

Effects of Slum Upgrading on Security Management In Soweto Slums, Roysambu Sub-County In Nairobi, Kenya

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ABSTRACT

This paper uses data collected for an MA Thesis to explore the effects of slum upgrading on security management in Soweto slums, Roysambu sub-county in Nairobi, Kenya. The study was guided by three objectives to establish social effect of slum upgrading on security management in Kahawa Soweto slums; to examine the economic effect of slum upgrading on security management in Kahawa Soweto slums; and to establish the challenges of security management in the slum upgrading programme for Kahawa Soweto Slums. The study adopted a descriptive research design and random sampling to select 318 respondents (main respondents) and 10 Key informants (K.I). Questionnaire was the main method of data collection while interview was used to collect data from K.I. Data collected was organized, and systematically interpreted thematically by use of graphs, frequency tables, and percentages. This study established the relationship between slum setting and rise of crime and insecurity in Kahawa Soweto slums in Roysambu sub-county in Nairobi, Kenya with 69.2% of respondents agreeing to this count. According to this study, poor roads, high poverty levels, low education levels, poor spatial designs/environmental design of slum area and housing, absence of police station and poor lighting predisposed the slum dwellers to crime and insecurity. According to this study slum upgrade will reduce crime and insecurity, given that special aspects such as improvement in spatial designs/environmental design of urban areas and housing with enhanced modern lighting will significantly reduce crime in slums by eliminating criminogenic and insecurity risk factors. Additionally, improved economic effects of slum upgrading on slum dwellers would build resilience to crime and insecurity. This includes; Job creation, provision of educational facilities such as vocational training institutes (polytechnics), basic education

institutions (primary and secondary schools) as well as other skills enhancement institutions. Community empowerment aimed at income generating activities, construction of police station to provide security to the slum dwellers (77%), and construction of better roads (55.3%) were recommended to reduce crime and improved security management in Kahawa Soweto slums in Roysambu sub-county in Nairobi, Kenya.

Key words: Slum upgrading, Crime and insecurity risk factors, Security management

INTRODUCTION

Crime continues to be a major scar on the peace and security landscape in Kenya. Whereas crime cuts across the country geographically, it is more prevalent, severe and acute in peri-urban informal settlement areas that are popularly known as slums. These unlegislated urban spaces are the result of poor or absence of urban policies and dysfunctional land and housing markets. They are often located in high risk areas and characterized by uninhabitable sites, such as hill-sides, garbage dumps and river banks (World Bank, 2004). Slums sometimes seem to emerge overnight, compacting humanity into filthy, densely packed areas with poorly constructed and often dangerous homes. Due to rising population, especially in urban populations, the number of slum dwellers is growing. In the late 20th century, slums have exploded worldwide becoming a cause for serious concern among humanitarian organizations as an alarmingly high number of people live in regions which could be considered slums (UN Habitat 2014).

Insecurity in Kenya has persisted as a major problem facing urban residents. Significant statistics from the UN-Habitat Safer Cities indicate that crime has been on the rise in the past 20 years, becoming a major problem for cities both in the northern and in the southern hemispheres (UN-Habitat, 2006). The causes of this state of affairs are related to the physical environment, poor management of the urbanization process, unemployment, inadequate urban services and failure to incorporate security related issues in urban management policies. The existence of poorly protected semi-public spaces and inadequate state security apparatus lead to the development of zones of lawlessness (UN-Habitat, 2004).

Notwithstanding the fact that cities provide many economic opportunities and access to better services and amenities, these benefits do not reach all urban citizens. Brakarz and Jaitman (2013) identified the three great scourges of urban life: crime, disease, and congestion. Inadequate housing and impoverished neighborhoods are key factors that explain these scourges. According to the UN-Habitat (2003), large proportions of the poor in developing countries live in urban or semi-urban areas under conditions of overcrowding, deficient urban and social services, poverty, high exposure to crime and violence, and other social problems. Consequently, migration to urban areas shift the location of global poverty to the cities, triggering the process known as the urbanization of poverty, which in turn snowballs into crime owing to limited income.

According to Gallaher *et al.* (2013), rapid expansion of population in cities throughout the world is accompanied by the equally rapid growth of informal and impoverished migrant settlements, which constrain resources to an extent that inequalities created by uneven income trigger

antisocial behaviours such as crime and delinquency. However, with slum upgrading programmes such as the Kenya Slum Upgrading Programme (KENSUP), it is anticipated that improved livelihoods of people living and working in Kenya's slums through the provision of secure neighbourhoods, better housing, income generating activities and physical and social infrastructure would be a reality (UN-Habitat, 2003; Field & Kremer, 2006).

Kenya's slums are growing at an unprecedented rate as more and more people move to Kenya's cities and towns in search of employment and other opportunities urban areas offer (UN-Habitat, 2003). The government and local authorities are faced with the serious challenge of guiding the physical growth of urban areas and providing adequate services for the growing urban population. Kenya's urban population at present comprises 40 percent of its total population (Syrjanen, 2008). More than 70 percent of these urban dwellers live in slums, with limited access to water and sanitation, housing, and secure tenure (Naceur, 2013; UN-Habitat, 2003). They have poor environmental conditions and experience high crime rates. In fact, unequal opportunities in terms of income between the poor in slums and middle/upper class in upscale neighbourhoods continue to pose the challenge of crime in informal settlements (Naceur, 2013; UN-Habitat, 2003).

One of the strategic reasons why Kenya and local and/or international aid agencies have been upgrading slums is because of the need to stem out crime by providing basic amenities and income generating activities since slums are hotbeds of crime where delinquents and criminals carry out their activities (Majale, 2008). In fact, scholars interested in understanding crime and informal settlements have, from time to time, attributed violence and other crimes in slums to poor physical infrastructure and underdevelopment, which translate into high crime rates (Naceur, 2013; Turley *et al.*, 2012).

Researchers have tended to focus on urban studies and the overall effect of improving urban settlements for sustainable cities (Huchzermeyer, 2008; Marx, Stoker & Suri, 2013). To this end, most the studies tend to focus on the improving economies of urban settlements thus negating the social essentials of upgrading informal settlements (Huchzermeyer, 2008). Notwithstanding this development, there is a knowledge gap on the precise effect of slum upgrading on slum security management.

Insecurity in urban areas primarily concerns the poorest sections of the urban residents as the more favoured sections of urban population tend to have access to public and private security services. The low income earners on the other hand are disadvantaged in their effort to redesign their environment to create safer neighborhoods for them to live in. Therefore, this study seeks to examine the effect of slum upgrading on security management in Soweto slum, Roysambu sub-county, Kenya.

PROBLEM ANALYSIS

Instances of reported crime in slum areas have been on the rise owing to the economic and social disparities between the slum dwellers and rest of the affluent urban residents. Despite government implementation approaches ranging from services provision (water, electricity and sanitation) and housing improvement (construction of high-rise residential blocks) to land tenure security, as entry points to improving the lives of slum dwellers in the Soweto slum, the need for security enhancement for the slum settlements of the city due to the increasing population has not

been fully addressed. Poorly managed urban growth, inequality and rapid social change, in addition to a weak understanding of the patterns and causes of crime, have provided fertile ground for the proliferation of criminal activities. This condition has attracted government institutions and non-governmental organizations in the area with the aim of providing interventions to the peri-urban residents. However, the effect of slum upgrading on security management in Soweto slums remain unknown, thus, the need for this study.

METHODOLOGY

Research Design

This study adopted a descriptive research design paradigm. This design is appropriate as it involves collection of information from a cross section of respondents selected in the study and offers the researcher the advantage of focusing on specific description or characteristics and, where suitable, attitudes and opinions of respondents towards a given phenomenon being investigated. Additionally, the design allows an interaction initiated by the researcher for the specific purpose of obtaining research-relevant information and to be focused on the content specified by research objectives, predictions or explanations. Hence, the study used researcher administered questionnaire to collect data from 318 main respondents (pubic). Interview method was used to collect data from 10 Key informants (Local security committee members of the slum).

Results and Discussions

A total of 318 dully filled and usable household questionnaires out of 384 were obtained from respondents for the study. This represented 82.8% response rate and a non-response rate of 17.2%. According to Mugenda and Mugenda (2003), this was sufficient for doing the analysis. Table 4.1 below shows the response rate. Therefore, all the tables and graphs presented in this chapter have a sample size of 318 unless stated otherwise. In this regard, some tables have a total response of more than 318 and this represents multiple response (where respondents were required to give more than one response).

Table 1: Response Rate

	<i>Frequency</i>	<i>Percentage %</i>
Responded	318	82.8
Did not respond	66	17.2
Total	384	100

Source: Author (2020)

Demographic Information

This section presents demographic information of respondents namely: gender, age, level of education, marital status, occupation and their religious affiliation.

Gender

The study sought to establish the gender of respondents. This was useful as it was important to get views from a representation of both male and female residents of the slum.

