INTERNATIONAL JOURNAL OF ACADEMICS & RESEARCH - *IJARKE*
(IJARKE Science & Technology Journal)

Evaluation of Efficiency of Nyumba Kumi Initiative in Combating Insecurity in Mombasa County

Gikundi David, Technical University of Mombasa, Kenya
Dr. Aggrey Adem, Technical University of Mombasa, Kenya
Dr. Michael Munywoki M, Technical University of Mombasa, Kenya

Abstract

One of the most important determinants of development of any country is peace and security. World over, terrorist activities have increased, posing a high threat to the world's security. Kenya has not been spared of this security challenge since the country has experienced some sporadic terrorists' attacks from 2012. This forced the government to introduce the nyumba kumi initiative as tool for citizens to know their neighbors. This was to help the government not only monitor the activities of the terrorists but also to contain the escalating levels of crime. Five years after the implementation, there has been need to evaluate the effectiveness of the initiative. The purpose of this study was to evaluate the effectiveness of the Nyumba Kumi Initiative in combating insecurity, reducing illegal trade and violence as well as upholding peace within the community in Mombasa County. Stratified sampling was used to select nine police stations for the study. The study considered cases lasting two years before the initiative and four years after the initiative. The study adopted a pre-test and post-test design. Independent t test model was used to compare mean number of crime cases before and after the nyumba kumi initiative. The findings of this study show that there is significant difference in mean number of cases before and after the initiative. The mean number of cases before the initiative was found to be approximately 56 while the mean number of cases after the initiative was found to be approximately 45. The test statistics t_0 was found to be 4.2752 with a p value of 0.00002327. From these results it can be seen that the mean number of cases for the post test group was smaller than the pre-test group. Therefore, the initiative has reduced the number of crimes in the Mombasa County.

Key words: *Insecurity, Nyumba Kumi, Terrorism, Community Policing*

1. Introduction

Since the August 7, 1998 simultaneous terrorist attack on United States Embassies in Nairobi, Kenya and Dar es Salam and the September 11, 2001 attack on World Trade Center, New York, United States of America, there has been deliberate worldwide move to counter terrorism. For instance, the Security Council took the leading role, introducing the Counter-Terrorism Committee in 2001, based on Resolution 1373 (2001) to oversee the Implementation of counter-terrorism policy.

In 2005, the UN Secretary General introduced the Counter-Terrorism Implementation Task Force for combating terrorism. With the emergence of new challenges on the terrorist front like the Islamic State (ISIL), foreign fighters, terrorism financing, in 2014 the Security Council adopted Resolutions 2170 and 2178, followed, in 2015, by Resolutions 2199 and 2214, which called on states to work together to deal with these threats. In 2015, the Informal European Council a statement was adopted in guiding the work of the European Union and its member states with regard to confronting terrorism that focused on: ensuring the security of citizens, preventing radicalisation and safeguarding values, and cooperating with international partners.

One of the measures that have been adopted in Kenya in combating insecurity is the concept of community based policing. Safeworld(2008) defined community based policing (also referred to as neighborhood watch policing) as a way of thinking and acting upon those thoughts that allow the police and the community to work in union to develop new ways of solving problems associated with crimes and safety of the neighborhood. Community based policing has been embraced in all corners of the world in 21st century after the security agencies realized that police service cannot fully solve security problems in a given neighborhood without the help of the residents within that given neighborhood.

According to East Africa Report, Nyumba Kumi (meaning ten households) Initiative required residents of a given neighborhood to know at least ten of their neighbors. President Kenyatta pronounced this initiative in 2013 after a terrorist attack at Westgate Shopping Mall in Nairobi, Kenya with the primary objective of this initiative being to enable members of the public to report any suspicious activities taking place in their neighborhood to the security agencies and ensuring those criminals do not get haven in the society. NKI has been implemented in a good number of urban and rural areas in the country. However, evaluation of this initiative in different counties has never been carried out to determine how effective the initiative in different counties is over the last few years.

Universally, the police service is highly recognized in providing security to the citizen of its respective country through ensuring that the rule of law is adhered to thus enabling citizens to accomplish their social, economic and political dreams. However, most developed countries such as Sweden and United Kingdom adopted a community based policing program to improve security of their citizens. Community based policing was embraced after international community realized that most people are of good will and will cooperate with others to reach to a consensus(Manning 1984: cited by Umar & Bappi, 2014). Therefore, a collective effort between the police service and the residents of a given area can help in reducing crime rate and violence and terrorism prevention/reduction.

