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Exploring The Main Causes of Overcrowding and Infectious Disease in Karaan District, Somalia

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Abstract

This study examines the main causes of overcrowding and infectious disease in Karaan District, Banadir region, Somalia. Overcrowding is a critical societal and population health issue that negatively influences the living conditions, health, and disease spread, especially in low-income urban areas. A descriptive research design is used, and data were collected from 40 respondents (Community elders, female household leaders, youth representatives, health workers, and local administrators) through in-depth interviews, focus group discussions, and field observations. The analysis comments on the perception of community members and the lived experiences of congested housing conditions. Results indicate that poverty, internal displacement, rural-urban migration, lack of housing infrastructure, high rental, and poor family planning facilities are some of the factors causing overcrowding in Karaan District. Most families live in small, poorly ventilated homes with many family members that share sanitation and water facilities. This form of living enhances the spread of respiratory diseases, diarrheal diseases, measles and other communicable diseases and children below the age of five and the elderly are the most susceptible. Lack of ability to isolate infected people and practice proper hygiene adds to the further spread of diseases. The paper is able to conclude that overcrowding in the Karaan District is a structural and a socioeconomic problem which is tightly related to poverty, urbanization and poor infrastructure. The solutions to infectious disease transmission involve multi-sectoral interventions that integrate better housing and water and sanitation systems and better primary healthcare systems, which should include poverty reduction strategies. Addressing the social determinants of health, such as overcrowding, is a key to long-term improvement in the social health of the urban Somali.

Keywords: Overcrowding, Infectious Disease, Urban Health, Housing, Social Determinants of Health, Karaan, Somalia

1. INTRODUCTION

Overcrowding is a multidimensional social and population health problem that bears a lot of consequences in regard to the well-being, quality of life, and socio-economic growth of the community.

Based on the World Health Organization (WHO, 2015), overcrowding is a situation where the number of people using a dwelling or a place is larger than it can accommodate, which leads to restricted movement, lack of privacy, loss of hygiene, and rest and sleep difficulties. Even though the words crowding and overcrowding are mostly used interchangeably, both terms are used to imply certain circumstances where the condition of the environment is beyond the needs of people by way of overpopulation. Not only does overcrowding cause physical discomfort, but it also several social and health issues, such as spreading diseases, psychological stress, sharing of common resources, and decreased caregiving ability. Although population density is a quantitative factor of the population in relation to unit area, overcrowding includes both the quantitative and qualitative responses to the density of population, perception of constraint, discomfort, and social pressure. Nevertheless, a large number of statistical indicators of overcrowding are based on objective density indicators without a complete understanding of the experienced space constraints by people (WHO, 2015).

Infectious disease is also one of the most prevalent causes of morbidity and mortality, especially in children below the age of five in Somalia. Infrastructure and health systems have been undermined over decades of conflict, political turmoil and frequent climate shocks to prevent access to safe housing, clean water and quality healthcare delivery. Reports by UNICEF (2022) have shown that Somali children are disproportionately exposed to preventable death due to various infectious diseases, with pneumonia, diarrheal diseases, and measles being the most common causes. These circumstances are closely related to the environmental risk factors like overcrowding, malnutrition, and a dearth of sanitation coverage. Likewise, the aged are more vulnerable due to compromised immunity and chronic illnesses, which predispose them to communicable diseases due to overcrowded living conditions.

According to the report published in 2011 by Human Rights Watch, the issue of poverty and poor housing conditions in Somalia is one of the factors the nation suffers poor health outcomes, including the transmission of communicable diseases. In situations where several relatives are living under one roof, it is hard to isolate those who are infected and preventive strategies like physical distancing are almost impossible to uphold. As a result, children and older people, whose immune systems could be less effective, are more susceptible to infections and complications (HR, 2011).

The overcrowding in the case of Karaan District in Somalia is a symptom and a result of larger demographic and socio-economic issues. The country of Somalia has had a history of conflict, displacement, and inadequate access to basic services in the last three decades. These circumstances have disrupted the conventional ways of settlement and the overstretched available infrastructure in urban centers such as Karaan District, which is a highly populated administrative unit in the capital city of Mogadishu. The rural migration of internally displaced persons (IDPs), rural-urban migration, and migration to conflict areas have contributed to the over-straining of resources of housing, water supply, sanitation, health services, and employment opportunities. Because of this, living conditions in most of the households in Karaan are that of overcrowding as per the internationally defined limits, and more than one household lives in a particular room, a bed, and even communal facilities.