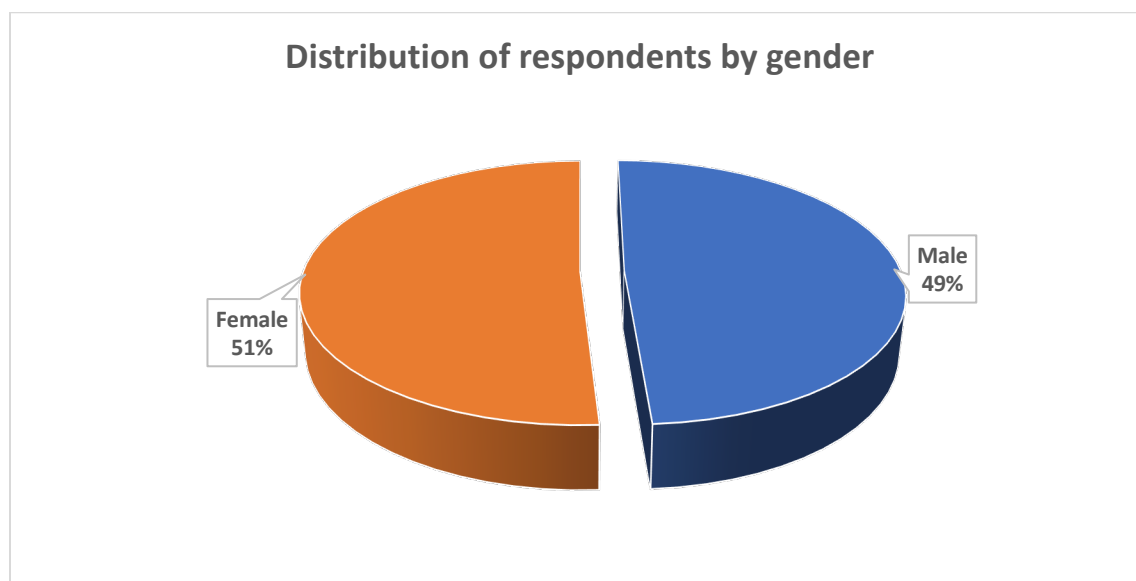


Figure 1: Distribution of respondents by gender
Source: Primary data, 2020

Based on the figure 1 above, there was a near parity in the distribution of respondents where 51% were female and 49% were male. This was almost a reflection of the population since females were more than males in the 2019 census.

Age

Even though the respondents were selected randomly, their age distribution was almost even. To this end, 23% of the respondents reported ages of between 18 to 25 years, 24.5% were aged between 26 and 35 years, 24.2% were aged between 36 and 45 years while 28.3% indicated ages between 46 and 55 years.

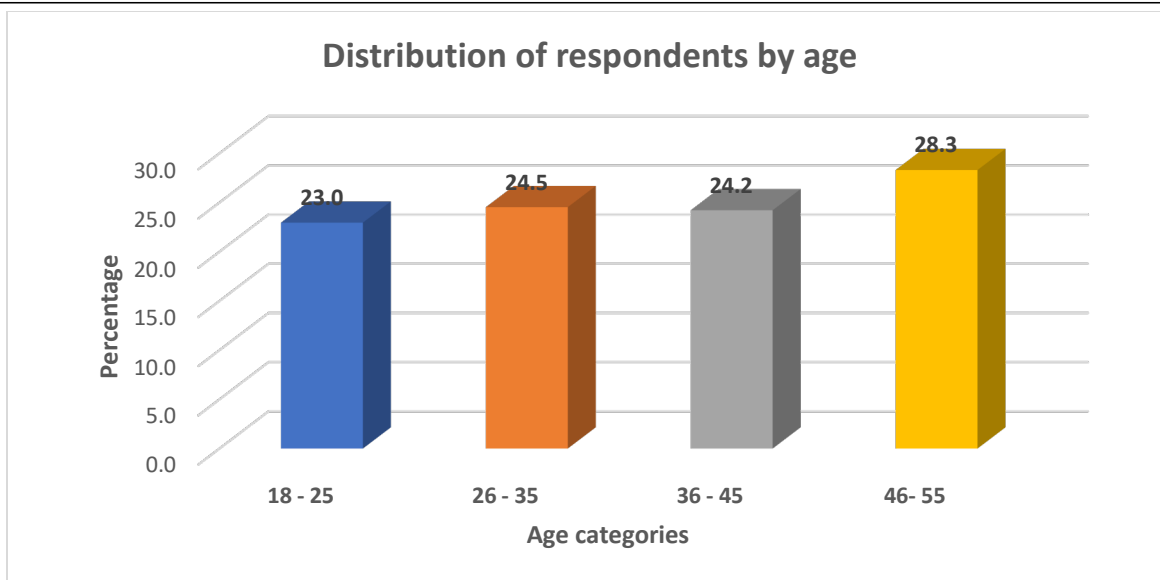


Figure 2: Distribution of respondents by age
Source: Primary data, 2020

Level of Education

With regard to education, the highest proportion of respondents (36%) reported that they had attained college diplomas. This was followed by 27% who had completed secondary school education, 26% had completed university degrees while only 11% had primary school education as shown in Figure 3. This shows that almost all the respondents were able to understand the questions and the responses were from a cognitive process and were well thought about.

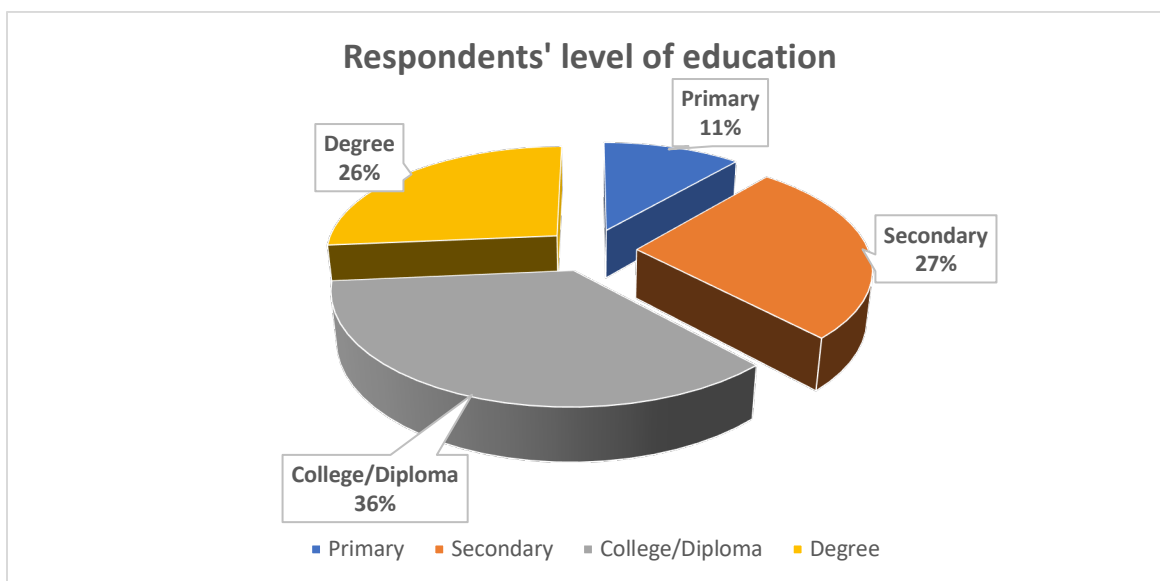


Figure 3: Respondents' level of education
Source: Primary data, 2020

Occupation

The respondents were asked to state their occupation and the study established that most of them were unemployed (42.1%). In addition, 27% were in formal employment, 20.1% were self-employed whereas 10.7% were students. The high unemployment rate might be a recipe for the high rates of crime in the informal settlement.

Table 2: Distribution of respondents by occupation

	<i>Frequency</i>	<i>Percent</i>
Non-Employed	134	42.1
Employed	86	27.0
Self-Employed	64	20.1
Student	34	10.7
Total	318	100.0

Source: Primary data, 2020

Religious Background

In terms of religion affiliation, majority of the respondents reported that they were affiliated to the Christianity while 22% were Muslim.

