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

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Abstract

The study sought to assess the effect of slum on the health of its' dwellers in Sodom and Gomorrah. The study adopted the explanatory design of the quantitative approach to examine the effect of slums on the quality of life of the slums inhabitants of Sodom and Gomorrah. With the aid of Krejcie and Morgan's (1970) sample size table, 306 respondents were selected and through convenience sampling, questionnaire were administered to the respondents. Moreover, the data were analyzed with the help of statistical software known as Statistical Product for Service Solution (SPSS version 25.0) by using frequencies, percentages, means and standard deviation as well as linear regression and presented by using tables, and charts. It was evident from the reviews that the emergence of slums and its growth are offshoots of urbanisation. The search for greener pastures in the city centers and the improvement of the livelihood of slum dwellers were the major driving force for slum dwellers to migrate to the city centers. 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 several means to survive. It is the argument of this thesis that government should engage private partnership to stem the tide down. Therefore, it is recommended that the government and private institutions and individuals provide intensive education support programs for the community. Education could be done through Community Publics Address systems (PA Systems), schools, workshops, seminars, and others.

Keywords: Slum-Health, Sodom, Gomorrah, Old Fadama, Accra Metropolis

INTRODUCTION

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, this developmental activities has provided a source of employment to all rural migrants as well as 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 of the world which has become a universal phenomenon accompanying urban growth.
Thus, the sprouting of slums in the urban areas is the direct outcome of greater economic opportunities available in the cities and towns. Therefore, it clearly shows a pull (accessibility to varied social amenities in the city) and push (difficulties associated in living in rural communities) factors Moise & Madhusoodanan, (2006) have influenced the growth of slums, hence slum is a reality that cannot be overlooked in the long run.

Hossain, (2013) and Hakim & Kamruzzaman, (2015) defines slum as a heavily populated area in a city where inhabitants are in or near poverty that reflects the miseries of deprived people who have to struggle with poverty to survive. The UN Un-Habitat, (2008) explained slums as group of individuals living under the same roof, in urban area that lack at least one of the following housing conditions in terms of improved water, access to adequate sanitation, housing durability and sufficient living area.

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 each year from 2000 to 2010. In sub-Saharan Africa, slum populations are growing at 4.5 percent per annum, a rate at which populations double every 15 years. And it predicted that within 30 years that figure would have doubled a third of the current world population (Un-Habitat, 2008). Countries with a high incidence of slums comprise Botswana, Burundi, Cameroon, Cote d’Ivoire, Eritrea, Gabon, Ghana, Kenya, Nigeria and Zambia, where at least 60% of the urban population resides in slums (Un-Habitat, 2008). Meanwhile, slum settlements are also known for their atmosphere of fear and violence (Bloom et al., 2008). People living in these settlements experience the most deplorable living and environmental conditions, which is characterised by inadequate water supply, squalid conditions of environmental sanitation, breakdown or non-existence of waste disposal arrangements, overcrowded and dilapidated habitation, hazardous location, insecurity of tenure and vulnerability to serious health risks (Agarwal et al., 2003; Kimani-Murage & Ngindu, 2007).

Hakim & Kamruzzaman, (2015) reveals that one typical feature of today’s slums is a one-roomed dwelling which is extremely over-crowded by individuals, dilapidated dwellings, lack of sanitation, charaterised with diseases and lack civic amenities. For instance, Ashman et al., (2011) posit that one billion of 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 the context of Ghana, rapid urbanisation has resulted to creation of more slums in the cities attributed with overcrowded dwellings, high rate of pollution, inadequate household facilities and carefree attitude towards environmental health and safety among residence in these areas (Cobbinah et al., 2019). Such 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, Kojokrom and New Takoradi in the western Region respectively. Adedeji, (2006) observes that the poor environmental conditions in slum areas is a great concern because the quality of man’s environment is an integral contributor to the overall quality of families and individuals life. It is expected that when the environmental sanitation standards of a slum areas improve, there would be improved living condition and health security for slum dwellers (Owoeye & Adedeji, 2013).
Shelter stands as a fundamental human need, with the aspiration for suitable housing being a universal human desire (Un-Habitat, 2008). Consequently, urban spaces have become the preferred locations for habitation (Owoeye, 2013). Various scholars have extensively researched slums from diverse perspectives. For example, Roy et al., (2014) concentrated on the emergence and expansion of slums, identifying key factors and employing different models to elucidate their growth. Raška et al., (2020) explored urbanization and slum development, while Owoeye & Adedeji, (2013) examined the interconnectedness of individuals' health, socio-economic status, and living conditions. Their study concluded that considering the health of individuals necessitates an understanding of their socio-economic base, housing, and environment.

