

**FACTORS INFLUENCING PARTICIPATION OF  
STAKEHOLDERS IN ERADICATION OF JIGGERS: A CASE OF  
KANDARA SUB COUNTY, MURANGA COUNTY, KENYA.**

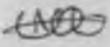
**BY**

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THE REQUIREMENTS OF THE AWARD OF THE DEGREE OF MASTER OF ARTS IN  
PROJECT PLANNING AND MANAGEMENT OF THE UNIVERSITY OF NAIROBI.**

## DECLARATION

This Research Project report is my original work and has not been submitted to any other university for the award of a degree.

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This Research Project report has been submitted for examination with my approval as the University supervisor.

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## DEDICATION

This research project report is dedicated to my loving mum Margaret whose support has been overwhelming. It is through her prayers and encouragement that I have made it this far. Further dedication goes to my friends Simon, Judy and Anita for their support not forgetting Mrs Judy Mwangi who made this dream come true.

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## ABBREVIATIONS AND ACRONYMS

MDG, s	-Millennium Development Goals
MOE	- Ministry Of education
MPH	- Ministry of Public Health
NGO	-Non Governmental Organization
IFAD	- International fund for agricultural Development
MOA	-Ministry Of agriculture
GOK	-Government of Kenya
CHW	-Community Health Worker
MP	-Member of Parliament
AIDS	-Acquired Immune Deficiency Syndrome
UN	-United Nations
WHO	- World Health Organization
CDF	-Community Development Fund
MCA	-Member of County assembly

## ABSTRACT

This study was about the factors influencing participation of stakeholders in eradication of jiggers in Kandara sub county, Muranga County. The study was guided by the following objectives; to establish the level at which demographic characteristic influence participation of stakeholders in eradication of jiggers in Kandara sub county, to determine the extent to which social cultural factors influence participation of stakeholders in eradication of jiggers in kandara sub county, to find out how political factors influence participation of stakeholders in eradication of jiggers in kandara sub county and to determine how economic factors influence participation of stakeholders in eradication of jiggers in kandara Sub County. The literature reviewed was guided by the above objectives. The study adopted both qualitative and quantitative approach. Data was collected through descriptive survey design. The target population was adult men and women. The sample size was 375, that is, 365 community members and 10 community leaders. The sampling technique used was simple random and stratified sampling for sampling community members and purposive sampling for sampling community leaders. The research instruments that were used were questionnaires and interviews. A pilot test was done to test reliability of the instruments using a village in the bordering Gitugi Sub County. Descriptive statistical methods were used in analyzing the quantitative data while narratives were used to analyze qualitative data. SPSS (Statistical packages for social Sciences) was used to generate the appropriate result frequencies and percentages. Tables were used to present the results. The study found out that among the demographic characteristics, only age and education level influenced participation. However, social, economic and political factors had a significant influence on stakeholder's participation in jigger eradication. The study recommends more training, mobilization and sensitization of community members by the Ministry of Public Health. The government should ensure that the jigger guidelines are implemented and avail jigger medication in hospitals. The stakeholders should also continue collaborating with the government since the government cannot fight this menace alone. The overall findings of this study helped shed light on how participation influences jigger eradication activities and also provides other researchers with more information since this is an area with very little literature available.

## CHAPTER ONE

### INTRODUCTION

#### 1.1 Background of the study

The health of human beings is a key aspect in their lives. Jigger's infestation has been a serious threat to the health of human beings globally and locally (WHO, 2010). Heavy infestations may lead to severe health complications. Ahadi Kenya Trust, a non-governmental organization, found out that the first evidence of jigger infestation on a person is a tiny black dot on the skin, which occurs at the point of penetration which later develops into a full grown jigger. Most lesions occur on the feet (Stanley, 2010).

From the overwhelming research conducted on jiggers, there are several causes of jigger's infestation. Karuga (2010) agrees with Ahadi Kenya that the biggest cause of jigger infestation is poverty and poor hygiene. The NGO argues that heavy infestations may lead to severe inflammation, ulceration, fibrosis, lymphangitis, gangrene, sepsis and the loss of toenails. Auto amputation of fingers and toes may occur and may lead to death. It also leads to the spread of HIV/AIDS due to sharing of pins. Internationally, the jigger menace is associated with poverty and most cases of jiggers have been identified in the Caribbean, Asia, Latin America and sub Saharan Africa (Ehreberg, 2009). However, increases in travel and migration across continents have affected dynamics of jiggers beyond poor communities to include travelers from various parts of the world (Ehreberg, 2009).

During the last two decades there has been more involvement by researchers in the plight of communities affected by jiggers. Since 2008, Ahadi Kenya has fought this menace seriously together with other NGO's and corporate bodies like Safaricom and K.C.B and there has been a lot of improvement in this region. According to Ahadi Kenya, the number of new infections has reduced and those infected know how to take care of themselves.

However, despite the many effects of jigger manifestation that are evident, those affected by jiggers have to contend with proud politicians and other leaders who refuse to accept that the jigger menace is real and therefore do not participate in fighting this menace (Ahadi Kenya

magazine July 2009). There is also slow participation by the community members which has negatively influenced eradication of jiggers in Kandara. Macantel argues that for any project to succeed, all the stakeholders must be involved right from planning, implementation, monitoring and evaluation (Macantel 2011). Failure to do this, the project is likely to fail.

*“To win the battle on jigger menace, it is important to recognize and use the existing knowledge and community structures for positive behavior change in jigger prevention and control. It is important for the health workers to embrace the spirit of public and private partnership in order to implement sustainable hygiene practices to eradicate jigger in the area for sustainable health and development”*, emphasized CEO Ahadi Trust Kenya.

Macantel (2011) agrees with Kamau (2010) that a continuous multi-sectoral approach and active community involvement and participation are also necessary to identify and address underlying causes to jigger infestation among the affected households in the area. Concerted efforts therefore should be made to transform the community knowledge, attitude and practices to positive hygienic and sanitation behaviors/practices that will contribute to jigger eradication and consequently contributing to improved general health status and sustainable community development (Kamau, 2010). He maintains that consideration should be given not only to how interventions will be implemented in the short term, but also their affordability and future sustainability.

The Senior Assistant Chief Public Health Officer (Mr.Wanjohi) concurs with this in his observation that involvement of the affected communities and households in the planning, implementation and evaluation of any jigger-infestation treatment and control programs will go a long way in eradication of jiggers.

*“Partners and other stakeholders should support the Ministry and NGOs in jigger-infestation treatment and control by targeting affected region/communities with improved sanitation and housing programs”* (Wanjohi, 2010, pg10).

Despite the great emphasis by different scholars and NGO,s on the need of the different stakeholders to work together in eradication of this menace in Kandara Sub County, participation has not been overwhelming (Ngunjiri, 2010). It is in the light of this that this study set out to find out the factors influencing participation of stakeholders in eradication of jiggers in kandara Sub County, Muranga County with an aim of establishing solutions to the jigger menace.

## **1.2 Statement of the problem**

Statistics indicate that 2 million Kenyans are infested with jiggers (Kamau, 2014). In Muranga County, Kandara Sub County 6200 inhabitants are infested with jiggers. The effects are far reaching in the community especially to children and the old people in the area worst of all being death. The main concern is that if this issue is not well addressed, it may hinder the realization of vision 2030 (M.P.H 2010).

Despite the evident effects of jigger menace, those affected by jiggers have to contend with leaders who deny the existence of jiggers in this area and even deny media coverage of anti-jigger events. The community members also do not collaborate with the NGOs which makes it very hard for them to fight this menace. It is worth noting that stakeholder participation is very important for any project to succeed. Yet, according to a study conducted in this area on the role of media in eradication of jiggers, it was found out that stakeholder's participation has not been overwhelming in this area (Ngunjiri, 2010).

Though studies have been conducted on jiggers particularly on the causes of jiggers, effects on education, the role of media in eradication of jiggers among others by different organizations like Ahadi Kenya, Media houses, cooperates and scholars from different universities, little has been done to find out why stakeholders are reluctant to come out and help in fighting the menace.

It is in the light of this that the researcher set out to study the factors influencing participation of stakeholders in eradication of jiggers with the aim of establishing solutions to the jigger menace in Kandara Sub County, Muranga County.

### **1.3 Purpose of the Study**

The purpose of this study was to find out the factors influencing participation of stakeholders in eradication of jiggers in Kandara Sub County, Muranga County.

### **1.4 Research Objectives**

This study was guided by the following;

1. To establish the extent which demographic characteristic influence participation of Stakeholder's in eradication of jiggers in Kandara Sub County.
2. To determine the extent to which social cultural factors influence participation of stakeholders in eradication of jiggers in Kandara Sub County.
3. To establish how political factors influence participation of stakeholders in eradication of jiggers in Kandara Sub County.
4. To determine how economic factors influence participation of stakeholders in eradication of jiggers in kandara Sub County.

### **1.5 Research questions**

The study was guided by the following;

1. How do demographic characteristic influence participation of stakeholders in eradication of jiggers in Kandara Sub County?
2. To what extent do Social cultural factors influence participation of stakeholders in eradication of jiggers in Kandara Sub County?
3. How do political factors influence participation of stakeholders in eradication of jiggers in Kandara Sub County?
4. How do economic factors influence participation of stakeholders in eradication of jiggers in Kandara Sub County?

### **1.6 Significance of the study**

This study hoped to hasten the achievement of vision 2030 and millennium development goals. Improved healthcare being one of the pillars of these goals, eradication of jiggers will improve

the health of this area helping the government achieve MDG's and in the long term realize vision 2030.

It also hoped to enlighten other researchers who may be interested in carrying out research in this area. As has been found out, it is an area with very little literature available and the information from this study will go a long way in assisting other researchers as it will provide a base for further research. In addition, it hoped to act as a wakeup call to the leaders and other stakeholders to play their part in the eradication of jiggers as their participation will be of great help in combating this menace.

### **1.7 Delimitations of the Study**

Kandara Sub County was highlighted as one area with a high infestation of jiggers by Ahadi Kenya in 2008. Despite the effects of the menace, stakeholder's participation has not been overwhelming. This study focused on this area. The study confined itself with the social – cultural, economic and political factors influencing participation of stakeholders in eradication of jiggers in Kandara Sub County and not any other factors.

### **1.8 Limitations of the Study**

This study was faced by the following limitations; some places were inaccessible due to the terrain of the area and bureaucratic issues which mildly affected the results of the study. To counter this, the researcher worked closely with the area leaders to assist in data collection.