Karaan District in Mogadishu is the area that has seen a rapid population growth in recent years. The problem of the influx of internally displaced people (IDPs), coupled with an insufficient housing infrastructure, has led to crowding. The congestion of areas provides good conditions for the spread of infectious diseases, especially respiratory and waterborne diseases.

It is vital to learn the underlying factors of overcrowding and the role they play in the spread of the disease in

order to develop meaningful interventions at the public level. This paper thus discusses the principal causes of overcrowding in Karaan District and the consequences of the same to the spread of infectious diseases.

2. LITERATURE REVIEW

The part of literature reviewed was picked from journals, conference presentations, books and institutional reports.

2.1 CONCEPT OF OVERCROWDING

Overcrowding is the condition when the human population in a settlement is greater than the space meant to sustain good living. People per room or square meter are often used to measure it. Overcrowding goes hand in hand with poverty, lack of housing, and a high rate of urbanization.

The phenomenon of overcrowding is very common in literature on public health and housing as a situation whereby the number of people using a dwelling is higher than the area that is believed to be sufficient to accommodate them to live safely and in a healthy environment. It is usually calculated on the basis of such indicators like people per room, people per bedroom, or square meters per capita (HWO, 2018).

Despite the differences in definition in different countries, the main issue is the same; inadequate living space reduces the health of the population physically and psychologically, privacy, and the quality of life on the whole. Overcrowding is not just a spatial concern but also demonstrates more general issues of income, housing, and urban rule (Mathew, A. 2018).

The international housing standards indicate that decent housing must offer adequate space, air circulation, structural security, and water access and sanitation (World Health Organization, 2018). In case these conditions are not observed, the likelihood of negative health outcomes is high. Crowding is a common issue in low-income urban areas, where the housing provision does not match the increased demand. The sudden urbanization, coupled with a lack of economic resources compel the households to stay in small houses which are not able to house very many people. Informal settlements and slum growth are closely related to the phenomenon in most developing countries (UN-Habitat, 2020).

One of the mechanisms of overcrowding is poverty. The Theory of Fundamental Causes illustrates that socioeconomic status determines health outcomes due to the fact that it affects access to health-related resources, including safe housing, healthcare, and sanitation (Link and Phelan, 1995). Poor families are also not able to pay bigger and better-quality houses and can live together with their extended family members to pay less. As a result, overcrowding is a symptom of poverty as well as a perpetuation of poverty. The overcrowding can become standard within the communities in vulnerable environments where the housing market is unregulated and job opportunities are limited.

Overcrowding is also enhanced by urbanization. The urban population of the world is increasing at a rapid pace in the recent several decades, with most of the population being concentrated in low-income nations (United Natation, 2022). Urban growth leads to the spread of housing inadequacies and informal settlements when the urban growth is not properly planned concerning the development of infrastructure. Overcrowding in such situations is not just the problem at the household-level, but it is a structural consequence of the lack of proper urban policy and the insufficient government investment in housing construction.

Besides the physical space limitation, the overcrowding is usually accompanied by inadequate ventilation, poor lighting and lack of adequate sanitation facilities. These circumstances enhance the risks to health attributed to crowded living. The issue of overcrowding, thus, needs to be perceived within a more extensive social determinants framework, which takes into account economic inequality, the housing policy, and the forms of government. To deal with overcrowding, in addition to increasing housing supply, it is necessary to take into consideration the socioeconomic circumstances that restrict access to proper shelter.

2.2 CAUSES OF OVERCROWDING IN KARAAN DISTRICT

Population growth in Karaan District, which is caused by demographic, social, economic, and technological factors, is the main cause of overcrowding. The increase in population by the steady rise in birth rates over the death rates results in population growth, increased population density, and pressure on available resources. The causes that have led to the overcrowding are discussed in the following sections.