While recent studies have primarily focused on the growth and prevention of slums, there remains a gap regarding the impact of slum creation on the health of its inhabitants. Few studies have delved into this aspect, particularly within the context of Ghana (Hakim & Kamruzzaman, 2015; Subasinghe et al., 2015). Despite research gaps, studies by Owoeye & Adedeji, (2013) and Sori & Ayana, (2012) conducted locally have highlighted the effects of slums on urbanization and the lives of slum dwellers. This research seeks to contribute to the limited body of knowledge on the health effects of slums in Ghana, with a specific focus on Sodom and Gomorrah, a settlement with over 23,000 people (GSS, 2010) located along the banks of the dead Korle lagoon. The area is characterized by issues such as rape cases, cholera outbreaks, drug abuses, unsanitary living conditions, overcrowded dwellings, poor waste disposal management, and inadequate access to clean water (Adamtey et al., 2021).

The absence of essential infrastructure such as clean water, health facilities, and toilets in these slum areas significantly impacts the health and well-being of the residents. This study is conducted within the context of Sodom and Gomorrah in the Accra Metropolitan Assembly to investigate the direct consequences of slums on the health and overall quality of life of slum dwellers, acknowledging the urgency of addressing these issues both now and in the foreseeable future. Slums are home to nearly one billion people in the world and they are expanding at an exponential rate. In the context of Ghana, the situation is no different. In Ghana, slum growth rate is purported to stand at 4.7%, according to statistics from the Ministry of Local Government and Rural Development (MLGRD 2011).

As at 2001, the number of slum dwellers in Ghana was estimated to be 4,993,000 with an annual growth rate of 1.8% and is predicted to 7.1 million by 2020 (UN-Habitat 2001). Increases in natural population growth and rural-urban migration has invariably lead to enormous sprawling of urban slums in the country. In the last three decades, the country’s population has more than doubled (14.7million in 1990 to an estimated 30.5million in 2019). 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. 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. Rural 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.
In Ghana, issues related to the health of slum residence are widely subsumed in research and policies on urban health and the association between poverty and health. Failure to recognise slums as unique spatial entities obscures neighbourhood effects that are likely to affect health in slums. This shortcoming is important in the sense that slum health is also affected by factors arising from the shared physical and social environment, which have consequences beyond those of poverty alone. Further, understanding on the dynamics underlying urban slum health is severely limited (Aggrey-Korsah & Oppong, 2013).

In Sub-Saharan Africa and for the purposes of this research, Ghana, the massive growth of slums has not been corresponded by commensurate growth in the scientific literature, which remains rudimentary when compared with the many studies of urban health generally, rural health, and the association between poverty and health (Owusu-Ansah et al., 2016). The few studies in the urban slums of Ghana have not addressed the associated health issues but have often focused on the social and economic vulnerabilities of slum dwellers (Arku et al., 2011; Weeks, 2007). Thus, using “Sodom and Gomorra” in Accra as a case, this research seeks to interrogate how individual characteristics and shared social-physical environment define the health of slum residence in Ghana.