### **1.9 Assumptions of the study**

This study assumed that respondents would be available and that the study would be completed on the scheduled time.

### **1.10 Definition of operational terms used in the study**

**Demographic characteristics:** The demographic characteristics looked into in this study are gender roles, marital status, and age and education level of the target population.

**Cultural factors:** The cultural factors looked into in this study are myths, stigma, illiteracy, witchcraft and curses.

**Economic factors:** The economic factors looked into in this study are poverty and availability of resources and funds.

**Eradication:** This term refers to reduction of jigger infestation.

**Influencing:** This term refers to the effect the mentioned factors have on participation.

**Jigger:** This refers to a tiny black flea that attacks human beings.

**Jigger menace:** This refers to the high infestation of the community members by jiggers .

**Participation:** This term refers to the involvement of stakeholders in eradication of jiggers.

**Political factors:** The political factors looked into in this study are political support and good will.

**Stakeholders:** In this study, the concept of stakeholders is taken to refer to the community members and their leaders.

## CHAPTER TWO

### LITERATURE REVIEW

#### **2.1 Introduction**

This chapter reviewed what past researchers have contributed that is relevant to the current study on the factors influencing participation of stakeholders in eradication of jiggers. The aspects that were discussed in this chapter include the overview of the jiggers menace, influence of demographic characteristics on stakeholders participation in jigger eradication activities, influence of social cultural factors on stakeholders participation in eradication of jiggers activities, influence of economic factors on stakeholders participation in jigger eradication activities and influence of political factors on stakeholders participation in jigger eradication activities.

#### **2.2 Overview of Jiggers Menace**

It is no longer a dispute that there are people who are suffering from jiggers. Much remains to be done in Africa to bring this menace into control, (Wangui, 2008). A study conducted by Ugbomoiko (2007) in Erekiti, a small village in Western Nigeria found that 45.2% of 557 individuals examined were infected by jiggers. In other parts of Africa, such as Tanzania, research indicates that the jigger menace has not spared them either especially in Kigoma where 800 people were infected ( Mazigo, 2010). A study conducted in Cameroon indicated 610 (53%) individuals were infested with jiggers with prevalence highest in children (Collins, 2009). The impact of the disease is highly felt among poverty stricken rural communities and is believed to inhibit progress and development.

Ahadi Trust Kenya records that 2.6 million Kenyans or 6.5 %, are infected with jiggers in the country. By August 3rd 2011, Nation newspaper reported that due to jiggers, 50 000 kids dropped out of school the last 6 months. It also mentioned that 265 people died because of jiggers-related causes in the same period (Karuga, 2010). By 2012, a lower estimate of 1.4 million Kenyans translating to 4% of the total population suffered from jigger infestation with the highest prevalence rates found in Central, Nyanza, Western, Coast and Rift Valley Provinces.

Jiggers' infestation is largely considered a thing of the past but in Kenya it has been a serious threat ( Wangui, 2008). The Ministry of Public Health is concerned that it may hinder the realization of vision 2030 and also the millennium development goals especially those on health and poverty issues if not urgently addressed. A scientific paper on vermin control by Wanjohi (2010) reports that without eradication of the sand flea, achieving the Millennium Development Goals (MDG's) remains a dream in Kenya (Ruttoh et al. 2012). As Kenya seeks to develop, we often tend to forget the key elements, which if addressed, could make the societies really match their goals. In the Kenyan case, as we seek to attain Vision 2030, through which the country hopes to achieve more than 10 % economic growth, we cannot ignore the jigger menace. This is because Jigger's infestation leads to a vicious cycle of poverty and health issues (Stanley, 2008). In Kenya, health issues regarding jiggers are the responsibility of the Ministry of Public Health and Sanitation; department of environmental health and sanitation; vector and vermin control (Onwong'a 2011). The aim of the Ministry is to enhance health and quality of life through safe, effective and environmentally sound integrated vector, rodent and vermin management services. The Ministry's objective is to promote collaboration with various stakeholders and it seems that the private sector has been investing most efforts in this vermin control. There are indeed several NGOs working on jigger's eradication, the most dominant being Ahadi Trust Kenya.

In Rift valley, a research conducted in 2010 by Ahadi Kenya revealed that in Samburu more than 300 children were infested with jiggers and most of them had dropped out of school. A survey done in Narok by District Health Officials indicated that over 5000 people are infested with jiggers. Kericho, Baringo, Subukia are also among the infested areas in Rift valley.

It is estimated that more than 400,000 people are infected by jiggers in Eastern Kenya the most affected areas being Maringa, Machakos, Kitui, Kathiani among others (Stanley, 2010). In March 2009, Ahadi Kenya launched a campaign in the region after several people called on them to intervene in the situation. In Nairobi, several children in Mji wa Huruma, Runda estate are in urgent need of medical attention due to jigger infestation. This was realized by ahadi Kenya during a visit to the home. Other affected areas in Nairobi are Kasarani, Mathare, kibera and Dagoretti. Ahadi Kenya also records that Coast Province is so far the second most jigger infested County in Kenya with 40,000 victims. Some of the affected areas are Kwale , Kilifi , Malindi and Lamu. According to C.E.O Ahadi Kenya, Stanley Kamau, this is due to the high level of

poverty and poor sanitation in the area. In 2008, two people died in Garsen Constituency from the jigger menace.

Central Kenya is the most affected county by the jigger menace, the most affected being children and the elderly. Ahadi Kenya identified several areas with high jigger infestation which include Nyeri, Nyandarua, Kikuyu and Muranga. In Murang'a County the extent of infection is termed by Wangui (2010) as 'shocking' and of unbelievable magnitude. One of the most affected areas of Murang'a County is Kandara Sub County. In 2010 Ahadi Kenya reported 262 jigger related deaths in this area and more than 6200 school going children were infested with jiggers. In the same year, more than 20 jigger victims from Kandara were admitted at Maragwa District Hospital. Infestation has in some instances resulted in transmission of HIV/AIDS among victims through sharing of pins and needles during removal of the parasites (Karuga, 2010). The available studies suggest that jigger infestation affects people of all ages (Collins, 2009).

Kamau (2014) points out that those jiggers are caused by poor hygiene and unsanitary dwellings. When people are unable to take care of their own hygiene, they easily fall victim to jiggers which degrades their lives. They get trapped in a vicious cycle of poverty. This has affected their lives in many negative ways and to the extreme caused death.

Despite the evident effects of this menace, the participation of the stakeholders as highlighted by Ngunjiri (2010) in his research has not been overwhelming in this area. Ahadi Trust Kenya has faced a lot of challenges trying to woo the stakeholders in their jigger eradication activities but their efforts have long been misconstrued and even outrightly snubbed.

### **2.3 Influence of Demographic Characteristics on Stakeholders Participation in Jigger Eradication Activities**

Macinis (2014) put across a view that participation of stakeholders is influenced by a combination of factors including demographic factors which include education and gender roles.

Education is the most important means to development of human resources (Barrett, 2001). It forms the basis for development. It is fundamental to development of human resource capacities

for sustainable economic growth and development. By imparting new skills and knowledge in people, education expands human capabilities, increases labor productivity and enhances essential participation and partnerships in nation building. Muthaka (2002) echoes that education is a vital tool in achieving greater autonomy, empowerment of women and men and addressing gender gaps in the distribution of opportunities and resources. Lack of education and low levels of literacy makes access to information difficult and undermines the confidence and skills needed to participate in community activities. In regard to education, studies have shown that there is a strong association between education and women participation in projects (Barret, 2003). Provision of adequate education levels will enhance capacity to participate actively in the ongoing projects.

As argued by Saara (2009), education qualification is key to project implementation. She argues that giving education to women in the United Kingdom had resulted in their participation in community projects. Reuben (2005) added that education levels were quite low among women compared to men. He recommends raise of levels of education of both gender and across age in order to achieve projects objectives since illiteracy is a factor that hinders development.

A study carried out in Senegal by Michelle (2006) reported that education had a key role in promoting community participation in implementation of community projects. Another study conducted in Kiambu and Maragwa districts established that the education level of household's heads was an important factor influencing what development projects people initiate or engage in (Macharia et al,2007). Eliud found out that illiteracy levels in the rural areas of Murang'a County leads to poor participation in projects (Eliud,2009). Kidane (2006) indicates that educational attainment by house heads could lead to awareness of the possible advantages of participating in community projects. However, in some areas participation in development projects is not affected by education levels. Eradication of jiggers in Kandara targets all people in the society who are affected. The researcher intends to find out whether the level of their education affects their participation in jigger eradication projects.

Non participation of women in projects is caused by a combination of factors amongst which gender roles also play a major role. Women and girls play an important, largely unpaid role in generating family income, by providing labor for planting, weeding, harvesting and threshing crops, and processing produce for sale (M.O.A, 2009). In most societies rural women have the primary responsibility for maintaining the household. They raise children, grow and prepare food, manage poultry, and collect fuel wood and water. However, gender roles vary considerably depending on the geographical area, culture and other factors. These roles have been seen as a fundamental women responsibility if not an obligation to human society and households. There are many studies that have been conducted on participation of women in projects and the gendered nature of work. In Australia, Kuntara (2008) argued that involvement of women in projects was very low. A survey conducted by IFAD in all their ongoing projects in 2009 recognized a need to address gender issues at all stages in the project cycle because of its great implication for effective project implementation. The study noted that beneficiaries' participation varies considerably throughout the life of a project. Although all projects claim that the participation of women is important for the success of the project, the degree to which they participate compared to men varies considerably (Confidential report No.1090, 2000). Though gender roles have been seen by several researchers as an obstacle to women participation, I believe women can be able to handle several tasks and therefore their roles are not supposed to limit them in taking part in development activities. However, this is subject to further studies. The researcher intends to find out whether gender roles influence their participation in the eradication of jiggers projects.

#### **2.4 Influence of Social Cultural factors on Stakeholders Participation in Eradication of Jiggers Activities**

Culture refers to a shared way of life ( Macionis, 1993). It comprises of beliefs, symbols, and language, value, behavior and material objects shared by a particular people. According to the business dictionary 2014, social factors refer to facts and experiences that influence an individual's personality, attitudes and lifestyle. The social cultural factors of a people affect their lifestyle and mostly determine how they respond to life issues in their daily life ( Karuga, 2010). Kamau (2010) reinforces that social cultural factors play a major role on how the stakeholders

respond to the eradication of jiggers which really affects its outcomes. He argues that these factors affect the identity of the participants and their degree of cohesiveness.

