UNIVERSITY OF CAPE COAST

SLUM HEALTH IN GHANA: A STUDY OF OLD FADAMA IN THE ACCRA METROPOLIS

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2023

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SLUM HEALTH IN GHANA: A STUDY OF OLD FADAMA IN THE ACCRA METROPOLIS

BY

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Thesis submitted to the Department of Geography and Regional Planning of the Faculty of Social Science, College of Humanities and Legal Studies, University of Cape Coast, in partial fulfillment of the requirements for the award of Master of Philosophy degree in Geography

MAY 2023

DECLARATION

Candidate's Declaration

I hereby declare that this thesis is the result of my own original research and that no part of it has been presented for another degree at this university or elsewhere.

Candidate's Signature: ..... Date: .....

Name: Ida Asantewaa Adofo

Supervisors' Declaration

We hereby declare that the preparation and presentation of the thesis were supervised by the guidelines on supervision of thesis laid down by the University of Cape Coast.

Signature: .....Date: .....

Supervisor's Name: Dr. Collins Adjei Mensah

ABSTRACT

Thousands of Ghanaians live in slums to make ends meet. However, the social and environmental conditions slum dwellers live in expose them to several health issues, an issue insufficiently studied. The study investigated how individual characteristics and shared social-physical environment define the health of slum residents in Old Fadama. The study adopted a mixed-method approach, and 306 household heads were selected. Six (6) key informants were included. A multi-stage sampling technique was employed with a questionnaire and interview guide used to get data. The quantitative analysis was done using SPSS, covering both descriptive and inferential statistical analyses. A thematic content analysis was carried out using the Nvivo software.

The study found malaria, cholera, tuberculousis, hepatitis, dangue fever, and pneumonia, as the most prevailing health challenges in the area. The study unearthed poor sanitation, bad road network, informal settlement as what slum dwellers perceived as factors that affect their health status. It was also found out that infrastructure, public services, and housing characteristics are the shared social-physical environment factors that explain the health of slum dwellers in the area. The strategies adopted by residents to cope with prevailing health-related problems included "Borrowing from friends and selling assets to cope with huge health expenditures," "Working for long hours to make more money," and "Reducing excessive food consumption spending,". It is, therefore, recommended that governments and other stakeholders should educate residents of the study area on the associated dangers. It also suggested that governments should pay attention to the following issues: poor sanitation, bad road network, informal settlement.

KEY WORDS

Ghana

Health issues/diseases

Health status

Old Fadama

Slum dwellers

ACKNOWLEDGEMENTS

Without the assistance, time, direction, support, and effort of a few people who gave me the necessary assistance to complete my task, I would not have been able to complete this thesis. I want to start by sincerely thanking my supervisor, Dr. Collins Adjei Mensah, for his leadership, patience, and support in making this work a success.

I am also appreciative to my lecturers for their love, support, and belief in me. My sources of power were their encouragement and unceasing support. I owe my fellow students for their efforts and support during the duration of the task.

In addition, I want to thank my friends for assisting me with the transcription, analysis, and proofreading of the work.

Finally, I must express my sincere appreciation to my parents and siblings for their unwavering support and never-ending encouragement during my years of study, particularly during the process of gathering information for and writing my thesis. Without them, this feat would not have been possible. I'm grateful.

DEDICATION

To my Parents, Nana Kwadwo, Aseda and Nyameye.

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LIST OF ACRONYMS

AMA	-	Accra Metropolitan Assembly and sustainable urban development
CDB	-	Central Business District (CDB)
CDC	-	Centers for Disease Control and Prevention
CLM	-	Cutaneous Lava Migrans
DFID	-	Department for International Development instrument
LDCs	-	Least Developed Countries (LDCs)
LRS	-	Loss Redistributive System (LRS)
MDGs	-	Millennium Development Goals (MDGs)
MMDAs	-	Municipal, Metropolitan and District Assemblies Organization
PHCC	-	Primary Health Care Centre
SDGs	-	Sustainable Development Goals
TCPD	-	Town and Country Planning Department
U.N.	-	United Nations
UCC	-	University of Cape Coast
UNCHS	-	United Nation Conference on Human Settlement
UNESCO	-	United Nations Educational, Scientific and Cultural
UNFPA	-	United Nations Population Fund
UN-Habitat	-	United Nations Programme for Human settlement
WHO	-	World Health Organization
WHOQOL	-	World Health Organization Quality of Life-BREF

CHAPTER ONE

INTRODUCTION

Background to the Study

In today's environment, rapid population growth within the urban area has been tremendous, specifically in the developing world, due to rural migration to cities for better livelihood (Sufaira, 2013). Consequently, these developmental activities have provided a source of employment to all rural migrants as well as the local urban population. This has resulted in rural migrants migrating to informal settlements in and around cities, popularly known as slums. Slums punctuate almost every city worldwide, which has become a universal phenomenon accompanying urban growth. Here, the growth of slums in metropolitan areas is a direct consequence of the better job prospects found in cities and towns. Therefore, it clearly shows how pull (accessibility to varied social amenities in the city) and push (difficulties associated with living in rural communities) factors (Madhusoodhanan, 2006) have influenced the growth of slums; hence slum is a reality that cannot be overlooked in the long run.

Slums, according to Hossain (2013) and Hakim (2015), are densely populated urban areas where most of the population lives in poverty or on the brink of it, reflecting the hardships of the poor. Slums, as defined by UN-Habitat (2003), are communities of people who share housing but do not have access to safe drinking water, proper sanitation, safe and sturdy housing, or suitable space to live. Slum health in the context of this thesis is defined as the degree to which the disease burden in a slum area is attributable to the

prevailing conditions in the slum's shared social-physical space (Ezeh et al., 2017; Kshetrimayum et al., (2020).

According to Un-Habitat (2012a) report, at least 860 million people live in slums, and the number of slum dwellers has grown by six million yearly from 2000 to 2010. This rapid increase in slums has provoked increasing international concern as indicated in the United Nations Sustainable Development Goals (SDGs) (Goals 3, 6, and 11), which specify a target to address the "plight of slum inhabitants." Globally and particularly in low-income and middle-income countries, slums are unhealthy places with exceptionally high risks of infection and injury (Ezeh et al. 2017).

The slum population in sub-Saharan Africa (SSA) is increasing at a pace of 4.5 percent per year, which means that the population will double every 15 years. Within the next three decades, that number is expected to increase by a factor of two, reaching one-third of the global population (UN-Habitat, 2003). At least 60% of the urban populations of Botswana, Burundi, Cameroon, Cote d'Ivoire, Eritrea, Gabon, Ghana, Kenya, Nigeria, and Zambia live in slums, making these nations among the world's most slum-prone (Un-Habitat, 2013). Although the atmosphere of fear and violence in slums is well-known (Bloom et al., 2008). Living and environmental circumstances in these communities are characterized by inadequate water supply, poor environmental sanitation, broken or non-existent waste disposal systems, overcrowded and decaying dwelling, hazardous location, insecurity of tenure, and major health hazards (Wambui, 2007; Kumar & Agarwal, 2003).

Hakim and Kamruzzaman (2015) reveal that one typical feature of today's slums is a one-roomed dwelling that is highly over-crowded by individuals, dilapidated dwellings, poor sanitation conditions characterised by diseases, and lack of civic amenities. For instance, Daniel et al. (2015). posits that one billion dwellers living in slum areas have no access to basic needs, inadequate sanitation and water supply, and decent housing and living space to improve upon their stand of living.

In Ghana, rapid urbanization has resulted in the creation of more slums in the cities attributed to overcrowded dwellings, high rates of pollution, inadequate household facilities, and a carefree attitude toward environmental health and safety among residents in these areas (Dinye & Acheampong 2013). A typical example of a slum area in Ghana is Sodom and Gomorrah in the Greater Accra Region. Besides Sodom and Gomorrah, there are other notable slums in Ghana, such as those found in Nima in Greater Accra, Asawase and Aboabo in Ashanti Region, Kojokrom and New Takoradi in the Western Region, respectively. According to Adedeji (2005), the environmental conditions in slum regions are a serious problem since they have a direct impact on how well families and people are able to live their lives. Improved living circumstances and healthy security for slum inhabitants are anticipated as the environmental cleanliness standards of slum regions rise (Ezeh et al., 2017; Owoeye, 2013).

Statement of the Problem

Over the years, unsuccessful policies to address the challenges confronting slum dwellers and society at large across the world have stimulated debates among policy-makers, practitioners, and researchers.

According to the United Nations Habitat [UN-Habitat] (2020), globally, a total of 1,033,545 urban population live in slum households as of 2018, from 928,063 in 2014. The regions of Sub-Saharan Africa (SSA), Latin America and the Caribbean (LAC), and Central and Southern Asia (CSA), respectively, saw slum households growing in percentage terms by 56.2, 20.9, and 31.2, against 0.1 in Europe and North America (ENA), as at 2018. The exponential growth in a slum dwellings in SSA is evidenced in the number of such settlements in its leading economic hubs, such as Nigeria and Ghana. Between 2016 and 2018, Nigeria and Ghana, respectively, saw 48,788 to 52,605 and 4,696 to 4,826 growth in slum households. Increases in natural population growth and rural-urban migration have invariably led to the enormous sprawling of urban slums in SSA countries.

In the last three decades, Ghana's population has more than doubled (14.7 million in 1990 to over 30 million in 2022). This increase in population has not received a commensurate growth in socio-economic infrastructure (i.e., health facilities, housing, water and sanitation facilities, access to finance, etc.). This lag has underpinned the recent trends in slum sprawling, particularly in big urban areas like Accra and Kumasi. In Ghana, rural-urban migration is the single most important contributor to the growth of urban slums. Slums provide a necessary housing option for poor rural-urban migrants. Urban dwellers who perceive "greener pastures" in the big urban cities and actually migrate there are soon faced with the miserable realities of limited economic opportunities, housing facilities, access to education, and access to health. It is safe to assume that the vast majority of slum residents are either completely illiterate or have barely completed elementary school

(Bormann & Agyeman-Duah, 2015; Funke, 2008). Lack of employment opportunities contributes to broader societal problems like substance misuse, violence, and incarceration. Schools and other public institutions, such as water and sanitation systems, are not adequately provided for in slum areas (Farouk & Owusu, 2012). UN-HABITAT (2008) found that access to clean water and adequate sanitation are major issues in Slums. Significant investment (both physical and financial) has been made over the years to improve water, sanitation, and health in Slums, but the research notes that these efforts have had little or no effect. According to the Ghana Health Service Annual report (2016), although the Accra Metropolitan Authorities (AMA) implicitly recognize the settlement by providing basic infrastructure and services, residents still live in precarious living conditions. It is, therefore, imperious to investigate how to find out the prevalent health issues/diseases among slum dwellers, examine the perception of slum residents on factors that affect their health status, assess the effects of the shared social-physical environment on their health, analyse their coping strategies in dealing with prevailing health-related problems, from a developing economic setting.

With respect to prevalent health issues/diseases in slums, available evidence suggests that while there exists a plethora of studies globally (Banerjee & Goswami, 2019; Dakhode, Muntode, & Gaidhane, 2019; Das, Das, Giri, Sarkar, & Saha, 2021; Macchia, Ferrante, Battistella, Mariani, & González, 2021; Naydenova et al., 2018; Reddy et al., 2022; Sekoni, Mall, & Christofides, 2021; Sutradhar et al., 2019; Venkatesh et al., 2022; Waghela, Shah, & Saha, 2018), very little (Kabore et al., 2019; Yirenya-Tawiah, Darkwa, & Dzodzomenyo, 2018) can be said of Ghana. Apart from the limited

studies on the Ghanaian setting, the earlier authors only looked at one or two of the health issues and diseases, say poor sanitation, lack of portable drinking water, blood pressure, diabetes mellitus, diarrhea, typhoid, hepatitis, tuberculosis, leprosy, filariasis, etc. Also, the few studies in the urban slums of Ghana have often focused on the social and economic vulnerabilities of slum dwellers (Weeks et al. 2007; Arku et al. 2011).

The perception of slum dwellers on factors that affect their health status is one the leading areas in the slum literature and has received researchers' attention in recent times. While several studies (Macchia et al., 2021; Nguyen & Pattanasri, 2022; Patwary et al., 2022; Sekoni et al., 2021; Sekoni, Mall, & Christofides, 2022) abound globally, particularly in most developing settings, only a few (Aberese-Ako et al., 2022; Nkrumah, Agyabeng A., Ahwireng, Bawole, Mickson, & Ahenkan, 2022; Seidu et al., 2022) can be said of slum dwellers in the context of Ghana. Some of the leading factors uncovered in these studies include demographic features, social characteristics, psychological dynamics, economic factors, and health-related dimensions, among others. Only one or two of these factors got featured in the aforesaid studies. Although each of the underlying dimensions matter in predicting the health status of slum dwellers, there is the need to figure out the most promising drivers toward sustainable policy and practice directions.

Social-physical environment factors have been cited as one of the major issues affecting the health of slum residents. The existing evidence reveals that while there are numerous studies (Ignacio et al., 2017; Malika, Barbagelatta, Penny, Reynolds, & Sinclair, 2021; Mukherjee, Sundberg, & Schütt, 2020; Ssemugabo, Halage, Namata, Musoke, & Ssempebwa, 2020;

Wang, Kuffer, Sliuzas, & Kohli, 2019) conducted worldwide, Ghana is the subject of very few of them (Adams & Nyantakyi-Frimpong, 2021; Preko, Nkrumah, & Mensah, 2021; Takyi, Amponsah, Yeboah, & Mantey, 2021). Most of these studies addressed either social or physical environmental factors separately and independently without delving into the dynamic interaction of such shared characteristics. Methodologically, studies in this regard are limited to the environment in which they were conducted, making it impossible to generalize their findings. Undertaking such a study in the Ghanaian slum environment will be a source of great knowledge for policy and practice.

Globally, researchers have not paid much attention to strategies being adopted by slum residents to cope with prevailing health-related problems. However, a few studies (Amiresmaili, Yazdi-Feyzabadi, & Heidarijamebozorgi, 2019; Amoako, 2018; Mensah, Yu, & Shi, 2022; Waghela et al., 2018) attempted to unveil some of the coping strategies being employed by slum dwellers amidst the many failed interventions adopted by governments everywhere informal settlements exist. The failure of the many slum interventions across the globe (Abass & Kucukmehmetoglu, 2021) has brought to the fore the need to explore how dwellers cope with the health-related challenges associated with the social issue.

In the face of the ever-evolving problem reemphasized in this study and the gaps left unaddressed in the extant literature coupled with the associated motivations, it is imperious to revisit issues relating to slum settlements, particularly in the Ghanaian context. The current study, therefore, seeks to interrogate how individual characteristics and shared social-physical

environment define the health of slum residents in Ghana using Old Fadama as a case study. This study will be a source of knowledge for policy and practice toward sustainment settlement.

Objectives of the Study

The main objective of this research is to investigate how individual characteristics and shared social-physical environment (neighbourhood effect) define the health of slum residents in Old Fadama ("Sodom and Gomorra") in the Accra Metropolitan Area (AMA), Ghana. The specific objectives were to:

1. Find out the prevalent health issues/diseases in Old Fadama.
2. Examine the perception of slum dwellers on factors that affect their health status.
3. Assess the effects of the shared social-physical environment on the health of slum residents.
4. Analyse the strategies adopted by residents to cope with prevailing health-related problems.

Research Questions

1. What are the prevalent health issues/diseases in the Old Fadama (Sodom and Gomorra)?
2. What is the perception of slum dwellers on factors that affect their health status?
3. How does the shared social-physical environment influence the health of slum residents?
4. How effective are the strategies adopted by slum residents to cope with prevailing health-related problems?

Significance of the Study

This study will help to broaden the evidence on how individual and shared social-physical environment influence the health of slum dwellers, highlighting the need for concerted efforts at more empirical research and policy initiatives that target improved slum health in developing countries. For academic relevance, the study will add up to limited research in the area of slum growth in the developing countries and health implications; specifically, in Sub-Sahara Africa. Likewise, the finding of this study will serve as a reference point for future studies in the field of health and slum development. In addition, the findings of this study would be useful to the Ministry of Health, Ministries of Local Government and Rural Development, Zongo Development and Inner-cities and Housing as well as its allied bodies involved in eradicating poverty and providing sustainable livelihood for deprived communities.

Again, the findings would provide information for strategic planning for the Ministries mentioned above in achieving the health and settlement aspects of the Sustainable Development Goal 11 which focus on sustainable cities. Finally, the findings from the study will provide data for government and other relevant bodies and enrich the existing body of knowledge on slum health.

Delimitation of the Study

The study was concentrated at Old Fadama which is just one among many other slums in the capital and many other urban settlements in Ghana. The study employed the mixed method as opposed to other methods of enquiries. The study concerned itself with the impacts of slums on the health

of the dwellers whilst to a larger extent could have investigated the effects of slums on the quality of lives or even the ecology of the area. Meanwhile, the outcome of this research serves a basis for further research into other aspects of slums and health issues in such settlements.

Organisation of the Study

This thesis is comprised of five chapters. Chapter One lays emphasis on the background to the study, statement of the problem, research questions, objectives and significance of the study, delimitations and organisation of the study. Chapter Two studies the available literature related to the study and discussion of theories and building of the conceptual framework of the thesis.

Chapter three will covered the methodology namely sample design, population size and sampling technique and source of data, analytical tools. Chapter four mainly consist of the analysis of data from respondents and discussion of findings in relation to literature. Lastly, chapter five which is the final chapter consist of a summary, conclusion, recommendation and future research areas in the area of slum and healthcare in slum communities.

CHAPTER TWO

LITERATURE REVIEW

Introduction

This chapter is devoted to a review of relevant literature concerned with slum growth across the country, influence of slum on health and quality of life of dwellers or individuals in this locality. This chapter expands on earlier research on construct variables. The study framework and hypotheses are presented when the literature review is completed.

Review of Related Concepts

This section presents review of concepts related to the subject matter. It covers subjects under the health of slum dwellers. The underlying themes include Definition of Slum; The Concept of Slum health; Slum and other Related Concepts; Health; Quality of Life; Neighbourhood Effect; Social-Interactive Mechanisms; Environmental Mechanisms; Geographical Mechanisms; and Institutional Mechanisms.

Definition of Slum

Since 2011, there has been significant population growth which has reached a staggered seven billion people cited by UNFPA (2011) mostly witnessed in the urban compared to the rural areas. This has resulted to most government across the globe unable to keep up with the fast pace of the population growth in terms of the provision of adequate infrastructures like housing facilities to it population, hence led to significant formation of slums. Ooi and Phua (2007) articulated in their study that one third of the urban world population is living in slums and squatter settlements. The name slum first appeared in the 1820's, (UN-Habitat, 2003) however over the years several

names has been used to refer to this concept such as “shantytowns, getto’s, favela’s, shawls, etcetera”, nonetheless, the term slum would be used in this study.

Scholars have provided a number of definitions for the concept of slum, however these definitions differ from nation to country depending on the socio-economic realities in each community. Research by Wambui (2007), Kumar (2003), and Agarwal (2003), among others, characterized slums as densely inhabited temporary residential houses constructed lawfully and unlawfully without water supply, sewage services, or electrical supply. Slums were defined by Hossain (2013) and Hakim (2015) as densely populated areas of cities where residents live in or near poverty, reflecting the hardships of the poor.

In addition, UN Habitat (2003) defined slums as communities of people sharing a building in an urban setting who do not have access to modern plumbing, proper sanitary facilities, safe and secure housing, or suitable space to call their own. Traditional definitions of slums refer to rundown neighborhoods that lost their luster after their original residents moved out and the buildings were subdivided and rented to lower-income families, but today the term "slum" is used to describe a much broader range of low-income settlements and poor human living conditions (UN-HABITAT, 2003).

According to the definitions given above, the term "slum" refers to an area where the local population lacks access to adequate water, sanitation, housing that is not overcrowded, and legal protections against eviction. This research uses Niebergall's (2008) definition of a slum, which describes an

informal settlement characterized by a high degree of spatial heterogeneity, a complex shape, substandard housing, a high density of buildings, an irregular pattern of roads in poor repair, a lack of connectivity to essential services, a lack of vegetation, and a high risk of accidents.

In this context, a slum is typically understood to be an area with a high density of people that is also polluted, lacks basic social amenities like adequate housing and ventilation, and has severe overcrowding, poor lighting, a lack of safe drinking water, and the absence of fundamental physical and social services. In light of this, Jha and Tripathi (2014) contended that the growth of slums and squatter settlements has significantly worsened the social, economic, and environmental problems affecting today's metropolitan regions.