This thesis seeks to broaden the evidence base 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. “Sodom and Gomorra” (officially known as Korle Dudor or Old Fadama, near Agbogbloshie) in the Greater Accra Region presents an excellent case through which these dynamics can be study. The choice of “Sodom and Gomorra” is anchored on the fact that the slum is a high-density area that is primarily made up of self-built wooden kiosks and shacks that lack adequate basic amenities like health, water and sanitation facilities (Arku et al., 2011). According to Ghana Living Standard Survey (2014), on the average a household spends GHS 200 on health-related issues, which could be said to be on the high side (GLSS, 2014). The slum is also characterised by frequent flooding due to the area’s location between the Korle Lagoon and the Odaw River. Although the Accra Metropolitan Authorities (AMA), implicitly, recognise the settlement by providing basic infrastructure and services, residents still live in precarious living conditions. Thus, on the bases of the above social-physical characteristics, “Sodom and Gomorra” is an excellent case for this explanatory study.
RESEARCH METHODS

Figure 1: Map of Study area
Source: GIS unit of Department of Geography and Regional Planning, UCC, 2018

The study adopted the explanatory design of the quantitative approach to examine the effect of slums on the quality of life of the slums inhabitants of Sodom and Gomorrah. The study involved all adults eighteen and above who have lived in the study area for some couple of years and were fit to provide credible information. With the aid of Krejcie and Morgan's (1970) sample size table, 306 respondents were selected for formed part of the study and through convenience sampling, questionnaire were administered to the respondents. Necessary ethincal issues such as privacy, informed consent, free participation, confidentiality and anonymity were considered. Furthermore, the data were analyzed with the help of statistical software known as Statistical Product for Service Solution (SPSS version 25.0) by using frequencies, percentages, means and standard deviation as well as linear regression and presented by using tables, and charts

RESULTS AND DISCUSSION

Background Characteristics of Respondents

This section provides a summary of the preliminary descriptive analysis of respondents’ socio-demographic characteristics in terms of gender, age, and educational level, length of stay at the area, occupation, ethnicity and religion. These characteristics provide a general overview of the distribution among respondents sampled within Sodom and Gomorrah.

The data revealed that majority (60.37%, representing 125) of the dwellers at Sodom and Gomorrah were males whereas 39.61% representing 82 were females. This implies that more males were involved in the study than their female
counterparts. 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 68 respondents representing 32.85%, Konkumbas followed with 45 respondents representing 21.74%, Mamprosis’ were the third ethnic group with 32 respondents representing 15.45%. The Gonja’s, Sisala’s, and other groups namely Ga, Ewe, Fanti were the next group that recorded 9.66%, 9.17%, 10.63% respectively whilst the Basari’s were the least ethnic group with only one respondent (see Table 1). Some ethnic groups were more religiously inclined, with the majority being Islam with (139, 67.14%) and few Christians representing 68, 32.5%).

Also, the summary of respondents’ marital status was also examined in this study. Out of 207 respondents, it was found that 37(17.87%) of the respondents were married, 35(16.9%) of the respondents were single, 82(39.61%) of the respondents were co-habiting and 53(25.6%) 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 (62, 29.95%) respondents, those with Junior High School certificate were 56, (27.05%), Senior High School Certificate were 44 (21.25%), 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.

In terms of their occupation, it revealed that majority of 67(32.36%) women engaged in trading and food selling, 43(20.77%), respondents were shower and toilet workers. Kayayie and Scrap dealers were the next highest occupation representing 16.42% and 17.39%. Students and shop assistants as well as dress makers were the next lowest occupation engaged in by these dwellers (14 and 13 respectively). Lastly, majority of the dwellers (81 respondents) at Sodom and Gomorrah had stayed there between 5 to 9 years, whilst 44 respondents have lived there for 15 to 19 years, there were 39 of these dwellers who had resided between 0 to 4 years. Finally, 20 respondents had lived there for 20 years and above.

Prevalent Health issues/diseases in Old Fadama

Sodom and Gomorrah popularly known as Old Fadama is a slum community that have existed for decades. This study revealed as part of its objectives that the area is characterized by certain common diseases that affects the health and well-being of dwellers. From Figure 2, it is significant that malaria (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.
Cholera became the second most indicated (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 (2003) is not only meant for shelter but also, conditions necessary for ones well-being and socio economic development of a locality. This outcome buttresses that accession of the influence of slum on the health of dwellers of Old Fadama in Accra.