Illiteracy influences the participation of the stakeholders in project implementation (John, 2010). Education plays a major role in the life of an individual. It instills the right knowledge attitudes and skills in an individual. Provision of adequate education levels enhances capacity to participate effectively in community projects (Barret, 1998). Education qualification as argued by Sara (2005) is fundamental in project implementation. It encourages participation in community projects too. A study carried out by Ahadi Kenya in 2008 in Kandara established that illiteracy levels were high among the community members whereby 20% of them had not gone past primary level education. This really affected the response of their activities in this area. Ngunjiri (2008) attributes this to low level of education which leads to limited access to information on prevention of jiggers which has generally contributed to the problem. He also challenges the media on sensitizing the community on the jigger menace as this will go a long way in helping to curb the menace. He argues that published information by the government regarding knowledge, attitudes and practices as well as about the jigger situation in general is scanty and fragmented.

Jigger infestation has also been stigmatized. According to the Oxford dictionary 2014, stigma is a mark of disgrace associated with a particular circumstance. The disease, as other vermin ailments, is associated with stigma, and is often described as a “poor man disease”. It leads to social exclusion. A study conducted in Bungoma County in 2010 by Red Cross Kenya revealed that mothers who have kids with jiggers prefer to remove the lesion at home. This may be because they feel ashamed and that people accuse them for not taking care of their children properly (Heukelbach et al.2003). I see this as partly maybe the reason why health agents, nurses and physicians only marginally contribute to knowledge on this disease. Moreover, poor health care- seeking by those affected results most likely in underestimates of the prevalence of jiggers (Heukelbach et al. 2003). Local media in Kenya and East- Africa puts across that perceptions about jiggers, cultural believes and social stigma might hinder those infected with jiggers to seek

help (Sharma, 2010). As I have observed in this region, stigmatization is so strong in these communities and it affects the way people respond to the jigger menace.

In Kiangage village, Murang'a county (meaning jigger village) infected villagers seem oblivious to the pain caused by jiggers and are more concerned and afraid of the social stigma associated with the disease. Ahadi Kenya highlighted a case in 2010 where a mother of six whose whole family is jigger infested prefers to stay home and hide rather than seek medical attention. She believes seeking medical assistance would make her family 'a laughing stock. Neighbors and friends tend to stay away from those infected and they therefore tend to hide or stay at home. In Kandara, an infected adult narrated that

*"Neighbors cannot even step into our homestead because my children have jiggers. They also tell their children not to come because they will get infected".*

Another elderly infected person explained that; *"Sometimes people move away when they see me"*.

A pupil who was not affected told indeed that he did not want to be too close to those who were infected:

*"You have to wear shoes when you are with infected people. You have to make sure that You wash your hands after being with them. And put on protective gloves... When the People that have jiggers kick the ball, the jiggers' flea might stick to the ball and when they kick it to me, the flea can infect me"*.

In November 2010 a local radio station in Murang'a (Radio Maria) mentioned that that people suffering of jiggers are harassed. Feldmeier et al. (2013) talks about this too and explains that in Nigeria and Brazil those affected suffer from social stigmatization and that children in Kenya are teased and ridiculed. He says that he saw himself self that infected pupils at school were not as sociable as others due to poor functionality and because others did not want to play with them. They tended to lay or sit in the grass or sand, while others were playing. Also, in class it was reported that those infected were not included by other pupils or activated by teachers. Social harassment due to jiggers' infection might be a setback for development among pupils, and might also be a contributing factor to drop out from school (Ruttoh et al. 2012). However, this must be further investigated. Indeed, understanding the determinants of social exclusion is of importance in health promotion initiatives such as jigger's eradication (Green and Tones, 2010).

However Ahadi Kenya has managed to heighten awareness regarding the plight of the millions on poverty stricken people infested with jiggers. The stigma previously associated with jigger infestation is greatly reduced and uninfected members of society have begun to understand that jigger infestation is a result of extreme poverty and poor hygiene. Previously jigger victims were turned away from public hospitals and health facilities; they are now able to receive treatment.

The whole issue of the jigger menace has also been based on myths, witchcraft and curses. Kamau (2014) defines a myth as a thing or person that is imaginary or not true. As found out by Ahadi Trust Kenya some people did not turn up believing that their afflictions could not be uplifted. They believe that jiggers are as a result of curses. In one of their home visits, the family resisted their child to be treated saying that the child has been bewitched and nothing could be done. They believed that due to the curse, no medication could work on their jigger's. In western Kenya Red Cross organization encountered a community of ultra conservative people who did not want their jiggers removed because they do not kill living things. In Murang'a County, the organization reported that there are equally bizarre communities who do not believe in hospitals. Some religious sects have no faith in modern medicine. This means that when their family members are infested by jiggers, they do not take them to hospitals for treatment. They do not even allow their members to be part of the jiggers eradication activities carried out by the organization.

The feeling of disempowerment in front of the menace and the fact that those affected experience the infestation to occur so suddenly brought some to believe that there were other causes for the problem. For instance, some did not understand why one house would be fully infested, while the neighbor's house would not have any jigger fleas in their house, even if they were living in the same conditions. Ideas about witchcraft varied. In Bungoma County, most of the infected pupils explained that they did not believe in witchcraft and that only the elders in the community believed in such. During group discussion in Bungoma County, pupils stated though that "*...we believe that maybe we have been bewitched*". Witchcraft might be a sensitive topic and those infected might have been afraid to discuss it openly. When discussing the topic in groups, one could see that many of the participants giggled and became shy of speaking. Health workers explained that they faced challenges with infected people who believed they were bewitched, and that this was a common feature. A woman working in Bungoma Red Cross explained:

*“Some victims believe that they are cursed or bewitched. So they laugh at me when I come to their house and say that I can help... They think that we just are wasting their time and that those things will never go away. They think that since my grandfather and father died of this, how can I survive?”*

Some health workers elaborated that it is a challenge if those infected with jiggers believe that they are cursed or bewitched, because they will not take precautions on preventing jiggers, nor try to remove the jiggers or even be involved in jigger eradication activities.

Witchcraft believes causes strong local stigma and keeps those affected from seeking help, it keeps victims isolated and unable to participate normally in their communities. In Muhoroni district, which is also highly affected by jiggers, the Red Cross Coordinator dismissed those who associated jigger infestation with witchcraft urging them to stop misguiding the public but instead emulate the humanitarian support demonstrated by the NGO (Mwangi, 2009).

Jiggers and witchcraft are associated with each other in other countries as well. In Uganda, a medical officer explained that people simply die instead of trying to prevent and treat the infestation; and that people must stop believing that witchcraft causes jiggers. He suggests that in order to be able control the outbreak of jiggers in high prevalence jigger infested areas, there must be an increased awareness among people on what actually causes the infestation, how it spreads and how you prevent and treat the jigger's infestation (Wamalwa, 2013). This applies to Kenya too as highlighted above. In Murang'a district in Kenya, 12% of a study's participants reported that jigger sufferers either have specific blood or are from certain families, and almost 60% believed in myths and misconceptions on jiggers (Kimani et al., 2012). I believe that the issue of witchcraft and myths is as a result of ignorance and lack of information but can be improved by creating awareness. This can be done through trainings.

## **2.5 Influence of Economic factors on stakeholders participation in Jigger eradication activities**

Poverty and material deprivation are two important related causes of health inequalities (Green and Tones, 2010). During a research by Ahadi Kenya, when asking different people why jiggers are such a big problem in Bungoma County and Kenya, almost everyone answered that it is due to poor hygiene and poverty. A public health officer clearly identified the causal relation between these factors: *“...and poor hygiene is a result of poverty”*. A man working in Bungoma

Red Cross also explained poverty as the underlying cause for the jiggers' epidemic; *"If we don't address the poverty issue, we will not be able to address the jiggers' issue"*. The fact that people are not able to fight the jigger epidemic due to the lack of basic needs often emerged as an explanation on what causes jiggers.

As found out in their study in Bungoma, when the household has not fulfilled the basic needs, such as food to yourself and your family, it is their main concern, and not the jiggers' infection. The population rate in Bungoma County increases every year and 60 % of the population in the County live indeed below the poverty line (IcFEM, 2006). Other basic goods often lacking were water and soap. As a non-infected pupil explained:

*"Not so many people have soap because some people are very poor. They think that buying Soap is just wasting money and they rather spend it on food"*.

Thus, another cause of jiggers is that people cannot afford to keep themselves clean. Some suggested that lack of water is an important cause for why people fail to keep themselves clean, and indeed only 65 000 out of 200 000 households have access to piped water in Bungoma (IcFEM, 2006). Lack of water and soap are indeed mentioned as risk factors for getting jiggers in Kenya (Karuga, 2011). Given that only a bit more than a ¼ of the Bungoma population had close access to water, and that gathering water in buckets and fetching it from the river is a time consuming and demanding task, large families and poor and vulnerable households may still lack the resources needed for promoting the personal hygiene of all its members, as well as environmental hygiene around the homestead. Moreover, the gendered division of labor in care work of children and the elderly might also need attention. The burden of collecting water, washing and cleaning most often is concentrated on women, in addition to the production and preparation of food. Finding time for daily and systematic jiggers' hygiene of several dependent family members might be quite demanding for the female head of household. In addition they may not participate effectively in jigger eradication activities which is a great obstacle to eradication of jiggers.

## **2.6 Influence of political factors on the stakeholders participation in Jigger eradication activities**

A leader is a person who is involved in influencing public policy and decision making (Kamau, 2014). This includes those who hold decision making decision positions in government and other

offices and people who seek those positions. Kamau believes that lack of political goodwill has been one of the greatest challenges in the fight against jigger menace as political leaders feel embarrassed to come out and talk about jiggers. He said that it is worrying that county leaders still hide the jigger problem out of embarrassment. According to Ahadi Kenya findings, there is no County that can claim to be completely jigger free and therefore urges leaders to address the issue "head-on". He was worried that if the leaders do not talk about what is affecting the people, jiggers menace will remain a great challenge.

During a Medical camp in Baringo in August 4<sup>th</sup> 2013, Kiptui, the woman representative, accused the previous leadership of ignoring the plight of Baringo people for decades. She lamented that despite a section of the population being infested with jiggers, there is no medication or supplies in public hospitals to treat it.