Slums may now be found by utilizing a number of mapped and documented markers. According to Govindaraju (2012), citing Environmental Improvement of Urban Slums, any area with a high concentration of these people is a classical slum area because of decay, overcrowding, poor street layout, a lack of ventilation, light, or sanitation facilities, an insufficient amount of open space, and a lack of community facilities. According to a related UNESCO declaration, a slum is a group of houses that are so economically impoverished that they pose a threat to both the residents' and the neighborhood's safety.

The Concept of Slum health

New ideas like these are emerging to address the unique health challenges faced by low-income neighborhoods. Slums are highly populated areas that lack basic amenities and infrastructure and include substandard housing. Sanitation, water, energy, trash management, and safety are all

examples. The close proximity of slum dwellers increases the risk of disease transmission and the onset of debilitating health problems (Mberu et al., 2016).

In this study, slum health refers to the prevalence of diseases, contribution of prevailing conditions in the shared social-physical space to the health of residents, and the availability of and accessibility to health facilities (Ezeh et al., 2017; Kshetrimayum, et al., (2020). Therefore, the central argument is that, living in neighbourhoods that are seriously affected by poverty, poor sanitation, and lack of access to clean water, for instance, affects a wide range of individual outcomes, such as economic self-sufficiency, violence, drug use, illnesses, low birthweight, cognitive ability among others.

Slum and other Related Concepts

There are a number of different meanings that people mistakenly attribute to the word "slum." Squatter camps and blight are two such well-known examples. It might be difficult to tell the difference between blight and slum. Although the term "blight" is most commonly used to describe the progression of a slum, it is more generic than that, as it may be applied to single buildings as well as groups. The term "blight" can also be used to refer to the degradation of a building or neighborhood. It follows that blight might appear on a property to varying degrees, whereas in a slum area, the majority of properties will have advanced blight. Thus, blight is an inherent part of any definition of slum, yet the terms are nonetheless equivalent.

Squatter settlements are communities created by unauthorized residents of urban areas on land that is legally owned by the state or private individuals. The United Nations' definition of slum does a great job of

differentiating between slums and squatter settlements. Since most slum residents, unlike squatters, have legal title to the property on which they live, the United Nations defines slums as "areas of authorized mainly older housing, which are degrading in the sense of being under-serviced, overcrowded, and dilapidated." On the other hand, some people believe that not all squatter settlements are illegal. Many illegal settlements are not squatter settlements and do conform to the law in some ways, write Hardoy and Satterwaite (2004), eloquently summarizing this view. For instance, Winayanti and Lang state that in the situation of illegal subdivision, the occupation of land is legitimate at least in the eyes of the person or corporation owning it.

Health

Living conditions in slums are often physically hazardous, which might increase the frequency with which residents worry about their health. This suggests that the large population concentrations found in slums pose a serious threat to residents' health. According to the World Health Organization (Kühn & Rieger 2017), health is not just the absence of sickness, but rather a condition of complete physical, mental, and social well-being. This involves ensuring that people's health and wellbeing is not only preserved, but also detected and treated if necessary (Jetten et al (2012). It's a tool for making dreams come true, meeting basic requirements, and dealing with adverse conditions so that individuals can live full, satisfying lives (Breslow, 2006; Herrman, Saxena, & Moodie, 2005).

It's been said that health, in its many forms, is essential to people's happiness since it allows for their fullest possible flourishing on all fronts, including the personal, societal, and economic. Because of this, health has typically been evaluated using a deficit model (CDC, 2011). Because of the key role that residents' health in slum regions plays in their quality of life, the next part will focus on this topic.

Quality of Life

According to Adedeji (2005), the space that house an individual in terms of its quality is a deep-seated contributor to the overall quality of families and individual lives. As such, it is one of the emerging fields of study in human geography, radical geography, welfare geography, and philosophical geography. Research into this idea is more important than ever for the holistic advancement of society and nation in the postmodern era.

Research by Shin and Johnson (1978) established that quality of life refers to a person's sense of contentment, prosperity, and joy. According to the World Health Organization Quality of Life Group, QoL is "also an individual's view of their own position in life in the context of the culture and value of the systems in which they live, and in connection to their own objectives, expectations, standards, and concerns" (1995). Contentment is another phrase for a person's emotional and mental well (Summers 1976; Eastern, 1978; Andrews & Withey, 1978). In light of the foregoing, it is important to recognize that one's perception of his or her own level of happiness is a subjective assessment based on his or her own set of goals, desires, and requirements (Frisch, Cornell, Villanewa, & Retzaloff, 1989), which in turn are influenced by both internal and external factors.

Further, the idea is a value judgment that develops from one's holistic view of the factors that are, at this point in time, most salient. The concept of quality of life across time has been examined using a wide range of social indicators, including health and crime rates, subjective measures of well-being, cultural and economic benchmarks, and others. Many different attempts have been made to measure people's satisfaction with their lives and their communities using quality of life measures. Land use and infrastructure, natural environment, health and wellness, economic wellbeing, education and lifelong learning, public wellbeing, arts and cultural vitality, civic engagement, enrichment, and innovation are some of the broad categories Gliedt and Larson (2018) identified for this set of indicators. By considering the innermost feeling of satisfaction and fulfillment as a subjective evaluation by an individual's goal, the study uses an adapted definition for quality of life as cited by Summers (1976), Eastern (1978), and Andrews and Withey (1978) as the basis for measuring the quality of life of respondents in the study area.

Neighbourhood Effect

Neighborhoods, according to the economic and social science notion known as the "neighborhood effect," may have an impact on people's actions in both obvious and subtle ways (Park, Burgess & McKenzie, 1925). Slum dwellers' health is negatively impacted by the neighbourhood impacts of their overcrowded settings. People living in slums may have worse health than those living in more affluent areas because of the affects of their environment (Mberu et al.,2016). Although the neighborhood impact was recognized and researched around the turn of the 20th century and as early as the mid-19th century, it did not gain widespread traction until William Julius Wilson

published The Truly Disadvantaged in 1987. According to Wilson's idea, being immersed in a highly impoverished area can have a negative impact on a person's economic independence, physical and mental health, fetal weight, and intelligence (1996).

The presence of "neighborhood impacts" on health is supported by a wealth of research. The term "neighborhood impacts" is used to describe elements that have an impact on health at the community level, rather than at the level of individual households. Health consequences are the most obvious and straightforward to attribute to a neighborhood's influence. Exposure to violent media has a direct correlation to the development of posttraumatic stress disorder. There is a direct correlation between pollution in the local environment and health problems in the community (McMichael, 2000). Social interaction, environment, geography, and institutions are the four overarching categories into which George (2010) places the factors behind neighborhood impacts. The rest of the explanation for them follows.

Social-Interactive Mechanisms

This set of mechanisms refers to social processes endogenous to neighborhoods. These processes include:

- Social contagion: mingling with one's neighbors can affect one's behavior, goals, and outlook. These shifts have the potential to spread like "epidemics" under the right conditions.
- Collective Socialization: Neighborhood role models and other forms of social pressure can influence people to act in accordance with accepted social standards. Because of this socialization impact, norms may only

have significant effects on the surrounding community if a certain percentage of people conform to them.

- Social Networks: The dissemination of resources and knowledge from one's neighbors can have a significant impact on the recipients. Both "strong links" and "weak ties" are possible in such networks.
- Social cohesion and control: The degree of neighborhood social disorder and its opposite, "collective efficacy" (Sampson et al., 1999), may impact a range of behaviors and psychological reactions of inhabitants.
- Competition: This mechanism implies that organizations inside the area will compete with one another for these resources on the basis that certain local resources are limited and not pure public goods. Residents' access to these resources (and the opportunities that flow from them) may be contingent on the success of their group in "winning" this competition, as the outcome is zero-sum.

Environmental Mechanisms

In this context, "environmental processes" refers to the physical and mental characteristics of the surrounding area, both natural and man-made, that can have an impact on the health of local inhabitants independently of their actions. Like the social-interactive mechanism, the environmental category can take on a variety of shapes and sizes:

- Exposure to Violence: When people feel that they or their possessions are under danger, they may react emotionally and physically in ways that hinder their ability to work or decrease their feeling of well-being.

If the person has previously been a victim, the effects will likely be more severe.

- Physical Surroundings: In contrast, Manski (1995) divides the potential psychological impacts of deteriorating physical conditions of the built environment (such as dilapidated buildings and public infrastructure, litter, and graffiti) into three groups: endogenous, exogenous, and associated. Concentration, location, socializing, physical, and services are the five broad characteristics identified by Ellen and Turner (1997). Institutional resources, interpersonal connections, and group norms and performance are the categories used by Leventhal and Brooks-Gunn (2000).
- Toxic Exposure: Pollutants in the air, soil, and water may reach dangerous levels in a community due to past and present land use and environmental factors.

Geographical Mechanisms

When we talk about "geographic mechanisms," we're referring to the ways in which a neighborhood's position in relation to larger-scale political and economic factors may have an impact on the lives of its people, even if those mechanisms have nothing to do with the area itself.

- Spatial Mismatch: It is possible that people of some areas are less likely to find employment opportunities that match their skillset because they lack access (directly or through transportation networks) to such areas.
- Public Services: Some communities may fall under the control of a local governmental jurisdiction that, due to a lack of funds,

inefficiency, or corruption, is unable to provide adequate public services and infrastructure. These, in turn, may have a negative impact on people's ability to grow as individuals and further their education.

Institutional Mechanisms

The fourth group of mechanisms involves the acts of people who aren't local but whose institutions are based in the area and/or who operate hubs where locals may access critical markets.

- Stigmatization: Stigmatization of an area can occur when influential people have negative preconceptions about the people living there. Even if the population of a certain area is relatively stable, problems may persist as a result of factors such as its past, environmental or topographical drawbacks, housing stock, scale, and type, and the state of its business areas and public spaces. There are several ways in which people of stigmatized places may have their possibilities and perspectives diminished as a result of this type of stigma, including diminished career prospects and diminished self-esteem.
- Local Institutional Resources: Communities may have limited or inadequate access to governmental, commercial, or non-profit resources including day care centers, schools, and health clinics. It's possible that inhabitants' chances for self-improvement might suffer if they didn't have access to such.
- Local Market Actors: Alcoholic beverage distributors, grocery shops, fast food joints, and drug dealers are only few examples of private market players whose presence in a given area may have a significant

positive or negative impact on inhabitants' propensity to engage in particular kinds of behavior.

Consisting of all-encompassing influences felt in people's everyday environments. The processes through which neighbourhoods exert their impacts have been characterized in numerous ways. In Table 1, we show how one categorization method may be used to identify certain types of neighborhood impacts.

Table 1: The Neighbourhood effects

Type of neighbourhood effect	Example	Example from slum context
Physical environment	The risk of childhood illness in Indian families is more strongly correlated with a neighbour's defecation patterns than with the family's defecation behaviour	Slum environment and water supply is heavily contaminated with faeces in many slums
Social interactions	An experimental study in the USA showed that providing vouchers to move to a better-off neighbourhood improved health in the short-term, and young children's prospects in the long-term.	Crime rates vary considerably among slums, reflecting different cultures that have developed within them
Geographical factors	Poor people in rich cities in the USA have better health than equally poor people in poor cities	Many slums are exposed to geographic hazards, such as flooding, subsidence, and local pollution from factories
Institutional factors	Teachers may have lower expectations of pupils who live in poor neighbourhoods.	Some slums are stigmatised so that residents' rights are infringed to the point of expropriation.

Source: Adopted from Galster (2012) and Parks (2014)

However, if harnessed properly, neighbourhood influences may also have a beneficial effect on health outcomes. Low-income neighborhoods with a lot of people living in them can take advantage of economies of scale. As a result, a large number of individuals in slum regions can reap the rewards of interventions at a minimal cost. Because of these neighorhood impacts, even poor neighborhoods might see rising profits. The provision of sanitary facilities is a prime illustration of this. The rate at which the percentage of slum residents whose health has improved as a result of sanitation improvements grows also accelerates. When sanitation efforts don't yield a positive return, it might be because the initiatives aren't large enough to leverage the synergistic benefits on surrounding areas (Mberu et al., 2016).

Empirical Review

This section presents recent studies relating to the health of slum residents. In response to how individual characteristics and shared social-physical environment define the health of slum residents, the study executed a reviews of recent studies under the following themes: Prevalent Health Issues/Diseases in Slums, Perception of slum dwellers on factors that affect their Health Status, Effects of the Shared Social-Physical Environment on the Health of slum residents, and Strategies adopted by residents to cope with prevailing Health-related Problems. The review covers studies from the Ghanaian slum perspectives and those outside the scope of Ghana

Prevalent Health Issues/Diseases in Slums

Waghela, Shah, and Saha (2018) carried out research with the dual goals of assessing the pattern of morbidity in the urban slums of Durg and Bhilai, India, and understanding the function of Mitanins in the slum

population's pursuit of health. Simple random selection was used to choose ten urban slums, five from Durg and five from Bhilai. A standardized questionnaire was used to collect data from households. The sample size was 1025 homes, or 4997 people. According to the research, high blood pressure and diabetes mellitus are two of the most common ailments in the urban slums of Durg and Bhilai. There is a high prevalence of water- and sanitation-related diseases such as diarrhoea, typhoid, hepatitis, TB, leprosy, and filariasis. People in both cities favor using public hospitals and clinics for treatment of chronic communicable diseases and RCH issues. According to the results, the slum population is increasingly affected by lifestyle-related chronic illnesses. Inclusion of chronic illnesses, as outlined in Comprehensive Primary Health Care, is warranted.

Sekoni, Mall, and Christofides (2021) examined the prevalence among female urban slum dwellers in Ibadan, Nigeria. Questions on traumatic events in the past, current stresses, intimate partner violence, other psychiatric illnesses, sociodemographics, and post-traumatic stress disorder (PTSD) were collected by interview. The average PTSD score was 5.80, with a frequency of 4.18%. Women in Ibadan's shantytowns didn't suffer from post-traumatic stress disorder at a particularly high rate. Sexual abuse of children and relationship violence are both preventable. In addition, the authors suggested conducting longitudinal studies to identify and evaluate potential risk and protective variables.

In a cross-sectional questionnaire study conducted from October 2019 to April 2021, Venkatesh et al. (2022) analyzed the level of hepatitis B virus (HBV) awareness and knowledge among inhabitants of an urban slum and a

social welfare home in Bhubaneswar, Odisha. Serum positive for hepatitis B surface antigen was tested using quick point-of-care test kits, which allowed for another evaluation of HBV infection rates. SPSS version 20 was utilized to carry out the statistical analysis. In all, 370 people were evaluated. Only 16.7 percent (62) exhibited high levels of awareness about HBV, despite the fact that 18.1 percent (67) were very knowledgeable. About 14.8 percent (55) were aware that an HBV vaccination is available in the country, and 6.2% (23) reported having received the vaccine. People with a high school diploma or higher had an 11.05-fold increased likelihood of having strong knowledge and a 14.7-fold increased likelihood of having high awareness of HBV. The point prevalence rate for hepatitis B surface antigen was 2.7%, with 10 patients testing positive. Knowledge and awareness regarding HBV were also greater in the slum neighborhood than in the welfare home, as did the percentage of the population that had completed high school. Our study's findings showed relatively low levels of knowledge and awareness about the prevalence of hepatitis B infection in the population cast doubt on the necessity of stepping up health education and promotion efforts on a massive scale.

Knowledge of leprosy in urban slums of western Maharashtra was analyzed by Reddy et al. (2022). Approximately 400 people from a city slum in western Maharashtra took part in the research. After a brief education session and screening for leprosy, a closed-ended survey was given to gather information on people's prior exposure to the disease, as well as their current levels of knowledge, attitude, habits, and stigma. There were a total of 400 people that took part, with women making up 205 (51.25%) and men accounting for 195 (48.75%). Only 154 out of 400 respondents (38.5%)

reported having heard about leprosy. According to the survey, despite the fact that 130 out of 400 persons (32.5% of the total) believe it can be treated, 71 out of 130 (54.6% of the total) believe it will return even after treatment has been completed. Only 103 out of 400 (25.75%) answered they would marry someone who has leprosy, indicating widespread stigma in the community. Additionally, only 79 out of 400 (19.75%) were aware of government services for leprosy and the National Leprosy Eradication Program (NLEP). No new or suspicious cases of leprosy were found during screening of the entire survey population. The current research demonstrates that slum residents are not well informed about leprosy. There is a clear need to further enhance government programs because only 20% of them are aware of government services and the NLEP, and they have a very poor level of understanding about the condition. The necessity for public education aimed at changing public perceptions of those living with leprosy can't be overstated.

Banerjee and Goswami (2019) attempted empirically to understand the nature and prevalence of occupational sickness among slum workers in diverse sectors because few research focusing on slum residents have addressed the occupational health of their primary earners, who choose dangerous industrial jobs. According to the findings above, there are four distinct categories of industry: the civil and mechanical, textile, consumer products, and chemical. Primary data is collected via face-to-face interviews and Focus Group Discussions (FGDs) with 320 slum-dwelling industrial employees in the Indian state of West Bengal via a multi-stage random sampling process. Workers in the jute textile industry are more prone to develop chronic respiratory illnesses, whereas those in the garment and consumer goods

industries are more likely to experience musculoskeletal issues. Workers in the civil-mechanical and chemical industries are more vulnerable to suffering workplace injuries. Workers in the industrial sector may be dissuaded from seeing a doctor due to the financial disparity between the cost of an office visit and the cost of purchasing OTC medications. Slum families' major breadwinners face significant health hazards on the job, thus it's recommended that a health insurance plan catering to their needs be established and put into effect.

Slum residents of Dhaka, Bangladesh were studied by Sutradhar et al. (2019) to determine the community-based incidence of eye disorders and related risk factors. There were actually two parts to the study. 1320 homes from three randomly chosen Dhaka slums participated in the first phase of the survey, which used multistage cluster sampling. Trained data collectors visited homes and randomly questioned one adult (18+) from each household using a predetermined set of questions. After then, everyone was asked to continue on to the next stage of the research. Out of a total of 1320 participants, 432 (9.2%) complied with the invitation to visit tertiary care facilities so that an ophthalmologist could do a clinical evaluation of them. Stata 13 was used to conduct a variety of descriptive and inferential statistical analyses.

Sixty-eight percent of the study's 432 participants were female, and the vast majority of married participants (82.6 percent) and Muslims (98.8 percent) were also Muslim. Virtually everyone had some form of clinically confirmed eye illness (92.8%). Refractive error (63.2%), conjunctivitis (17.1%), impaired vision (16.4%), and cataract (7.2%) were the most common eye conditions. Factors including age, gender, and income-generating

occupation were found to be significant predictors of refractive error. A lower level of schooling was related with a higher risk of cataract, whereas the converse was true for visual impairment. Findings from this study give epidemiologic information on the incidence of ocular illnesses in Dhaka's adult slum population. Increased access to eye care is required in light of the high rates of myopia (short-sightedness), hyperopia (far-sightedness), allergic conjunctivitis, and cataracts in this population.

Using principal component analysis and a Fuzzy AHP-based technique, Das, Das, Giri, Sarkar, and Saha (2021) investigated COVID-19 susceptibility in slum areas in India and produced a slum vulnerability score to COVID-19 (SVIcovid-19). According to the Kaiser criterion, the four slum vulnerability groups (i.e. principal components) kept with eigen-values greater than 1 were low socioeconomic status in slum households, low social distance maintenance in slums, high slum population and urban concentration, and high household mobility. For a more complete picture of geographic differences, this study additionally mapped composite SVIcovid-19 using PCA and the Fuzzy AHP technique at the state level. The study found that a lack of basic services and utilities made slums in eastern and central India (especially in Uttar Pradesh, Bihar, Jharkhand, Odisha, and West Bengal) more susceptible to the spread of COVID-19. Therefore, the study's findings may serve as a guide for future policymaking to improve the quality of slum homes (HHs) and lower the health risk from any infectious illness, as well as aid in our understanding of the habitat sensitivity in slum regions to COVID-19.

Macchia, Ferrante, Battistella, Mariani, and González (2021) reviewed the first 20 weeks after the first documented incidence of the COVID-19 outbreak in Buenos Aires' slums and other socioeconomic strata. All individuals in Argentina suspected of having COVID-19 and subsequently diagnosed with the virus by RT-PCR between January 31, 2020 and July 14, 2020 were included in the study. About 114052 individuals were screened for COVID-19-related symptoms. A total of 39,039 (34.2%) tested positive for RT-PCR. By the conclusion of the 20th week, COVID-19 incidence rates were 160 (155 to 165) per 100,000 individuals among those who did not live in slums, and 708 (674 to 642) among those who did. Lives in slums are linked to a 14.3 percent higher incidence rate (13.4 to 15.4). Because of socioeconomic factors, the pandemic is spreading. People living in shantytowns are putting themselves in danger more than the average citizen. People living in slums have a unique risk profile and, as such, should be the focus of specialized policy.