Pictures of the Slum at Sodom and Gomorrah indicating why there are outbreak of diseases

The following figures provide a pictorial representation of the slum area at Sodom and Gomorrah mainly denoted by squatter settlement, densely populated temporary residential houses, built lawfully and unlawfully without water supply, sanitation facilities or health care facilities, high poverty level that reflects the miseries of deprived people who have to grapple with poverty to survive, poor housing conditions in terms of improved water, access to adequate sanitation, overcrowding, faulty arrangements of streets, lack of ventilation, light or sanitation facilities, and inadequacy of open space that end up causing diseases outbreak in the area.
Figure 3 shows how congested a respondent’s settlement is at the study area, which is basically a wooden structure with an old roofing sheet.

Figure 4: Portions showing poor sanitation due to lack of proper garbage and sewage disposal

Figure 4 clearly shows another characteristic of a slum area, a place that has poor sanitation due to lack of proper garbage and sewage disposal leaving sewages in the community. This provides a fertile ground for breeding mosquitoes and other insects which can lead to the spread of diseases exposing both young and old to health risks that leads to death.

Figure 5: Portion showing poor drainage in the community

Lack of proper drainage pattern as shown in Figure 5, can lead to floods in the community, one major characteristic of slum areas, they lack proper drainage patterns.
Another problem that exists in slum areas is the fact that most settlements are unplanned and as such makes navigating very difficult in the community in times of emergency such as fire outbreaks, natural disasters and other accidents. Figure 6 delineates the unplanned nature of settlement in the study area.

Figure 7: Portions showing lack of reliable sanitation service in the community

Dumping or waste materials is disposed anywhere in the community as shown in Figure 7. Most slum areas do not have a reliable sanitation service and as such the waste is dumped anywhere in the community. This can lead to the spread of viral diseases which would be hard to control due to the filth and bad conditions of living. The water bodies are also contaminated because of poor sanitation. This can also be a medium of spreading waterborne diseases.
These pictorial Figures (2 to 8) clearly shows that poor sanitation due to lack of proper garbage and sewage disposal. Housing system made of wooden structures, poor road network, poor drainage systems and many others are the most dominant features in this area that contribute to this menace. Thus, these features align with Niebergall (2008) that explained slum as an “informal settlement that encompasses physical characteristics in terms of high spatial heterogeneity, complex shape, substandard housing, high building density, irregular pattern of road network in poor condition, poor connectivity with infrastructure, no or little vegetation that is prone to hazardous locations”.

Table 1-Factors for the Growth of Slum

<table>
<thead>
<tr>
<th>Factors</th>
<th>Mean</th>
<th>Stand deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business purpose (menial jobs for survival)</td>
<td>3.36</td>
<td>0.81</td>
</tr>
<tr>
<td>Migration to cities to join families, friends, relatives</td>
<td>3.33</td>
<td>1.36</td>
</tr>
<tr>
<td>Cheaper housing facility for accommodation purpose</td>
<td>2.98</td>
<td>0.964</td>
</tr>
<tr>
<td>Job opportunity and join their family and friends in the city</td>
<td>3.31</td>
<td>0.959</td>
</tr>
</tbody>
</table>

Table 1 shows the factors that contributed to the emergence and growth of slum at Sodom and Gomorrah in Accra. Based on the analysis, it was discovered that the key fundamental factor that contributed to the growth of slum settlement was the search for business or job opportunities among individuals from the northern part of Ghana representing 3.36. This means that the search for job to improve on their living conditions and to make money contributed to the slum growth.

This was followed by migration to cities to join their family, friends and relatives that recorded a mean of 3.33 (SD=1.36). The third ranking factor for slum growth was both for business purpose and live with family (M=3.31; SD=0.959). The last factor was housing facility for dwellers that revealed a mean value of 2.98 and SD=0.964. This means that due to the expensive housing facilities at cities, informal settlement at these areas led to the rise of more dwellers to migrate to Sodom and Gomorrah since the housing facility was cheaper and squatter settlement was the
major shelter occupied by the individuals in this area (slums attracts lower income
groups and people that have migrated to the city without any good job).