There are no funds that have been set aside in counties to fight the jigger menace. Speaking during a tour of Baringo County in July 2011, Kamau suggested that county governments should allocate funds in their budgets for fighting jiggers for the residents to remain productive.

US President Barack Obama's grandmother on August 2010 launched a free anti-jigger campaign. She challenged the government to step up the war on Jiggers rather wait for help from donors. She said the government has the capacity to eradicate the disease but was reluctant and waiting for foreigners for assistance which come late when the damage has been done already.

*"Although jiggers' infestation is a serious threat to the welfare of the children in this country, there is lack of political good will from the government to eradicate it, they have the capacity to eradicate it by small allocation,"* said Sarah.

She said it was pity that the government has ignored issues of jiggers despite its widespread effect across the country.

*"Jigger is everywhere, it is not only in our village but one cannot find medical assistance at the government facilities, that shows neglect,"* said Sarah.

Sarah (2010) noted that effect of jiggers had spread across many villages even those not thought to be infected and it is high time that the government start to step up its efforts in reducing the jiggers. She also called on the county governments to ensure that they set aside funds to fight the

jigger menace. Ahadi Trust Kenya director Kamau also echoed her sentiments saying the spread of the disease was to be blamed on lack of support from the government. He Justified this by saying that the effects of jigger infestation are not vague with the school going children dropping out of school and the spread of HIV/AIDS among the infested through sharing of pins and other removing equipment.

In Kenya, health issues regarding jiggers are the responsibility of the Ministry of Public Health and Sanitation; Department of environmental health and sanitation; vector and vermin control (Onwong'a, 2011). The aim of the department is to enhance health and quality of life through safe, effective and environmentally sound integrated vector, rodent and vermin management services. Its mandate is to support the attainment of the health goals of the people by implementing priority interventions in public health, guided by the strategic framework provided from the medium-Term plan 2008-2012 and the wider health sector (Mwangi, 2009). The Ministry's objective is to promote collaboration with various stakeholders, whereof communities and it seems that the private sector has been investing most efforts in this vermin control. However the efforts of the private sector have been frustrated by this ministry with the saying that they are blowing things out of proportion. According to Ahadi Kenya, some public health workers confiscated their medication under the pretense of testing it for quality. In Murang'a County, when one badly jigger-infested person died, a public health official denied that it was because of jiggers. Some even went to the extent of ordering their juniors to hide jigger victims from Ahadi Kenya officials. Ahadi Kenya statistics indicate that in roughly 70% of the country, public health officials downplayed the menace. In one of the Counties, a Public Health Official gave the statistics of those infected as 120 in total while in reality 120 were the ones infected in one school.

Kamau felt that public health workers and not NGOs should be the ones at the forefront of fighting the menace, fumigating afflicted homes, compiling statistical information, Spreading awareness and researching the best treatment methods. He argues that the reason that we do not have a national policy on jiggers is the silence of the health workers on the issue, their lack of cooperation from the start and trying to sweep the problem under the carpet (Kamau, 2014).

Teachers on the other hand are considered part parents because of their care of the young ones which goes beyond the syllabus (Wachira, 2012). When Ahadi Kenya realized that school going children were the most affected by the jigger menace; they approached teachers to see if they could work together with them in fighting the menace. Unfortunately most of them were not positive about as they did not see it as a challenge. They argued that jiggers were normal and that they saw no evil in their pupils having jiggers. During a medical camp in one of the schools in Kandara, teachers told their pupils not to turn up for the jigger-removal exercise.

## **2.5 Theoretical Framework of the study.**

Theoretical frameworks provide an explanation of the research design used and describe the concepts, variables and theories underlying the study and the relationship among various variables (Ogula, 1998). This section will look into the underlying theory supporting stakeholder's participation in implementation of projects. Implementation of such projects can be based on many theories but this research will be anchored on the Citizen Participation theory.

The roots of citizen participation can be traced to ancient Greece and Colonial New England. Citizen participation was institutionalized in the mid-1960s with President Lyndon Johnson's great Society programs (Cogan & Sharpe, 1986 p. 283). Citizen participation is a process which provides individuals with an opportunity to influence public decision and has long been a component of the democratic decision making process. The roots of participation can be traced in ancient Greece, Before the 1960s, government processes and procedures were designed to facilitate external participation. It was institutionalized in the mid-1960s (Corgan & Sharpe, 1986).

Citizen participation is a desired and necessary part of all community development activities (Spiegel, 1968). Citizen participation was earlier practiced in Plato's republic. Participation is the essence of any democracy. The town assembly in America was unique because all citizens in the community got together to decide on issues. The growth of states later made it increasingly difficult for every citizen to actively participate in all community programs. This led to the use of representatives either directly or in form of community groups (Christen & Robinson, 1980).

Despite the fact that citizen participation has declined, several opportunities exist in most projects especially donor funded to get involved in the implementation of the projects.

Participation of stakeholders in projects implementation helps promote dignity and self-sufficiency within the individuals which helps to tap into the energies and resources of citizens. It provides a source of special insight, information, knowledge and experience which contributes to sound community solutions .Stakeholders participation helps to legitimize its projects, plans and actions. It reduces costs of projects without which worthwhile projects would never be achieved in many communities.

According to this theory, majority of the community members are reluctant to participate in projects implementation when they don't have enough information. They only participate if they understand the issue at hand and its benefits (Mbugua, 2009). The high values placed on education in the society sometimes make people with low education feel inferior and shy off from participating in community projects. Other factors such as gender issues, division of labor, culture, political good will among others also hinder participation. Citizen participation does not occur by chance but is bound to several factors.

Many agencies or individuals choose to exclude or minimize public participation in planning efforts claiming citizen participation is too expensive and time consuming mostly seen as the weaknesses of this theory. However, there are tangible benefits that can be derived from an effective citizen involvement program. Cogan and Sharpe (1986, p. 284) identify five benefits of citizen participation to the planning process which include vast information and public support, reduced conflicts, reservoir of goodwill and enhances spirit of cooperation and trust between agencies and the public. Cogan (p. 287) indicates that participation can offer a variety of rewards to citizens. These can be intrinsic to the involvement (through the very act of participation) or instrumental (resulting from the opportunity to contribute to public policy). The planner's expectations are also important in that an effective public participation program can lead to a better planning process and product as well as personal satisfaction. The perceptions of stakeholders and planners are an important consideration in the development and implementation of any public participation program. Public participation is often a requirement for planners; however, it is always optional for citizens. Citizens choose to participate because they expect a satisfying experience and hope to influence the planning process.

This theory is related to this study in that it shows the benefits of stakeholder's participation in implementation of projects. It also shows the disadvantages of stakeholder's involvement in implementation of projects. Despite the weakness of citizen participation theory in that it is expensive, time consuming among others, this study was based on this theory because the advantages outweighs the disadvantages. This is because it has several strengths as highlighted above which can make citizen participation in projects implementation successful.

## **2.6 Conceptual framework of the study**

Mugenda and Mugenda (2003), defines conceptual framework as a hypothesized model identifying the concepts under study and their relationship. This section provides a description of the relationship between variables in this study. Variables include; independent, dependent and moderating variables. In this study, the independent variables include factors influencing stakeholder's participation in eradication of jiggers which are demographic, social, economic and political factors. The dependent variable is participation of stakeholders in eradication of the jigger menace. The moderating variable for this study that determines its effects on the relationship between dependent and independent variable is government policies.