Developing countries, especially in Africa, have recently embraced community based policing to curb uprising cases of terrorism, crimes and violence. In Nigeria (Umar & Bappi, 2014), community policing was adopted with an objective of promoting police-community relationship and in turn reduce the number of casualties suffered by the police service in violent crimes. South Africa too has been on the list of the African countries that have embraced community policing. Mengistu, Pindur, & Leibold(2000) in their journal crime and community policing in South Africa demonstrated the importance of evaluating the effectiveness of community based policing in South Africa. They also illustrated the importance of partnership, transparency and accountability aspects in any CBP.

In Kenya, recent security reforms have led to introduction of community based policing (CBP) to combat crimes and acts of violence and terrorism. Safeworld report (2008) recognized that communities are better off if they identify their own security and safety needs and how to meet them. Therefore, communities are actively engaged in planning and implementation stages of identifying solutions to their security needs and problems. Furthermore, they are responsible of monitoring the process of implementing the solutions and giving feedback to the security agencies. Safeworld report recognized that these CBPs consist of partnership, transparency, accountability, mobilization and sensitization elements. These elements are replicated in Nyumba Kumi Initiative. A good number of counties in Kenya have implemented the NKI, including Mombasa despite facing several challenges. From the Safeworld report, it is very clear that for any country or county to implement any community based policing program effectively, partnership between the police service and the community living in that country or county should be established to facilitate cooperation. In addition, there must be high level of trust between security personnel and the members of the public that is earned by creating a transparent environment. Finally, all the stakeholders have to be accountable. Therefore, this study assumed that positive, negative change or no change on the crime rates are accrued on the above mentioned elements of the community based policing.

As stated by Kiprono & Muchemi(2014) most community policing failures resulted from lack of internal accountability within the police force and citizens. This was an indication that for any community policing, accountability from both the police service and the public should be put in consideration while evaluating the effectiveness of any community policing. Therefore, institutions involved in community policing have to be open for scrutiny by the public and other stakeholders to ensure that they are accountable towards their performances. According to findings of Kiprono & Muchemi, evaluation of community based policy was done through non-participative frameworks such as administration of questionnaires via police customer service desk, through having time event charts and trend analysis, through crime incidents trend analysis, loggings and crime trend analysis. However, these methods of monitoring and evaluation only evaluated the police service. Citizens of the given neighborhood were not considered in evaluating the community policy.

Maiyo (2015) in his study on Strategic responses to security challenges by ministry of interior and coordination in Kenya recommends that ministry of interior and coordination in Kenya to put up efficient mechanisms to ensure transparency, inclusion, participation and accountability within the ministry after identifying that some officers were corrupt hence hampering the fight against insecurity.

Nyapara & Sakataka(2015) in a study on evaluating Nyumba Kumi in West Pokot focused on partnership, citizen involvement and decentralized decision making as the variables to consider in relation to peace and security of the area. Nyapara and Sakataka(2015) concluded in their study in that 98% of citizens were aware of the NKI as a community policing. According to Ndili (2016), the highest percentage of crimes was committed by youths. Youths formed or enrolled to illegal groups and militia under which they operated to undertake criminal activities and disrupted peace of a given area. Youth radicalization resulted from economic marginalization, breakdown of social values and discriminative law enforcement. In Ndili's study, over 90% of the interviewees agreed that increased police operations in Eastleigh area exacerbated radicalization processes.

According to a study in Kirinyaga county on the role of community policing, mainly NKI, in crime prevention, Mwaniki(2016) recognized that evaluation of the effectiveness of any community policing should be based on reduction in crimes within the neighborhood, reduction in fear of crimes and satisfaction of the citizens on security issues. In this study, a strong partnership between the police and the community was the main component for evaluation of the community policing and the extent to which security personnel (police officer) worked as a team. In Lunga lunga, study on effects of NKI on security management revealed that NKI is working successfully (Munyao & Ng'ang'a: 2017). This study based its argument on surveillance, accountability, policing and peace building components all considered together.