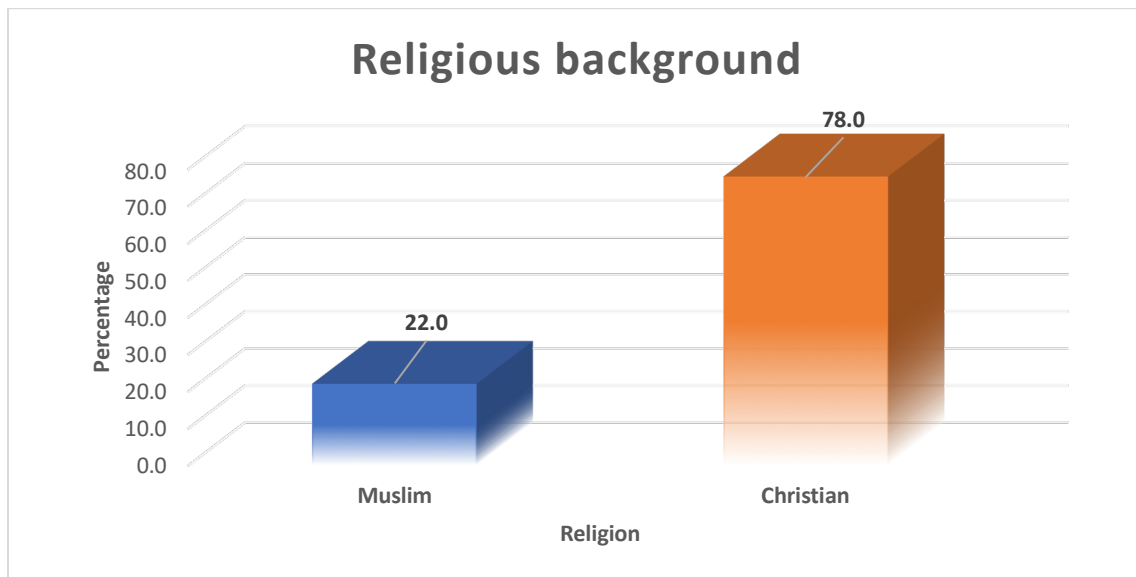


Figure 4: Respondents' religious background
Source: Primary data, 2020

Marital Status

When the respondents were asked about their marital status, majority of them indicated that they were married (53.5%). Moreover, 34.9% indicated that they were single, 6% were separated and 5.7% were divorced as illustrated in Figure 5.

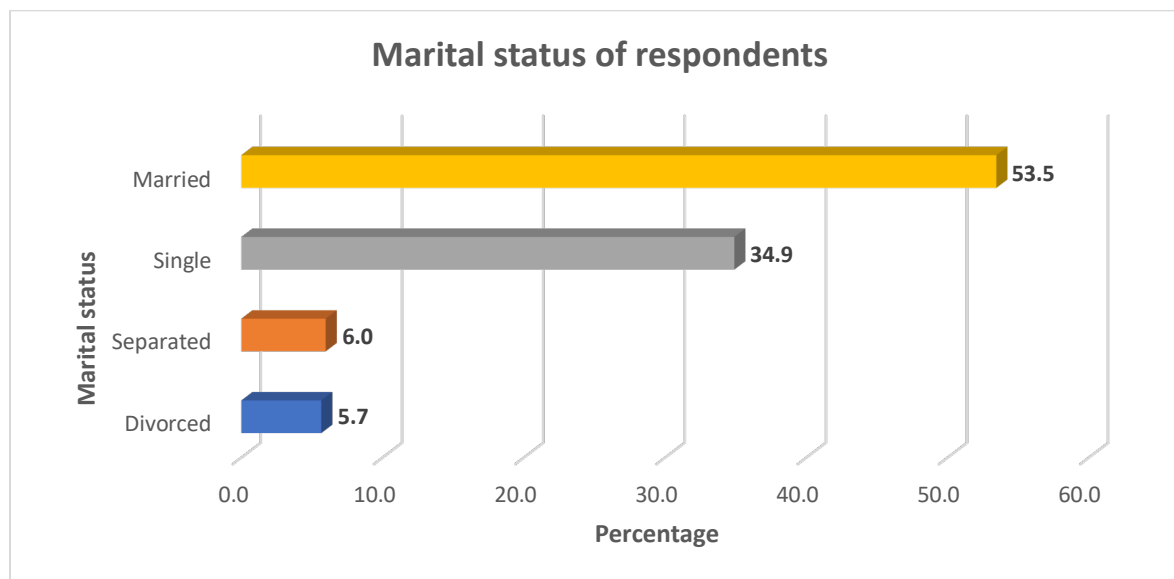


Figure 5: Respondents' marital status
Source: Primary data, 2020

Social Effects Of Slum Upgrading On Security Management

The first objective of the study sought to establish the social effects of slum upgrading on security management in Kahawa-Soweto slums. In order to respond to the objective, the respondents were asked whether new houses were being constructed in their neighborhoods. This was geared at establishing whether slum upgrading was still going on.

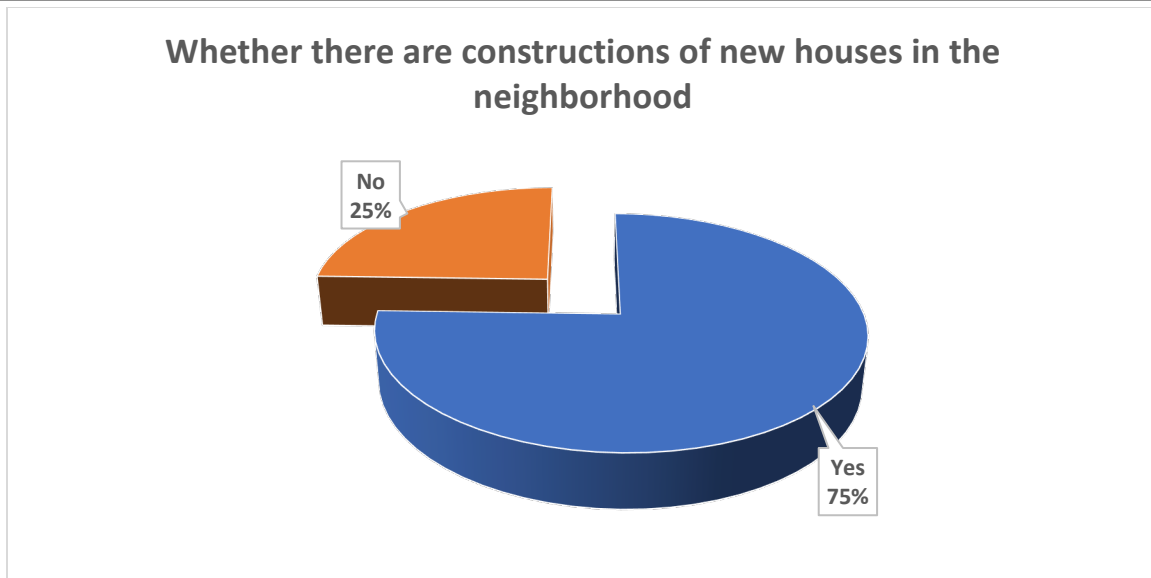


Figure 6: Whether there are constructions of new houses in the neighborhood
Source: Primary data, 2020

As evidenced in Figure 4.6, three out of every four respondents indeed ascertained that there were constructions of new houses in their neighborhoods.

In addition, the respondents were asked who the target group for the new houses was. Based on their responses, the new housing units targeted rehabilitated criminals (79.6%), married couples (77.5%) lowest income groups (63.8%) as well as local leaders (22.1%) as shown in Figure 7.

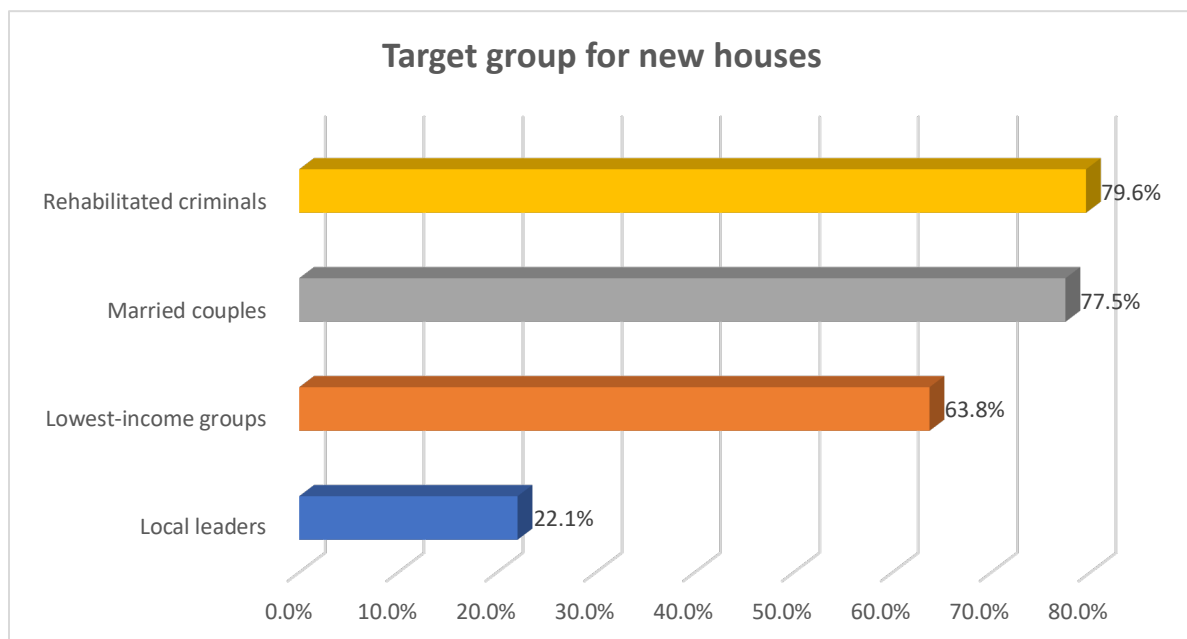


Figure 7: Target group for the new houses
Source: Primary data, 2020

Social Benefits of Slum Upgrading

The study sought to establish the social benefits of slum upgrading. This was to gauge how the respondents would benefit from the upgrading of the informal settlement.