# CONCEPTUAL FRAMEWORK

## DEPENDENT VARIABLES

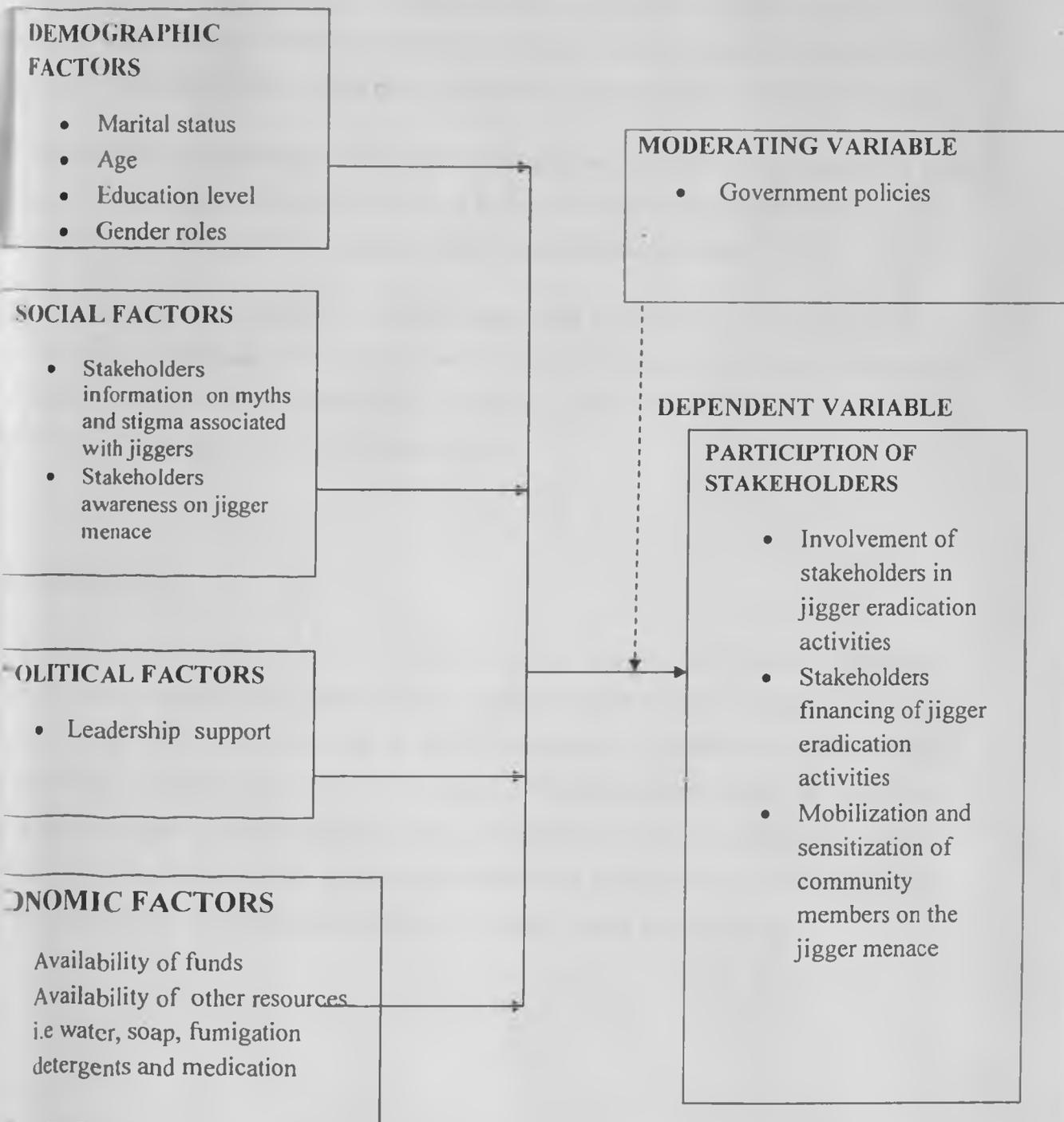


Figure 1: Conceptual Framework

# CONCEPTUAL FRAMEWORK

## INDEPENDENT VARIABLES

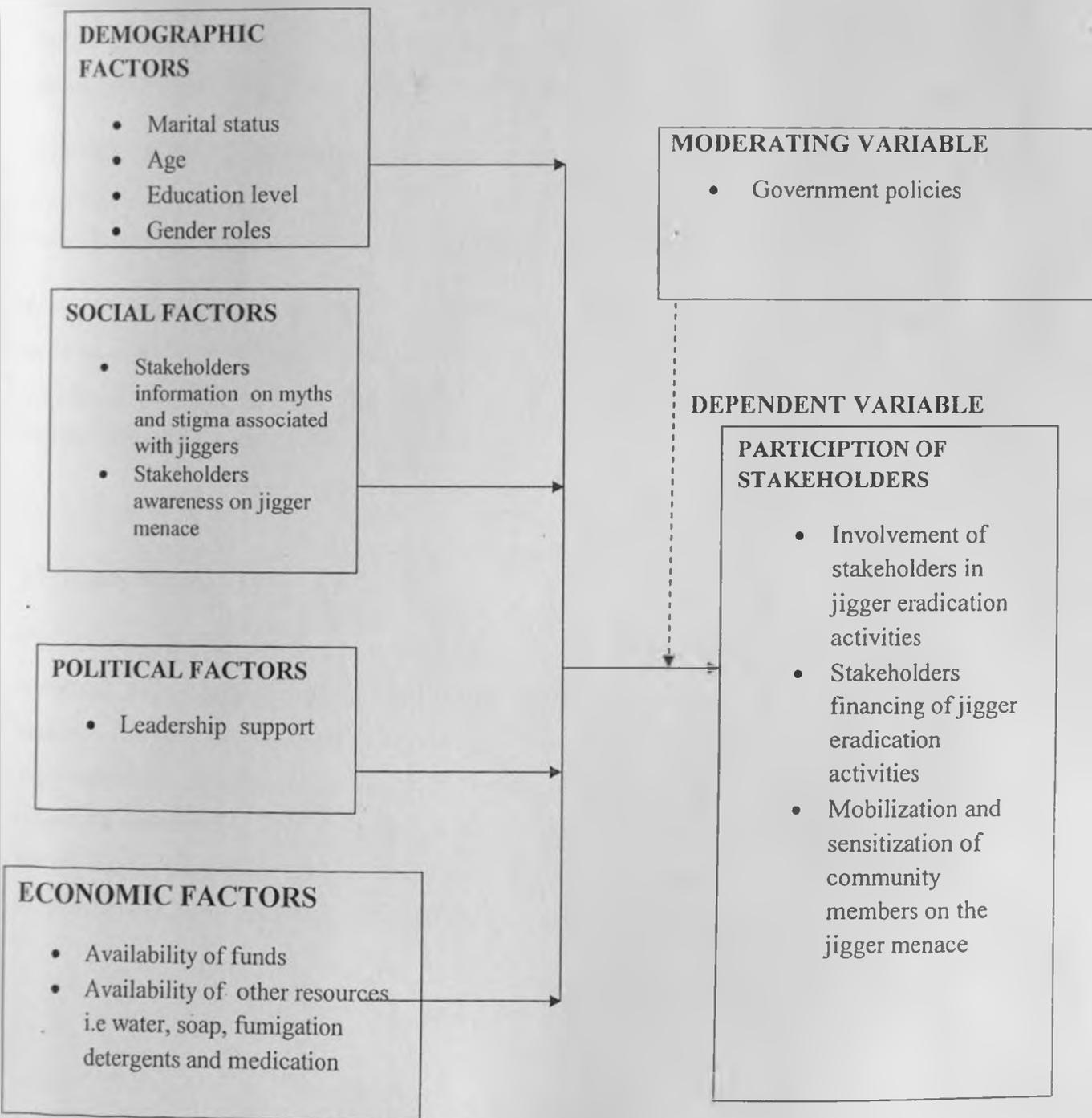


Figure 1: Conceptual Framework

The conceptual framework illustrates the relationship between variables in this study which include independent variables, dependent variable and moderating variable.

Independent variable is the that the researcher manipulates in order to determine its effects on the dependent variable (Kothari,2004).In this study, independent variables include social, economic, demographic and political factors influencing stakeholders participation in eradication of jiggers.

Dependent variable is an outcome of the influence of independent variable. It is the variable that is expected to change as a result of the presence or absence of the independent variables. In this study, he variable that is expected to change is participation of stakeholders.

Moderating variable is described as a second independent variable that has been selected for study in order to determine if it modifies the relationship between the primary independent variable and dependent variable (Fraenkel and Walden, 2008). In this study, the moderating variable that has been identified is government policies.

## **2.7 Knowledge gap**

The literature reviewed showed that several studies have shown that the four independent variables, that is demographic characteristics, political factors, social cultural factors and economic factors have a role to play in the involvement of stakeholders during project implementation. Several scholars have researched on the causes and effects of jiggers and echoed the high level of non-participation among stakeholders. However, none of these studies has taken an in-depth study on the factors that influence the participation of stakeholders or on suggestions on how to win stakeholders support. This study aimed to bridge this gap.

## CHAPTER THREE

### RESEARCH METHODOLOGY

#### **3.1 Introduction**

This chapter represents the methodology that was employed by the study. It describes the research design, target population, sample size and the sampling procedure, data collection methods and instruments that were used and methods of data analysis.

#### **3.2 Research Design**

This study employed descriptive survey design. A research design is the arrangement of conditions for collection and analysis of data in a manner that aims to combine relevance to the research purpose with the economy in procedure (Kothari 2010). Mugenda (2008) defines it as the process that the researcher will follow from the inception to completion of the study. According to Mugenda (2008) surveys are designed to collect information that describe, explore and help the researcher to understand social life. This design therefore assisted in describing data and characteristics about the phenomena studied. A descriptive survey helps in answering questions like who, what, where and how about the phenomena being studied. This design was therefore appropriate because it enabled data collection from the sample on the factors influencing participation of stakeholders in eradication of jiggers. The study used both qualitative and quantitative approaches. The quantitative approach was used to collect data from wide sources concerning the respondent's knowledge on jigger menace. The qualitative method was used to obtain data which captured different views of respondent's experiences and opinions on jigger menace. This approach was appropriate as it allowed the researcher to collect numerical and non- numerical data from the respondents.

#### **3.3 Target Population**

The term population refers to the entire group of individuals with common attributes or characteristics, (Mugenda, 2010). The target population of this study was adult (men and women) community members of kandara Sub County and their leaders. According to the national census (2009) Kandara Sub County has five wards with a population of 30, 010. According to the Electoral and Boundaries Commission kandara Sub County has 15,001 adults.

This target population was suitable as adult community members are the ones who play a lead role in implementation of projects. The target population provided information on the demographic, social, political and economic factors influencing participation of stakeholders in eradication of jiggers.

### **3.4 Sample size and sampling procedure**

This section provides the method that was used to determine sample size from which data was collected. It also describes the sampling techniques that were used in selecting the elements to be included as subjects of the study sample.

#### **3.4.1 Sample size**

A sample is a subset of the population (Kothari, 2010.) The sample size should be a representative of the population and which the researcher wishes to generalize the research findings. The study involved a sample size of 375 (Appendix V). The sample included the MP, pastors, chiefs, Members of County assembly, Ward administrators, Media representatives, community health workers, public health officials and community members.

#### **3.4.2 Sampling technique.**

Sampling is the process of selecting a sample (Kothari 2010). This study used simple random sampling, stratified sampling and purposive sampling. Simple random involves selecting at random from a list of population the required number of subjects for the sample. Stratified sampling involves a process of segregation of the population in homogeneous groups. Purposive sampling is where the elements to be included in the sample are processed on the basis of the researchers' judgment for their typicality (Mbwesa, 2006). A sample of 365 was selected from the community members through simple random sampling to ensure they are evenly spread. In the simple random sampling procedure every element in the population has a known equal chance of being selected as a subject. After getting the 365 members, they were divided into strata's according to their age, gender and level of education and marital status. Leaders were selected through purposive sampling after which 10 leaders were picked through simple random sampling. The sampling was confined to specific types of people who can provide the desired

information, either because they are the only ones who have it, or confirm to some criteria set by the researcher. leaders will included the area MP, 2 ward administrators,1 chief, 1 Member Of County assembly, 1 public officer, 2 community health workers,1 pastor ,1 teacher and 1 media representative.

### **3.5 Research Instruments**

A research instrument is a method of capturing data (Mugenda, 2008). This study used questionnaires and interviews to collect data. The questionnaire targeted the community members and had both close ended and open ended questions. A questionnaire consists of a number of questions printed or typed in a definite order on a form or set of forms (Kothari 2004). The researcher personally administered questionnaires and collected them after 7 days. The questionnaire consisted of four sections addressing the four study variables. Interviews were conducted on the selected community leaders whereby the researcher asked them questions and wrote their responses. The two instruments allowed the researcher to collect numerical and non-numerical data.

#### **3.5.1 Pilot testing**

It involves pre testing the instruments to determine their validity and reliability (Orodho, 2004). The researcher tested the instruments by using a similar group in Gitugi Sub County and made the necessary adjustments to the instruments. This sample was not part of the study sample. According to Mugenda and Mugenda (2003), a sample equivalent to 10% of the study sample is enough for piloting the study instruments. Using blind folding method, the researcher sampled 37 respondents equivalent to 10% of the study sample of 375 Members.