Dakhode, Muntode, and Gaidhane (2019) examined urban slum inhabitants' knowledge and awareness of TB. This was a community-based cross-sectional study that took place over the course of three months in four urban slums in the Wardha district of Maharashtra (January-March 2019). The writers went door-to-door in the slums, engaging residents who were at home and eager to relate their experiences with tuberculosis. A total of 169 individuals were questioned using a standardized questionnaire designed to assess their knowledge about TB's symptoms, transmission, prevention, and treatment options. There were a total of 169 residents, 111 (or 65.68%) of whom were male and 58 (or 34.32%) of whom were female. In all, 20 people

(11.83%) said they were completely unaware about tuberculosis. There were 149 people (88.17%) who were made aware of tuberculosis by some means; of these, 87 (51.48%) lived in urban areas, where word-of-mouth was the primary means of communication, followed by the media. The majority of respondents (132, or 78.11%) were aware that tuberculosis (TB) is transmitted by the inhalation of droplets in the air. 128 (75.74%) respondents reported a cough as their primary symptom of tuberculosis, whereas 56 (33.14%) reported a fever of less than 2 weeks. It's worth noting that 150 (88.76%) participants said that public PHC/CHC/District Hospitals are the best site for management, whereas just 37 (21.89%) said the same about private practitioners. Both males and those with higher levels of education had a greater awareness than females and those with lower levels of education. People living in slums are especially at risk of contracting tuberculosis (TB) or developing the disease. Most people living in the slums had a decent understanding of tuberculosis, although this was by no means universal. There is room for improvement in slum areas in terms of education, particularly via the implementation of awareness initiatives and the expansion of community visits by health workers. This will improve the literacy levels of the habitat female group, whose knowledge was shown to be much lower than those of the literate.

Researchers Naydenova et al. (2018) looked at the current relevance of AFC metrics and domains for initiatives to improve the health and well-being of older slum residents, as well as at the specific problems that a slum-focused age-friendly project in SSA may need to solve. The study applies the methodology to two slum areas in Nairobi, Kenya. Evidence on the health and

social conditions of the elderly population and data on the local implementation and assessment of global age-friendly city (AFC) metrics were two of the areas examined. The results highlight several expected but less immediately apparent health and social challenges that an age-friendly project in these communities must address. The results also demonstrate that the existing AFC domains and indicators framework only partially captures these challenges, but that the framework may be modified to be relevant in slum contexts. In conclusion, the authors emphasized the importance of and potential benefits from an age-friendly slums project.

Yirenya-Tawiah, Darkwa, and Dzodzomenyo (2018) assessed the occurrence of toxigenic Vibrio cholerae in water storage systems in selected high risk areas in the Accra Metropolitan Area (AMA) area prior to the 2014 outbreak. Toxigenic Vibrio cholerae were identified in 320 water samples taken from 80 residences' water storage systems by bacterial culture testing. Presumptive Vibrio cholerae was found in 83% of household water storage systems. There was a wide range, from one to 1,400 CFU per 100 ml, of viable cells. Five residences in Old Fadama, one home in Shiabu, and one home in Bukom all had Vibrio cholerae O1 serotype isolated from them in the month of May. The months of June and July followed the same pattern. The finding of Vibro cholerae in water storage containers suggests that environmental surveillance for this pathogen is warranted in high-risk areas to supplement the existing surveillance system.

Kabore et al. (2019) examined the risks and protective variables of drug usage in Ghana, West Africa, using the photovoice technique. Ten people in Ghana's greater Accra area who are recovering from drug misuse and

receiving treatment were selected and instructed in the usage of the photovoice approach. Each person was given a disposable camera to document local barriers and supports in their area that prevent or mitigate substance addiction. Participants were given pictures and asked to write descriptions based on the social-ecological model's identified themes and gradations through participatory action research (PAR). Individually, participants cited a lack of knowledge; interpersonally, they cited family and peer pressure; organizationally, they cited a lack of regulation; communally, they cited the media, the availability of drugs, the cost of drugs, urbanization, slum communities, and cultural factors; and systematically, they cited a lack of regulation at the policy level. Education and beliefs represented the individual level, families the interpersonal level, organizations the religious level, the community level youth groups, the media, and drugs anonymous, and the policy level was not mentioned at all. This research is exploratory in nature, but it will assist fill in some of the gaps in the current scientific literature on the topic of drug misuse in Ghana and lead to the creation of treatments tailored to the specific requirements of a number of the country's communities.

Perception of slum dwellers on factors that affect their Health Status

Patwary et al. (2022) evaluated the psychological antecedents of vaccination uptake among Bangladeshi urban slum dwellers. A face-to-face survey was conducted in the urban slums of two significant cities in Bangladesh from July 5 to August 5 of 2021. In relation to COVID-19, the questionnaire probed respondents' sociodemographic characteristics, health-related aspects, psychological determinants, informational settings, and conspiracy beliefs. Mental preconditions were evaluated using the 5C scales.

Predictors of confidence, complacency, calculation, restrictions, and shared responsibility were examined using five hierarchical binary logistic regression models. Acceptance of vaccination was linked to its psychological precursors using multinomial logistic regression.

The study found that slum dwellers who scored higher on measures of confidence, complacency, limitations, calculativeness, and responsibility were more likely to accept vaccination. Those who rejected anti-vaccination views and who believed in both natural and artificial origins were more likely to embrace vaccines. In contrast to the widespread use of television and radio as secondary sources of information on COVID-19 vaccines, newspaper articles provide widely varying accounts of the topic. The 5C dimensions were substantially linked to variables including marital status, level of education, household income, and self-reported health status in a regression analysis. Vaccine acceptance was highly correlated with two psychological factors: apathy and a sense of shared responsibility. Individual differences in predictors of COVID-19 vaccination uptake are substantial. Thus, taking into account the causes, tailored interventions based on the findings may assist to reduce vaccine hesitancy and increase vaccination rates.

Nguyen and Pattanasri (2022) examined the impact of ethnicity and other demographic and socioeconomic variables on urban slum residents. Twenty semi-structured interviews and 452 questionnaires were utilized to collect the data from Thailand, Myanmar, Laos, and Cambodia. The semi-structured interviews were analyzed using phenomenology. Descriptive statistics and a multiple regression model were used to examine the survey responses. This research found that COVID-19 susceptibility was significantly

increased for those who were older, female, foreign-born migrants, and/or lived in vacant places, beneath tollways, or near railroads. COVID-19 was more severe in some populations, and these populations were distinguished by their housing conditions and their jobs (daily wage workers). Women and those with higher levels of education were more likely to follow COVID-19 protection standards than males were, and this trend was observed across all ethnic groups. Even among those categories, those of non-European ancestry and those employed on a daily wage scale fared better in COVID-19 prevention measures. The authors of this report call for immediate action and specialized aid from development groups, the state, and civil society in order to protect urban poor neighborhoods.

Common mental problems were studied by Sekoni, Mall, and Christofides (2022) in female residents of urban slums in Ibadan, Nigeria, and its link to protective factors. A total of 550 women in slum areas of Ibadan, Nigeria, were surveyed in a cross-sectional household study. Common mental diseases and protective variables (social connectivity, self-esteem, social support, resilience) were gathered by interviewer-administered questionnaires (depression, anxiety and stress). Common mental diseases were examined using the DASS-21, while protective variables such social connectedness, perceived social support, resilience, and self-esteem were measured using other instruments. To account for any confounding factors, we used a multivariate logistic regression model to analyze the correlations. Fourteen percent of respondents reported suffering from a common mental condition. Protective factors against reporting symptoms of common mental illnesses include resilience and social support. When it comes to prevalent mental

diseases, women who reported higher levels of social support and resilience were less likely to report them. Elderly women (aged 65 and over) were likewise less likely to report experiencing common mental illnesses than younger women (aged 18-34) were. Among these responders, having strong social networks and a positive outlook on the future appear to be protective against developing common mental diseases. Protective factors lessen the risk of common mental diseases, although the mechanisms by which this occurs need more study. This would be useful information for anybody working on improving mental health programs.

Choi, Bhandari, and Shrestha (2022) studied social inequality, noise pollution, and quality of life of slum dwellers in Pokhara, Nepal. This research entailed a cross-sectional analysis of 528 people living in both slums and non-slums. Eighty-seven percent of slum respondents and 63 percent of non-slum respondents said they had been severely bothered by noise, while 90 percent of slum respondents and 63 percent of non-slum respondents said there was a primary source of noise. When comparing slums with non-slums, slums have higher 24-hour average interior noise levels. Slum residents fared much worse than the general population across four health dimensions, as measured by the Mann and Whitney U test. Slum dwelling was found to be a significant predictor of poor health in a logistic regression analysis. At the same time, a high level of noise irritation was a good predictor of bad quality of life among slum inhabitants, highlighting a differentiating detrimental effect of the high level of noise annoyance in the slum neighborhoods.

Macchia, Ferrante, Battistella, Mariani, and González (2021) investigated the impact of residing in a slum on the standardised incidence rate of COVID-19 in Buenos Aires over the first 20 weeks after the first recorded case. The research included all people in Argentina suspected of having COVID-19 and later diagnosed with the virus by RT-PCR between January 31, 2020 and July 14, 2020. Using a corrected Poisson regression model, it was determined that slum housing had a negative effect on the COVID-19 incidence rate. In addition, an ecological research at the community level was done to investigate the impacts of socioeconomic status. From the most advantaged socioeconomic quintile (1.00) to the least advantaged quintile (Q5.00), the incidence rates climbed linearly: 1.36 (1.25–1.46), 1.61 (1.49–1.74), 1.86 (1.72–2.01), and 2.94. (3.74–3.16). Those who reside in slums are associated with a 14.3% higher incidence rate (13.4 to 15.4).

Nejad, Ghamari, Mohaqeqi, Kamal, Tabatabaee, and Ganjali (2021) examined the important aspects of social determinants of health due to their importance in enhancing the health of slum dwellers. For this scoping review, the PRISMA-ScR guidelines were observed (Preferred Reporting Items for Systematic Reviews and Meta-Analyses Extension for Scoping Reviews). We searched PubMed, ProQuest, Scopus, and Web of Science for articles published between 2010 and the end of 2019. The inclusion criteria were used to select the studies, with a focus on those that investigated the link between social variables and health outcomes. Thirty-three studies were selected to extract data on the socioeconomic factors of urban poor people' health. Seven broad criteria emerged from the evaluation of relevant material (housing, socioeconomic status of the family, nutrition, neighborhood characteristics,

social support and social capital, occupational factors, and health behaviors). This technique might be utilized by planners, managers, and policymakers when making decisions that affect the well-being of these communities.

Gitatui, Kimani, Muniu, and Okube studied the factors influencing dangerous alcohol intake among adults in a Kenyan urban slum (2019). A total of 215 people of the Githurai slum in Nairobi were selected at random for this cross-sectional study. A pre-tested questionnaire that gathered information on the backgrounds, drinking habits, motives, and social networks of participants. Alcohol consumption was most prevalent among respondents aged 31 and older, those who were married, separated, or divorced, those with bachelor's degrees or higher, those with yearly salaries greater than $50, and those who came from dysfunctional households. The low-income group consumed unaccounted-for alcohol, whereas the high-income group consumed alcohol that was tracked. Those who grew up in families where both parents and siblings imbibed regularly had a greater prevalence of alcoholism. Stress-induced drinking and alcohol-related problems were more prevalent among singles, those with lower incomes, and those from broken homes. The first alcoholic beverage most young, single, part-time employees drank was Budweiser. Alcohol abuse among adults living in slums is related to socioeconomic level, family and social support, and stress, all of which should be treated.

Olack et al. (2015) described the distribution of risk factors for hypertension and investigated their connection with hypertension in an urban slum in Kenya due to the lack of data on hypertension and related risk factors among urban slum residents in Sub-Saharan Africa (SSA). In Nairobi, Kenya's

Kibera slum, the authors conducted a cross-sectional study of individuals aged 35 and older. Socio-demographic characteristics and self-reported health behaviors were collected through interviews performed by trained interviewers using a modified version of the World Health Organization's stepwise surveillance questionnaire for chronic disease risk factors. The patient's height, weight, and blood pressure were measured according to established methods. Multiple logistic regression analysis was used to identify hypertension risk factors, and odds ratios with 95% confidence intervals were calculated.

The average age of the 1,528 individuals that participated in the survey was 46,7 years. 29.4% of persons in this age range had hypertension. Over a third (39.5%) of the 418 hypertensive patients were unaware of their illness. The current prevalence of smoking was 8.5%, while alcohol use was 13.1%. More over a quarter of the sample was rated overweight (26.2%). A higher body mass index, a smoking history, a lack of formal education, a low level of wealth, a sedentary lifestyle, old age, and widowhood were all risk factors for developing hypertension. In a multivariable logistic regression model, being a widow, having the highest income index, being fat, and having a moderate level of physical activity were all significantly associated with hypertension, even after correcting for other characteristics. At least one-third of people between the ages of 35 and 64 in the slums have hypertension, making it a significant public health risk. Important hypertension risk variables include age, marital status, wealth index, inactivity, and body mass index. In order to reduce the onset of hypertension and its repercussions, preventative measures should concentrate on modifiable risk factors.

Using the nationally representative 2006 Bangladesh Urban Health Survey, Kamal (2015) investigated the socioeconomic determinants influencing contraceptive usage and method preference among women in urban slums. Using bivariate and multivariate statistical approaches, the correlation between the independent and dependent variables was examined. 58.1 percent of women used some type of contraception, with 53.2% employing modern approaches. Women's usage of contraception was influenced by their age, the number of unions they belonged to, the number of non-governmental organizations (NGOs) they supported, their employment status, the number of children they had, the rate of child mortality, and the country's wealth index. The most important criteria in both contraceptive use and method selection were the distribution of surviving children by gender and the education level of mothers. Residents of slums should have more access to free nonclinical modern methods through expanding initiatives. Providing doorstep delivery of current types of birth control might enhance contraceptive use among the urban poor of Bangladesh.

Patel and Deonandan (2017) explored the variables affecting Indian women's body mass index (BMI) in urban slums, with an emphasis on those who identified as members of a minority group. The Indian National Family Health Survey (2005-2006) was utilized to conduct a multiple linear regression analysis on the demographic and behavioral factors believed to be associated with body mass index (BMI), with a focus on the measures of social class, especially caste and tribal status. Television viewing, diabetes, age, living in affluent areas, and residing in New Delhi, Andhra Pradesh, or Tamil Nadu are all variables that correlate to a higher body mass index. Being

a member of a federally recognized tribe was not associated with changes in body mass index, but the unadjusted rates suggest that tribal status warrants more investigation. Residents in slums struggle with both starvation and obesity. To improve the health of these ladies, it may be required to utilize many therapies.

Nuwematsiko et al. (2022) evaluated the socioeconomic and health repercussions of the COVID-19 pandemic and the efforts done to ameliorate them among Kampala's slum population in order to inform present and future pandemic response strategies. Between October and December of 2020, a cross-sectional study utilizing both quantitative and qualitative methodologies was conducted in the slums of Bwaise I and Bwaise III in the Kawempe district of Kampala, Uganda. Using systematic sampling, the authors randomly chose 425 household heads to engage in the in-person quantitative interviews. In addition to the photovoices of eight Community Health Workers (CHWs), six FGDs with slum dwellers were undertaken to document the unanticipated socioeconomic and health consequences. We utilized STATA version 14.0 for quantitative analysis and NVivo version 12 for theme analysis of qualitative data. Using a modified Poisson regression analysis, the factors influencing people's access to food were determined.

Others said that they had difficulty obtaining adequate food, that their children's schools had been interrupted, that their incomes had decreased, and that they had lost their jobs. Twenty-five percent of individuals surveyed identified domestic violence as a challenge they've encountered. Seven themes emerged from the qualitative findings on the impact of COVID-19: limited food availability; negative impact on children's rights (child labor and teen

pregnancies) and education; poor housing and lack of accommodation; negative social behaviors; negative impact on family and child care; decreased income and employment; reduced health and access to health care; and limited access to health and health care. Residents of Bwaise I and Bwaise III were severely affected by the negative socioeconomic and health repercussions of COVID-19 and its prevention measures. Only two of the catastrophic consequences on children were child labor and adolescent pregnancy. Protocols to protect the most vulnerable community members, such as children and women, should be developed and integrated into response activities.

Kamara, Namugambe, Egessa, Kamanga, and Renzaho (2019) evaluated the socioeconomic and sexual health status of Kampala, Uganda's urban slum youth. The purpose of this study was to evaluate such needs and make contextually-based recommendations for boosting their well-being in a sustainable manner. To conclude their qualitative study, the authors interviewed 20 key informants and had 10 focus groups with a total of 113 participants. Using the structuration theoretical framework, we were able to identify, define, review, organize, and recount the emerging themes and sub-themes that allowed us to investigate the inherent capacity of slum dweller youth to make independent decisions and the recurring rules and resources that influence or restrict their options.

Personal and societal factors continue to limit the potential of young people living in urban slums, according to the findings. Low life happiness and quality, as well as inattention to sexual and reproductive health, were individual characteristics. On the societal level, a lack of access to sexual and

reproductive health care and a depressing work environment were factors. Youth in the slums of Kampala, Uganda continue to have their demands disregarded, which is a recipe for political instability and insecurity, since an economically unproductive and dissatisfied population is a dangerous thing. To effectively address these youth, interventions must take a holistic view of the slum as a whole, engaging and empowering residents from all walks of life to build stronger community structures that improve livelihoods and capitalize on opportunities that generate income fortification and social and civic transformation.

In a research done in Ibadan, Nigeria, Sekoni, Mall, and Christofides (2021) investigated which slum-dwelling female traits were associated with PTSD. For their cross-sectional study, the authors recruited 550 women aged 18 and older from a variety of slums. A multivariate linear regression model was built to evaluate potential correlations between PTSD and external influences. Higher PTSD scores were significantly associated with childhood sexual abuse, intimate partner violence in the preceding year, and anxiety. The absence of recent stressful experiences was not significantly associated with PTSD. Unlike educational achievement, job, and marital status, characteristics such as age and wealth index revealed only a minor correlation with PTSD. Both sexual abuse of minors and intimate partner violence are avoidable. Moreover, the authors recommended longitudinal studies to identify and assess possible risk and protective factors.

Aberese-Ako et al. (2022) investigated the socioeconomic and health consequences of COVID-19 in Ghana's rural and urban slum populations. Used a concurrent mixed methods design. The research strategy entailed the

simultaneous use of many methodologies. The quantitative portion of the study consisted of a sample of 400 individuals, while the qualitative portion consisted of 46 In-Depth Interviews (IDIs) with residents and officials. We performed FGDs with 64 community members and observed them from a distance for three months. We evaluated quantitative data using both descriptive and inferential statistics. The interviews were recorded using digital recorders and then transcribed for analysis. Transcripts of interviews, focus group discussions, and field notes were imported into NVivo 12 for theme classification and analysis.

The majority of respondents indicated that COVID-19 has had negative social and economic effects, especially on the cost of living and food accessibility. Other results included depression, anxiety, and avoidance of medical treatment. Those between the ages of 18 and 32, men, those living in urban slums, those who are married, those who are employed, and those with low incomes (those earning between GHC10/$1.7 and GHC100/$17) were more susceptible to the socioeconomic and health effects of COVID-19. Rural people created locally tailored washing aids to facilitate hand washing in rural communities, whereas urban slum dwellers relied on family and social networks for food and other essentials. Vulnerable people experienced the negative socioeconomic and health effects of both COVID-19 and government mitigation efforts. Government COVID-19 mitigation efforts should target those aged 18 to 32, men, residents of urban slums, married individuals, and those with low incomes. We must urge communities to utilize their evolved coping methods long after the COVID-19 outbreak has ended.

Seidu et al. (2022) aimed to test the hypothesis that slum women in Accra who have received sex education are more likely to use contraception. Women of reproductive age from Agbogbloshie and Old Fadama slums in Accra, Ghana, participated in a cross-sectional survey. 691 individuals were included in the study, including those who responded to questions on their sexual history, contraception use, and level of sexual education. Using logistic regression models, the link between a person's degree of sexual and reproductive health education and their history of contraceptive use was studied. The significance of the association between the outcome and the independent variables was determined using crude odds ratios and adjusted odds ratios with a p-value less than 0.05.