Therefore, migration to cities lead to a densely populated temporary residential
house built lawfully and unlawfully, where inhabitants are poor that reflect the
miseries of deprived people who have to struggle with poverty to survive hence the
search for menial jobs which contributed to the growth of slums at Sodom and
Gomorrah which is prominent within the Greater Accra area. In view of the above
factors, the findings align with Chakravarty (2013) in his study stressed that the
expensive cost in acquisition of housing for individuals in the middle class especially
the poor has made it difficult. Also, high land values and construction costs and
neglect of the housing sector, is contributing to the growth of slums as the lower
income group is forced to find cheap accommodation in the form of informal
settlements. This, is not good for the socio economic growth of the country as these
slums, has become hideouts for hardened criminals, a place where many of these
young ladies, indulge in drugs and prostitution as a means for survival.

Furthermore, the flourishing informal economy has led to slum growth and
many people are attracted to join the slum areas due to Job opportunity which was
recorded in this present study contributed to the growth of the slum at Sodom. This
replicates other studies like Neuwirth (2006, 2012) and UN-Habitat (2011a) that
found that creation of job opportunities to the middle and lower class that experience
extreme poverty triggered slum growth. These opportunities have greatly helped the
poor to undertake menial jobs to afford their basic needs. Such owners in this sector
have expanded their operation due to the incentive of tax evasion. Hence, individuals
migrating from rural areas to the urban cities are mostly those who work in this
informal sector.

Perception of the Respondents on Factors that affect their Health Status

The views of the respondents on the various factors that influence their health
status were solicited, analysed and the result is presented in Table 2.

Table 2: Perception of the respondents on factors that affect their health status

<table>
<thead>
<tr>
<th>Factor</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sanitation</td>
<td>67</td>
<td>32.4</td>
</tr>
<tr>
<td>Road network</td>
<td>31</td>
<td>14.9</td>
</tr>
<tr>
<td>Settlement</td>
<td>21</td>
<td>10.1</td>
</tr>
<tr>
<td>Access to utilities</td>
<td>88</td>
<td>42.5</td>
</tr>
<tr>
<td>Total</td>
<td>207</td>
<td>100</td>
</tr>
</tbody>
</table>

It was found that access to basic utilities (88, 42.5%) such as water, electricity
and communication network as well as sanitation (67, 32%) were the main factors
that affect the health status of the respondents (Table 2).
Table 3: Cross-tabs of Perception of respondents on factors that affect their health and health status

<table>
<thead>
<tr>
<th>Factors that affect their health status</th>
<th>Gender</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male</td>
<td>Female</td>
</tr>
<tr>
<td>Sanitation</td>
<td>21</td>
<td>46</td>
</tr>
<tr>
<td>Road network</td>
<td>21</td>
<td>10</td>
</tr>
<tr>
<td>Settlement</td>
<td>12</td>
<td>9</td>
</tr>
<tr>
<td>Access to utilities</td>
<td>71</td>
<td>17</td>
</tr>
<tr>
<td>Total</td>
<td>125</td>
<td>82</td>
</tr>
</tbody>
</table>

To show the differences based on gender regarding the perception of respondents on the factors that influence their health, cross-tab was used and the result is presented in Table 3. It shows that majority of the female identified sanitation as the major factor that influence their health as compared to males who perceived access to utilities as the main factors that influence their health.

The effect of slum on quality of life of slum residents

In this study, the use of only one single independent variable that is a slum is used to test the dependent variables (quality of life) required the use of this predictive tool (Simple or linear regression). This helped to test the hypothesis which claimed that “there is a negative effect of slums on the quality of life.” The results are presented in Table 4 and 5.

Table 4: ANOVA statistics

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of squares</th>
<th>df</th>
<th>Mean square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between groups</td>
<td>111.584</td>
<td>1</td>
<td>57.24</td>
<td>7.076</td>
<td>0.021</td>
</tr>
<tr>
<td>Within groups</td>
<td>304.687</td>
<td>205</td>
<td>154.23</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>416.271</td>
<td>206</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The ANOVA result (F(1, 205) = 7.076, sig. 0.021) shows that there was a significant difference between the independent variables and the model is therefore significant. This shows that there are differences in the predictors and the independent variable (Table 4).