#### **3.5.2 Validity of Research instruments**

Validity is the extent, to which differences found with a measuring instrument reflect true differences among those being tested (Kothari, 2010). Mugenda (2010) defines it as the degree to which results obtained represent the phenomenon under study. This study used content validity. According to Kothari (2010), this is the extent to which a measuring instrument

provides adequate coverage of the topic under study. To ensure content validity of the instruments, the researcher consulted the supervisor, department lecturers and colleagues. Results of the pilot study were also be used to validate the instruments.

### **3.5.3 Reliability of research instruments**

Reliability is the measure of the degree to which a research instrument yields consistent results after repeated trials, (Mugenda, 2003). The reliability of the instrument was tested through split half technique which requires only one testing session. In this approach, an instrument is designed in such a way that there are two parts. Scores from one part are correlated with scores from the second part. If the correlation is high, the instrument will be taken to be reliable and suitable for data collection (Ranjit, 2003). The scores obtained in this study were keyed into SPSS software where a correlation of 0.711 was obtained which is reliable as recommended by Mbweza, (2006).

### **3.6 Data collection Procedure**

Data collection procedure refers to the protocol that must be followed to ensure that data collection tools are efficient (Mugenda 2010). In data collection procedure, the researcher prepared a research proposal with the consultation of the supervisor. The research proposal was presented to a panel appointed by the University of Nairobi for approval and permission to collect data on the phenomenon of the study. The researcher later obtained a letter of introduction from the university authority which was used to get a research permit from the National Council for Science and Technology upon which the researcher proceeded to the field.

### **3.7 Data analysis techniques**

Both quantitative and qualitative data was analyzed. The numerical data obtained from the study was systematically organized and converted into numerical code representing measurements of variables. The coded data was analyzed through descriptive statistics. Computer software statistical package for social scientist (SPSS, version 17.0) was used in data analysis which was later presented using percentages and frequency distribution tables. Qualitative data was analyzed through narrations.

### **3.8 Ethical considerations**

The researcher exercised outmost caution while administering the instruments and ensured that the rights and privacy of the respondents were respected. The aim of the study was also explained to the respondents and their consent sort before the study. No respondent was forced to participate in the study and anonymity was maintained. To ensure confidentiality, the questionnaires were given numerical codes instead of names. The interviews were conducted after briefing the leaders and seeking their consent.

**Table 3.1: OPERATIONAL DEFINATION OF VARIABLES**

Objectives	Type of Variable	Indicators	Measurement Scale	Data collection tools	Data analysis Technique
To establish the extent to which demographic characteristics influence participation of stakeholders in eradication of jiggers	Independent	-Education level -Gender -Marital Status -Age	Ordinal  Nominal Nominal  Ratio	Questionnaire  Questionnaire	Quantitative
	Independent	-Stakeholders level of information on myths and beliefs about jiggers -Stakeholders level of awareness on jigger menace	Interval    Interval	Interview Questionnaire  Questionnaire Interview	Quantitative Qualitative
To find out how political factors influence participation of	Independent	-Political support	Nominal	Interview Questionnaire	Quantitative Qualitative

stakeholders in eradication of stakeholders					
To determine how economic factors influence participation of stakeholders in eradication of jiggers	Independent	-Access to funds -Access to other resources	Ordinal(q)  Ordinal(q)	Questionnaire Interview  Questionnaire Interview	Quantitative Qualitative
To assess the level participation of stakeholders in eradication of jiggers	Dependent	- Level of engagement in mobilizing and sensitizing community members on jiggers -Financing of jigger eradication activities	Interval  Ratio	Interview Questionnaire  Questionnaire Interview	Quantitative Qualitative

## CHAPTER FOUR

### DATA ANALYSIS, PRESENTATION AND INTERPRETATION OF FINDINGS

#### 4.1 Introduction

This chapter presents data analysis, presentation and discussions of the study findings. The main goal of the study was to assess factors influencing participation of stakeholders in eradication of jiggers in Kandara Sub County, Murang'a County. The chapter is categorized into seven sections. Section one presents introduction, section two consist of questionnaire return rate while the remaining five sections presents findings of the study based on the objectives.

#### 4.2 Questionnaire Return Rate

The study sample comprised of 375 community members in Kandara Sub County. Among them, 273 respondents completely filled and returned their questionnaires hence giving a return rate of 72.8%. This proportion is high enough for data analysis and discussion of the study findings.

#### 4.3 Extent to Which Demographic Characteristic Influence Participation of Stakeholders in Eradication of Jiggers

The first objective of the study was to establish the extent to which demographic characteristic influence participation of stakeholders in eradication of jiggers in Kandara Sub County. To address this objective, the researcher sought to find out how gender, age, marital status and education level influence participation of stakeholders in eradication of jiggers. The results of this analysis are presented below.

##### 4.3.1 Respondents' Gender and their Participation in Jigger Eradication

The study sought to find out how respondents gender influence stakeholders participation in jigger eradication. Table 4.1 illustrates results of this analysis.

**Table 4.1**

Gender	Involvement in jigger eradication activities				Total		Chi-square statistics
	Yes		No		f	%	
	f	%	f	%	f	%	
Male	40	14.6	110	40.3	150	54.9	$\chi^2 = 1.118$
Female	40	14.6	83	30.4	123	45.1	df=1
<b>Total</b>	<b>80</b>	<b>29.3</b>	<b>193</b>	<b>70.7</b>	<b>273</b>	<b>100.0</b>	Sig.=0.290

Not significant at  $p < 0.05$  level

Chi-square statistics presented in Table 4.1 revealed that there were no significant gender differences among the community members who participated in jigger eradication activities at,  $p < 0.05$  level. The findings showed that out of 273 community members, 54.9% were males while 45.1% females. Among them, 14.6% of males and 14.6% of females took part in jigger eradication activities. This shows that although the proportion of male participants was slightly higher than female participants, their participation in jigger eradication was the same. Kuntara (2008) argued that involvement of women in projects was very low. He adds that although all projects claim that the participation of women is important for the success of the project, the degree to which they participate compared to men varies considerably. This has been supported by the above findings as the number of male participants was slightly higher.

#### **4.3.2 Respondents' Age and their Participation in Jigger Eradication**

To establish whether age of the community members had an influence on their participation in jigger eradication activities, the researcher conducted a Chi-square test statistic. The results of this analysis are reflected in Table 4.2 below

**Table 4.2**

Age	Involvement in jigger eradication activities						Chi-square statistics
	Yes		No		Total		
	f	%	f	%	f	%	
18yrs and below	8	2.9	28	10.3	36	13.2	$\chi^2 = 8.356$
21-30yrs	43	15.8	68	24.9	111	40.7	
31-40	14	5.1	53	19.4	67	24.5	df=3
40 and above	15	5.5	44	16.1	59	21.6	
<b>Total</b>	<b>80</b>	<b>29.3</b>	<b>193</b>	<b>70.7</b>	<b>273</b>	<b>100.0</b>	Sig.=0.039*

\* Significant at  $p < 0.05$  level

As shown in Table 4.2, Chi-square statistic test results showed that age of the respondents had a significant influence on their in jigger eradication activities at,  $p < 0.05$  level of significance. The findings indicate that out of 80 (29.3%) community members who participated in jigger eradication activities, 8 (2.9%) were aged 18 years and below, 43 (15.8%) were aged 21-30 years, 14 (5.1%) were aged 31-40 years while 15 (5.5%) were aged 40 years and above. This shows that majority of the community members who participated in jigger eradication activities were aged between 21 and 30 years. This shows that youth were more likely to participate in community projects compared to elderly members in the society. This is in line with John (2010) who found out that young people are more likely to involve themselves in projects as they are young and energetic compared to the old people.

#### 4.3.3 Respondents' Marital Status and their Participation in Jigger Eradication

To find out whether respondents marital status had any significant influence towards community members participation in jigger eradication activities, the researcher carried out a Chi-square statistics. Table 4.3 shows results obtained.

**Table 4.3**

Marital status	Involvement in jigger eradication activities				Total		Chi-square statistics
	Yes		No		f	%	
	f	%	f	%			
Single	50	18.3	103	37.7	153	56.0	$\chi^2 = 1.915$
Married	30	10.9	90	32.9	120	44.0	df=1
<b>Total</b>	<b>80</b>	<b>29.3</b>	<b>193</b>	<b>70.7</b>	<b>273</b>	<b>100.0</b>	Sig.=0.166

Not significant at  $p < 0.05$  level

Results in Table 4.3 illustrates that respondents marital status had a slight significant influence on community members involvement in jigger eradication activities at  $p < 0.05$  level. Specifically, results in the table depicts that among the 153 (56.0%) respondents who reported that they were single, 50 (18.3%) were involved in jigger eradication activities while 103 (37.7%) were not. In addition, results in the table showed that out of the 120 (44.0%) respondents who were married, 30 (10.9%) participated in jigger eradication activities whereas 90 (32.9%) did not. This supports kuntara's (2008) argument that gender roles have been seen as an obstacle to women participation in projects.

#### **4.3.4 Respondents' Education Level and their Participation in Jigger Eradication**

By imparting new skills and knowledge in people, education expands human capabilities, increases labor productivity and enhances essential participation and partnerships in nation building. In this view, the study sought to find out whether respondents education level had an impact in their participation in jigger eradication activities. The findings of this analysis are presented in Table 4.4.

**Table 4.4:**

Level of education	of Involvement in jigger eradication activities				Total		Chi-square statistics
	Yes		No		f	%	
	f	%	f	%			
Primary level	9	3.3	80	29.3	89	32.6	$\chi^2 = 77.569$ df=3 Sig.=0.000*
Secondary level	27	9.9	86	31.5	113	41.4	
College level	13	4.8	23	8.4	36	13.2	
University level	31	11.4	4	1.5	35	12.8	
<b>Total</b>	<b>80</b>	<b>29.3</b>	<b>193</b>	<b>70.7</b>	<b>273</b>	<b>100.0</b>	

\* Significant at  $p < 0.05$  level

Chi-square statistics presented in Table 4.4 showed that respondents' level of education had a significant influence on their participation in jigger eradication activities, at  $p < 0.05$  level. The findings revealed that among the 80 community members who took part in jigger eradication activities, 9 (3.3%) had attained primary education, 27 (9.9%) had secondary education, 13 (4.8%) had college qualifications whereas 31 (11.4%) had university qualification. This shows that community members with higher level of education (university level) were more likely to participate in jigger eradication activities compared with their counterparts who had lower level of education (primary level). These findings were in line with John, (2010) who established that illiteracy influences the participation of the stakeholders in project implementation. Similarly, Barret (2001) emphasized that provision of adequate education levels enhances capacity to participate effectively in community projects and this is clearly shown in the findings since those with low level of education participated poorly.