Sixty-seven percent of women, or more than half, have never received sexual and reproductive health education. Seventy-seven percent of those surveyed had previously used birth control. Even after controlling for variations in background and education, women who had never received training on sexual and reproductive health were still less likely to use contraception. Contraceptive use was greater among unmarried women and those who had access to the media in the slums of Accra, Ghana (newspapers, radio, and television). Few women living in Accra's urban slums have received sex education, according to the report. Those who had received sex education were shown to be more likely to utilize contraception. These findings underscore the need to promote sexual and reproductive health education among girls and women of reproductive age residing in Accra's urban slums by utilizing informal social networks and local media outlets.

Nkrumah, Agyabeng, Ahwireng, Bawole, Mickson, and Ahenkan (2022) researched the power issues facing slums in order to comprehend the resulting health repercussions. Using a combination of purposive and convenience sampling, 30 individuals from a wide variety of demographics were recruited for in-depth interviews within the context of qualitative research. Findings revealed that slums faced several challenges owing to reasons such as a lack of government assistance, burdensome rules, and fiscal limits. According to the report, a lack of health information in the slums has contributed to skin diseases, stomach problems, cholera, typhoid, and delivery complications. Due to the qualitative character of the investigation, the results cannot be generalized to all slum inhabitants. This research stretched the limits of our understanding of urban poverty, enabling academics and practitioners to get a deeper understanding of the context of important concerns. Through the perspective of the two-factor theory of motivation, this study showed the particular barriers slum people in a given nation experience in acquiring access to electricity.

Effects of the Shared Social-Physical Environment on the Health of slum residents

Wang, Kuffer, Sliuzas, and Kohli (2019) investigated whether slum inhabitants in low-income urban locations are exposed to greater temperatures, hence further damaging their demographic and health characteristics. Instead than depending on a random selection of pixels or other land surface zones, this study examines the underlying patterns of heat to see whether micro-clusters of squalor and temperature are related. The regional climate of Ahmedabad, India is estimated using remotely sensed medium-resolution land

surface temperature (LST) records. The optimal representations of temperature pattern morphology are automatically learnt from temporally consecutive images without manually specifying model hyper-parameters. Once the physical characteristics have been evaluated, the temperature trend on a local scale in slum regions may be established.

The data indicate that slums cause localized temperature increases in some places. Specifically, larger slums are vulnerable to more severe localized high temperatures than smaller slums. It is impossible to tell whether or not Ahmedabad's unusually high temperatures are caused by the city's slums due to a lack of statistics and their comparatively small size. The investigation of heat-related risk in slums lacked a vital element, which this study addresses. Within the scope of a simplified study procedure, local temperature patterns were explored and the slums' susceptibility to heat was assessed. Using morphological observations as additional parameters, urban temperature analysis is conducted on a finer scale than previously allowed.

The incidence of intestinal parasite infections (IPIs) in Brazil and other nations is poorly understood. Understanding the epidemiology and risk factors for IPIs in the general population of slum dwellers is essential for the development of effective public health measures in today's rapidly urbanizing society. Ignacio et al. (2017) examined the occurrence of IPIs and the social and environmental elements that lead to their development in the favelas of Rio de Janeiro, RJ State, Brazil. In order to discover intestinal parasites, researchers analyzed 595 fresh stool specimens using the spontaneous sedimentation method and three slides per sample in a cluster of urban slums between 2015 and 2016 as part of a cross-sectional study. Endolimax nana and

Entamoeba coli were the bacteria discovered most frequently, followed by Giardia intestinalis and Ascaris lumbricoides. Entamoeba coli/A. lumbricoides and Entamoeba nana/E. histolytica/dispar were the most prevalent coinfections. The majority of the population drank from municipal water mains, which were contaminated with coliform and E. coli and included A. lumbricoides. The incidence of poverty was greatest among children aged 0 to 19 years old. A universal strategy focusing on preventative chemotherapy against soil-transmitted helminths may not be relevant to all people in low-income countries due to the predominance of protozoa parasites. Residents and health professionals must take the socioenvironmental characteristics of urban slums into account when assessing intestinal parasite infections for disease control and health promotion programs.

Ssemugabo, Halage, Namata, Musoke, and Ssempebwa (2020) investigated the antecedents and implications of water, sanitation, and hygiene (WASH) intervention uptake among slum residents in Kampala, Uganda, using a socio-ecological framework. To gain a deeper understanding of the neighborhood, we conducted key informant interviews with local business owners, government officials, and IT specialists, as well as focus groups with normal inhabitants. Adoption of WASH interventions was facilitated by variables such as people's knowledge of WASH-related illnesses and their lack of WASH-related information, as well as their peers' activities at the home level and organizations' support of WASH. Slum residents were encouraged to implement WASH interventions at the community and public policy levels through community participation and empowerment, as well as the formulation and enforcement of ordinances and bylaws. On the other hand,

individuals were hesitant to accept WASH initiatives due to difficulties such as ignorance, racism, language barriers, and a lack of resources. Residents of Kampala's slums met resistance to WASH activities on several fronts, including unsupportive organizational settings and community engagement, cultural attitudes and a lack of space at the community level, and ineffective leadership and political interference. The success or failure of WASH initiatives in a slum is determined by several socioecological factors. Therefore, it is essential that WASH initiatives employ a multidimensional strategy that involves all stakeholders in the result.

Malika, Barbagelatta, Penny, Reynolds, and Sinclair (2021) impact of housing and infrastructure on handwashing among slum dwellers in Peru. The purpose of this study was to discover statistically which components of everyday life have the most impact on the frequency with which people wash their hands. In this study, we examined the health of 16-year-olds in the slum of San Juan de Miraflores, located on the outskirts of Lima, Peru, using a cross-sectional epidemiological approach. Poisson regression was utilized to explore the effect of demographics on handwashing frequency. There was no link between living conditions (such as home style, population density, availability to running water, and grey water disposal) and reported hand-washing frequency. There is an association between the number of children in the home (those with children less than five were more likely to report not washing their hands) and the length of time a person has resided in a slum. Due to the correlation between living conditions and health, more rigorous study designs are necessary to determine which treatments are most likely to provide positive outcomes for slum inhabitants.

According to Mukherjee, Sundberg, and Schütt (2020), water security is important for several reasons, including but not limited to: maintaining human health; conserving ecosystem health; and assuring the availability and accessibility of water for drinking, food production, and washing. According to data gathered during India's 2011 Census, 17.4 percent of urban families are located in economically disadvantaged slums. Due to the expanding population in urban areas, it is becoming increasingly challenging to provide basic WASH services. We will explain how social isolation increases people's susceptibility to threats such as contaminated drinking water and inadequate sanitation and hygiene practices. This study attempts to assess the present status of water, sanitation, and hygiene facilities in the slum regions of Kolkata, India, as defined by the 2011 Indian Census.

Using census and household survey data, the authors identified a paucity of WASH services in some Kolkata neighborhoods. The accessibility, quality, and dependability of water, sanitation, and hygiene services in Kolkata's slums are problematic. Moreover, slum dwellers frequently struggle to maintain their water, sanitation, and hygiene systems. This study expands our understanding of the significance of factors such as gender, religion, and knowledge of drinking water in disadvantaged areas by examining the connections between physical and social issues determining vulnerability and the neglect of basic WASH provisions as human rights in slum communities.

As stated by Takyi, Amponsah, Yeboah, and Mantey (2021), slum expansion has become a serious barrier to urban planning and administration due to the issues it causes in the surrounding community. Due to the behaviors of slum dwellers, cities frequently fail in their attempts to achieve social,

economic, and environmental sustainability. Therefore, urban redevelopment programs that try to improve the living conditions of slum people garner considerable attention. By studying the locations of a subset of the city's slums, this study examined the social, economic, and environmental effects of the actions of slum residents on the city of Kumasi. In the Aboabo and Ayigya Zongo slums of Kumasi City, 260 low-income households were interviewed.

It was discovered that slums in Kumasi Metropolis are situated in regions with the largest densities of ugly uninhabited lands. As land is occupied by low-income city inhabitants, many of whom are migrants, slums develop. The behaviors of slum dwellers were associated with environmental problems such as river pollution and unclean living conditions. As socioeconomic issues, poor health, lower educational achievement, and increasing noise pollution were identified. The conclusion of the study is that in order to halt the expansion of slums, local governments must develop green policies that assist the transition of these unsightly areas into green spaces. The researchers also recommend that authorities in the Metropolis expand their environmental awareness initiatives in these slums to guarantee that inhabitants adopt a more optimistic perspective on environmental resource management and consumption.

Adams & Nyantakyi-Frimpong (2021) reported that despite a large and growing body of literature on anticipated climate change effects on health, we know very little about the links between differentiated vulnerability to climate extremes and negative physical and mental health outcomes among slum dwellers. They examine how gendered vulnerability, socioeconomic differentiation, and historical and structural factors related with geography

contribute to inequalities in physical and mental health outcomes induced by recurrent flooding. The authors conducted their research in Old Fadama, Ghana, using a Photovoice approach with a total sample size of twenty, as well as theoretical concepts from political ecologies of health and feminist political ecology. The study indicated that flooding can have harmful impacts on both physical and mental health, with susceptibility varying by demographic parameters such as age, gender, socioeconomic level, and housing type. The outcomes of their study suggest that academic work on political ecologies of health should pay greater attention to socioeconomic disparity. This research contributes to the growing corpus of literature linking social and contextual elements to medical outcomes, ultimately advancing the subject of health and place studies.

Preko, Nkrumah, and Mensah (2021) investigated the country-specific comprehension of the occupational activities and environmental behavior of slum inhabitants. The replies of thirty-five participants were evaluated using an exploratory qualitative approach and the ecologically responsible behavior model. The findings indicate that slum inhabitants engage in a variety of socioeconomic activities, such as the distribution of sachet water, the selling of prepared and uncooked food wrapped in polythene bags, and the burning of waste. Masons, carpenters, tilers, salon beauticians, scrap dealers, and filthy waste disposal were also found as unique occupations in slum research. In conclusion, this study uncovered divergent perspectives among respondents on environmental responsibility and the consequences of their activities. As a result, slum dwellings are usually plagued by health concerns, an unhygienic environment, and soil deterioration.

Due to the use of a qualitative methodology, it would be improper to apply the study's findings and conclusions to the entire slum population in Ghana. This research gives a country-specific perspective on the ecological behavior of slum inhabitants depending on their employment, which may be utilized to inform health policy. This study's findings are important for policymakers and practitioners because they improve context-specific information regarding the health-related behavior of slum inhabitants.

Strategies adopted by residents to cope with prevailing Health-related Problems

Waghela, Shah, and Saha (2018) studied people living in urban slums in Durg and Bhilai, India, to learn more about the impact of Mitanins on people's propensity to seek medical attention. Ten urban slums, five in Durg and five in Bhilai, were chosen at random. Each home was given a standard questionnaire to fill out in order to contribute to the overall data set. 1025 households, or 4997 individuals, were included in the study. The Mitanins dealt with around a quarter of the population for medical assistance, most often for treatment of chronic communicable diseases and reproductive and sexual health concerns. There has to be a reevaluation of mitanin's role in early diagnosis, with an emphasis on point-of-care diagnostics and on making sure patients get the therapy they need in a timely manner.

Amiresmaili, Yazdi-Feyzabadi, and Heidarijamebozorgi (2019) found that people's health care utilization is a complex behavioral phenomenon with many influencing factors. This study set out to assess the frequency with which slum dwellers in one of Iran's largest cities sought medical care. This cross-sectional study included 559 residents of urban shantytowns who were

selected at random. Data on health service utilization was collected using a questionnaire developed for the health equity assessment and response tool. We analyzed the data using SPSS version 22 to perform descriptive statistics and a logistic regression analysis.

Fourty-two and a half percent of the participants in this study required outpatient treatment (238 total). Twenty-one percent of the population (118 persons) were able to benefit from them. To add insult to injury, just 1 in 8 (38 families) with children who require outpatient therapies in the past month actually made use of them. 62% (349) of patients needed to be hospitalized, while only 31% (175) were actually admitted. Age, gender, marital status, income, and level of education all had a role in who sought inpatient care, whereas the same factors predicted who opted for outpatient care. In the final multiple regression model, we accounted for age, marital status, and the requirement for hospitalization. Slum dwellers shouldn't be encouraged to visit the doctor. The study's findings clearly highlighted the nuanced nature of slum residents' utilization of health care services, stressing the significance of strategic planning and policy creation to fulfill this growing demand.

Amendah, Buigut, and Mohamed (2014) examined the coping strategies among urban poor: Evidence from Nairobi, Kenya. Information acquired in Kenya's capital city of Nairobi. Some estimates have the percentage of the urban Kenyan population living in slums or conditions similar to slums at between 60% and 80%. The researchers in this study set out to learn more about the lifestyles, coping mechanisms, and underlying causes of those living in the informal settlements of Nairobi. The data utilized came from the Indicator Development for Surveillance of Urban Emergencies

(IDSUE) project, which took place in four slums in Nairobi between April 2012 and September 2012. Everything from livelihoods to member wages to household spending to shocks and coping methods are all factored into the data set.

A whopping 52% of household income and 42% of total expenditures are devoted to food. Individuals and their families report adopting a variety of coping mechanisms in the four weeks prior to the interview in order to deal with traumatic occurrences. To make ends meet, many families (69%) and individuals (52% of households) have reduced their food consumption or taken out loans. It's vital to remember that you're not alone; many families have to take their children out of school to deal with financial challenges. People who had stable employment, company ownership, free housing, high household incomes (the top two quintiles), or access to social safety nets were less likely to use any coping strategy. The risk that a coping mechanism would be used increased both with increasing shock exposure and with a greater number of children under the age of 15. Policies that limit food price inflation and expand decent-paying employment opportunities for the urban poor are more likely to reduce the use of maladaptive coping mechanisms among slum residents. The frequency with which detrimental interventions, such as "removing" children from school, are utilized can be decreased by making basic education available to more children in the slums at no cost.

In their study, Swain, Bhattacharya, Dutta, Pati, and Nanda (2019) used a community-based comparative method to examine susceptibility and adaptability to excessive heat in odisha, India. Heat waves and heat-related illnesses have become more common in India in recent years. The researchers

in this study set out to learn more about heat illness and the ways that city dwellers in Odisha, India, deal with it. A 2017 cross-sectional study in the twin cities of Odisha contained data from 766 households (HH), with a total of 1099 persons (404 from slums and 695 from non-slum regions). Socioeconomic status, home characteristics, heat management strategies, and the prevalence of heat illness were some of the variables studied. We used multivariate logistic modelling that accounts for clustering effects at the household and slum levels to identify risk variables for heat illness after adjusting for potential confounders.

The average age of the study participants was 38.36, and just under half were female. There was a huge disparity between the groups' standard of life. It might also be stated that almost two-thirds of the participants in the study had heat illness. Heat exhaustion was more common among non-slum dwellers and was exacerbated by male gender, medication use, and preexisting conditions. However, outside cooks and individuals with previous health conditions were more likely to have heat illness among the urban poor. Residents in shantytowns were 60% less likely to become ill from the heat because to the widespread adoption of cooling systems. Heat exhaustion has several roots that may be traced back to both the domestic setting and the physical condition of the victim. Finding vulnerable groups and developing more adaptable responses might improve public health preparedness.

Mensah, Yu, and Shi (2022) explained the essence of an alternative approach to the Old Fadama inevitable eviction and to justify the merits & feasibility of a land-sharing scheme to the community. This study employed principles and ideas to argue land sharing, whereas others had merely used

notions. Amartya Sen's philosophy of justice, which argues against transcendentalism, may be used to lessen the social stratification and inequality caused by evictions. The study's primary goals are to determine (a) whether or whether land-sharing is viable in the study's geographical location, (b) how land-sharing compares to alternative possibilities, and (c) what drives community members to seek justice. With the use of questionnaires, interviews, and direct observation, we were able to perform a comprehensive survey of the study region. Six hundred people from the impacted community, thirty officials from the local government, and one representative from Amnesty International Ghana were selected using a systematic sampling method. The raw data was analyzed using both qualitative and quantitative approaches.

The most prevalent reasons for seeking redress with the local authorities are related to citizenship, property, visas, and lengths of stay. Second, because it entails less guesswork than relocation and monetary compensation, land-sharing is favoured. The results of this analysis support the viability of executing a land-sharing plan for the Old Fadama in accordance with the principles proposed by Rabé (2005). According to the research, local administrations should prioritize the provision of information and financial compensation to displaced residents.

Oppong, Asomani-Boateng, and Fricano (2020) looked at to what extent is this slum sustainable? Major difficulties are posed by the slum conditions associated with squatter communities in African towns. Conditions in slum areas caused by squatter populations are a major problem in African towns. Accra, the capital of Ghana, has a long history of dealing with squatter

populations in the region through demolition and eviction. Old Fadama/Agbogbloshie is a squatter settlement in Accra that has flourished despite several attempts at removal. Based on sustainable research principles, this study investigates the origins of this slum. A total of 100 slum residents, 20 city officials, and 20 prominent individuals were surveyed to compile the data presented here. The findings suggest that slum repairs that take into account the social and economic concerns of residents may be the outcome of community engagement combined with municipal power.

As recalled by Amoako (2018), many Accra, Ghana slums have been threatened by flooding every year for the past half century. It would appear that the residents of these locations had withstood the storms brought on by the elevated danger of flooding and the subsequent attempts to remove them by local officials. Even if the population and the number of dwellings in flood-prone regions grow each year, the locals there always find a way to survive. Does it seem like they're growing harder to handle? Have natives honed their capacity to bounce back from calamities like floods and relocations? The way they handle floods is influenced by. Is there anything that can be learned from this allegedly hardy grass-roots campaign to better protect the main cities of Africa against flooding? Using case studies of three informal settlements in Ghana (Glefe, Agbogbloshie, and Old Fadama), the author analyzed the growing adaptive capacities and social resilience of low-income urban dwellers in the face of flood risks.

The author detailed how residents of flooded shantytowns are gradually reshaping their understanding and embodiment of flood experiences into adaptive skills and responses. Local communities are, in the absence of

effective government flood interventions, creating and sustaining flood responses and adaption tactics that are shaped by people' social and political networks and a sense of place. The solutions include the installation of communal drains, the continual restructuring of housing units, and the formation of local evacuation teams and safe havens. It has been hypothesized that urban policymakers may learn something from the growing municipal capacity to control flood risk.

The deplorable living conditions typical of urban slums have caused widespread concern for the migrants' health (Afeadie, 2021). Taking care of one's health should become second nature. For community health initiatives to be successful, it is crucial that their context be taken into account. Afeadie's research sought to address this knowledge gap by contrasting the health care-seeking patterns of rural-urban labor migrants before and after they settled in the slums of Madina in Ghana's Greater Accra Region. A sequential, explanatory structure was used as part of the author's study methodology. Questionnaires and interview guides were used to compile the data; however, without a reliable sampling frame, cluster sampling was used to choose representative samples from each community. Our second step was selecting several family heads at random. There were 241 total questionnaire returns, representing 100% of the population. Using a purposive sample method, the author conducted eight in-depth interviews and six interviews with key informants.

The author found that there are numerous key health-seeking behaviors that are not met in the slum but are in the migrant's home country. A lack of resources and knowledge, as well as the slum itself, are among the many

reasons why people choose to dwell in an urban ghetto. As a result, this study's findings challenge the current paradigm of health beliefs. Thus, it is crucial to remember the relevance of context when designing health interventions; in this case, slums constituted of rural-urban migrants present a distinctive dynamic. The slums where urban migrants live have been largely overlooked by studies of people's inclination to seek medical treatment. Without accurate data on the number of migratory slum residents, efforts to improve their health may fall short of their needs. As a result, the study's findings stress the importance of accounting for these variations in future health policy and practice. The same people had contrasting medical-care-seeking behaviors in the slum and their home nations, the study found.

Theoretical Background

That poverty is viewed as a state of deprivation is demonstrated by the notion of the Vicious Cycle of Poverty and Sustainable Development. To be unable to satisfy one's basic necessities because of a lack of resources, typically owing to a lack of money. Owoeye (2012, 2013) utilized this idea to depict the factors that lead to slum development in Akure, a city in Nigeria, and how those slums impact residents' quality of life (see Figure 1).