2.2.1 Poverty and Socioeconomic Factors.

Overcrowding in Karaan District is also promoted by the socioeconomic conditions especially, poverty. In most of the low-income societies, big families are viewed as financially beneficial. In the past, the high rates of infant mortality stimulated the tendency of families to have as many children as possible in a hope that some would make it to an adult age. Also, children are usually regarded as good labor sources in agrarian and informal economies. Families that are economically insecure or those having a limited access to the social security systems or those at risk due to natural disasters might opt to bear more children as one of their survival mechanisms. Modern advances in the healthcare system have led to an increase in child survival rates, however, leading to larger populations that exert more pressure on the limited resources (EIA, 2017).

2.2.3 Decline in the Death Rate

One of the underlying reasons of overcrowding is the reduced death rates in the long term. Population stability is the situation when there is a balance between the birth rates and the death rates. But with the death rates reducing substantially and the birth rates not too low, there is high population growth. In the past, the major causes of high mortality were infectious diseases, starvation, spoiled hygiene, and lack of medical expertise. The invention of agriculture was one of the first turning points in the human population. A consistent supply of food minimized starvation and enhanced the survival. Since the mortality rates decreased without the matching effect of fertility rates, the disequilibrium between the birth and death was created. This population increase over the years led to long term population growth and finally overpopulation (U.S. Energy Information Administration (EIA, 2017).

2.2.4 Enhanced Medical Facilities

Medical science and medical systems have been instrumental in the reduction of mortality rates. Industrial revolution came with the technological advancement that brought the growth of agriculture productivity and better living conditions. Food production was increased and allowed families to have bigger households. Medical discoveries led to the creation of vaccines, antibiotics, and more sanitary systems that greatly reduced fatalities in illnesses that were deadly before. This saw life expectancy go up and the infant mortality reduce. This resulted in an increase in population that was negatively affected by the demographic balance caused by the better food security and the improved healthcare systems (EIA, 2017).

2.2.5 Fertility Treatment Technological Advancements.

The current trends in the reproductive medicine have also had an impact on the population growth trends in Karaan District. Technologies, reproductive drugs, and better prenatal care have also helped couples with infertility to conceive. These healthcare inventions raise the total birth rates through the extension of reproductive options. Moreover, contemporary obstetric care has played a major role in decreasing deaths of mothers and children in the process of pregnancy and delivery. On the one hand, these innovations enhance the life quality of individuals and their reproductive rights, but on the other hand, they can increase the population in those areas where the population is already dense (EIA, 2017).

2.2.6 Immigration and Population Density

Karaan District has encountered significant internal migration of the surrounding rural and peri-urban areas. The presence of job opportunities, education institutions, and social amenities attract many people and their families to the district as opposed to more remote areas. Population density goes high when immigration becomes more than the emigration in particular regions. This increased congestion of people is straining infrastructure, housing, public services, energy provision and food. Therefore, this can lead to congestion in some urban centers because of unequal dispersion of population (EIA, 2017).

2.2.7 Limited Family Planning

Poor access to family planning services is one of the key factors to high rates of population growth, especially in developing nations. Poor education, poverty, cultural practices and lack of reproductive health education limit the population from making informed decisions on the number of children to bear. The early marriage customs also prolong the reproductive years and enhance fertility. The lack of awareness and access to birth control mechanisms leads to accidents and an increase in families. In the absence of proper family planning policy and education, the population growth can be sustained at unsustainable levels, which will aggravate the problem of overcrowding and the consumption of available resources (EIA, 2017).

2.3 CONCEPT OF INFECTIOUS DISEASE

The issue of infectious diseases is one of the primary problems of Somali social life since it is common in overpopulated urban districts, where people live in overcrowded and poorly furnished houses, and the infrastructure is a limited resource. There is a considerable amount of literature on health worldwide that shows that there is a high level of correlation between overcrowding and the spread of communicable diseases. Crowding promotes the transmission of infectious agents because it results in close interpersonal contact, the lack of physical distancing, and poor ventilation and sanitation. The World Health Organization (WHO, 2018) affirms that inadequate housing conditions such as a lack of airflow, sharing of facilities, and a lack of sanitation have favorable conditions that sustain the existence and spread of pathogens.