Munyao & Ng'ang'a established that solving local crime problems and developing plans for crime prevention laid on the extent to which the community and police service shared the information. Sharing of information (intelligence) could be smooth and effective when there exists a good relationship between security agencies and the police. All the above studies in Kirinyaga, Lungalunga and West Pokot generally considered surveillance, partnership, accountability, mobilization and sensitization components in evaluating the effectiveness of the NKI. This study evaluated the NKI by comparing the crime levels before and after the introduction of the initiative.

3. Research Design

This study adopted a pretest-posttest design. Selection of this design was based on the fact that this study analyzed the crime rates for the period before introduction of the NKI and after the introduction of the initiate. In Mombasa County, there are 9 police stations located across all constituencies of this county. Other than police stations, there are AP posts located in several localities. This study adopted stratified and random sampling design to select a sample from the 9 police stations within Mombasa. Modified Cochran's formula was used to calculate the sample size:

$$n = \frac{n_0}{1 + \frac{(n_0 - 1)}{N}}$$

where n=sample size, N=population size and

$$n_0 = \frac{Z^2 p(1-p)}{e^2}$$

where e is the level of significance and p is estimated proportion of the population with the attribute in question. Assuming half of the population experienced notable decrease in crime levels, then p=0.5. At 95% CI, Z value is 1.96 and e=0.05.

$$n_0 = \frac{1.96^2 (0.5)0.5}{0.05^2} = 385$$

Since the population size this study considers is relatively small, modified Cochran's formula is used:

$$n = \frac{385}{1 + \frac{(385 - 1)}{9}} = 9$$

From the above calculations, a sample of size 9 police stations were selected randomly to represent the each population.

4. Data Collection Procedure

Data for this study originated from secondary sources, that is from the occurrence books of the two periods whose means are being compared. The procedure of data collection was as follows:
i. Establishing contact with security agencies within the chosen stations
ii. Identify appropriate respondents in each of the police station
iii. Sending a request for accessing data from the occurrence books

4.1 Test Statistics

To test the hypotheses for difference in means of two independent populations t test was used.

$$t_0 = \frac{\bar{x}_1 - \bar{x}_2}{\sqrt{\dfrac{s_1^2}{n_1} + \dfrac{s_2^2}{n_2}}}$$

5. Results

Out of the 9 sampled police stations, two of them keep no records thus perform a monthly return and forward their records to their division headquarters. That accounts for 22.22% of the total sample size. However, their records were included in the respective division headquarters' records. Police stations whose data was submitted to division headquarters were not considered while calculating the bouncing rate but were considered in calculating the response rate. For the remaining 7 police stations, 2 withheld their data and denied the researcher access to it. Therefore, the study faced a bounce rate of 22.22%. The response rate in this study was 77.77%. A response rate of more than 70% is considered sufficient in analysis (Mugenda and Mugenda(2003): cited by Ndili(2016)) hence for this study the response rate surpassed the response rate threshold.

5.1 Crime Progression per Police Station

Nyali police station which in Kisauni Division recorded inflated crimes in the year 2011 with highest number of crimes recorded being 96. This later dropped remarkably to 50 in the year 2012 from which a progressive rise in crime numbers for the year 2014 and 2015 with 66 and 79 monthly total crimes respectively was experienced. Considering this station, the pretest group's highest number of crimes recorded in any month was 96 while that of the post-test group was 79.

Makupa police station which in the urban division recorded highest monthly total as 50 in the year 2011. This number slightly increased in the year 2012 to hit at 60. Thus for the pretest group in Makupa Police station, the highest number of crimes reported were 60. For the year 2014 and 2015 the highest number of crimes recorded were 42 cases. Thus for the post test group, the maximum number of crimes reported were 42. Changamwe police station representing Changamwe division recorded a rise in the maximum crime numbers from 52 to 66 between 2011 and 2012. Therefore, considering the pretest group, the highest number of crimes ever recorded monthly were 66. However, this reduced in the years 2014 and 2015 to 52 and then to 45 respectively