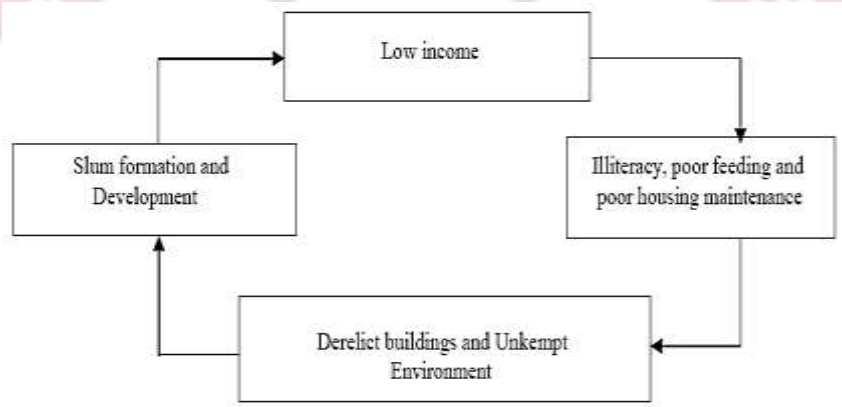

Figure 1: Circular Effects of Poverty on Slum Formation

Source: Owoeye (2012)

According to Osoko (2000), the notion of Sustainable Development is crucial in helping the world successfully address the pressing environmental and development challenges we face today. In fact, the author claims that most environmental issues related to inadequate sanitation are the consequence of human actions carried out in the name of progress and survival. These pursuits revolve around satisfying the human need for sustenance, clothing, abode, conveyance, and ease of mind. According to Okusipe (1998), the notion of sustainability is to perceive the environment as a complex, dynamic, and fragile system that requires intentional and purposeful actions to satisfy our many requirements in the here and now and in the future with the hope of making it better than it was before.

According to Adetokunbo and Herbert (2003), environmental health includes all elements of human health and well-being, including quality of life, that are determined by the environment's physical, chemical, biological, social, and psychological conditions. Because of this, ensuring environmental health also entails supplying clean water on a consistent basis, reducing pollution, and providing suitable housing with the basics (Adetokunbo and Herbert, 2003). Owoeye (2012) argues that Nigerian authorities have adopted measures to enhance the standard of urban areas, particularly in the areas of environmental regulation and sanitation. These measures have given rise to a number of political statutes and decrees. With such a large gap between rural and urban living conditions, it is assumed that people in developing nations would eventually move to the cities. These usually results in poverty and compel people to move to urban centres for greener pastures. Most people are illiterates and end up not securing better jobs and settle in unkempt houses

leading to increase in slum formation in cities. And as that happens the circle goes on and on each time and making the core cities congested and slums prone to disease and conditions that affects the quality of people's health in cities.

Even though this concept might always be the case and most especially in developing countries, it has some much relevance to the case of slums in Ghana and to some much extent Sodom and Gomorrah where this study was undertaken. For that matter, the study adopted the concept and used it to achieve its objectives.

Conceptual Framework

The study seeks to investigate how individual characteristics and shared social-physical environment define the health of slum residents in Old Fadama at the Accra Metropolitan Area of Ghana, using the conceptual framework illustrated in Figure 2 leveraging the theories, concepts, and empirical issues reviewed above. This research expands on the ideas presented in Vicious Cycle of Poverty by Owoeye (2012, 2013) and other urban planners who have stated that poverty is a major factor in the decline of our cities, such as Abumere (1987), Osatuyi (2004), and Olarenwaju (2004). Poverty is defined as a condition of deprivation in which an individual is unable to provide for himself because of his income being too low. Owoeye (2012, 2013) and Olanrewaju (2004) used this idea to illustrate the causes of slum formation in Akure's urban center, finding that low income leads to high rates of illiteracy, malnutrition, and inadequate housing maintenance; that inadequate housing maintenance leads to derelict buildings and a deteriorating environment; and that these factors all contribute to the growth of slums. This

study employs the above concept to find how individual characteristics and shared social-physical environment which most engulfed with poverty related dimensions to define the health of slum residents.

The conceptual framework was used for the work taking into consideration the specific objectives of the study. Firstly, the study seeks to find out the prevalent health issues/diseases in Old Fadama as presented in the model. The second aspect of the model presents the perception of slum dwellers on factors that affect their health status. Thirdly, the framework depicts the effects of the shared social-physical environment on the health of slum residents. The final section of the model presents strategies adopted by residents to cope with prevailing health-related problems.

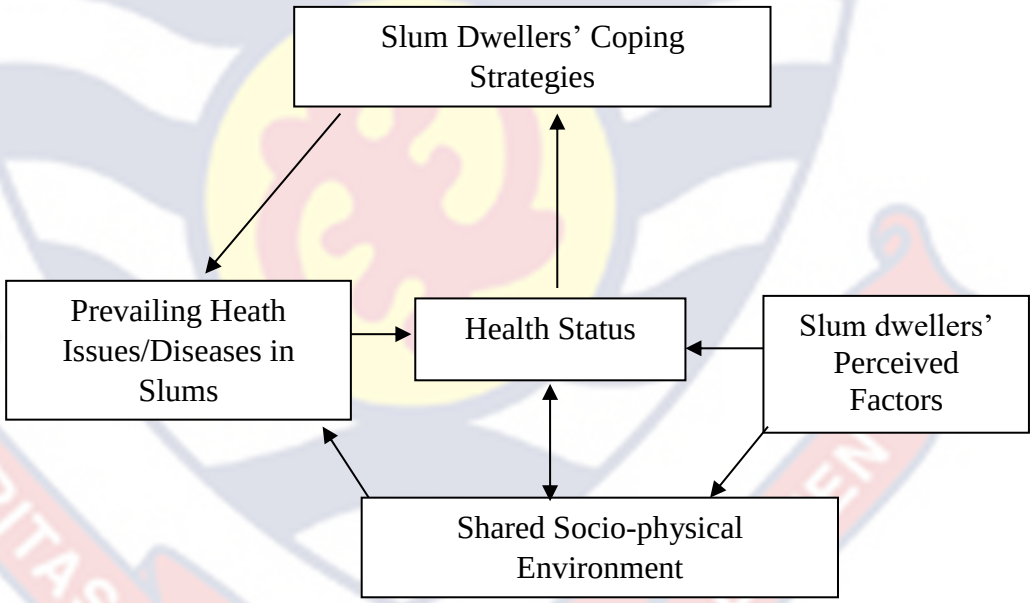

Figure 2: The Conceptual Framework
Source: Author's construct (2023)

Prevalent Health Issues/Diseases in Slums

The study's overarching objective is to use the conceptual model to identify the most pressing health problems facing the residents of Old Fadama. It's not just in the United States that slum inhabitants face health risks. Health

problems such as high blood pressure, malaria, cholera, diabetes, dangue fever, deliberate and accidental injuries, TB, rheumatic heart disease, hepatitis, pneumonia, etc. affect them. There are several negative outcomes for those living in slums. The authors Baeza and Packard (2006) state that those who reside in slums are at a higher risk of contracting various illnesses. According to Viegas (2006), many people living in slums enter a vicious cycle as a result of health shocks, wherein acute poverty and sickness lead to hospital admission, repeated readmissions, and/or mortality owing to a lack of adequate coping techniques. These findings corroborate those of earlier research on common illnesses in developing countries (Dakhode et al., 2019; Das et al., 2021; Kabore et al., 2019; Macchia et al., 2021; Naydenova et al., 2018; Reddy et al., 2022; Sekoni et al., 2021; Sutradhar et al., 2019; Venkatesh Prevalence estimates for various illnesses and health problems are also included in the present study.

Perception of slum dwellers on factors that affect their Health Status

Factors that people in slums believe impact their health were incorporated into the conceptual model. Inadequate infrastructure, including a lack of running water, sewage systems, and proper roads, as well as the prevalence of informal housing, are all variables that this study suggests have a significant impact on the health of slum residents. It was found that the health of the respondents was largely affected by their access to essential utilities like water, electricity, and communication networks, and by sanitation measures like toilet facilities and gutters. In line with previous research (Gitatui et al., 2019; Nejad et al., 2021; Nuwematsiko et al., 2022). For example, in a scoping study following the PRISMA-ScR guidelines, Nejad et

al. (2021) analyzed the primary facets of these factors (Preferred Reporting Items for Systematic Reviews and Meta-Analyses Extension for Scoping Reviews). Based on the literature, seven overarching dimensions (housing, socioeconomic status of the family, nutrition, neighborhood characteristics, social support and social capital, occupational factors, and health behaviors). Poor sanitation is a well-known problem in urban poor communities and has a major impact on residents' health. Public toilets are heavily utilized since many slum dwellers lack access to private facilities. Homes, workplaces, and educational institutions can be built without restrooms. Sanitation was found as a key factor impacting the health of slum inhabitants in several other research (Nejad et al., 2021; Nuwematsiko et al., 2022; Takyi et al., 2021). One of the elements affecting slum inhabitants' health is the quality of their dwelling, according to research by Nuwematsiko et al. (2022). Slum residents' health is negatively impacted by a lack of transportation options, particularly roads that go to or within slums. The poor state of the roads in the region severely limits the GHS's ability to meet its mission of providing excellent healthcare to the local population. The rates of maternal and newborn mortality, for instance, have been on the rise, while respiratory tract infections have emerged as a major issue. The poor road conditions, along with the high exhaust emissions from automobiles that are now rickety, cause a number of health problems. When roads are in bad shape, it can cause more problems than just a rough ride. After enough time, road conditions might degrade to the point that driving is dangerous. Uneven pavement increases the risk of an automobile accidents or rollover, which can be harmful to the driver, passengers, and bystanders. Numerous research' findings that poor road

infrastructure is a key factor in the poor health of slum residents provide support for this theory (Choi et al., 2022; Malika et al., 2021; Nejad et al., 2021). The majority of the urban population in developing countries now lives in slums or other types of informal settlements. More than a billion people call the slums and shantytowns of the world's low- and middle-income cities home. People living there are often marginalized in a variety of ways, including socially, environmentally, and politically, all of which have negative effects on their health. In addition, the government has not formally recognized these settlements. Even while some improvement programs have improved residents' health, the vast majority of informal settlements still lack basic risk-reducing infrastructure and services including clean piped water, sanitation and drainage, solid waste collection, healthcare, and emergency services. Informal settlements have been described as a key factor impacting the health condition of slum residents by several research (Malika et al., 2021; Nejad et al., 2021; Nguyen & Pattanasri, 2022; Nuwematsiko et al., 2022).

Effects of the Shared Social-Physical Environment on the Health of slum residents

The consequences of the slum community's shared social-physical environment on inhabitants' health are also outlined in the conceptual model. Objectives Predict how aspects of the social-physical environment, such as infrastructure, public services, and housing features, impact the health of slum residents. The health of slum dwellers is highly dependent on these factors. As a result, it is clear that the health of slum inhabitants should decrease along with the shared social-physical environment. This is in line with the hypothesis of neighbourhood effect, which states that slum dwellers' health is

negatively impacted by their shared social-physical environment. Evidence from a number of research shows that slum residents' health suffers greatly from the lack of adequate infrastructure (Malika et al., 2021; Ssemugabo et al., 2020). Inadequate public services are a key concern influencing the health of slum residents, according to authors like Mukherjee et al. (2020), Ssemugabo et al. (2020), and Takyi et al. (2021). Similarly, inadequate housing characteristics have been linked to negative health outcomes for slum residents in a number of studies (Malika et al., 2021; Mukherjee et al., 2020).

Strategies adopted by residents to cope with prevailing Health-related Problems

Slum residents' ideas for addressing the most pressing health issues are modeled here. Residents in slums have developed a variety of coping mechanisms to deal with the unique stresses posed by urban poverty. This study by Amendah et al. (2014) looked at how the urban poor of Nairobi, Kenya, deal with adversity. Several different coping mechanisms are mentioned by different families. The most common method is cutting back on eating, followed by making use of credit. In addition, some families report pulling their children out of school as a means of dealing with budgetary constraints. Another study looked at the susceptibility and adaptability to intense heat in odisha, India, and found that the usage of cooling methods in slum areas lowered the incidence of heat disease by 60%. Illness brought on by excessive heat is linked to both the quality of one's home life and their own personal health. Strengthening public health preparedness requires identifying the vulnerable population and scaling up adaptive approaches. The current

study thus anticipated that slum dwellers would develop methods for addressing the widespread health issues.

Chapter Summary

This chapter has critically reviewed previous works on slums and its development. The review was done on challenges confronting slum dwellers. It was also revealed that quite a few studies have been done on slums in Ghana. The few studies cited too did not focus on wellbeing and health simultaneously. It is within the above context that this study has been initiated to document both sides of the discussions.

CHAPTER THREE

RESEARCH METHODS

Introduction

This chapter presents the methods used in carrying out the study. It describes the research problem, methodology, data sources, and participants. In addition, the study's sample size, sampling methodology, and other methods are detailed. Data gathering strategies, research tools, and processes have all been outlined. Ethical considerations, data analysis, and processing procedures are all spelled out.

Study Area

The slum known as Old Fadama, in the southwest of Accra's Central Business District (CDB), is one of the most populous and well-known in all of Ghana. Common belief is that northern Ghanaians fled to Old Fadama due to chieftain wars and brush fires in the provinces of Northern, Upper East, and Upper West. It's the biggest slum in Ghana, covering an area of around 3 square kilometers. Because of its low elevation, this area is frequently flooded. It reaches from the Lartebiokoshie neighborhood in the west to the Korle Lagoon in the east. It was originally established as a refugee camp. Although the Agbogbloshie truck station serves Old Fadama, most locals go to the heart of town on motorbikes (Okada). Carjackings, reckless driving, and lax enforcement of traffic laws are persistent problems. Most of the population is of Ghanaian ancestry, with a smattering of other West African peoples. About 48% of the present population of Sodom and Gomorra can trace their ancestry back to the initial Muslim immigrants from Northern Ghana. Figure 3 shows the map of the study area.

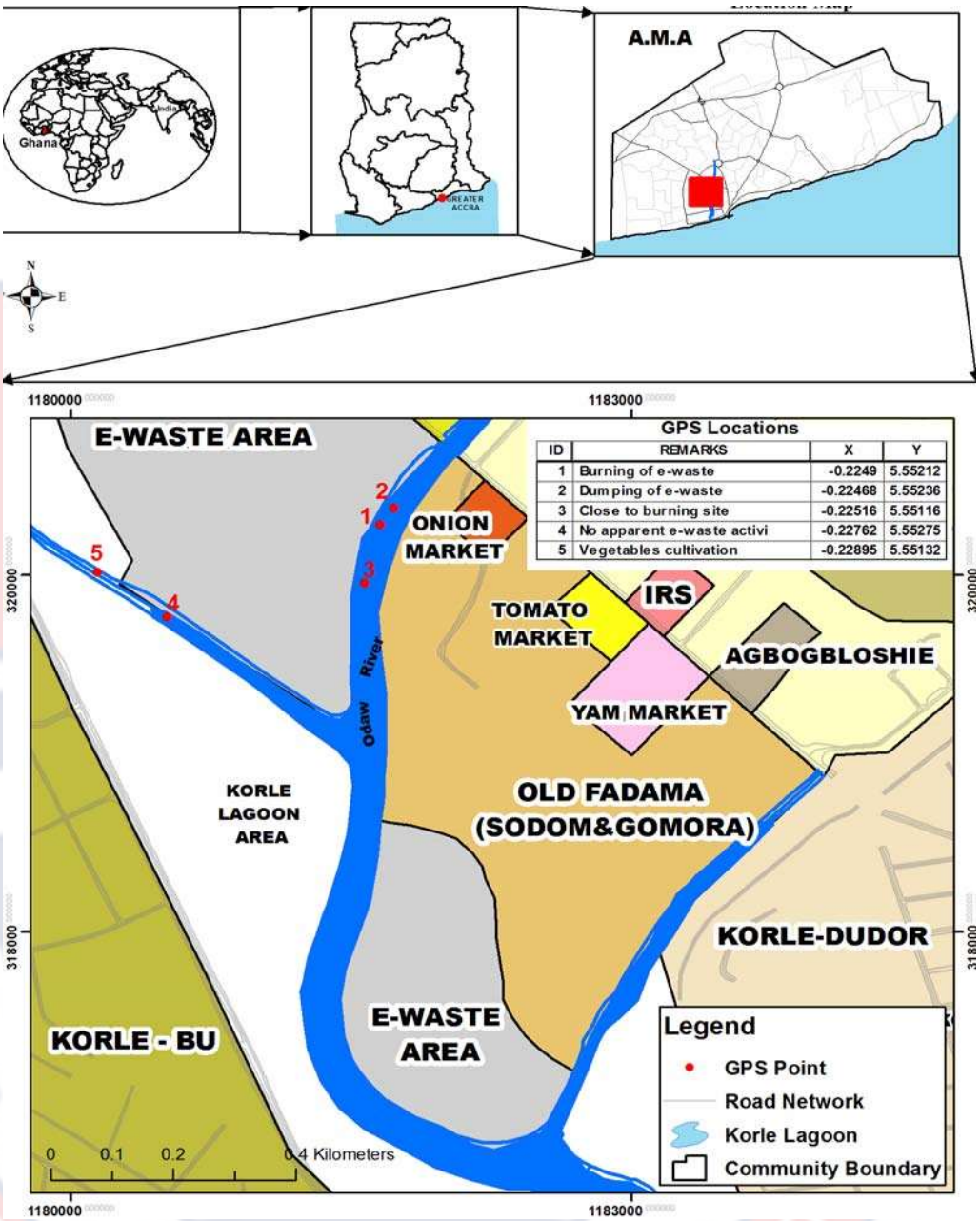

Figure 3: Map of the Study Area

Source: Accra Metropolitan Assembly [AMA] (2012)

Population

Precise population size is imprecise, as the most recent count was in 2010, however, more recent data estimates the population is 100,000. The population profile, like population size, is imprecise, however, the most recent profile showed that Old Fadama is fairly young: four-fifths of the popuatlion is under the age of 35 and ethnically, approximately 49 percent is Dagomba

(Farouk & Owusu, 2012; Housing the Masses, 2009; Stacey & Lund, 2016). Most of Old Fadama's population is in the informal economy and do a variety of jobs, including tro-tros and taxi drivers, however, the 2010 count found that 15 percent of the community works in the formal sector (Housing the Masses, 2009). Old Fadama can be divided into two regions that differ by quality of built infrastructure and when it was settled. In general, the "Older" section has better quality, e.g. concrete, homes and public toilets, water piping, legal electric grid access, paved roads, stormwater drains, and on elevated land (Farouk & Owusu, 2012; Stacey & Lund, 2016).

The "Newer" section is on the banks of the Odaw and prone to flooding, the houses and public toilets are made from low-quality materials (e.g. corrugated aluminum and debris), and borders the infamous Agroboshie electronic waste landfill (Onouha, 2016). A note on Ghanaian architecture; Ghanaian neighborhoods tend to appear 'cramped,' however, these neighborhoods replicate village designs that emphasize compounds. The homes comprise of a head or a couple heads of households, with friends, extended family members staying at regular intervals or temporarily.

Socioeconomic Conditions

There are mostly unofficial shops in the form of kiosks lining the streets. Agbogbloshie, where yams and onions are sold, and the nearby factories depend on the local population for labor. In addition to serving the neighborhoods of Korle-bu and Lartebiokorshie, they also work as domestic workers in the homes of those communities' residents. The local women engage in small-scale enterprises, such as food selling, hawking, and head-portering (Kayayoo).

Housing

There are both temporary residential and business buildings there. Grant (2006) states that most of the structures in the community are made from scrap wood and corrugated metal. Others, meanwhile, are forced to make their homes in flammable shacks and kiosks. The average size of residential houses (shacks) in this area is 12ft x 12ft. Many of the eight or more people living in these shacks have no choice but to sleep on the floor. Pollutants such as human waste, rubbish, soot, dust, and other pollutants are abundant in the slum. Due to the lack of a proper sewage system and the widespread use of makeshift "flying toilets," the slum is riddled with human and animal waste. Many illness outbreaks in the slum can be attributed to the area's lack of sanitary facilities and the residents' subpar diets. Ga people, the dominant group in the Odododiodoo electoral region of Accra Central, own the vast majority of the shacks. All of the renters are locals, however they are from various sections of Ghana and West Africa. The relationships between landlords and renters, as well as those between employed and unemployed residents, are particularly fraught. It has the highest population density of any subdivision in the Odododiodoo constituency.

Philosophy

What matters most to philosophers conducting research is the perspective from which they see and analyze occurrences (Johnston, 2014.; Yin, et al., 2009). Study paradigms center on the underlying assumptions that guide the research approach and methodology. Pragmatism was used as the theoretical framework for the study. The pragmatic researcher is not wed to any one methodological framework, but rather uses a wide variety of

quantitative and qualitative presumptions (Crotty, 2020). Pragmatists recognized that there are various ways to perceive reality and conduct research and that no single point of view can adequately present the complete picture of the problem. Creswell & Creswell (2017). Within a single study, the pragmatist emphasizes on mixing research approaches to address the research questions, therefore allowing for numerous methods, assumptions, and data collecting and analysis. As a result, the study's research topic and objectives prompted the researcher to employ both a qualitative (interpretivism) and quantitative (positivist) technique to determine whether slums affect people's health in Old Fadama.