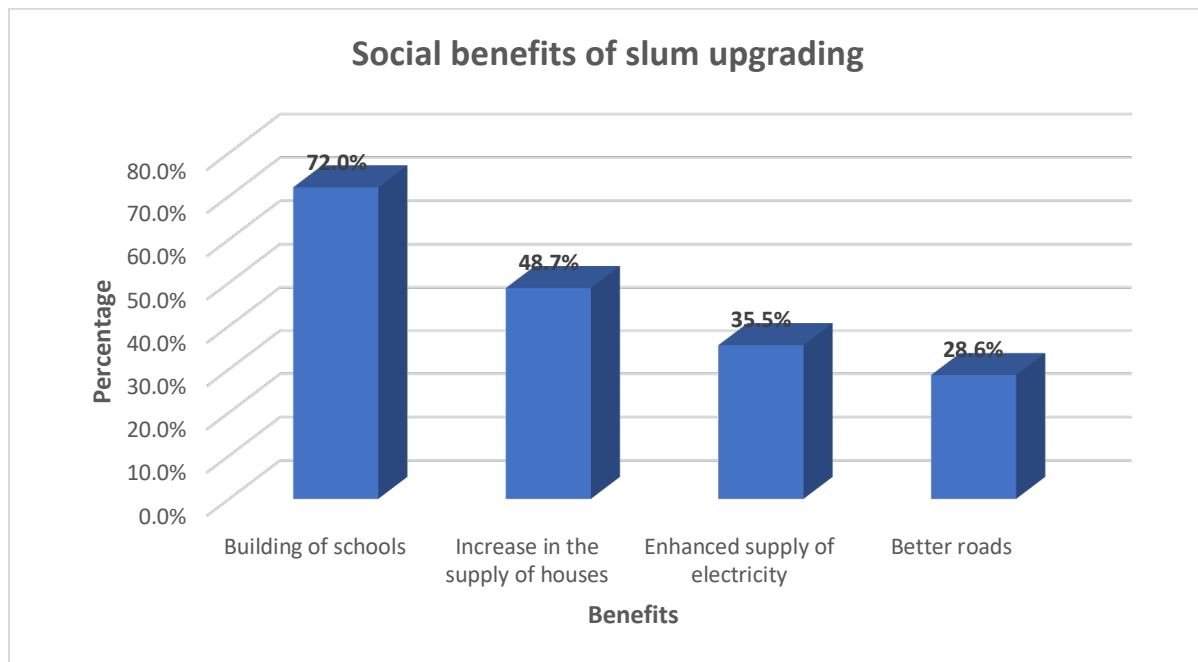


Figure 8: Social benefits of slum upgrading
Source: Primary data, 2020

Based on figure 8, the main social benefit of slum upgrading was said to be the building of schools (72%). This would ensure that more children from the slum would attend school and access education. Another benefit of slum upgrading was reported to be increase in the supply of houses (48.7%). Over time, slum have been characterized by informal shanties which are overcrowded. By constructing new and modern houses, there is an opportunity for families living in squeezed houses to move to more spacious yet affordable units. Other benefits of upgrading slums were said to be enhanced supply of electricity and availability of better roads.

Besides, slum upgrading also enhances reduction of crime. In this regard, the respondents were asked how upgrading the slums would lead to reduction in crime. The results were as presented in Figure 9.

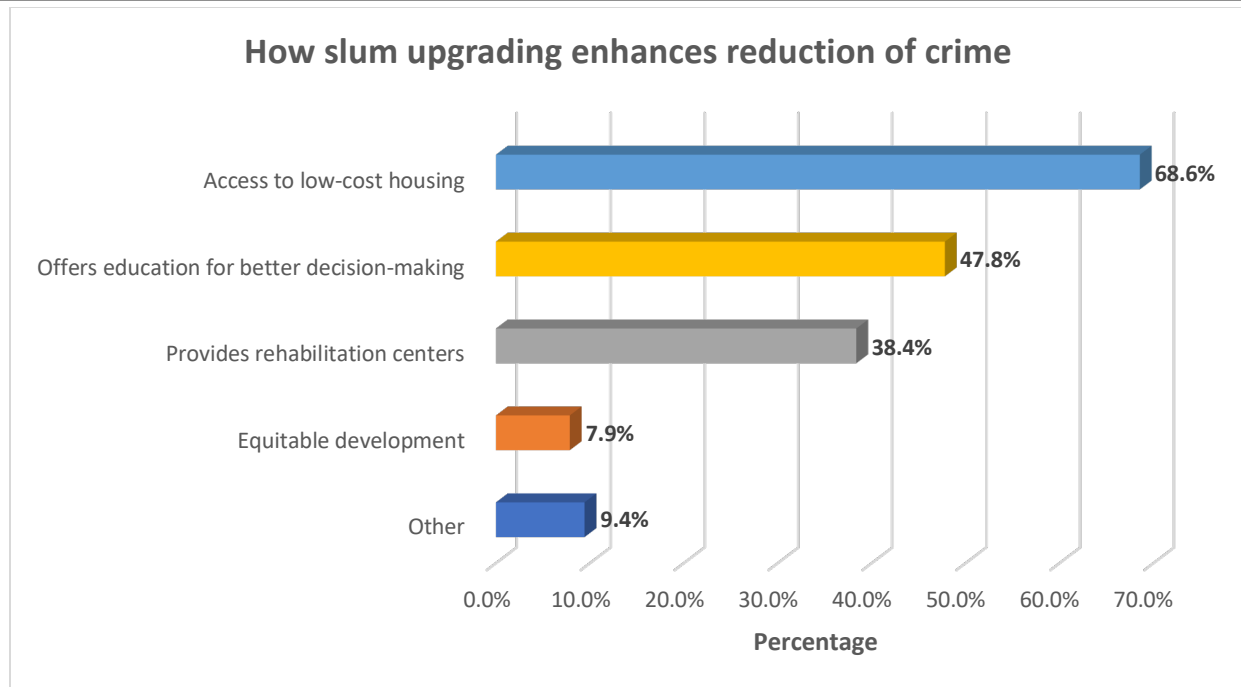


Figure 9: How slum upgrading enhances reduction of crime
Source: Primary data, 2020

As evidenced in Figure 9, the main way that slum upgrading would lead to reduced crime is by access to low cost housing (68.6%). This would mean that residents will get more secure houses at low cost thus reducing the rate of house breaking. Moreover, slum upgrading offers education which is vital for better decision making as reported by 47.8% of the respondents. The more children will access education, the more they will be able to make sound decision and this will reduce the number of people going into crime. In the long run, the slum area will likely have very minimal cases of crime. Slum upgrading also provides rehabilitation center for criminals which enhances reformation of these criminals thus reducing crime.

Economic Effect of Slum Upgrading On Security Management

The second objective of the study sought to establish the economic effects of slum upgrading on security management.

Aspects Achieved Through Slum Upgrading

Generally, there are many good things that are brought about by upgrading of informal settlements. To this end, the study sought to get the opinion of the residents on what they thought would be achieved by slum upgrading. The results were as illustrated in Figure 10.