For Central police station, the maximum number of crimes shot up from 94 to 108 in the period between 2011 and 2012. Then, considering the pretest group, the highest number of crimes reported for any month were 108. The year 2014 experienced a steep drop in highest number of reported crimes to 71 and consequently 2015 recorded 68 crimes as the highest monthly crime totals. Thus the post-test period's highest crime numbers were recorded in 2014 as 71. Pretest group of Likoni police station had 13 missing observations, that is, 2011 data was missing. However, 2012 it was recorded that the highest number of crimes in any month reached 52. Post-test group recorded the highest monthly totals as 71 and 69 for the years 2014 and 2015 respectively. The figure below graphically represents the highest values of monthly crimes in each station.
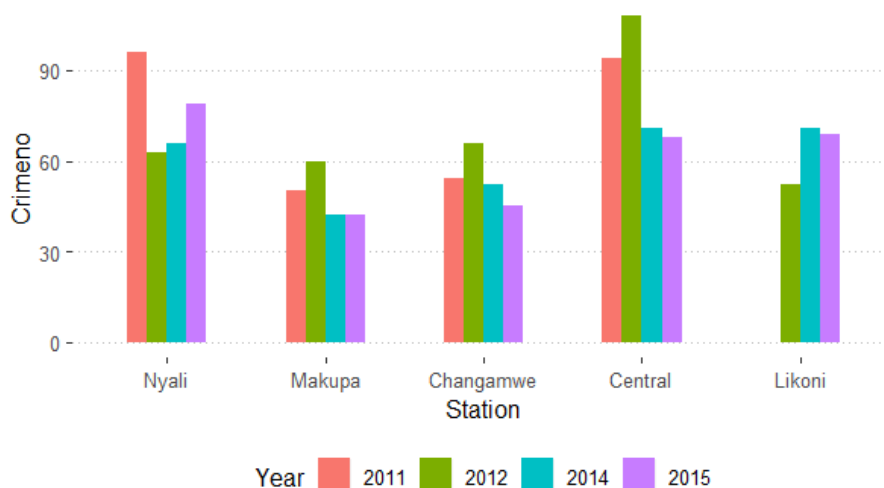

Figure 1: Highest monthly crime levels for different stations

5.2 Comparison between Pretest and Post-test

The pretest group consisted of monthly data observations from the year 2011 to 2012. The number of observation recorded during 2011 tolled to 48 which accounted for 40%. The year 2012 recorded 58 crimes in all police stations considered, accounting for 48.33%. Pretest period recorded 13 cases of missing data which accounted 11.67% of the pretest group. Sample size for the pretest population was 106 while for the post-test group was 120. The pooled sample size was 226.

Table 1 Pretest and Post-test groups summary

Group	min	max	Range	1st Quarter	median	3rd Quarter	Mean	Missing Valued	n
Pretest	21	108	87	40.25	50	73	55.72	13	106
Post-test	17	79	62	36.5	43	54	44.9	0	120

5.3 Independent z-test Summary

The pretest group consisted of monthly data observations from the year 2011 to 2012. The number of observation recorded during 2011 tolled to 48 which accounted for 40%. The year 2012 recorded 58 crimes in all police stations considered, accounting for 48.33%. Pretest period recorded 13 cases of missing data which accounted 11.67% of the pretest group. Sample size for the pretest population was 106 while for the post-test group was 120. The pooled sample size was 226.

The main objective of this study was to determine if the Nyumba Kumi Initiative was successful or not in reducing crime levels. Therefore, t test was performed to examine if there is mean difference or not and the results were as shown in the figure below.

Table 2 Two Sample t-test

T value	Df	P value
4.2752	224	0.00002827

From the above results, the null hypothesis there were no significant mean differences in the cases of the crime before and after the Nyumba Kumi initiative was rejected.

6. Summary of the Findings

The researcher found out that the Nyumba Kumi is highly effective in reducing the crime levels in Mombasa County. However, trust between the police and the community is unsatisfactory thus reducing the effectiveness of the Nyumba Kumi Initiative (Muchira, 2016). Different police stations from respective police divisions have experienced different responses on recorded monthly crimes. Despite differences in crime numbers recorded in the police stations, the highest monthly crime numbers for the post-test(after introduction of NKI) are way lower than those of the pretest group, except for Likoni. This indicates that the NKI had assisted one way or another to reduce the rate at which crimes are committed. However, crimes are still persisting as observed from graphs.

The findings of this study conformed with a study by Munyao & Ng'ang'a(2017) who concluded that the Nyumba Kumi Initiative in Lungalunga subcounty is effective by considering variables such as surveilance, public participation and accountability as the main determinants of the effectiveness of the initiative.