The qualitative technique in a study where individuals build their own subjective understanding of reality is referred to as interpretivist. Because people's perspectives differ from one another. These subjective meanings, according to Creswell (2014), are produced through interactions with others as well as historical and cultural conventions that operate in people's lives. The objective one which focuses on the prevalent health issues /diseases in Old Fadama adopted an interpretivist approach. The interpretivist approach allows posing questions designed to elicit answers that quantitative research is not easy to find.

Research Approach

According to Sarantakos (2005), the researcher may assess all aspects of the study in a rational manner with the help of the research approach. This meant that a combination of qualitative and quantitative techniques was used to collect data for the study. The mixed-methodologies strategy combines many types of research strategies, including quantitative and qualitative

methods, into a single investigation (Johnson & Onwuegbuzie, 2015). Research on whether or not living conditions in Old Fadama's slums negatively affect residents' health relied on both qualitative and quantitative techniques of data collecting. When compared to adopting just one method, the benefits of a mixed-method approach are clear. The main informant's viewpoints on slum problems in relation to health were better understood thanks to the qualitative method. The quantitative approach, on the other hand, favored a singular concentration on numbers and static information, as well as convergent rather than diverse thought (Creswell and Creswell 2005). The quantitative method is useful for studying population-level associations between independent and dependent (or outcome) variables (Lucko & Rojas 2010). As a result, it was useful for assessing how Old Fadama's socio-physical setting affects residents' health.

Research Design

The research design comprises the techniques or methods of inquiry, techniques of data collecting, analysis, and evaluation of outcomes. Research design, as defined by Johnson and Onwuegbuzie (2004), is a methodological blueprint for gathering and analyzing information. The research design is the "glue" that keeps the whole study together. In this context, "stages" refers to the distinct processes utilized in both data collecting and processing. Therefore, the study design is a synopsis of the whole survey process, from data collecting through data analysis (Sullivan, 2011). Researchers in the social sciences have used a variety of distinct methodologies. Both Christensen et al. (2001) and Ontong (2017) list a variety of typical research designs used in the social sciences, including experiments, correlation studies,

explanation studies, exploration studies, and cross-sectional and longitudinal surveys.

The research strategy was explanatory. Research with an explanation for anything is an extension of descriptive research. Instead of stopping at a superficial description, it digs deeper to explain the causes and mechanisms behind the phenomena being researched. Explanatory research, on the other hand, seeks to comprehend phenomena by uncovering and quantifying causal linkages among them, whereas descriptive research is useful for identifying and obtaining information on the features of a particular problem or topic. The term "causal research design" is sometimes used to describe this approach (Saunders et al., 2007). While descriptive components are common in explanatory research, the focus is on delving deeper into the connections between variables and the reasons for observed effects.

Source of Data

The study made use of primary data from the study area. In achieving this, interview guide, observation checklist, and questionnaires were used to get primary data on the perception of slum dwellers on the factors that affect their health in the study area, the effects socio-physical environment on the health of slum dwellers, and coping strategies adopted by them to survive in the study area. The secondary data such as a published reports from Ghana Health Service, Physical Planning Department and district assembly of the area on the objectives of the study were used and these were supplement with secondary information from books and journals that focused on the topic under study.

Target Population

The people, things, or organizations that are the focus of an academic study are known as its "target population" (Creswell 2003). The majority of the people who participated in the research were from the Old Fadama neighborhood. The target population for this study comprised residents(household heads) of Old Fadama in Accra. The residents considered to participate in this research have lived in the study area for some couple of years to provide credible information on the objectives set for the study. The residents are the actual people living in the study area and therefore it was prudent to involve them to provide information on the study objectives which borders on matters affecting their living in the study area. In addition, some key informants (officials from district assembly where the study area is situated, Ghana Health Service and opinion leaders) were also included due to their roles, expertise and knowledge on the topic under study where very important in order to get broader and better understanding on matters pertaining to health, sanitation and settlement issues affecting slum growth which were key to study's objectives.

Sample Size

According to Trotter, it is crucial to select a sample that is accurately representative of the population so that the conclusions drawn from the sample may be applied to the population of interest (2012). The choice of a sample size is therefore influenced by the need to collect information that is both pertinent to the study's purpose and aims and both representative of the population. According to Bartlett (2001), the proper sample size should be established either directly using statistical formulae relevant to the study or by

making use of tables that provide suggested sample sizes based on the population under study. Simple random sampling method was used to arrive at a sample size of 306 out of a target population of 1,500 slum dwellers at Old Fadama. The sample size was determined using Yamane (1970) simplified formula for calculation of sample sizes. The simple random formula is as follows:

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

where,

n: Sample size

N: Population size

e: The acceptable sampling error (0.5)

$$n = \frac{1500}{1 + 1500(0.05)^2}$$

$$n = 306$$

The study further added an upward adjustment of 10% for incomplete data giving our new sample size at 306.

Sampling Procedure

Sampling is the process of selecting a subset of a population for the purposes of collecting data and drawing conclusions about the entire population statistically. This is done to guarantee that the sample was as accurate as feasible in its representation of the whole (Bhattacherjee & Fitzgerald 2012). Considering the population under study (residents of Old Fadama), a multi-stage sampling technique (both clustering and systematic) was employed.

Since the study site was Old Fadama, an informal community without numbered houses, the researcher and interviewees initially visited the areas to create a map of the study sites into clusters based on streets and other identifying features. The research assistant numbered the clusters and then drew a number at random from a ballot to select a cluster. In this particular grouping, we counted each and every residential structure. The respondent's primary residence, where the majority of their time is spent and where most of their belongings are stored, was considered a housing unit for the purposes of this study.

At the second phase of the systematic sampling process, we divided the total number of dwellings by the sample size (510/316=1.6) to arrive at our sampling interval. A house was randomly selected and the sample frame at 2-house intervals was used until the desired sample size was achieved. Most of the houses only had room for one family and their household heads were selected. In the absence of a recognized household head, household selected a member of household above 18years who had indepth knowledge about issues og interest. In the cases when there was more than one family living in a home, random selection was utilized. It was expected that there would be certain restrictions placed on the selection of the households that would participate in the research. Household heads who are slum dwellers in Old Fadama and were at least 18 years old, permanent residents of the area for at least a year, and able to be reached throughout the study period were asked to fill out a questionnaire (interview schedule). This is due to the fact that no participant was to be coerced into taking part in the study; this is in accordance with the ethical standards underlying a behavioral research. In order to get the

desired sample size of 306, this procedure was repeated until that number was reached. The unit of analysis was the inhabitants in the slum areas. The chosen unit was a main focus for the data collection since they were the actual people living in the area and therefore have the needed experience rightful to give information on the exact issues being researched into in the study area. Purposive sampling was used to select the various categories of participants who were seen as key informants in Old Fadama (Creswell, 2009; Fraenkel et al., 2012) as well as those who knew about the slum health situations in the area amongst the people. They included representative each from the Physical Planning Unit, Health Unit, and Sanitation Department of the District Assembly of the areas. Additionally, three (3) opinion leaders from the study area were purposively selected and interviewed accordingly. Direct quotations from the responses of the key informants were used to construct meanings of the data generated (Fade, 2004; Smith and Osborn, 2008; Pietkiewicz and Smith, 2014).They provided insightful information about the demography of the area, the incidences through with the slum keeps on springing up each year, the challenges slum dwellers face, the reasons they still reside there and the health problems they encounter for staying in and what they are doing to improve their living conditions in the area.

Data Collection Instrument

A questionnaire is a document that contains questions on a topic, problem, issue, or viewpoint that has to be researched (Kumekpor, 2002). In addition, the author argues that questionnaires are a valuable asset of data collection devices since they often include asking a predetermined group of people to answer a series of questions either orally or in writing. The primary

research instrument, questionnaires was used for the data collection which was divided into sections (See Appendix A). The study adopted the use of questionnaires since they are noted for its affordability in most ways of gathering quantitative data. Apart from being inexpensive and flexible, they are also known to be very practical in the way data is being gathered and hence yield speedy results in due time. Questionnaires also were chosen for this study since the anonymity of respondents were of high regards and making predictions and scientific analysis easy to cover all aspects of the topic. Even though questionnaires usage in research at times breed bias, dishonesty and hard to convey feelings of people, however, the necessary measures were put in place to collect reliable data to ensure trustworthy results and interpretations that reflected the exact situation on the grounds. In line with the research approach (mixed method) guiding the study qualitative research instruments were also utilized (Denzin and Lincoln, 1994; Fraenkel et al., 2012). A series of in-depth interviews with important informants were done using a custom-made guide. The study's goals informed the layout of the in-depth interview guide, which allowed for the collection of detailed information from the study's primary sources. To augment and cross-check the findings gained via the use of questionnaires and in-depth interview guide, an observation checklist was developed to facilitate participant observation sessions.

Data Collection Procedure

An introductory letter was obtained from the Geography and Regional Planning department. Respondents were assured in the letter that their comments would be kept anonymous and confidential, that the instrument

served a useful purpose, and that their participation was required. Permission to administer the instrument was provided when first contact with the responders was established. The slum health status was investigated by surveying a representative sample of slum residents, conducting in-depth interviews with district key informants, and using an interview guide and observation checklist. Researchers had to be there because they had to build rapport with respondents so that they could explain any parts of the questionnaire that the respondents didn't understand. All surveys were filled out and returned to the researcher on the same day. Between the hours of 4:30 and 6:30 PM, Monday through Friday, for two weeks, questionnaires were distributed. This was a convenient moment for the researcher to administer the instrument to the respondents since it coincided with the time when most people were getting off work for the day. The interview with key informants, on the other hand, was done from 12:00 noon to 1:00 pm on each day of the week, which was their lunchtime and allowed them to participate. The observation checklist was also utilized to gather thorough information about the slum situation in the Old Fadama neighborhood.

Data Processing and Analysis

Out of the 306 instruments that the researcher administered unto the respondents, 280 were retrieved from the respondents. This corresponds to a relatively high response rate of 92 percent. Data obtained from respondents via the study's questionnaires were statistically analyzed using both descriptive and inferential statistics. Data were cross-checked before being obtained from respondents, coded, and fed into the Statistical Package for the Social Sciences

(SPSS) Version 21 for statistical analysis. Second, we proofread the surveys for typos and other errors that might compromise the results.

As a next step, respondent biodata was analyzed using descriptive statistics. To summarize and characterize numerical data, descriptive statistics are typically employed, as explained by Opoku & Hinson, (2006). Descriptive statistics were used to compile all of the information on the participants in this study and to calculate the mean, median, and frequencies. Predicting an outcome variable from predictor variables is the goal of a basic linear regression (Pan et al., 2009). Given that correlation analysis does not reveal the direction of causality, as noted by Pan et al., regression goes farther (2009). Accordingly, the study adopted the ordinary least square (OLS) regression to establish the effect of predictors on the host of dependent variables. The hypotheses were tested using the t-test. The in-depth interviews which were mainly tape-recorded were transcribed and afterwards processed with the help of NVIVO Software to get appropriate themes for the analysis. Thematic analysis was then done for the in-depth interviews to capture and discuss the main issues that were found out. The pictures that were taken through the observation sessions were used to support the findings of the study.

Ethical Consideration

Ethical clearance was obtained from UCC's Ethical Review Board. Proper permission was obtained in the form of an introductory letter from the Department of Geography and Regional Planning at the University of Cape Coast (UCC) to embark on this study in Old Fadama in the Greater Accra Region. Respondents were given prior notice and had the rights to either be

part or exempt themselves from the research. As a precaution against impersonation, the researcher was required to introduce herself and explain the study's goals to the participants. Participants may choose whether or not to take part in the study, and they could opt out at any moment throughout the study's duration if they so desired. Participants were not required to provide any identifying information in order to maintain their privacy. Under no circumstances were individual participant identities revealed in the study's final report. Before the interviews, participants were given a participant information sheet and an informed consent form to fill out.

Those who were physically unable to sign the consent form were instead asked to thump their agreement to participate in the study. Participants were informed that they might stop participating in the study at any moment. The taking of still images was used to capture the real situation in an unmediated and unbiased way Forkuor et al., (2017).

Chapter Summary

Examining how living in slums affects the quality of life for people in Old Fadama, this study used the explanatory design of the pragmatic method. Household heads who have been permanent residents of the research region for more than one year and are in a position to offer reliable data were invited to participate. Using the sample size table developed by Krejcie and Morgan (1970), a total of 306 participants were recruited for the study and administered questionnaires as part of a multi-stage sampling strategy that also included the use of an interviews guide, an observation checklist, and purposive sampling to identify study's key informants. Ethical concerns of utmost importance were taken into account. These included personal safety,

freedom of choice, anonymity, and secrecy. In addition, SPSS version 21.0 was used to perform frequency, percentage, mean, and standard deviation analyses, as well as multiple regression, and tables and charts were created in Excel 2013 to display the results. After conducting interviews, data was analyzed using thematic content.

CHAPTER FOUR

RESULTS AND DISCUSSION

Introduction

This chapter centres on the results and discussion of the findings of the study. It is structured based on the study's objectives for easy understanding. It is has been arranged in a way to provide logical flow of the findings. The themes discussed here include background characteristics of the respondents, environmental conditions of the study area, factors influencing slum growth at Old Fadama, perception of the respondents on factors that affect their health status, shared social-physical environment effects on the health of slum residents, and coping strategies among slum dwellers at Old Fadama.

Preliminary Analysis

This section outlines the researcher's preliminary analysis prior to the actual data analysis. It demonstrates the steps taken to process the survey response data. The section discusses concerns with missing instances and an examination of the survey answer.

Response Rates

This subsection presents the survey response rate. The results are summarized in Table 2. A total of 306 copies of the study questionnaire were delivered in persons to the randomly picked residents (household heads) of Old Fadama by the research team. Of the copies sent to the slum dwellers, 295 were returned making a response rate of 93.35 percent.

Table1: **Survey Response Rates**

Questionnaire	Number	Percentage
Copies Distributed	306	100
Copies Returned	295	93.35
Response Rate	96.41	

Source: Author (2023)

Data Cleaning

During data screening, you check for things like coding mistakes, missing data patterns, out-of-the-ordinary or extreme results, and whether or not the data support the statistical assumptions you need to conduct your research. Subsequently, a quick inspection of the data's quality confirmed my first impression. Completeness and internal consistency checks were performed on each respondent within each sample population. Similar questions were used to compare and cross-check answers for the consistency checks. This analysis showed that almost nothing was missed or ignored, and that there were clear patterns in the replies given.

We also looked for variables having more than 10% missing data in the datasets. Cases with more than 10% missing data were removed from the dataset after an analysis of the data from the pilot and main surveys, as shown in Table 3. Of the 295 cases retrieved, the study found 15 with missing cases which were deleted. The reduced dataset was used in all further analysis undertaken for this study. The practice of eliminating such cases of missing data is consistent with practice as in several studies (Cohen & Cohen, 1983; Hair et al., 2006).

Table 2: Data Cleaning Outcomes

Cases	Survey
Cases Received	295
Cases Eliminated	15
Cases Used	280

Source: Author (2023)

Background Characteristics of Respondents

In terms of gender, age, level of education, years of residence in the region, employment, ethnicity, and religion, this section summarizes the preliminary descriptive analysis of respondent socio-demographic characteristics. These characteristics provide a general overview of the distribution among respondents sampled within Old Fadama (Sodom and Gomorra).

The result in Table 2 showed that majority (57.09%, representing 162) of the dwellers at Old Fadama were males whereas 42.01% representing 118 were females. This implies that more males were involved in the study than their female counterparts. This may be due to the harsh condition in the slum communities that limit its dwelling by females as compare to males who may hustle easily.

Table 3: Demographic Information of Respondents

Variables		Frequency	Percent
Sex	Male	162	57.09
	Female	118	42.01
Age	18-21years	7	2.50
	22-25years	54	19.29
	26-29years	47	16.78
	30-33years	64	22.85
	34-36years	41	14.64
	37-40years	30	10.71
	41years and above	37	13.21
Ethnicity	Dagomba	78	27.85
	Mamprusi	44	15.71
	Gonja	30	10.71
	Basari	11	3.92
	Konkomba	55	19.64
	Sisala	29	10.36
	Others (Ga, Fanti etc)	33	11.78
Religion	Islam	179	65.00
	Christianity	98	35.00
Marital status	Married	33	11.80
	Single	61	21.70
	Co-habitation	107	38.20
	Divorced	79	28.20
Educational background	basic level	73	26.10
	JHS	66	23.60
	SHS	57	20.40
	Tertiary level	2	0.710
	no education	82	29.28
Occupation	Trader and food seller	79	28.20
	Kayayo/truck pushers	59	21.10
	Scrab dealers	46	16.43
	Students	17	6.10
	Shower/toilet workers	51	18.20
	Shop assistant and dress makers	28	10.00
length of stay	0-4years	43	15.40
	5-9 years	104	37.14
	10-19years	53	18.90
	15-19years	65	23.20
	20+years	15	5.40
	Total	280	100.00

Source: Author (2023)

With respect to age, the study reports 64 (22.85%), 54 (19.29%), 47 (16.78%), 41 (14.64%) respectively for 30-33, 22-25, 26-29, and 34-36. The age group with the least representation was 18-21 with seven participants accounting for 2.5 percent. Having most of the participants falling below age 36 point to the widely circulated assertion that the youth dominate slum settlements.

Ethnicity of dwellers was also established in this study. Based on the analysis of the respondents, it was revealed that, northerners formed most of the people. Dagombas represented the highest ethnic group with 78 respondents representing 27.85%, Konkumbas followed with 55 respondents representing 19.64%, Mamprosis' were the third ethnic group with 44 respondents representing 15.71%. The Gonja's, Sisala's, and other groups namely Ga, Ewe, Fanti were the next group that recorded 10.71%, 10.36%, 11.78% respectively whilst the Basari's were the least ethnic group with only eleven respondent (see Table 2). Some ethnic groups were more religiously inclined, with the majority being Islam with (179, 65%) and few Christians representing 98 (35%).

Also, the summary of respondents' marital status was also examined in this study. Out of 280 respondents, it was found that 33 (11.8%) of the respondents were married (marriage is a legally or formally recognized union between two individuals), 61(16.9%) of the respondents were single, 107 (38.2%) of the respondents were co-habiting (cohabitation is a situation in which two people live together) and 79 (28.2%) of the respondents were divorced. This portrays that majority of the respondents were co-habiting. Also, with regards to education, the highest level of education obtained at the

time the study was conducted found that, majority of the respondents, had no education representing (82, 29.28%) respondents, those with Junior High School certificate were 66, (23.6%), Senior High School Certificate were 57 (20.4%), and tertiary level were only two respondents. Therefore, this denotes that, the education level of respondents can influence and determine the type of occupation they engage in. However, a larger number of the respondents had no formal education with few being highly educated.

In terms of their occupation (see Table 2) it revealed that majority of 79(28.2%) women engaged in trading and food selling, 51 (18.2%), respondents were shower and toilet workers. Kayayie and Scrap dealers were the next highest occupation representing 21.1 percent and 16.43 percent. Students and shop assistants as well as dress makers were the next lowest occupation engaged in by these dwellers (17 and 28 respectively). Lastly, majority of the dwellers (104 respondents) at Old Fadama had stayed there between 5 to 9 years, whilst 65 respondents have lived there for 15 to 19 years, there were 43 of these dwellers who had resided between 0 to 4 years. Finally, 15 respondents had lived there for 20 years and above.

Prevalent Health issues/diseases in Old Fadama

The first part of study was all about finding out *what are the prevalent health issues/diseases in the Old Fadama?* Old Fadama is a slum community that have existed for decades. Figure 4 presents the findings in response to the prevalent health issues/diseases in Old Fadama. The study found malaria, cholera, tuberculousis, hepatitis, dangue fever, and pneumonia, as the most prevailing prevalent health issues/diseases in the area. It is significant that malaria (80, 28.5%) was indicated as the most recurrent disease in the area due

to the presence of waste and other breeding sites that supports propagation of anopheles mosquitoes.