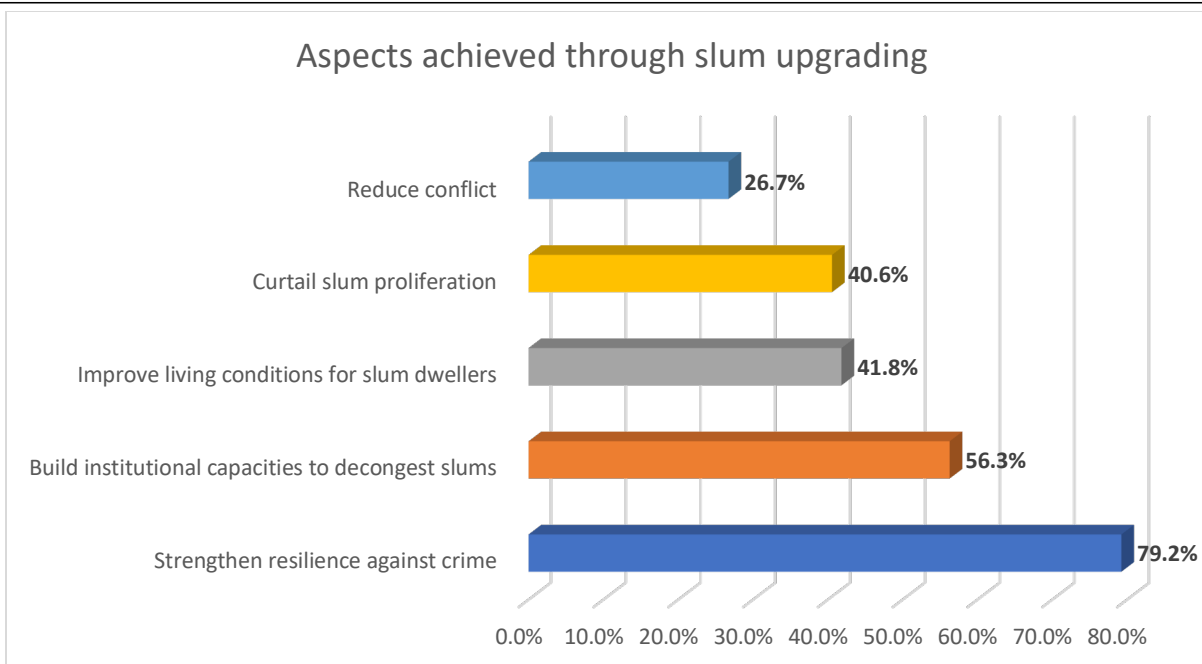


Figure 10: Aspects achieved through slum upgrading
Source: Primary data, 2020

Based on the figure, the greatest achievement of slum upgrading would be to build resilience against crime as was reported by 79.2% of the respondents. This would be possible since upgraded settlements are more organized and in most cases have gates. This serves to control movements into and out of the houses thus reducing petty theft, muggings along the corridors as well as house-breaking. Another aspect that can be achieved is to build institutional capacities to decongest slums (56.3%). One of the key informants even recounted how it has been difficult to convince people (slum dwellers) out of the informal settlements and take them to the new housing units. In this case therefore, relevant authorities such as ministry of housing, ministry of interior as well as the local actors can develop a framework to enable the slum dwellers to embrace the new projects that are cheaper in order to develop other parts of the slum.

Besides, it is in no doubt that slum upgrading would improve the ways of life for the residents and this assertion was made by 41.8% of the respondents. The new housing units are usually fitted with good drainage, adequate water supply and the environment is generally clean. This not only improves the living conditions but also improves the health of the residents. In addition, the upgrading of slums would curtail slum proliferation thus enhancing security. This was reported by 40.6% of the respondents. Finally, slum upgrading was said to reduce conflict among the dwellers. Most of the resources such as water, toilet and electricity are usually shared among the residents. A major component of the renovation of the slum is the provision for critical infrastructures such as water and sanitation systems. It follows that, by means of integrated housing and infrastructure projects, we will reduce maintenance costs and make housing more affordable for the poor. Competition for these resources more often causes conflicts because they are very scarce. Therefore, by upgrading the slums, the houses are fitted with electricity and water taps leading to reduced competition for these resources.

On the other hand, the respondents revealed that slum upgrading has economic effects especially to the slum dwellers. The suggested economic effects were as presented in Figure 11 below.

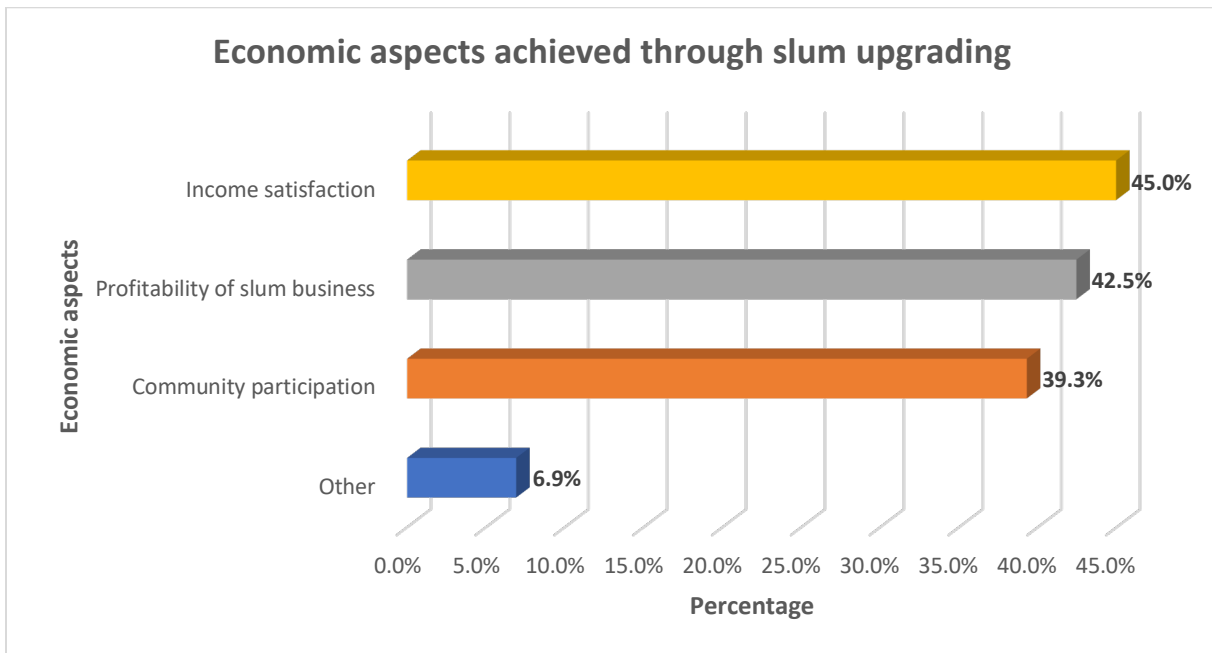


Figure 11: Economic aspects achieved through slum upgrading
Source: Primary data, 2020

The major economic impact of slum upgrading was reported to be income satisfaction among the residents as reported by 45% of the respondents. Potential lenders and investors may partner with CBOs to create small business credit sources. Collectivizing and increasing poor households' financial and social assets will generate valuable development capital. One of the informants further revealed that slum dwellers are mostly financially and otherwise responsible partners, and usually, micro-loaning systems have very low fault levels. This credit distribution model maintains the benefits of the informal credit market and avoids instability of the informal system of supply (usury, exploitation) as well as household savings.

In addition, it was also said that slum upgrading has an effect on the profitability of businesses within the slums. This assertion was made by 42.5% of the respondents. Generally, with increased income satisfaction through access to resources and credit, the residents have increased purchasing power thus businesses within the slums are bound to improve. Similarly, as was stated by a key respondent,

“For slum-improvement projects, local business elites may substitute or complement international donor agencies. In one case, it receives considerable support from the local media and finally international recognition as a partnership, which has brought local pride and increased publicity to self-help actions”.

The other economic benefit of slum upgrading was reported to be enhanced community participation in matters concerning the community. In this view, community members have the inherent right to engage in slum renovation because they have a say in urban processes that form their lives. The Kenya slum upgrading program (KENSUP) seeks to promote inclusiveness, acknowledging the diversity and the lack of homogeneous values in societies. Empowerment, capability creation, and sustainability are key priorities. As one of the informants stated,

“The key goals of KENSUP are the capacity to take charge of local communities’ growth, provide basic urban services to local authorities and, in general, react in a participatory way to their constituent needs, and organize the slum improvement process by the central government”.

The upgraded slums economically stimulate local economic growth, boost urban mobility, and turn the physical and socio-economic structures of the larger city into an enormous economically productive area. Due to this, public housing in the slums needs to be changed. Community engagement can thus become a powerful resource for mobilizing low-income communities on planning, policy, and policy concerns in their urban districts provided their involvement is significant, inspiring, and enhancing their day-to-day lives. Economic prosperity may be due to both a decrease in expenditure and an increase in income. The increase in income is related to the increase in land value by new developments that results in an increase in the selling or rental price of houses, usually rental rooms; the proliferation and development of established enterprises, creation of new employment and economic mobility through provider access; as well as enhanced public transport promotes access to commercial, educational and work opportunities.

Relationship Between Slum Setting And Crime

The rate of crime in the informal settlements is usually relatively higher than in the formal settlement. It was due to this notion that the study sought to establish whether there is a relationship between the slum setting and crime.

Table 1: Whether there is a relationship between slum setting and crime

		Frequency	Percent
Is there a relationship between slum setting and crime?	Yes	220	69.2
	No	98	30.8
	Total	318	100.0

Source: Primary data, 2020

Based on results on Table 3, majority of the respondents (69.2%) indeed ascertained that there was a relationship between slum setting and crime. Only 30.8% held a contrary opinion. Further, the respondents were asked to give the aspects of slum setting that lead to crime and the results were as presented in Figure 12.