The airborne diseases are particularly sensitive to overcrowding. An example of this is Tuberculosis (TB) which is spread by breathing in the sputum of an infected individual who coughs or sneezes. These droplets may take long durations in the air especially in poorly ventilated and overcrowded areas, raising the chances of other people being exposed to them. Empirical studies have revealed that housing congestion is a major contribution to pulmonary tuberculosis especially in poor urban areas. On the same note, respiratory infections like pneumonia and influenza are spread in large numbers in the households whereby more than two people share bedrooms and living rooms. Such conditions provide an environment that enables frequent

respiratory attacks in Somalia where most households live in small but inadequately ventilated houses (Lee, J. Y. 2022).

In addition to infectious diseases of the respiratory system, congested housing may worsen chronic respiratory diseases like asthma. The cooking fuel, humidity, growth of molds, and poor ventilation are some of the causes of indoor air pollution, which worsens respiratory health. Results of research carried out in similar low-income urban settings indicate that children residing in crowded households are more susceptible to recurring respiratory infections and asthma exacerbation. These environmental exposures, along with the limited ventilation systems and biomass fuels that are commonly used in Somalia to cook and ventilate their homes, add to the health risks of crowding among vulnerable groups, including children and older adults.

Overcrowding is also very important in the proliferation of waterborne and sanitation-related diseases. In cases when many families use few toilets and water supplies, hygienic levels tend to decrease. Poor sanitation amenities, poor waste disposal, and poor handwashing provision expose individuals to pathogens that cause diarrheal diseases and cholera. Poor sanitation is among the most common reasons for child mortality in the weaker states, including Somalia. The shared facilities are used more often in overcrowded neighborhoods, posing greater risks of contamination and hastening the spread of diseases. Physical contact that involves direct and indirect physical contact within overcrowded households increases the rate of spreading infectious diseases. Measles and seasonal flu are examples of viral infections that spread very fast when people live close to each other without effective isolation (UNICEF, 2022).

2.4 RELATIONSHIPS BETWEEN OVERCROWDING AND INFECTIOUS DISEASES IN SOMALIA.

The issue of overcrowding is closely related to the outbreak and propagation of infectious diseases in the Karaan District, Banadir Region, Somalia. High population density and poor living conditions due to the lack of proper housing infrastructure, rapid urbanization, and internal displacement have caused the high population density. Poorly ventilated, congested households enhance physical intimacy, and individuals, particularly children below the age of five and older adults, are at risk of infectious diseases (WHO, 2023; UNICEF, 2022).

Incidence of airborne diseases like tuberculosis, influenza and pneumonia is especially common in congested areas. Poor ventilation and a lack of space increase the period of exposure to respiratory droplets, which increase household transmission (WHO, 2018). On the same note, when a number of families use toilets and water sources, waterborne diseases and sanitation diseases are even worse, and poor collection and absence of handwashing water exacerbate the spread of diarrheal diseases (UNICEF, 2022).

These risks are also mediated by socioeconomic factors. The Theory of Fundamental Causes also emphasizes the role of poverty and displacement in restricting access to safe housing, sanitation and medical care, which result in poor health outcomes (Link and Phelan, 1995). The eco-social theory by (Krieger, N. 2011) focuses on the fact that structural inequalities are biologically imposed, which raises the rate of infections in marginalized groups. Problems with overcrowding also do not allow isolation of infected people, and quarantine is unrealistic, which increases the spread of intra-household infection, in particular, in cases where there is limited access to healthcare and delayed treatment (WHO, 2023).

In short, Karaan District overcrowding combines with poor sanitation, poor ventilation, poverty, and lack of access to health services to increase the spread and intensity of infectious diseases. Interventions to improve

housing, increase water and sanitation effects, decrease poverty, and solidify primary healthcare are all parts of a comprehensive intervention.

3. MATERIALS AND METHODS

The research design used in this study was a descriptive research design to help gain a detailed insight into the community experience and perception towards overcrowding and the spread of infectious diseases. The research was done in the Karaan District, Mogadishu.

Karaan District is one of the northern administrative districts of Mogadishu, located in the Benadir Regional Administration of Somalia. Karaan is a reflection on the socio-political changes that have taken place in the wider Mogadishu city since the fall of the central government in 1991. Karaan has recorded a high population growth over the last three decades attributed to rural-urban migration, population displacement as a result of conflict and natural calamities like drought. These changes have had an immense impact on the urban environment of the district that led to high population density, informal settlements and overcrowding. As a result, Karaan can be viewed as one of the important examples of how instability and fast urbanization interact with the issue of public health, especially spreading infectious diseases in overcrowded areas. The district presents a unique context for studying overcrowding, and infectious disease. The area is highly crowded and inhabited by permanent citizens and displaced communities.