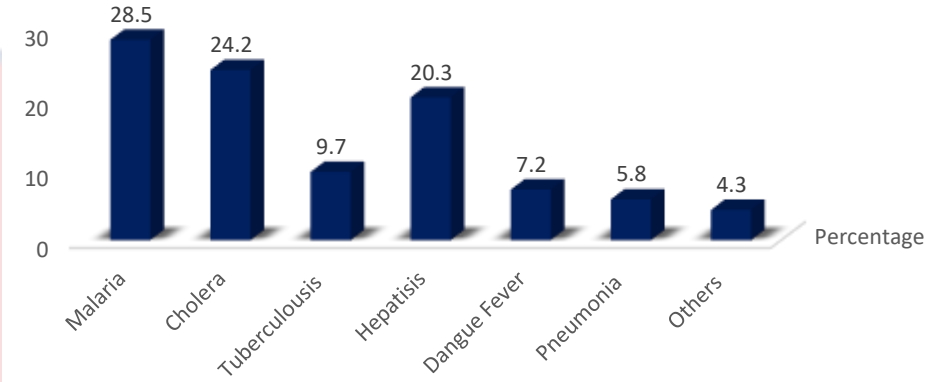

Figure 4: Common diseases in Old Fadama
Source: Author (2023)

Cholera was the second most indicated (68, 24.2%) disease followed by Hepatitis (20.3%) and the other forms of diseases constituted the least (9%). As such, many of the children in this study area were malnourished and some adults also looked pale. Housing according to UN-Habitat (2004) is not only meant for shelter but also, conditions necessary for ones well-being and socioeconomic development of a locality. This outcome buttresses that accession of the influence of slum on the health of dwellers of Old Fadama in Accra. An interview with a female representative from the Ghana Health Service of the area revealed the following:

> *Malaria, cholera, TB, and hepatitis are the most commonly reported health problems in the several years I have worked here as a health professional, although malaria and cholera are the most common. What I can say about*

the prevailing causes of these ailments is that they are a result of the area's poor sanitation. This is due to the widespread presence of open drains containing stagnant water and liquid waste, which provided ideal breeding grounds for mosquitos and, as a result, malaria illnesses. The Ghana Health Service conducts various outreach programs to sensitize residents by educating them about positive health practices such as cleaning their environment, providing preventative measures such as bed nets, and encouraging families to visit the health center for treatment whenever they are concerned about their health. Some people, however, adhere to the schooling while others do not. That is, in the case of a bed net, some of them do not use them because they believe it generates heat and rushes. (Health worker, female, age 34).

On the causes of Cholera as one of the main prevailing diseases in the study area, an officer from the Assembly's Sanitation Department has this to say:

The bacteria Vibrio cholerae, which is very small yet may infect the intestines, is responsible for cholera. Cholera caused by the bacteria Vibrio cholerae is spread mostly by infected food, drink, and occasionally the surrounding environment. While cholera is preventable and treated, it is nevertheless seen as a major issue in India and other underdeveloped nations. The principal causes of cholera in

slum regions include migration, poor sanitation, overcrowding, open field defecation, and lack of education about disease transmission.

An official from the Assembly's Health Unit comments on the root causes of tuberculosis, one of the most common illnesses in the research area:

TB is caused by Mycobacterium tuberculosis. It is a slow-growing bacteria that prefers environments with plenty of blood and oxygen, like the lungs. Those who are sick transfer it to others by exhaling contaminated droplets when they cough, sneeze, or talk. In most cases, transmission takes place after an infected person has been in close contact with others for a while. The prevalence of TB in urban slums is exacerbated by the dense population density there and the scarcity of healthcare resources available there.

Informal settlements create room for outbreak of not just the aforesaid diseases but also a risk factor for deadly ailments such as Hepatitis, Dangue fever, pneumonia, etc. The following were learned via an interview with a female representative of the local Health Unit:

Hepatitis is inflammation of the liver. As a defense mechanism, inflammation occurs when an injury or infection occurs within the body. It's not always clear what triggers hepatitis outbreaks. There has been a lot of coverage about hepatitis in recent media. Kids all throughout the world have started displaying signs of infection recently. The cause of this

is a mystery to doctors. When something goes wrong, viruses are usually to blame. Hepatitis A, B, C, D, and E are the five recognized causative viruses. The viruses that cause hepatitis A and E are commonly found in tainted food and water. Contact with contaminated blood or other bodily fluids is the only known method of transmission for hepatitis B, C, and D. The symptoms of hepatitis might also be caused by other viruses. Most of the time, your immune system will be able to fight off these illnesses. However, there are situations when they become persistent or chronic. Hepatitis can also be caused by other factors prevalent in urban poor communities, such as frequent alcohol consumption, toxic exposure, drug side effects, and autoimmune disorders.

Dengue fever is an infection spread by mosquitoes and is most common in tropical and subtropical regions. Dengue fever, even the mild variety, results in a high temperature and flu-like symptoms. Dengue fever's extreme form, dengue hemorrhagic fever, can result in internal bleeding, a reduction in blood pressure (shock), and ultimately death. Old Fadama is rife with dengue disease outbreaks.

Pneumonia can be brought on by either a bacterial or viral illness. Causes by fungi or mycoplasma are unusual but possible. Pneumonia caused by fungi is not contagious. It is typical for people living in slums to get bacterial and viral

pneumonia because of their exposure to airborne droplets from coughing and sneezing.

Perception of the Respondents on Factors that affect their Health Status

The study's second objective was in response to *what are the perceptions of slum dwellers on factors that affect their health status?* Table 5 reports the findings in response to perceptions of the respondents on factors that affect their health status. The study found poor access to utilities, poor sanitation, bad road network, and informal settlement.

With respect to poor access to utilities, it was found that 107 (38.20%) dwellers in the study area perceived inaccessibility to utilities as the major factor affect their health status. Utility such as toilet facilities, water, electricity, hospitals, clinics, etc. are very paramount to the health and survival of slum dwellers just like any other citizens. It stated, in particular, that the use of health services is a complex behavioral phenomena influenced by a number of variables, such as the accessibility, accessibility, cost, and quality of health services as well as individual attitudes, cultural views, and socioeconomic features (Amiresmaili et al., 2019). It is not advisable to use health services in slum regions. Since it has been demonstrated that the utilization of health services by residents of slums is a multifaceted phenomenon, effective planning and policy are crucial to meet this rising demand.

About sanitation, it was discovered that 85 (30.40%) dwellers in the study area suggested poor sanitation as the next most worrying factor affecting their health status. The nexus between poor sanitation and health status implies the former has implications for the latter. It is a well-known truth that inadequate sanitation is one of the main issues facing slums in Ghana and this

has a significant effect on their health status. Many residents in slums do not have access to bathrooms at home, therefore they frequently rely on using public restrooms. Ghana's lack of private or separate restrooms is not limited to the slums. It is possible to construct homes, offices, and schools without toilets.

Table 4: Perception of the respondents on factors that affect their health status

Factors	Frequency	Percentage
Poor access to utilities	107	38.20
Poor sanitation	85	30.40
Bad road network	49	17.50
Informal settlements	39	13.90
Total	280	100.00

Source: Author (2023)

Table 4 also shows that bad road network is next major factors affecting the health status of slum dwellers with about 17.50 percent (49) of the selected participants affirming the notion. Lack of road linkage to major areas away or within slums to access health facilities is a major issue affecting dwellers' health. The GHS's efforts to provide the residents of the area with high-quality healthcare are hampered by the area's deplorable road infrastructure. For example, respiratory tract infections have become a serious problem in the area while maternal and infant mortality rates have been rising. The dusty roads combined with the heavy exhaust fumes from vehicles—which have become rickety due to the bad roads—lead to respiratory ailments. When roads are in bad shape, it can cause more problems than just a rough

ride. Roads can reach a perilous state of disrepair. Uneven pavement increases the risk of a car accidents or rollover, which can cause serious injuries to the driver, passengers, and even bystanders.

Finally, the study found that 39 (13.90%) dwellers in the study area were of the belief that informal settlements in slums affect their health status. The import of this revelation is that putting up structures at inappropriate areas have consequences for dwellers' health status. Today, a significant portion of the urban population in emerging nations resides in informal settlements. Over a billion people make their homes in slums, or "informal settlements," which are prevalent in the urban areas of many poor and middle-income countries. People living there are often marginalized in a variety of ways, including socially, environmentally, and politically, all of which have negative effects on their health. The government also has not formally recognized these areas. People often lack secure land tenure, forcing them to make due with overcrowded, substandard housing in precarious or marginal areas. High environmental risks are a major contributor to the high rates of illness, injury, and premature death in shantytowns. The health risks faced by the local population range from those often associated with daily life, such as the transmission of infectious and parasitic diseases, to those associated with rarer but no less devastating events. Even though certain upgrading projects have effectively promoted health and wellness, the vast majority of informal settlements still lack essential risk-reducing infrastructure and services such as clean piped water, sanitation and drainage, solid waste collection, healthcare, and emergency services.

Although directly expected from this study, the author estimated the demographic difference in the perception of the respondents on factors that affect their health status based on their gender. The results derived from the dataset using the independent t-test are presented in Table 6. The study found that more females than males perceived poor access to utilities and poor sanitation as major factors explaining their health status and highly significant at one percent. However, the study uncovered insignificant gender difference on the perception that bad road network and informal settlements affect slum dwellers' health status.

Table 5: Effect of the shared social-physical environment on the health of slum residents

Variables	Coefficient	Std. Error	t-statistic	p-value
Constant		6.26	17.97	0.00**
Infrastructure	-0.22	1.21	8.67	0.04**
Public services	-0.77	1.53	3.22	0.01**
Housing characteristics	-0.53	3.07	4.98	0.00**

Note: *p<.1, **p<.05, ***p<.01 R-squared= 0.68; Adjusted R Square= 0.62 ; Sum squared resid= 14.849; N=280

Source: Author (2023)

Shared Social-Physical Environment effect on the Health of Slum Residents

This section presents findings in response to *How does the shared social-physical environment influence the health of slum residents?* The study adopted the ordinary least square regression techniques. In this study,

dependent variable was the health of slum residents with infrastructure, public services and housing characteristics as the independent variables. The following hypotheses were tested using t-statistic and p-value:

H_1: There exists a significant statistical negative relationship between Infrastructure and Health of slum residents.

H_2: There exists a significant statistical negative relationship between Public Services and Health of slum residents.

H_3: There exists a significant negative statistical relationship between Housing Characteristics and Health of slum residents.

Table 5 presents findings in response to how the shared social-physical environment variables relate to the health of slum dwellers in the study area. The study recorded 0.68 R-square measuring coefficient of determination. This proxies the amount of changes all the independent variables caused in the dependent variable. It can be established infrastructure, public services, and housing characteristics all together explained about 68 percent changes in the health of slum dwellers.

With respect to the infrastructure-health nexus, the study supports the hypothesis H_1 that "*There exists a significant statistical negative relationship between Infrastructure and Health of slum residents"* (β = -0.22, P<0.05). Under the circumstance, the findings implies that a percent fall in infrastructure will cause the health of slum residents to be deteriorated by 0.22. Slum inhabitants' low earnings have led to substandard housing. The residents have developed a culture of maintenance due to the area's inadequate infrastructure, which includes housing difficulties. As a direct result, more than half of the homes are in poor condition now. In the absence of drainage,

mosquitoes and other disease-carrying insects thrive in the slum area's stagnant waterways and weedy spots.

About the relationship between public services and health of dwellers, the study supports the hypothesis H_2 that "*There exists a significant statistical negative relationship between Public Services and Health of slum residents"* (β = -0.77, P<0.05). Here, a percent decrease in public services will cause the health of slum residents to be sluggish by 0.77. It is commonly believed that urban slum dwellers have better health than their rural counterparts but lower health than other urban groups. Due to their close proximity and the presumption that metropolitan regions have greater access to healthcare services, this perception or assumption occurs frequently. However, a few recent studies (Mberu, Haregu, Kyobutungi, & Ezeh, 2016) have cast doubt on this belief as reported in this current study. Since indications for slum residents are typically concealed in urban averages, it is still unclear whether they are better off, comparable to, or worse off than rural and other urban communities.

On the nexus between housing characteristics and health of slum residents, the study supports the hypothesis H_3 that "*There exists a significant statistical negative relationship between Housing Characteristics and Health of slum residents"* (β = -0.53, P<0.05). The findings suggest that a percent fall in the housing characteristics will also cause a negative change in the health of the slum residents by 0.53. A slum's population health is directly related to the condition of their dwellings. Slum dwellers' substandard housing has been connected to a variety of physical, mental, and even social health difficulties, such as the spread of communicable diseases including tuberculosis, influenza,

and diarrhea, as well as cardiovascular diseases, injuries, and suicides. Better housing, on the other hand, has the potential to improve quality of life, combat illness, and reduce poverty.

Table 6 provides the ANOVA test statistics for the significant of the 68 percent (F (3, 276) = 7.08, sig. 0.02) of the changes in the health of slum dwellers that is being accounted for by infrastructure, public services, and housing characteristics. This shows that there is a significant difference between the independent variables and the model is therefore significant. This shows that there are differences in the predictors and the dependent variable.

Table 6: **ANOVA Test Statistics**

Model	Sum of squares	Df	Mean square	F	Sig.
Between groups	111.58	3	57.24	7.08	0.02
Within groups	304.69	276	154.23		

Source: Author (2023)

Coping Strategies among Slum Dwellers at Old Fadama

The final analysis was all about *How effective are the strategies adopted by slum residents to cope with prevailing health-related problems?* This reveals the strategies adopted by slum dwellers to manage their circumstance in this area though they indicated that the situation was very hectic and difficult. However, they developed some strategies to enable them live in Old Fadama. The analysis brought to bear the following coping strategies (descending order): “Borrowing from friends and selling assets to cope with huge health expenditures”, “Working for long hours to make more money”, “Reducing excessive food consumption spending”, “Adjusting to

cope with current situation as and when it occur", "Purchase of household goods on credit", and "Removal of children from school to help in earning more money for their basic needs".

It was found that 67 (23.93%) dwellers in the study area adopt "Borrowing from friends and selling assets to cope with huge health expenditures". It's possible that getting a loan from a friend or relative will be the most helpful way for residents to deal with their present health financial requirement. It is indeed feasible that you do not have a credit history or that your credit history is so damaged that you simply cannot afford the interest rates that traditional lenders would charge you. If you borrow money from a friend or family member instead of a business, they may be more understanding if paying it back takes longer than you anticipated, especially if it's for medical care. It also a well-known fact that slum dwellers just any other low income bracket citizens under certain circumstances sell of their belongings such as assets, to survive.

The study also found that 57 (20.36%) dwellers in the study area adopt "Working for long hours to make more money". People who live in slums often resort to engaging in low-level commercial operations as a means of coping with the myriad of challenges they face on a daily basis. Slum dwellers in Old Fadama are frequently confronted with issues such as a deficiency in access to clean water, ongoing movement within the slums, an absence of sewage or waste disposal facilities, pollution, and living circumstances that are unhygienic. Slum dwelling is typically characterized by overcrowding, high levels of air pollution, and a lack of access to even the most fundamental necessities.

The study also found that 52 (18.57%) dwellers in the study area adopt "Reducing excessive food consumption spending". Slum dwellers are faced with daily consumption needs amidst several other demands. Their daily consumption needs include spending on foodstuff, clothes, electricity bills, children's school fees, hospital bills, etc. According to the participating slum dwellers, cutting down on some of these expenditure patterns is one of their main coping strategies.

Table 7: Coping Strategies among Dwellers

Strategies	Frequency	Percentage
Borrowing from friends and selling assets to cope with huge health expenditures	67	23.93
Working for long hours to make more money	57	20.36
Reducing excessive food consumption spending	52	18.57
Adjusting to cope with current situation as and when it occur	37	13.21
Purchase of household goods on credit	35	12.50
Removal of children from school to help in earning more money for their basic needs	32	11.43
Total	280	100.00

Source: Author (2023)

The study also found that 37 (13.21%) dwellers in the study area adopt "Adjusting to coping with current situation as and when it occur". Happening within the national and local slum economy have implications for individual resident's living. For instance, higher incident of inflation or escalating increases in prices of goods and services will have greater toes on the lives of slum residents. Higher inflation erodes the purchasing power of slum residents which has consequences for their health. Therefore, residents of Old Fadama decide to adjust their ways of spending in order to cope with such intimidating turbulent.

The study also found that 35 (12.50%) dwellers in the study area adopt "Purchase of household goods on credit". Slum dwellers tend to use these loans for short- to medium-term consumption and production needs. The loan's use may differ from one family to the next based on factors such as the household's employment, composition, income, assets, and psychological make-up. Slum residents who lack access to traditional banking institutions can be helped significantly by alternative financial institutions that offer credit and other services. The basic idea is that giving the urban poor access to loans and other resources will help them lift themselves out of poverty. However, the devil is in the details when it comes to money and investments, especially when achieving justice and financial inclusion have proven so difficult in the past.

The study also found that 32 (11.43%) dwellers in the study area adopt "Removal of children from school to help in earning more money for their basic needs". In the slums, dropout rates are extremely high and affect students at all educational levels. There is a high dropout rate among the

student population. Dropout is still a societal evil that causes educational backwardness despite the existence of many initiatives and laws intended to prevent it. Many parents in slums are unable to afford the costs of raising a child there, so they pull their kids out of school to work. Dropout literature cites factors like the expense of schooling and other sociocultural challenges as contributing factors. It has been argued that structural problems at the home, school, and societal levels contribute to the inability of slum children to finish their primary and secondary education.

Discussion of Findings

This section presents findings in response to the study's specific objectives. The study seeks to investigate how individual characteristics and shared social-physical environment define the health of slum residents in Old Fadama at the Accra Metropolitan Area of Ghana. Both quantitative and qualitative means were employed in response to the specific underlying issues. Specifically, the study seeks to find out the prevalent health issues/diseases in Old Fadama; examine the perception of slum dwellers on factors that affect their health status; assess the effects of the shared social-physical environment on the health of slum residents; and analyse the strategies adopted by residents to cope with prevailing health-related problems.

Prevalent Health Issues/Diseases in Old Fadama

The extensive analysis led to the discovery of the prevalent health issues/diseases at Old Fadama. The study found malaria, cholera, tuberculousis, hepatitis, dangue fever, and pneumonia, as the most prevailing health issues/diseases in the area. The conditions in slums have a number of detrimental consequences on the residents. Baeza and Packard (2006) assert

that people who live in slums are more susceptible to diseases. Viegas (2006) emphasizes that many slum inhabitants enter a vicious cycle as a result of health shocks in which acute poverty and disease cause hospital admission, recurrent readmission, and/or death due to a lack of effective coping strategies. These revelations are consistent with those of several other studies (Dakhode et al., 2019; Das et al., 2021; Kabore et al., 2019; Macchia et al., 2021; Naydenova et al., 2018; Reddy et al., 2022; Sekoni et al., 2021; Sutradhar et al., 2019; Venkatesh et al., 2022; Waghela et al., 2018; Yirenya-Tawiah et al., 2018) on prevailing health issues/diseases in slums. Waghela et al. (2018), who studied the prevalence of illnesses in urban slums in Durg and Bhilai, India, discovered that hypertension and diabetes mellitus were the most common conditions. There is a high prevalence of water and sanitation-related diseases such as diarrhoea, typhoid, hepatitis, TB, leprosy, and filariasis. According to the results, the slum population is increasingly affected by lifestyle-related chronic illnesses.

The presence of toxigenic Vibrio cholerae in water storage systems in Old Fadama, Shiabu, and Bukom, all high-risk sites in the AMA before the 2014 epidemic, was also studied by Yirenya-Tawiah et al. (2018). The confirmation of Vibro cholerae in drinking water storage vessels validates the necessity to investigate environmental surveillance for toxigenic Vibro cholerae, especially in high-risk locations, to bolster the current surveillance system.

Awareness of malaria, cholera, tuberculousis, hepatitis, dangue fever, and pneumonia, as the most prevailing prevalent health issues/diseases in the area, will be a major source of policy and practice towards a sustainable slum

development. Also slum dwellers' knowledge of these aforesaid issues/diseases prevailing in the study will serve as a guide towards self-protection against such happenings. It is believed that awareness of a situation is one major step ahead in fixing or safeguarding oneself against it.

Perception of the Respondents on Factors that affect their Health Status

The perceptions of slum dwellers on factors that affect their health status were arrived at and discussions offered accordingly. The study found poor access to utilities as the leading factor influencing the health status of slum dwellers. The respondents perceived that access to utilities and sanitation were the main factors that affect their health status. This means that access to basic utilities such as water, electricity and communication network as well as sanitation; toilet facilities, gutters among others were the main factors that affect the health status of the respondents. The current is consistent those of the existing studies (Gitatui et al., 2019; Nejad et al., 2021; Nuwematsiko et al., 2022). To give one example, Nejad et al. (2021) did a scoping study using the PRISMA-ScR guidelines and looked at the primary aspects of these factors (Preferred Reporting Items for Systematic Reviews and Meta-Analyses Extension for Scoping Reviews). Seven overarching criteria emerged from the literature review (housing, socioeconomic status of the family, nutrition, neighborhood characteristics, social support and social capital, occupational factors, and health behaviors).