#### 4.4 Extent to Which Social Cultural Factors Influence Participation of Stakeholders in Eradication of Jiggers

The second objective of the study was to determine the extent to which social cultural factors influence participation of stakeholders in eradication of jiggers in Kandara Sub County. To meet this objective, the study first sought to find out from the study respondents whether jiggers can be eradicated in the Sub-county. Their responses were as shown in the following subsections.

##### 4.4.1 Respondents Perception towards Jigger Eradication

To find out whether social cultural factors influenced community members participation in jigger eradication activities, the researcher conducted a Chi-square test. The results obtained are presented in Table 4.5.

**Table 4.5**

Do you think jiggers can be eradicated	Involvement in jigger eradication activities						Chi-square statistics
	Yes		No		Total		
	f	%	f	%	f	%	
Yes	77	28.2	114	41.8	191	70.0	$\chi^2 = 37.209$
No	3	1.1	79	28.9	82	30.0	df=1
<b>Total</b>	<b>80</b>	<b>29.3</b>	<b>193</b>	<b>70.7</b>	<b>273</b>	<b>100.0</b>	Sig.=0.000*

\* Significant at  $p < 0.05$  level

Chi-square results revealed that there was a significant relationship between respondents perception and their involvement towards jigger eradication activities, at  $p < 0.05$  level .In particular the table showed that among the 80 (29.3%) community members who reported that they are involved in jigger eradication activities, 28.2% of them were of the view that jiggers can

be eradicated. This shows that most of the respondents who were involved in jigger eradication activities perceived jigger menace as a problem that can be eradicated.

#### 4.4.2 Reasons given by the community members who felt that jiggers cannot be eradicated

Table 4.6 shows reasons given by 82 community members who thought that jiggers cannot be eradicated.

**Table 4.6**

Reason	Frequency	Percent
Its curse/witchcraft	82	30.0
Jiggers can be eradicated	191	70.0
<b>Total</b>	<b>273</b>	<b>100.0</b>

Data presented in Table 4.6 shows that the major reason that was given by 82 community members who felt that jiggers cannot be eradicated was a curse or witchcraft. This clearly indicates that some of the community members still hold some myths which explain jigger menace as witchcraft and curses as found out by Kamau. Kamau (2014) defines a myth as a thing or person that is imaginary or not true. He found out that some people did not turn up believing that their afflictions could not be uplifted. They believe that jiggers are as a result of curses. Similarly, Kimani et al., (2012) established that 60% of the respondents believed in myths and misconceptions on jiggers.

#### 4.4.3 Treatment of jigger victims in the community

Table 4.7 shows respondents perceptions on how jigger victims are treated in the community.

**Table 4.7**

Treatment of jigger victims	Frequency	Percent
With care/love	39	14.3
With stigma	234	85.7
<b>Total</b>	<b>273</b>	<b>100.0</b>

The data presented in Table 4.7 showed that 14.3% of the respondents stated that jigger victims in the community were treated with care and love while 85.7% said that they were treated with stigma. This implies that majority of the jigger victims were stigmatized in the society. These results were in agreement with findings by Feldmeier et al. (2013) who explained that in Nigeria and Brazil those affected suffer from social stigmatization and that children in Kenya are teased and ridiculed.

#### 4.4.4 Jigger victims turn up during eradication activities

Presented in Table 4.8 are community members responses in relation to jigger victims turn up during jigger eradication events.

**Table 4.8**

	Frequency	Percent
Jigger victims turn out	66	24.2
Jigger victims never turn out	207	75.8
<b>Total</b>	<b>273</b>	<b>100.0</b>

Table 4.8 shows that majority of the community members (75.8%) cited that jigger victims were not turning up during the activity. This can be attributed to the inadequate information they have which is influenced by the low level of education as discussed in the first objective. The findings are supported by Sara (2009) who argued that education qualification is fundamental in project implementation as it encourages participation in community projects.

#### 4.4.5 Factors influencing jigger victims turn up during eradication activities

Table 4.9 illustrates reasons that were given by the community members that negatively influenced jigger victims turn up during eradication activities.

**Table 4.9**

Reasons	Frequency	Percent
Stigmatization	156	57.1
Ignorance	51	18.7
Jigger victims turned out	66	24.2
<b>Total</b>	<b>273</b>	<b>100.0</b>

Out of 207 community members who reported that jigger victims were not turning up, 156 (57.1%) of them stated that the major reason which hindered them was stigmatization in the community whereas 51 (18.7%) cited ignorance. These findings were in agreement with the results obtained by Sharma (2010) who stated that local media in Kenya and East- Africa puts across that cultural believes and social stigma hinder those infected with jiggers to seek help.

#### 4.4.6 Rating of jigger victim turn out during eradication activities

To find out turn up of jigger victims during jigger eradication activities, the researcher asked the study respondents to give their responses using high, moderate or low. Table 4.10 shows results obtained.

**Table 4.10**

<b>Ratings</b>	<b>Frequency</b>	<b>Percent</b>
High	6	2.2
Moderate	41	15.0
Low	19	7.0
Jigger victims never turn out	207	75.8
<b>Total</b>	<b>273</b>	<b>100.0</b>

Statistics presented in Table 4.10 indicates that 2.2% of the community members rated the turn-out of jigger victims as high, 15.0% rated it as moderate while 7.0% of them rated it as low. Most the members do not turn –out during jigger eradication activities. This affects the sustainability of jigger eradication projects since the level of participation is low. These findings are in line with what Ngunjiri (2010) found out that these activities rarely succeeded in this area.

#### **4.5 Political Factors Influencing Participation of Stakeholders in Eradication of Jiggers**

The third objective of the study was to find out how political factors influence participation of stakeholders in eradication of jiggers in Kandara Sub County. To ascertain this objective, the researcher first sought to find out from the community members whether the leaders acknowledge jigger menace as problem in the society. The study also looked at whether these leaders were involved in jigger eradication activities, the extent of their involvement and finally the support leaders gave during jigger eradication events. The results of this analysis are presented in the following sections.

#### 4.5.1 Leaders view of jigger menace and their involvement in jigger eradication activities

The establish whether the political leaders view jigger menace as a problem in the community and their involvement during jigger eradication activities, the researcher carried out Chi-square statistic test. Results of this analysis are presented in Table 4.11.

Table 4.1

Leaders view of jigger menace	Leaders involvement in jigger eradication events				Total		Chi-square statistics
	Yes		No		f	%	
	f	%	f	%			
Yes	124	45.4	23	8.4	147	53.8	$\chi^2 = 179.540$
No	4	1.5	122	44.7	126	46.2	df=1
<b>Total</b>	<b>128</b>	<b>46.9</b>	<b>145</b>	<b>53.1</b>	<b>273</b>	<b>100.0</b>	Sig.=0.000*

\* Significant at  $p < 0.05$  level

Chi-square statistics presented in Table 4.11 revealed that there was a significant relationship between political leaders view in relation to jigger menace in the community and their involvement in jigger eradication activities, at  $p < 0.05$  level of significance. The results showed that majority of the community members (53.8%) who reported that leaders viewed jigger menace as a problem. Most of them (45.4%) further reported that the leaders were involved in jigger eradication activities. This clearly indicates that political leaders' perception towards jigger menace had a great influence on their participation in jigger eradication activities. However, this does not agree with the reports of Ahadi Kenya (2014) which stated that most of the leaders did not acknowledge the problem or participate in jigger eradication activities.

#### 4.5.2 Political leaders' involvement in jigger eradication activities

To find out the level in which political leaders were involved in jigger eradication activities, community members were asked to rate leaders involvement in three levels, that is largely involved, moderately involved or not involved at all. Table 4.12 illustrates their responses.

**Table 4.12**

<b>Level of involvement</b>	<b>Frequency</b>	<b>Percent</b>
Largely	12	4.4
Moderately	116	42.5
Not involved	145	53.1
<b>Total</b>	<b>273</b>	<b>100.0</b>

As shown in Table 4.12, 12 (4.4%) community members stated that political leaders were largely involved in jigger eradication activities, 116 (42.5%) stated that they were moderately involved while 145 (53.1%) stated that they were not involved at all. The major factor which hindered political leader's involvement in jigger eradication activities was ignorance (53.1%). This supports the findings of Ahadi Kenya (2010) which reported that most of the leaders rarely participated in jigger eradication activities.

#### 4.5.4 Support offered by leaders during jigger eradication activities

To find out support given by the political leaders during jigger eradication activities, the study first sought to establish from the community members whether leaders offered them with any support. Table 4.13 depicts their responses.

**Table 4.13**

	Frequency	Percent
Offered support	167	61.2
No support	106	38.8
<b>Total</b>	<b>273</b>	<b>100.0</b>

As shown in Table 4.13, majority of the community members (61.2%) indicated that political leaders were giving them support during jigger eradication activities with 38.8% of them stating that political leaders were not offering any support during the event. The findings support Kamau's argument .Kamau (2014) believes that lack of political goodwill has been one of the greatest challenges in the fight against jigger menace as political leaders feel embarrassed to come out and talk about jiggers. He said that it is worrying that no funds or support had been given by political leaders to eradicate the jigger menace.

#### 4.5.5 Type of support offered by political leaders

Table 4.14 illustrates type of the support offered to the community members by political leaders during jigger eradication activities.

**Table 4.14**

Type of support	Frequency	Percent
Funds	100	36.6
Shoes	44	16.1
Detergents	23	8.4
No support	106	38.8
<b>Total</b>	<b>273</b>	<b>100.0</b>

Out of 167 (61.2%) community members who reported that political leaders offered them with support during jigger eradication activities, 36.6% of them stated that they were given funds, 16.1% indicated shoes while 8.4% of them stated that they were given detergents. However, a higher number (106) of community members cited that political leaders were not offering them with any support. This again supports findings by Kamau (2014) who stated that leaders lacked political good will.

#### 4.6 Economic Factors Influence Participation of Stakeholders in Eradication of Jiggers

The third objective of the study was to determine how economic factors influence participation of stakeholders in eradication of jiggers in kandara Sub County. To address this objective, the study sought to find out from the study respondents, the major causes of jiggers in the community, whether they were able to afford daily basic needs, get enough water to help them in cleaning and maintaining personal hygiene and also find out whether they were able to afford soap and other detergents used to fumigate jiggers. This objective also sought to establish whether community members were in a position of seeking jigger medication in the hospital. The results of this analysis are presented below.