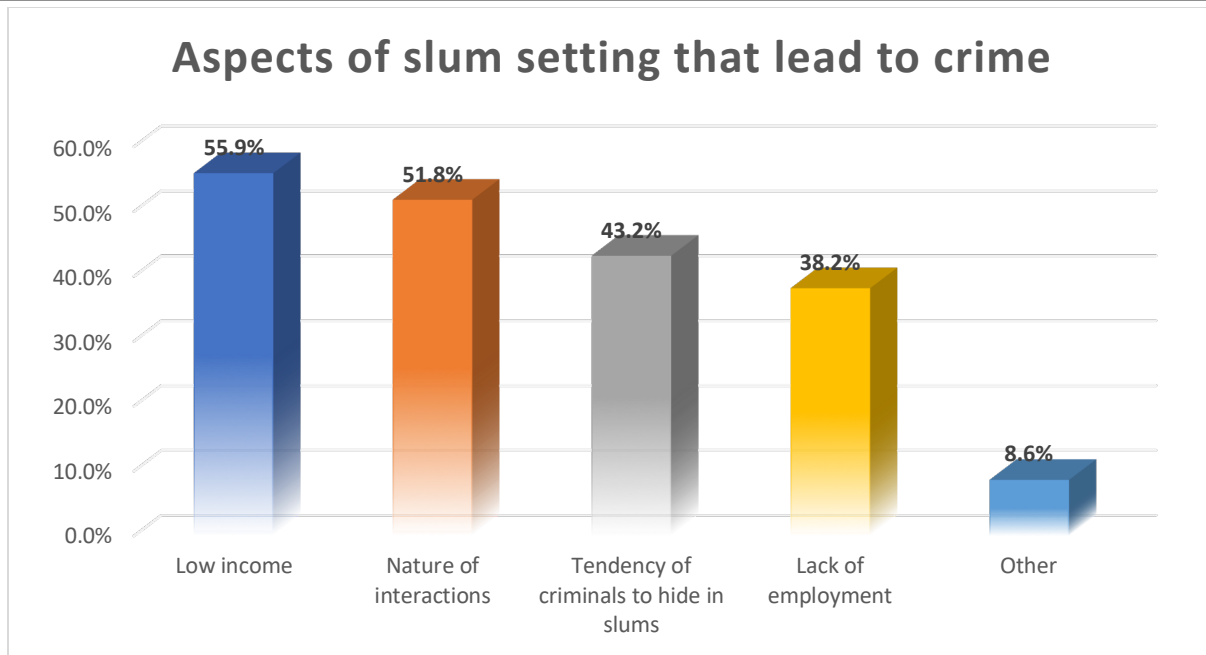


Figure 12: Aspects of slum upgrading that lead to crime
Source: Primary data, 2020

Basically, housing in slums consists mostly of single units of lower materials that leave residents vulnerable to the environmental elements. More than 8 people often sleep on the floor because of the limited space in the houses. There is no basis for the structure, such as sanitation, water and fire safety. The tenants are paying more than expected because of low housing efficiency. The presence of organized organizations collaborating with local authorities to receive illicit payments is an essential aspect of these buildings. Generally, homes with many families have disproportionately high crime levels than those with few families on a single entrance basis. These residents of large multi-family homes face robberies and burglaries. In those places where criminals await ambush their targets or victims and threaten them with plans to rob them.

As evidenced in Figure 12 above, low income was one of the main contributors of crime within the slums as reported by 55.9% of the respondents. Slums are usually characterized by high unemployment rates (also evidenced in this study where 42.1% of the respondents were unemployed) and this leads to cases of theft and mugging as the unemployed look for food and other needs. Another aspect that lead to crime was the nature of interactions (51.8%). This is because informal settlements are not neutral spaces, but instead promote specific policies and laws that shape the ways in which crime unfolds and is being negotiated, and therefore affect security. Informal settlements are often criminalized by the association to their residents. Through definition, the bulk of land use and the construction of non-standard structures are or is unlawful. They are symbolically shaped as spaces of violence, anomalous spaces of waste and harmful qualities, "excluded from the world of what is proper". Inhabitants of these areas are still considered to be insignificant. This criminalization shapes the idea that informal settlements are criminal areas: 'Anti-establishment or oppositional culture prevails in slum areas and is widely supportive of any type of illegal activity. There is a lack of clear law and order, and there are

notable roaming juvenile gangs, muggers, drug traffickers, prostitutes and the poor, and impunity for illegal activities.

Besides, the tendency of criminals to hide in slums was another cause of crime in the slum areas according to 42.3% of the respondents. Basically, informal settlements are particularly vulnerable to crime and violence. The unplanned physical existence of informal settlements gives residents little security from government agencies and, due to high poverty rates, little resistance to loss or injury, and consequently, the lack of institutions and services, leaves residents with little choices for addressing problems by due process.

Economic Conditions To Blame For Crime

Further, the respondents were asked if they thought poor slum economic conditions were to blame for crime. Indeed, eight out of every ten respondents ascertained that the poor slum economic conditions were to blame for crime within the slum areas as shown in Table 4.

Table 2: Whether poor slum economic conditions are to blame for crime

		<i>Frequency</i>	<i>Percent</i>
Are poor slum economic conditions to blame for crime?	Yes	257	80.8
	No	61	19.2
	Total	318	100.0

Source: Primary data, 2020

Moreover, they (the respondents) were asked to state the said economic conditions that were responsible for crime in the slums. The main economic conditions that were reported as the causes of crime were lack of proper education (60.7%), lack of basic social amenities such as water, sanitation and hospitals (47.9%) as well as inadequate functional skills (47.1%) as illustrated in Figure 13.

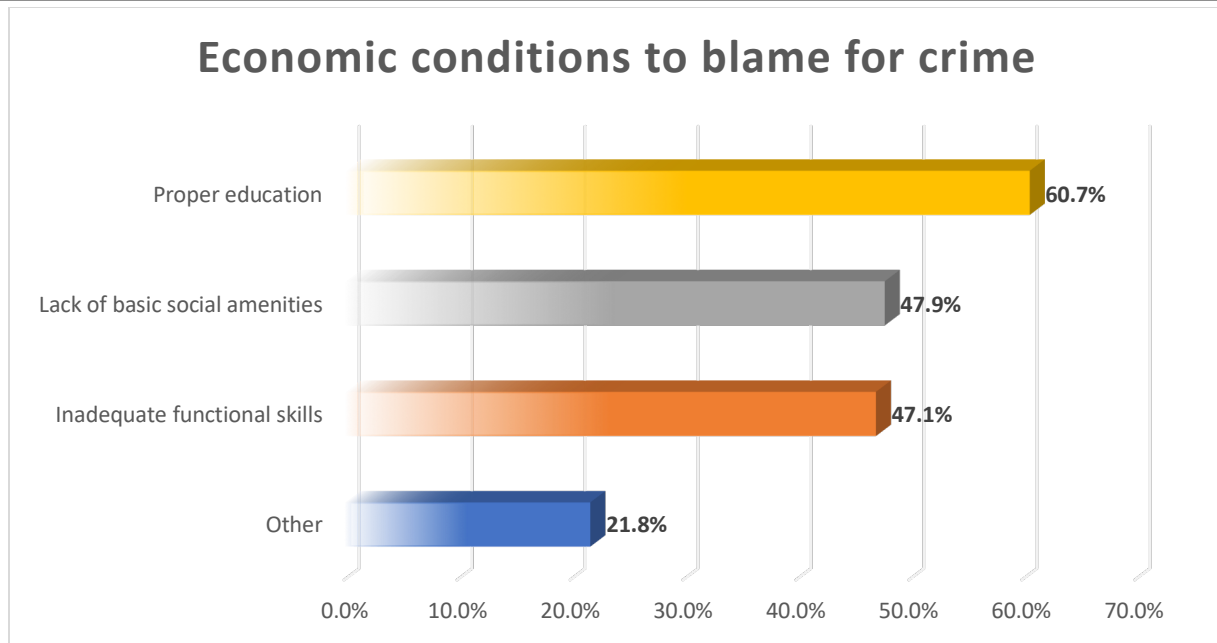


Figure 13: Economic conditions to blame for crime
Source: Primary data, 2020

The slums have the most intolerable conditions for urban housing, often including tenure insecurity, the absence of basic services, especially water and sanitation, the insufficient and often unreliable construction structures; overcrowding and positioning on risky property. Slum areas have high concentrations, like fragmented households, jobless, physical and social isolation, poverty, and cultural and deprivation. Because of stigmatization, discrimination, and geographical isolation, slum dwellers have limited access to credit and formal labor markets. Slums, like industrial waste and noxious wastes, are also recipients of nuisances in the city, and the only land available to slum dwellers is often unsafe, hazardous, or contaminated-land that nobody else wants.

The slums are the first stop for students and other young people of low economic backgrounds, providing low-cost, affordable accommodation that allows them to save money for their eventual absorption of the city. For low-income workers, slums keep the wheels of the city turning in a wide variety of ways. The majority of slum residents benefit from informal activities in slum areas or outside, and many informal entrepreneurs in slums have customers extending to the rest of the city. Within the sense of urban deprivation and formal unemployment, the majority of slum dwellers struggle to survive honestly. Slum areas also often result in new forms of artistic expression because of the vibrant mixing of different cultures. Cultural movements and rates of solidarity in the suburbs of rich people rising arise from unhealthy, crowded, and sometimes dangerous environments.