7. Conclusion

Two sample t test results led to the conclusion that the Nyumba Kumi Initiative has achieved its objective of combating crime rates in Mombasa County. Despite the challenges faced by the policy, it can continually reduce crime levels when the recommendations of this study are adopted..

8. Recommendations

Firstly, the government should direct more resources to support and promote community-based policies and offer sensitization stressing the importance of the Nyumba Kumi Initiative in combating insecurity in any given neighborhood.

Secondly, more community based policies to combat insecurity in Mombasa County and other counties to be implemented and financed to increase the output of the policies and attainment of the respective objectives. Security status within a given neighborhood has a direct impact on the socioeconomic being of the inhabitants of a given neighborhood. Therefore, if security would improve in any given neighborhood, that neighborhood will experience improvement in other sectors of the economy.

Thirdly, frequent evaluations of Nyumba Kumi Initiative and other community-based policies should be mandatory to ensure that optimal results of the policies are achieved. This will also ensure that the quality of the CBPs is under control and that the challenges will be addressed before they cause a breakdown in the CBP.

To add on, evaluations to be done on division basis rather than regionally which will make it easier to establish the divisions where more resources and supervision are to be directed in ensuring the efficiency and effectiveness of the CBPs.
Lastly, more research should be done to determine whether police' attitude and behavior while handling members of public while (public members) are reporting criminal activities or any suspicious activity within their neighborhood affect the public participation in the CBP.

References

1. Adamtey, R., Yajalin, J. E., & Oduro, C. Y. (2015). The Socio-economic well-being of Internal migrants in Agbogbloshie, Ghana. *African Sociological Review, 19(2*) 132-148.
2. anonymous. (2015). *Draft guidelines for Implementation of Community Policing- Nyumba Kumi, Usalama wa Msingi.* unpublished.
3. Bennett, T., Holloway, K., & Farrington, D. (2008). The Effectiveness of Neighborhood Watch. *Campbell Systematic Reviews*.
4. Dalayeen, B. A. (2017). Impact of Customer Relationship Management Practices on Customer's Satisfaction in Jordan Ahli Bank and Bank Al-Etihad. *Journal of Service Science and Management*, 3,87-96.
5. Diriye, H. G. (2015). *Effect of Terrorism on Tourism in the 21st Century : A case study of Kenya.* unpublished.
6. Kinuthia, A. W. (2014). *An Investigation into the use of Construction Management Softwares: A Survey of Construction Firms in Nairobi, Kenya.* Unpublished.
7. Kiprono, W., & Muchemi, J. K. (2014). Peace building in kenya Implementation of Community Policing as critical factor. *Journal of Contemporary Research and Review*, 5, 20185-20204.
8. Maiyo, R. K. (2015). Strategic Responses to security Challenges by Ministry of Interior and Cordination in Kenya. *unpublished*.
9. Muchira, J. M. (2016). The Role of Community Policing in Crime Prevention: Kirinyaga County, Central Kenya. *unpublished*.
10. Munyao, F. M., & Ng'ang'a, R. (2017). Effects of Nyumba Kumi Initiative on security management in Kenya, a case study of Lungalunga sub county. *Journal for Public Policy and Administration 2(2),90-95.*
11. Musyimi, P. M. (2017). Factors Influemcing The Effectivess of Community Policing in Kenya: The Case of Kangema SubCounty, Murang'a Conty. *unpublished*.
12. Mwaura, R. M. (2014). *Factors that affect effective implementation of Community Policing in Kenya: A case of Kajiado North Police Division.* unpublished.
13. Ndili, A. (2016). The Role of Community Policing in the Prevention of Youth Radicalization in Eastleigh Area of Nairobi County. *Unpublished*.
14. Nyapara, N. A., & Sakataka, W. (2015). Evaluations of community policing project for peace and security in West Pokot County, Kenya. *International Journal of Recent Research in Life Sciences (IJRRLS) 2(4) 25-38*.
15. Safeworld. (2008). *Implementing Community based policing in Kenya.*
16. Umar, M., & Bappi, U. (2014). Community policing and partnership: opportunities and challenges for gombe state nigeria. *IOSR Journal Of Humanities And Social Science (IOSR-JHSS)*.