The participants of this study were involved 40 respondents from Karaan district banadir region Somalia which included Community elders, Women household heads, Youth representatives, Health workers, and Local administrative officials. The participants were chosen according to their knowledge and experience in the areas of housing conditions and the problems of the public health. In-depth interviews, Field observations, and Focus group discussions were used to collect the data. Data that had been collected were analyzed using thematic analysis. The transcriptions of the interviews were coded and classified into major themes.

4. FINDINGS AND DISCUSSION

This part presents findings and discussion of the study the main causes of overcrowding and infectious disease in Karaan District, Mogadishu, Somalia. It emphasizes an overview of the findings of in-depth interviews and focus group discussions with Community elders, Women household heads, Youth representatives, Health workers, and Local administrative officials.

4.1 Findings

The authors established that poverty, internal displacement, rural-urban migration, excessive rental prices, and lack of family planning services are the primary causes of overcrowding in Karaan District. Large families are housed in 6-10 individuals in small and lowly ventilated rooms with shared sanitation facilities with other families.

Health workers indicated that respiratory diseases like pneumonia, tuberculosis and influenza were very common and they were detected to be very high among children below five years and older adults. There was also water borne diseases such as diarrheal diseases because of sharing the toilets, the lack of clean water, and the poor standards of hygiene. Other results of overcrowding indicated by participants were psychological stress and lack of privacy.

4.2 Discussion

The results prove that overcrowding plays a major part in the transmission of infectious diseases in Karaan District, Somalia. The World Health Organization claims that poor housing conditions expose people to airborne infections and waterborne infections. Poverty prevents access to decent housing and sanitation which exposes a person to disease.

The findings are congruent with the reports by the UNICEF suggesting that children in Somalia are under a high risk of preventable environmental-related infectious diseases. Disease prevention measures are not easy to enact due to overcrowding and lack of ventilation and sharing of facilities.

Therefore, infectious diseases, in this case, cannot be treated exclusively in the field of medicine, but they should be interpreted in terms of social, environmental, and economic conditions.

5. CONCLUSION AND RECOMMENDATIONS

5.1 Conclusion

The research arrives at the conclusion that overcrowding has played a major role in the transmission of infectious diseases in the Karaan District, Somalia. Inadequate room, ventilation, and sanitation areas, and the inability to isolate sick persons, augment the transmission potential, especially among children and the elderly. It is fueled by poverty, displacement and high urbanization. Over-crowding in housing greatly aggravates the spread of respiratory and water borne diseases especially through the weak segments of the population like children and the old.

Overpopulation is closely related to poverty, displacement, and lack of urban infrastructure. Thus, to manage infectious diseases in the district, it is important to pay attention to both the short-term health situation and the long-term structural aspects, while maintaining the overcrowding.

Structural interventions, other than medical treatment are necessary in solving infectious diseases in the district.

5.2 RECOMMENDATIONS

1. **Enhance Housing Infrastructure:** Government bodies, and development aid agencies should invest in affordable housing developments as a measure to decongest. The policy of urban planning should control the growth of informal settlements and provide reasonable spatial norms.
2. **Strengthen Water and Sanitation Services:** It is necessary to increase the supply systems of clean water and to build enough sanitation systems. Hygiene promotion programs should be done within the community to promote handwashing and safe disposal of waste.
3. **Strengthen Primary Healthcare Services:** Local health centers will be empowered to the extent of offering early detection and treatment of infectious diseases. Educational programs on community health should create awareness concerning disease prevention and hygiene.
4. **Support Poverty Reduction Programs:** Livelihood programs, training vocation and income-generating programs should be increased to minimize economic vulnerability. Families may be empowered economically to get better houses.

5. **Support Family Planning and Reproductive Health Education:** A greater access to family planning service and reproductive health education can be used to control population growth and alleviate long-term overcrowding strains.
6. **Enhancement of Cooperation between Government and Humanitarian Agencies:** There should be coordinated actions among local governments, NGOs, and international organizations in dealing with the problem of overcrowding as a whole, especially in those locations where internally displaced individuals live.

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