The Challenges of Security Management In The Slum Upgrading Programme

The third objective of the study sought to establish the challenges of security management in the slum upgrading program. In general, there are high levels of insecurity and crime in the County, especially in the informal areas of settlement such as slums. The principal cause of insecurity in

the area is unemployment. Insecurity discourages innovation by rising business costs. Investors would have to invest more in their properties and their lives to improve safety. Streetlight installation is one of the main investments that lead to reduced community insecurity. The building provides access for police and fires emergency services as well as motor offenders.

Aspects of Slum Upgrading That Lead To Better Security Management

When the respondents were asked if upgrading of houses could lead to reduced neighborhood criminal behavior, 60% agreed while 40% disagreed.

Table 3: Whether upgrading of houses can lead to reduced neighborhood criminal behavior

		<i>Frequency</i>	<i>Percent</i>
Can upgrading of houses lead to reduced neighborhood criminal behavior?	Yes	191	60.1
	No	127	39.9
	Total	318	100.0

Source: Primary data, 2020

They were further asked to highlight the aspects of slum upgrading that lead to better security management and the results were as shown in Figure 14.

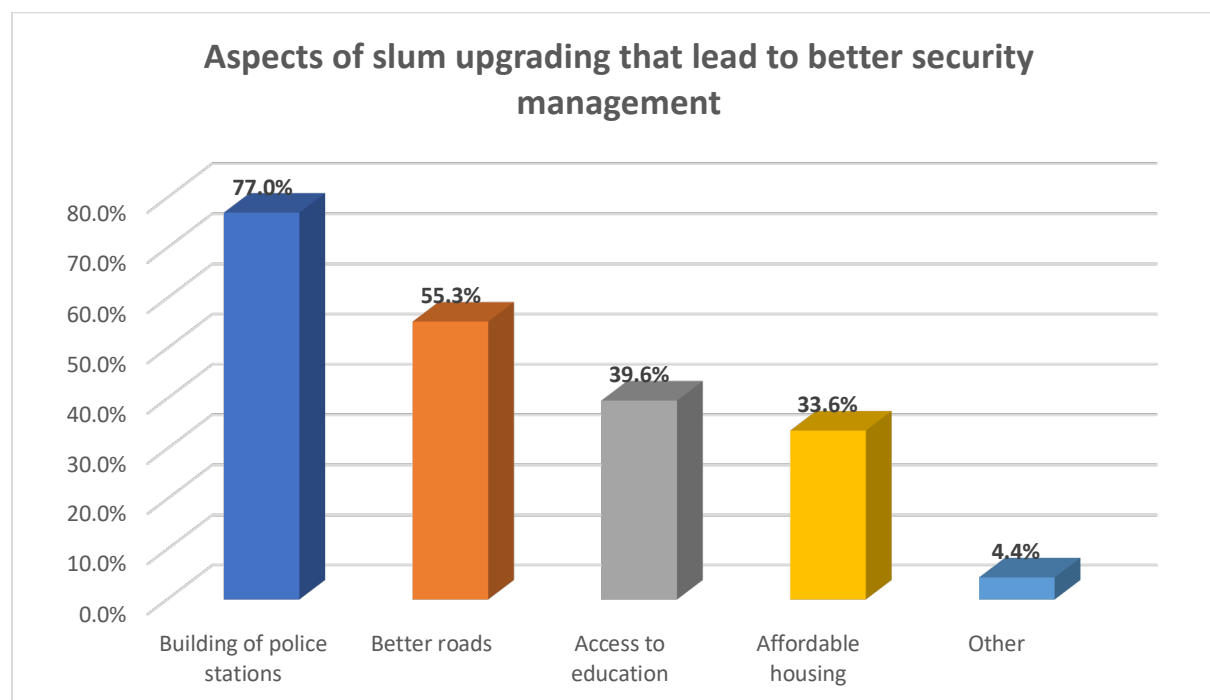


Figure 14: Aspects of slum upgrading that lead to better security management

Source: Primary data, 2020

As evidenced in the figure 14 above, the main aspects of slum upgrading the would lead to better security management were the construction of police station to provide security to the slum dwellers (77%), construction of better roads (55.3%), access to education (39.6%) and availability of affordable housing (33.6%). The change in living conditions in the communities is one way that governments and relief organizations have sought to tackle violence at the community level. This is usually intended to affect the actions and attitudes of people in physical environments. This suggests that the enhancement of the physical characteristics of urban areas and rising state visibility minimize neighborhood crime and improves citizens' sense of safety. These sentiments depend on the perception of a person that is vulnerable to or inadequate to defend himself from violence.

From the key informant interviews, it was revealed that the impacts of communities in terms of public health indicate that, independently of the individual household factor, the factor that affect the wellbeing in the neighborhood include the level of poverty and deprivation of the individual household. Such feelings rely on a person's own belief that s/he is helpless or lacks sufficient resources to protect themselves against aggression. Neighborhood development projects support the enhancement of the physical environment – for example, through the promotion and collaboration with local institutions of access to basic households' infrastructures such as water, sanitation, electricity, constructing and refurbishing public infrastructures, such as roads, sidewalks, and community facilities. In addition, there is evidence that upgrading programs, even before they are completely finished, would incentivize the inflow of poor households from other parts of the region. People move to informal communities as soon as it is understood that they have been upgraded.

Effects of Spatial Designs/Environmental Design of Urban Areas And Housing

The respondents were asked whether they thought that spatial designs/environmental design of urban areas and housing would significantly reduce crime in slums.

Table 4: Effects of spatial designs/environmental design of urban areas and housing

		<i>Frequency</i>	<i>Percent</i>
Do you think that spatial designs/environmental design of urban areas and housing would significantly reduce crime in slums?	Yes	209	65.7
	No	109	34.3
	Total	318	100.0

Source: Primary data, 2020

As evidenced in Table 6, almost two thirds of the respondents (65.7%) agreed that spatial designs/environmental design of urban areas and housing would significantly reduce crime in slums whilst 34.3% held a contrary opinion.

Further, the study sought to establish the factors that could enhance better security management in slum areas. Despite improving the housing structures within the informal settlements, the

respondents suggested various factors that are vital in improving the security of the informal settlements. These were as presented in Figure 15.

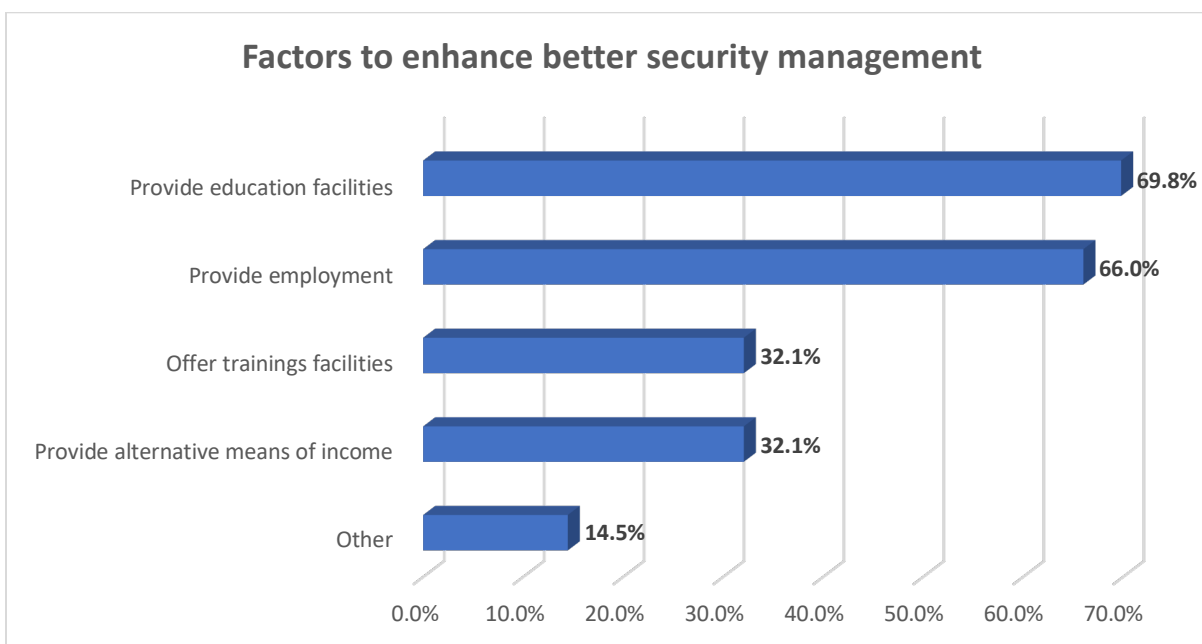


Figure 15: Factors to enhance better security management
Source: Primary data, 2020

Based on the results in Figure 15 above, the main factor that would lead to reduced crime and improved security management was provision of educational facilities such as vocational training institutes (polytechnics), basic education institutions (primary and secondary schools) as well as other skills enhancement institutions. This was as reported by 69.8% of the respondents. By providing such facilities, most of the young people (most of whom engage in criminal behavior) would be kept busy at school and have less time to engage in criminality. The acquisition of knowledge and skills would enable them to be more productive by seeking employment or even starting their own small enterprises. This would in-turn reduce the rate of crime and thereby improving the security of the slums.