The study found poor sanitation as one of the major factor influencing the health status of slum dwellers. The nexus between poor sanitation and health status implies the former has implications for the latter. It is a well-known truth that inadequate sanitation is one of the main issues facing slums

in Ghana and this has a significant effect on their health status. Many residents in slums do not have access to bathrooms at home, therefore they frequently rely on using public restrooms. Ghana's lack of private or separate restrooms is not limited to the slums. It is possible to construct homes, offices, and schools without toilets. Several other studies (Nejad et al., 2021; Nuwematsiko et al., 2022; Takyi et al., 2021) reported sanitation as one of the major factor influencing the health status of slum dwellers. Nejad et al. (2021) in the examination of the main dimensions of these determinants housing accessories such as toilet, bathrooms, etc. as some of the factors influencing the health status of slum dwellers. Again, Nuwematsiko et al. (2022) found poor housing as one of the factors influencing the health status of slum dwellers.

The study found bad road network as one of the major factor influencing the health status of slum dwellers. Lack of road linkage to major areas away or within slums to access health facilities is a major issue affecting dwellers' health. The GHS's efforts to provide the residents of the area with high-quality healthcare are hampered by the area's deplorable road infrastructure. For example, respiratory tract infections have become a serious problem in the area while maternal and infant mortality rates have been rising. The dusty roads combined with the heavy exhaust fumes from vehicles—which have become rickety due to the bad roads—lead to respiratory ailments. Poor road conditions can lead to more than just a bumpy ride. It is possible for roads to deteriorate to the point that they are unsafe. A driver may lose control of their car due to uneven road surfaces, which could result in a crash or rollover accident that could injure the driver, passengers, and pedestrians. Bad road network as a major driver of slum dwellers' health status corroborate

those of several other studies (Choi et al., 2022; Malika et al., 2021; Nejad et al., 2021).

The study found that informal settlements are a significant role in the poor health of slum residents. Putting up buildings in unsuitable locations can negatively affect the health of the local population, as shown by this discovery. As a result, a sizable percentage of the urban populace in developing countries now calls these slums home. Over a billion people make their homes in slums, or "informal settlements," which are prevalent in the urban areas of many poor and middle-income countries. People living there are often marginalized in a variety of ways, including socially, environmentally, and politically, all of which have negative effects on their health. The government also has not formally recognized these areas. People often lack secure land tenure, forcing them to make due with overcrowded, substandard housing in precarious or marginal areas. High environmental risks are a major contributor to the high rates of illness, injury, and premature death in shantytowns. The health risks faced by the local population range from those often associated with daily life, such as the transmission of infectious and parasitic diseases, to those associated with rarer but no less devastating events. Even though certain upgrading projects have effectively promoted health and wellness, the vast majority of informal settlements still lack essential risk-reducing infrastructure and services such as clean piped water, sanitation and drainage, solid waste collection, healthcare, and emergency services. Several other studies (Malika et al., 2021; Nejad et al., 2021; Nguyen & Pattanasri, 2022; Nuwematsiko et al., 2022) reported informal settlements as one of the major factor influencing the health status of slum dwellers.

Shared Social-Physical Environment effect on the Health of Slum Residents

The study sought to find out the shared social-physical environment factors affecting health of slum dwellers. It can be established infrastructure, public services, and housing characteristics capable of explaining about 68 percent changes in the health of slum dwellers. By implication, these variables count so much in the determination of slum residents' health. This shows that as there is poor shared social-physical environment, it is expected that the health of slum residents to also deteriorated and vice versa. This confirms the theory of neighbourhood effect which posits that poor shared social-physical environment definitely affect the health of slum residents detrimental.

The significant negative found nexus between study infrastructure and health of slum residents has implications of policy, practice and research. The residents have developed a culture of maintenance due to the area's inadequate infrastructure, which includes housing difficulties. As a direct result, more than half of the homes are in poor condition now. In the absence of drainage, mosquitoes and other disease-carrying insects thrive in the slum area's stagnant waterways and weedy spots. The current is consistent those of the existing studies (Malika et al., 2021; Ssemugabo et al., 2020) on how poor infrastructure affect slum dwellers' health.

The significant negative found nexus between study public services and health of slum residents implies that public services which included issues concerning their; drainage systems, sanitation facility, access to electricity, garbage collection centres among others was the major factor that affect respondents' health status. It is commonly believed that urban slum dwellers

have better health than their rural counterparts but lower health than other urban groups. Due to their close proximity and the presumption that metropolitan regions have greater access to healthcare services, this perception or assumption occurs frequently. However, a few recent studies (Mberu et al., 2016) have cast doubt on this belief as reported in this current study. Since indications for slum residents are typically concealed in urban averages, it is still unclear whether they are better off, comparable to, or worse off than rural and other urban communities. The current is consistent those of the existing studies (Mukherjee et al., 2020; Ssemugabo et al., 2020; Takyi et al., 2021) on how inadequate public services affect slum dwellers' health.

The significant negative found nexus between study housing characteristics and health of slum residents has implications of policy, practice and research. The health of a slum population is significantly impacted by housing quality. Poor housing of slum dwellers is linked to a wide range of health issues, including infectious illnesses including TB, influenza, and diarrhoea, cardiovascular disorders, injuries, and mental health problems. On the other hand, better housing conditions may boost quality of life, fight sickness, and lessen poverty. The current is consistent those of the existing studies (Malika et al., 2021; Mukherjee et al., 2020) on how poor housing features affect slum dwellers' health.

Coping Strategies among Slum Dwellers at Old Fadama

The analysis brought to bear the following coping strategies (descending order): "Borrowing from friends and selling assets to cope with huge health expenditures", "Working for long hours to make more money", "Reducing excessive food consumption spending", "Adjusting to cope with

current situation as and when it occur", "Purchase of household goods on credit", and "Removal of children from school to help in earning more money for their basic needs". It came to bare that respondents cope with slum living and its related challenges by adapting to and adopting the aforesaid strategies. The coping strategies uncovered in this current study consist with those several other studies (Afeadie, 2021; Amendah et al., 2014; Amiresmaili et al., 2019; Amoako, 2018; Mensah et al., 2022; Oppong et al., 2020; Swain et al., 2019; Waghela et al., 2018). Amendah et al. (2014), for instance, researched ways in which the urban poor of Nairobi, Kenya, made do with less than ideal circumstances. Different households have different ways of handling the situation. Cutting back on meals is the most common method, followed by making use of available credit. Some families also report taking children out of school to deal with financial difficulties.

In another study, Swain et al. (2019) looked at vulnerability and adaptation to extreme heat in odisha, India, and that the use of cooling practices in slum areas reduced the risk of heat illness by 60 percent. Heat illness is associated with the living environment and physical health of the individuals. Identifying the vulnerable population and scaling up adaptive practices can strengthen the public health preparedness.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATION

Introduction

In this chapter, the significant findings and the valuable information obtained or achieved by this study have been carefully summarized. The chapter is made up of the summary of the research, conclusion as well as recommendations drawn from this research study. Also, significant direction for further studies has been given to guide future research.

Summary

The study sought to investigate how individual characteristics and shared social-physical environment define the health of slum residents in Old Fadama at the Accra Metropolitan Area of Ghana. Both quantitative and qualitative means were employed in response to the specific underlying issues: the prevalent health issues/diseases in Old Fadama; perception of slum dwellers on factors that affect their health status; effects of shared social-physical environment on the health of slum residents; and strategies adopted by residents to cope with prevailing health-related problems. Of the 1,500 estimated residents(household heads) of Old Fadama, a sample size of 316 were selected using a questionnaire. Of the copies of questionnaires sent to the slum dwellers, 295 were returned making a response rate of 96.41 percent. The data cleaning process resulted in a 280 clean usable samples following the deletion of 15 cases. The quantitative analysis was done using SPSS covering both descriptive and inferential statistical analyses. With respect to the qualitative aspect of the study, a staff each was drawn from Physical Planning Unit, Health Unit, and Sanitation Department (1) of the AMA, and three (3)

opinion leaders from Old Fadama. This also included three comminity leaders . The Six (6) informants were purposively selected and interviewed accordingly. A thematic content analysis was carried out using the Nvivo analytical software.

In response to the prevalent health issues/diseases in Old Fadama, the study found malaria, cholera, tuberculousis, hepatitis, dangue fever, and pneumonia, as the most prevailing health challenges in the area. About the perception of slum dwellers on factors that affect their health status, the study poor sanitation, bad road network, and informal settlement. The study found infrastructure, public services, and housing characteristics, as the shared social-physical environment factors explaining the health of slum dwellers in the area. On the strategies adopted by residents to cope with prevailing health-related problems, the study uncovered "Borrowing from friends and selling assets to cope with huge health expenditures", "Working for long hours to make more money", "Reducing excessive food consumption spending", "Adjusting to cope with current situation as and when it occur", "Purchase of household goods on credit", and "Removal of children from school to help in earning more money for their basic needs".

Conclusion

In Ghana, slum communities are common, and an estimated 40% of the country's urban population lives there (Africa Research Institute, 2016). Ghana also has some of the most chaotic slum settlements in the entire globe. According to Africa Ranker (2016), Nima is one of the 20 worst slums in Africa, ranking 18th overall. On the list of the worst slums in Africa, Old Fadama, another Accra neighborhood, is ranked seventh. The aforementioned

points to the need for a practical strategy to address the slum problem. The main objective of this research is to investigate how individual characteristics and shared social-physical environment define the health of slum residents in Old Fadama in the Accra Metropolitan Area of AMA, Ghana. The study come to a host of realization on the literature.

According to the study, the most common diseases and health problems in Old Fadama include malaria, cholera, tuberculousis, hepatitis, dangue fever, and pneumonia. The study shows an increase in the prevalence of live threatening diseases among the slum population. The high prevalence of such health issues/diseases among this slum dwellers suggests the need for pragmatic strategies towards a healthy slum settlements.

It can be established that slum dwellers perceived poor sanitation, bad road network, and informal settlement as substantial factors affecting their health status. The underlying fundamental factors are keen to the lives of slum dwellers. It is evidenced that slum communities are generally faced with sanitation, road infrastructure, and inappropriate settlement challenges, all which result in poor health. The realization of these factors as major determinants of health status of slum dwellers will serve as a guide to policy, practice, and research.

The study concluded that the health of slum residents may be explained by shared social-physical environment, including infrastructure, public services, and housing characteristics. Such dimensions are seen as shared factors capable of explaining the health of slum residents. Therefore, as the shared social-physical environment is improved, it is expected that the health of slum residents to also improved and vice versa.

On the coping strategies being adopted by slum residents in dealing with prevailing health-related problems, the study uncovered "Borrowing from friends and selling assets to cope with huge health expenditures", "Working for long hours to make more money", "Reducing excessive food consumption spending", "Adjusting to cope with current situation as and when it occur", "Purchase of household goods on credit", and "Removal of children from school to help in earning more money for their basic needs". It was obvious from the study that migrants do not have life easy and promising as anticipated before embarking on their journeys. They become exposed to all kinds of risks, ranging from environmental to health. Within this context they device the aforesaid strategies to cope with challenges facing them. It is the argument of this thesis that government should engage private partnership to stem the tide down.

Recommendations

The study seeks to investigate how individual characteristics and shared social-physical environment define the health of slum residents in Old Fadama at the Ashiedu Keteke Sub-metro of Ghana. The study unveiled appropriate responses to the various specific objectives established above. Base on the various findings, the study presents the following recommendation towards policymaking and practice:

1. The government and private institutions and individuals provide intensive education support programs the prevalence of malaria, cholera, tuberculousis, hepatitis, dangue fever, and pneumonia in slum areas such as Old Fadama. Education could be done through Community Public Address systems (PA Systems), schools,

workshops, seminars, and others. Educational campaigns could be enhanced through public awareness creation by way of picnics and others. This will help to sensitize the residents on health issues/diseases and the associated dangers, in order to always keep the surroundings clean and healthy.

2. There is the need to prioritize sanitation, road network, and settlement arrangements in national policies on housing, land, and planning redevelopment. The central and local government should make efforts towards the realization of sound sanitation needs, good road network, and sustainable settlements.

Given the shared social-physical environment dimensions (infrastructure, public services, and housing characteristics) perceived by slum dwellers as factors explaining their health status, the study recommends that policymakers should pay special attention to such areas. Housing and land planning institutions need to adapt to dynamic land management systems that promote urban development since Ghana has made some level of progress in decentralisation in recent years and can extend that to the housing industry as well. This can focus on upgrading the housing structures of Old Fadama to a standard one with well-planned physical landscape to help the living conditions of area. The Sanitation Department of the district assembly of the study area should make conscious efforts to provide the necessary waste facilities and frequently collect refuse from the area as enshrined in the National Building Regulations of Ghana.

Planning Implication of Findings

The outcome of the present study inform urban planners and key housing stakeholders to have a second look at urban spatial planning activities in Accra. This is because spatial planning could be used as a relevant tool for all sectors of the urban economy to organise and integrate different sectors and urban systems into a consolidated spatial strategy for managing slum developments in cities across the country.

Contribution to Knowledge

The study has contributed in developing a conceptual framework to analyse slum health issues to guide future discussions and research in Ghana and elsewhere. The framework provides a circular flow of ideas about the formation of slums and how environmental conditions in such areas affect the health status of its dwellers.

Areas for Further Research

Further research can look at spatial planning of housing development in urban Ghana. Additionally, further research could bring to bear the spatial considerations necessary to help identify the proper ways of ensuring inner cities development without compromising the quality of the urban landscape.

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APPENDICES

APPENDIX A

QUESTIONNAIRE

UNIVERSIRTY OF CAPE COAST

TOPIC: THE EFFECT OF SLUM ON SLUM DWELLERS: A STUDY OF OLD FADAMA (SODOM AND GOMORRA)

I am an M.Phil. student from the Department of Geography and Resource Development, University of Ghana conducting a research on the above topic. I would like to assure you that all the information I will collect from you through this questionnaire will be treated with strict confidentiality and for academic purposes only. Kindly respond as truthfully as possible. Thank you for your cooperation.

PART ONE: SOCIO-DEMOGRAPHIC CHARACTERISTICS OF RESPONDENTS

1. Name of settlement……..

2. Sex: (A) Male…… (B) Female…….

3. Age…….

4. Ethnicity……..……

5. Religion……

6. Home Town.....

7. How long have you settled here? ……..……

8. Marital status?

(a) Married { } (b) Single { } (c) C0-habituating { } (d) Divorced { }

9. Educational Background

(A) Basic level { } (B) JHS { } (C) SHS { } (D) Tertiary { }(E) Others……

PART TWO: EMERGENCE AND GROWTH OF SLUMS

10. How did you get into this community ……

11. Why are you in this community? ……

12. Are you employed? (a)Yes { } (b) No { }

13. If yes, indicate if (a) Full Time { } (b) Part Time { }

13 Please specify if (a) Public { } (b) private { }

14 Occupation……

15 How much do you earn on the average per month? .....

16 What do you mostly spend your earnings on? (A) Food {} (B) Clothing { } (C) Medicals { } (D) school fees { } (e) rent { } others……

PART THREE: HEALTH OF SLUM DWELLERS

17. What are some of the common diseases experienced by males in this community?……

18. What are some the common diseases experienced by women in this community?

……

19. What are some of the common diseases of children in this community?

……

20. Where do residents of this community go when they are sick? (A) Chemical shop (B) Pharmacy shop (C) Clinic (D) Hospital

21. Do you have a health facility in this community? (A) Yes (B) No

22. If yes which type of health facility do you have? ……..……..

. How do pay for your hospital bills ……

PART FOUR: QUALITY OF LIFE

A. Infrastructure

24. The community has a good road network.

A. Strongly Agree B. Agree C. Strongly Disagree D. Disagree

25. The community has a reliable public transport.

A. Strongly Agree B. Agree C. Strongly Disagree D. Disagree

26. The community has enough public schools.

A. Strongly Agree B. Agree C. Strongly Disagree D. Disagree

27. The community has recreational facility.

A. Strongly Agree. B. Agree C. Strongly Disagree D. Disagree

B. Public Services

28. The community has potable drinking water.

A. Strongly Agree B. Agree C. Strongly Disagree D. Disagree

29. Do you have access to bath houses? (A) Yes { } (B) No { }

30. The community has garbage collection centres.

A. Strongly Agree B. Agree C. Strongly Disagree

31. The community is legally connected to electricity.

A. Strongly Agree B. Agree C. Strongly Disagree D. Disagree

32. The community has sanitation facilities.

A. Strongly Agree B. Agree C. Strongly Disagree D. Disagree

33. The community has drainage systems.

A. Strongly Agree B. Agree C. Strongly Disagree D. Disagree

C. Housing Characteristics

34. Type of house

(A) Compound House Single { } (B) storey House { } (C) Flat { }

(D)Temporal structure { } (D) Semi-Permanent Structure { }

35. What materials is your house made of?

(A)Sand Crete blocks with aluminum roof { }

(B) Land Crete and aluminum roof { } (C) Rammed earth and aluminum roof {}

(D) Wood { } (E) Salvaged materials { } (F) wooden materials { }

36. Who gave you the Land? .....

37. Do you have any documentation to show ownership? (A) Yes { } (B) No { }

38. If yes, please specify (A) sub lease { } (B) Allocation paper { }

(C) Land title deed { } (D) Lease { } (E) Squatting { } (F) others { }

39. Do you have security of tenure? .....

40. Housing tenure status? (A) House owner { } (B) Renter { }

(C) No formal arrangements { } (D) non renting occupant { }

41. Means of acquisition? .....

42. What is the size of the plot? …….....

43. Is the house suitable for the plot? .....

44. Any problem with the site or location of the house? .....

45. Have you encountered problems with city authorities regards your stay here?

(A)Yes { } (B) No { }

46. If yes what kind of encounter? (A) Force evictions { } (B) Water and Sanitation

(C) Destruction of housing { } (D) others? .....

APPENDIX B

INTERVIEW GUIDE ON SLUM HEALTH FOR KEY INFORMANTS

AT OLD FADAMA, ACCRA

DEPARTMENT OF GEOGRAPHY AND REGIONAL PLANNING,

UNIVERSITY OF CAPE COAST, GHANA

RESEARCH TOPIC

SLUM HEALTH IN GHANA: A STUDY OF OLD FADAMA, ACCRA

Dear Sir/Madam,

The above research is being carried out as part of a master's degree program in geography at the Department of Geography and Regional Planning.

I want to speak with you about the slum health situation in your neighborhood and how people are dealing with the situation through various management measures.

If you give your consent to be involved in this research, please sign below.

I agree to be involved in the research conducted on Slum Health in Ghana: A Case of Old Fadama, Accra.

Sign……

Date ……..

Date of interview:…….

Place of interview:…….....

Interviewee Gender:……..

Organization/Institution:……

Position/Title:……

1. How long have you stayed in this area (take note of their experience in relation to the past and current situation in the area)
2. How can you classify the settlement of this area? (Probe further for the nature of settlement and the challenges associated with staying in those settlements)
3. What are the major characteristics of the environment of Old Fadama?
4. As one of the leaders in this area, what are some of your roles? (take note of those roles that may relate to the management of the slum situation in the area)
5. In your opinion what is health? (find out if they really understand what health is and how their daily activities contribute to their health)
6. What are the most common diseases in this area? (find out whether they know the causes and how they affect their life)
7. How will you assess the slum health situation in this area? (find out some of the effects of the sanitation conditions in the area with respect to their health in the area)
8. How have you adapted to this slum health situation? (find out some of the community adapted management strategies in dealing with slum health situation in the area)
9. What are you doing to help minimize the challenges faced in this area with respect to slum health? (find out some of the efforts made by respondents using their position to influence the implementation of some policies that may help improve the slum situation in the area)

10. What suggestions do you have to help minimize the challenges you face here in this area? (find out some of the long term and short-term solutions to the current problem)
11. Are there any policies to help to shape the unplanned nature of settlement? (find out both traditional and governmental policies)
12. Are there any customs in place to ensure the sanitation condition in this area can be controlled? If yes probe for further information on the matter.
13. What is the way forward to improving health and environmental conditions of Old Fadama?

APPENDIX C

OBSERVATION CHECKLIST/GUIDE

Observation checklist on slum health situation in Old Fadama, Accra.			
Date	Time	Area	Event or activity observed