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

<table>
<thead>
<tr>
<th>Variables</th>
<th>Std. Coefficient</th>
<th>Std. Error</th>
<th>t-statistic</th>
<th>Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td>6.256</td>
<td>17.973</td>
<td>0.000*</td>
<td></td>
</tr>
<tr>
<td>Slum</td>
<td>-0.518</td>
<td>1.213</td>
<td>-8.665</td>
<td>0.001*</td>
</tr>
</tbody>
</table>

*p<0.05; R-squared= 0.32; Adjusted R Square= 0.26 ; Sum squared resid= 14.849; N=207

The result indicated an inversely relationship between slum and quality of life. It revealed a non-significant negative relationship between slum and quality of life among dwellers of Sodom and Gomorrah (β = -0.518, t=--8.665, p = 0.001) (Table 5). This means that slum decreased (negative) the quality of life among dwellers at a significant level. Thus, the predicted hypothesis “there will be a negative relationship between slum and quality of life was supported.
Also, evident from Table 4 showed an Adjusted R\(^2\) value represented by .26 means that slum only explains 26% of the variation in quality of life of dwellers. Moreover, when there is a percentage increase in slums, the quality of life of the people is expected to be reduced by 0.518.

**Coping Strategies among Dwellers**

The following 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 in their stay there.

<table>
<thead>
<tr>
<th>Strategies</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adjustment and cope with current situation as and when it occur</td>
<td>24</td>
<td>11.60</td>
</tr>
<tr>
<td>Reduction in food consumption</td>
<td>40</td>
<td>19.30</td>
</tr>
<tr>
<td>Removal of children from school to help in earning more money for their basic needs and reduce expenditures</td>
<td>20</td>
<td>9.70</td>
</tr>
<tr>
<td>Working for long hours to make more money</td>
<td>44</td>
<td>21.30</td>
</tr>
<tr>
<td>Borrowing from friends and selling assets to cope with catastrophic health expenditures</td>
<td>56</td>
<td>27.10</td>
</tr>
<tr>
<td>Purchase of household goods on credit</td>
<td>23</td>
<td>11.10</td>
</tr>
</tbody>
</table>

According to Table 6, most of the respondents (56, 27%) cope with slum and its related challenges by borrowing from friends and selling assets during catastrophic event or health expenditures. This was followed by 44 respondents who work for long hours to make more money in order to cope with their situation. However, few of the respondents (23, 11.1%) purchase household goods on credit as a coping strategy.

<table>
<thead>
<tr>
<th>Strategies</th>
<th>Gender</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adjustment and cope with current situation as and when it occur</td>
<td>Male</td>
<td>Female</td>
</tr>
<tr>
<td>Reduction in expenses made on food consumption</td>
<td>12</td>
<td>28</td>
</tr>
<tr>
<td>Removal of children from school to help in earning more money for their basic needs and reduce expenditures</td>
<td>6</td>
<td>15</td>
</tr>
<tr>
<td>Working for long hours to make more money</td>
<td>32</td>
<td>12</td>
</tr>
<tr>
<td>Borrowing from friends and selling assets to cope with catastrophic health expenditures</td>
<td>39</td>
<td>17</td>
</tr>
<tr>
<td>Purchase of household goods on credit</td>
<td>16</td>
<td>7</td>
</tr>
<tr>
<td>Total</td>
<td>125</td>
<td>82</td>
</tr>
</tbody>
</table>

To show the differences based on gender regarding the coping strategies employed by the slum dwellers, cross-tab was used and the result is presented in Table 7. It shows that most of the female preferred to reduce their expenses on food while
most of the males preferred to borrow from friends and selling of assets as well as to work for longer hours.