Another aspect that would improve security management in the slums was said to be creation of employment (66%). As evidenced earlier (in the demographics), there was a high rate of unemployment (42%) and this was cause for the rising crime rates in the informal settlements. With the prevailing hard economic conditions facilitated by the COVID-19 pandemic, the levels of income are low and many people have been rendered jobless. This has made people desperate and some result to crime in order to feed their families. In this regard therefore, provision of job opportunities to the public especially those living in low income areas would play a major role in improving the security of the informal settlements.

Moreover, 32.1% of the respondents suggested the need to provide alternative means of incomes to the residents. This can be done through funding start-ups, supporting young people to acquire

skills (funding their education) and recruiting them to national projects such as NYS, Kazi mtaani, etc.

FINDINGS AND CONCLUSIONS

The findings of this study were presented thematically guided by the objectives of the study as follows:

Social Effects of Slum Upgrading On Security Management

The first objective of the study sought to establish the social effects of slum upgrading on security management in Kahawa-Soweto slums. The results indicated that the main social benefit of slum upgrading was said to be the building of schools (72%). This would ensure that more children from the slum would attend school and access education. Another benefit of slum upgrading was reported to be increase in the supply of houses (48.7%). Over time, slum have been characterized by informal shanties which are overcrowded. Moreover, it was reported that slum upgrading also enhances reduction of crime. The results concur with those of Magalhaes (2012), who examined slum-upgrading lessons learned from Brazil, and the author argued that slum upgrading translates into social benefits, such as an increase in the supply of houses. Furthermore, the authors contended that social upgrading facilitates urban planning policy that expands access to low-cost urbanized land and creates a housing market for the middle- and low-income populations.

Similarly, Corburn and Sverdlik (2017) investigated slum upgrading and health equity from a social perspective in cities across Asia, Africa, and Latin America and found that few captured the multiple health benefits of slum upgrading. Furthermore, the authors argued that with the Sustainable Development Goals (SDGs) focused on improving the well-being of billions of city-dwellers, slum upgrading should be viewed as a key strategy for promoting health, equitable development, crime reduction, and a reduction in climate change vulnerabilities. Furthermore, Mitra et al. (2017) conducted a study in Kibera, Nairobi, on the effects of slum upgrading on the social contract and social cohesion. The author argued that major development efforts are working to improve living conditions for the residents, where the projects geared towards upgrading Kibera Slum were anticipated to reduce conflict, crime, insecurity, flood risks and strengthen resilience in dense and complex urban environments. The results also support those of Mutisya and Yarime (2011), who stated that the criminal activities in Slums in Kenya had left so many people dead and others are injured. Some businesses have to be relocated because of the insecurity in the Slums. Investors find it reasonable to invest elsewhere. Those who succeed have to pay some money to receive protection from criminal gangs, making the cost of doing business in the slums to go higher.

Economic Effect of Slum Upgrading On Security Management

Studies indicate that Kenya's slums are growing at an unprecedented rate as more and more people move to Kenya's cities and towns, searching for employment and other opportunities urban areas offer, leading to the expansion of the economy. Therefore, the study's second objective sought to establish the economic effects of slum upgrading on security management. The study objective covers three major areas, which are aspects achieved through slum upgrading, the relationship between slum setting and crime, and economic conditions to blame for the crime. Results of the current studies have shown that the greatest achievement of slum upgrading would

be to build resilience against crime, which is represented by 79.2% of the respondents. Other key aspects include building institutional capacities to decongest slums (56.3%). One of the key informants even recounted how difficult it was to convince people (slum dwellers) out of the informal settlements and take them to the new housing units. The results support those of Changeh (2016), who examined whether projects carried out in Kibera Slum, Nairobi, were successful or not in terms of land tenure, community participation, the profitability of slum business, and economic status, based on the residents' satisfaction with the various socio-economic determinants. The slum upgrading was an ambition by the national government to ensure that the residents of Kibera Slum who lived below the poverty line would achieve the level of middle-income residents in Nairobi.

Furthermore, results on the relationship between slum setting and crime have shown that there was a relationship between slum setting and crime, with 69.2% of respondents agreeing to this count. The results support those of Weerdt (2011), who critically examined the interactions and effects of violence and slum settings. The author argued that slum characteristics could potentially promote violence, and violence can exacerbate slum circumstances. Together, they have devastating effects on health and economic outcomes for slum dwellers. The relationship was due to low income within the slums as reported by 55.9% of the respondents, high unemployment rates (also evidenced in this study where 42.1% of the respondents were unemployed), and this leads to cases of theft and mugging as the unemployed look for food and other needs. Another aspect that leads to the crime was the nature of interactions (51.8%). This makes the relationship between crime and the slum setting to be high. According to Majale (2008), most young people in the slums are unemployed, which creates room for them to engage in crime. Young people are most affected by the unemployment challenge, especially in the slums. Furthermore, Syrjanen (2008) and Gallaher *et al.* (2013) stated that apart from the middle-income housing estates, there are a number of sprawling slums. It has been noted that most crimes in Nairobi are committed by youth residing in informal settlements.

Moreover, results on whether poor slum economic conditions were to blame for crime showed that 8 out of 10 of the respondents agreed that poor slum economic conditions were to blame for the crime. Further, these economic conditions included a lack of proper education (60.7%), which was the main economic condition. Other conditions included a lack of basic social amenities such as water, sanitation, and hospitals (47.9%), as well as inadequate functional skills (47.1%). The results concur with Singh (2016), who examined the socio-economic conditions of slum dwellers and argued that the socio-economic condition of the slum dwellers is generally poor because of the lack of basic social amenities, functional skills, proper education, and sources of income, hygiene and health resources. However, slum dwellers directly or indirectly play an important role in nation-building. Furthermore, Huchzermeyer (2008) stated that slum dwellers are vulnerable parts of society. They are facing problems related to health and hygiene, low level of income, poor housing conditions, and lack of social amenities.

The Challenges of Security Management In The Slum Upgrading Program

The third objective of the study sought to establish security management challenges in the slum upgrading program. As stated earlier, there are high levels of insecurity and crime in the County, especially in the informal areas of settlement, such as slums. This objective is subdivided into two

critical aspects of slum upgrading that lead to better security management and the effects of spatial designs/environmental design of urban areas and housing. On the count of aspects of slum upgrading that lead to better security management, results showed the main aspects of slum upgrading that would lead to better security management were the construction of police station to provide security to the slum dwellers (77%), construction of better roads (55.3%), access to education (39.6%) and availability of affordable housing (33.6%).

On the other hand, results on the Effects of spatial designs/environmental design of urban areas and housing showed that the majority (65.7%) believed that spatial designs/environmental design of urban areas and housing would significantly reduce crime in slums. The results are supported by those of Cauldwell (2012), who investigated the relationship between individual, neighborhood, and city characteristics and fear of crime. The findings of the study revealed that individual, along with neighborhood and city level (structural) contexts, are significant predictors of fear of crime. In addition, Meth (2017) examined the relationship between informal housing, gender, crime, and violence in urban South Africa. The author established that deep socio-economic inequalities shape violence and crime in countries such as South Africa. However, the spatial designs of urban areas and housing also play a role.

Furthermore, on the main factors that would lead to reduced crime and improved security management results showed 68.9% of respondents agreed that provision of educational facilities such as vocational training institutes (polytechnics), basic education institutions (primary and secondary schools) as well as other skills enhancement institutions would reduce crime and improved security management. Another aspect that would improve security management in the slums was said to be the creation of employment (66%). At the same time, other with lower effects include the provision of alternative means of incomes to the residents (32.1%), which can be done through funding start-ups, supporting young people to acquire skills (funding their education), and recruiting them to national projects such as NYS, Kazi mtaani, etc. Deaner *et al.* (2009) suggested that well-managed and governed recovery homes pose minimal risks to neighbors in terms of criminal behavior. The results contrasted with those of Miller (2013), who assessed the correlation between neighborhood upkeep and crime rates, and argued that the longer residents live within a given neighborhood, the more likely the neighborhood would have lower crime rates.

CONCLUSIONS AND RECOMMENDATIONS

As argued by Mutisya and Yarime (2011) this study has also established the relationship between slum setting and crime have shown that there was a relationship between slum setting and crime, with 69.2% of respondents agreeing to this count. According to this study slum upgrade will reduce crime and insecurity, given that special aspects such as an improvement in spatial designs/environmental design of urban areas and housing with enhanced modern lighting would significantly reduce crime in slums by eliminating criminogenic and insecurity risk factors. Additionally, improved economic effects of slum upgrading on slum dwellers would build resilience to crime and insecurity. This include Job creation, provision of educational facilities such as vocational training institutes (polytechnics), basic education institutions (primary and secondary schools) as well as other skills enhancement institutions. Community empowerment to come up with income generating activities, construction of police station to provide security to the

slum dwellers (77%), construction of better roads (55.3%) were recommended to **reduce** crime and improved security management

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