Discussion on Slum and Quality of Life among Dwellers

Under this objective, the researcher was interested in finding out the availability or access to, and utilization of social amenities like health facilities, potable water, sanitation, educational infrastructure within the community (Truckee, 2007). The results from the field indicated that on availability and access to health facility the community lack many functional health facilities. Respondents opined that the only means by which they deal with their health problem is through the patronage of chemical shops. This finding is consistent with Sclar and Northridge (2011) study, which argued that slums are homogeneously characterized by inadequate provision of basic infrastructure and public services necessary to sustain health, such as water, sanitation, and drainage.

Again, respondents were asked about the common diseases that confronted them. The common ones were malaria, cholera and skin diseases. These findings were consistent with a study done in Brazil by Heukelbach et al; (2003) which posited that skin diseases were the common parasitic diseases slum dwellers battle with. A similar study done in Kenya on Poverty and Health dynamics in slum settlement revealed that the slum settings have profound and varying impacts on the health status and outcomes for slum dwellers at different stages of their life (Zulu et al; 2011).

On availability and access to potable drinking water, it was clear from the study site that the residents lacked this necessity of life. They depended on sachet water for drinking and water tankers for their other domestic need. This finding is consistent with the studies done in India and Malaysia which found that around 128 migrant households in the study area are wholly dependent on water supplied through Lorries. Though there are municipal taps in the study area, it was revealed that the water is of poor quality and totally unsafe for drinking. The study further posited that the residents had to rely on the water Lorries which were also irregular in supplying the water (Jha & Tripathi, 2014; Sundari, 2003; Yazicioglu, 2006; Zainal, Kaur, Ahmad & Mhd, 2012).

Again, on the issue of the influence of slum on the quality of life on slum dwellers, the study found that there was a negative effect of slum on the quality of life of slum dwellers ($\beta = -0.518$, $t = -8.665$, $p = 0.001$). It was also revealed that slum decreased the quality of life of slum dwellers. The study revealed that there were no access routes, sanitation facilities, and health facilities. In the likely event of health emergency, one can only predict a dare situation for the victim. Should there be fire out break it will be difficult to douse the fire. It is vividly clear from this research that, the quality of life of slum dwellers is one of difficulty. Due to it, they resort to odd means such as, prostitution, armed robbery and other dubious ways to survive. It has become an issue of survival by any means possible. These effects affects every sphere of a nation and a holistic measure is needed to curb it.
Finally, on the strategies employed by slum dwellers to cope with adverse situations, the study found that borrowing from friends and selling assets to deal with difficult situations was the order of the day. As high as 25% of the respondents were engaged in this practice. Again, 21% of respondents worked for long hours in order to make the extra money needed to make life a little bearable. Some respondents also survived by purchasing household items on credit.

**CONCLUSION**

The study sought to evaluate the ‘Effect of Slum on the Health of Slum Dwellers at Old Fadama (Sodom and Gomorrah). It was evident from the reviews that the emergence of slums and its growth are offshoots of urbanisation. The search for greener pastures in the city centers and the improvement of the livelihood of slum dwellers were the major driving force for slum dwellers to migrate to the city centers. 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 several means to survive. It is the argument of this thesis that government should engage private partnership to stem the tide down. It is recommended that the government and private institutions and individuals provide intensive education support programs for the community. Education could be done through Community Publics Address systems (PA Systems), schools, workshops, seminars, and others. Educational campaigns could be enhanced through public awareness creation by way of picnics and others. The rural-urban migration syndrome could be drastically reduced if the push factors (lack of job opportunities, social amenities, basic infrastructure like health facilities, schools, potable water and electricity) in the rural areas are addressed by government through a Public, Private, Partnership Initiative (PPP). 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. For that matter, the government has created the new ministry named the Ministry headed by the minister for Zongo and InnerCity development, led by Honourable Mustapha Hamid. Such efforts are geared towards intensifying the implementation of the Local Government Act 462 of 1993 and the National Development Planning (System Act) 480 of 1994. Finally, when the incentive to travel to the city is catered for, the rippling effect is that, peoples expenditures would reduce. The money they make in the rural areas would be sufficient to cater for them. In other words, they would make savings on the money they would have used for accommodation in the city which could be channeled into other areas of their lives. Further research can look at spatial planning of housing development and landscape planning development in 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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