##### 4.6.1 Causes of jiggers

Table 4.15 illustrates causes of jiggers in the area of study as reported by the study respondents.

Table 4.15

Causes of jiggers	Frequency	Percent
Poverty	97	35.5
Poor hygiene	176	64.5
<b>Total</b>	<b>273</b>	<b>100.0</b>

Findings in Table 4.15 revealed that out of 273 community members, 35.5% of them reported that the major cause of jiggers was poverty while 64.5% stated poor hygiene. These results concurred with Karuga (2010) who agrees with Ahadi Kenya that the biggest cause of jigger infestation is poverty and poor hygiene. Similarly, Ehreberg (2009) cited that internationally, the jigger menace is associated with poverty and most cases of jiggers have been identified in the Caribbean, Asia, Latin America and sub Saharan Africa. Kamau (2014) also points out that jigger are caused by poor hygiene and unsanitary dwellings. When people are unable to take care of their own hygiene, they easily fall victim to jiggers which degrades their lives. They get trapped in a vicious cycle of poverty. This has affected their lives in many negative ways and to the extreme caused death.

#### 4.6.2 Affordability of the basic needs

To find out whether the sampled population was able to afford basic needs in their families, the researcher asked the study respondents whether they are capable of providing basic needs to their families. Results of this analysis are presented in Table 4.16

**Table 4.16**

	<b>Frequency</b>	<b>Percent</b>
Yes	197	72.2
No	76	27.8
<b>Total</b>	<b>273</b>	<b>100.0</b>

As shown in Table 4.16, 72.2% of the community members reported that they were capable of providing basic needs to their families while 27.8% of them stated that they were not capable. These results concurs with (IcFEM, 2006) that 20% of the community members cannot afford basic needs and this puts them at a risk since poverty has been found to be one of the causes of jigger infestation.

### 4.6.3 Adequacy of affordable basic needs

Table 4.17 illustrates community members' ratings of the adequacy of the basic needs they were capable of providing to their families.

Table 4.17

Adequacy	Frequency	Percent
Adequate	120	44.0
Inadequate	77	28.2
Cannot afford	76	27.8
<b>Total</b>	<b>273</b>	<b>100.0</b>

Among the 197 (72.2%) community members who reported that they were capable of providing basic needs to their community members, 120 (44.0%) stated that they were in a position of providing adequate basic needs to their families while 77 (28.2%) stated that the basic needs they provided to their families was not adequate which increases the chances of jigger infestation.

### 4.6.4 Availability of water for cleaning and maintaining personal hygiene

Table 4.18 shows community members responses in relation to availability of water used for cleaning and maintaining their personal hygiene in their families.

Table 4.18

	Frequency	Percent
Yes	211	77.3
No	62	22.7
<b>Total</b>	<b>273</b>	<b>100.0</b>

As reflected in Table 4.18, 211 (77.3%) community members reported that they have enough water for cleaning and maintaining their personal hygiene while 62 (22.7%) of them reported that they did not have adequate water to cater for their families. This explains the high number of jigger infestation in the areas where community members cannot access water and could not maintain good hygiene. It supports IcfEM (2006) argument that lack of water is indeed a risk factor for getting jiggers. It is in line (Karuga, 2010) who found out that hygiene plays a great role in eradication of jiggers.

#### 4.6.5 Sources of water used by the community members

Table 4.19 illustrates various water sources used by the community members in Kandara Sub-county.

**Table 4.19**

Water source	Frequency	Percent
Borehole	169	61.9
Dam	3	1.1
Rainfall	39	14.3
No water	62	22.7
<b>Total</b>	<b>273</b>	<b>100.0</b>

Results presented in Table 4.19 illustrate that majority of the community members (61.5%) reported that they fetched water for domestic use from the boreholes.

#### 4.6.6 Affordability of the soap and other detergents by the community members

Table 4.20 illustrates community members who were able to afford soap and other detergents used to fumigate jiggers.

**Table 4.20**

	Frequency	Percent
Yes	154	56.4
No	119	43.6
<b>Total</b>	<b>273</b>	<b>100.0</b>

Table 4.20 shows that 56.4% of the community members stated that they can afford soaps/detergents while 43.6% of them reported that they cannot afford. This shows that a significant proportion of community members were not in a position of buying soaps and other detergents which are used to enhance cleanliness hence eradicating jiggers. Lack of water and soap are indeed mentioned as risk factors for getting jiggers in Kenya (Karuga, 2010). Given that only a bit more than a ¼ of the Bungoma population had close access to water, and that gathering water in buckets and fetching it from the river is a time consuming and demanding task, large families and poor and vulnerable households may still lack the resources needed for promoting the personal hygiene of all its members, as well as environmental hygiene around the homestead.

#### **4.6.7 Community members access in hospitals to seek for jigger medication**

To find out whether community members in Kandara sub-county were using hospital services in case of jigger menace, the researcher asked the study respondents to indicate whether they were accessing jigger medication in the hospitals. Table 4.21 illustrates result obtained.

**Table 4.21**

	Frequency	Percent
Yes	95	34.8
No	178	65.2
<b>Total</b>	<b>273</b>	<b>100.0</b>

The findings presented in Table 4.21 illustrates that 34.8% of community members said that they sought medication once infected by jiggers while 62.2% of them stated that they never sought any help. These findings concur with what was echoed by Mrs. Kiptui during a Medical camp in Baringo in 4<sup>th</sup> August 2013 who lamented that despite a section of the population being infested with jiggers, there is no medication or supplies in public hospitals to treat it.

#### 4.6.8 Adequacy of the assistance offered in health centers among jigger victims

To find out whether jigger victims were offered enough assistance by medical staffs in the hospital, the study respondents who indicated that they were seeking medical care were asked to rate the adequacy of assistance given. Table 4.22 shows results obtained.

**Table 4.22**

Adequacy	Frequency	Percent
Adequate	25	9.2
Not adequate	70	25.6
Do not seek medication	178	65.2
<b>Total</b>	<b>273</b>	<b>100.0</b>

Out of 95 (34.8%) community members who sought medical assistance once infected by jiggers, 25 (9.2%) stated that the assistance offered in health facilities was adequate while 70 (25.6%) of them were of the view that the assistance offered was not adequate. These results agree with an observation by Mrs. Kiptui in 2013 that there is no adequate assistance in hospitals for those infected by jiggers.

#### 4.7 Possible Solutions that can be put in Place to Enhance Full Participation of Stakeholders in Jigger Eradication Activities

The fourth objective of the study was to suggest possible solutions to full participation of stakeholders in eradication of jiggers in Kandara Sub County. To address this objective, community members who took part in the study were asked to give their opinions in relation to strategies that can be put in place to enhance stakeholders' participation in jigger eradication activities. Table 4.23 shows suggestions that were given.

**Table 4.23**

Measures	Frequency	Percentage
Sensitizing the community members on dangers related to jigger menace	213	78.0
Offering training on jigger eradication techniques among the community members	201	73.6
Provision of funds by the government through Ministry of public health	191	70.0
Provision of enough water in the community to enhance good hygiene	164	60.1
Donation of basic needs among the poor within the community by well wishers	147	53.8
Creation of job opportunities in the community to curb down poverty	121	44.3

To ensure full participation of the stakeholders in jigger eradication activities, over 60.0% of the community members suggested that all the community members should be sensitized on dangers related to jigger menace (78.0%), 73.6% of them recommended that community members should be trained on jigger eradication activities while 70.0% of them suggested that government should provide fund to support in offering campaign on jigger eradication events. The findings in the table further revealed that 60.1% of the community members were of the view that provision of

water in the community could enhance good hygiene and hence improve participation of all members in jigger eradication activities. Other suggestions that were made included donation of basic need by well-wishers and creation of jobs in the community as a way of curbing down poverty.

According to Jawoko, (2011), in order to be able control the outbreak of jiggers in high prevalence jigger infested areas, there must be an increased awareness among people on what actually causes the infestation, how it spreads and how you prevent and treat the jigger's infestation. Kamau (2010) also suggested that county governments should allocate funds in their budgets for fighting jiggers for the residents to remain productive.

## CHAPTER FIVE

### SUMMARY OF FINDINGS, DISCUSSIONS, CONCLUSIONS AND RECOMMENDATIONS

#### 5.1 Introduction

This chapter presents summary of the study, discussion, conclusion and recommendations based on the study findings. The chapter also highlights areas for further study.

#### 5.2 Summary of the findings

The main goal of the study was to assess factors influencing participation of stakeholders in eradication of jiggers in Kandara Sub County, Murang'a County. The specific objectives of the study were to establish the extent to which demographic characteristic, social cultural factors, political factors, and economic factors influence participation of stakeholders in eradication of jiggers in Kandara Sub County. The study also looked at strategies that can be put in place to enhance full participation of stakeholders in eradication of jiggers in Kandara Sub County. The study employed mixed method design which involved both qualitative and quantitative approaches. The study sample comprised of 375 community members in Kandara Sub County. Among them, 273 respondents completely filled and returned their questionnaires hence giving a return rate of 72.8%. The following section presents discussion of the study findings.

#### 5.3 Discussion of the findings

##### 5.3.1 Extent to Which Demographic Characteristic Influence Participation of Stakeholders in Eradication of Jiggers

The study findings revealed respondents' level of education and age had a significant influence on their participation in jigger eradication activities, at  $p < 0.05$  level. On the other hand, Chi-square statistics showed that respondents' marital status and gender had no significant influence on community members' involvement in jigger eradication activities.

In relation to respondents' education level, the findings revealed that among the 80 community members who took part in jigger eradication activities, most of them had attained college and university qualification. This shows that community members with higher level of education (university level) were more likely to participate in jigger eradication activities compared with their counterparts who had lower level of education (primary level). These findings were in line with John. (2010) who established that illiteracy influences the participation of the stakeholders in project implementation. Similarly, Barret (2001) emphasized that provision of adequate education levels enhances capacity to participate effectively in community projects.

In terms of age, out of 80 (29.3%) community members who participated in jigger eradication activities, 8 (2.9%) were aged 18 years and below, 43 (15.8%) were aged 21-30 years, 14 (5.1%) were aged 31-40 years while 15 (5.5%) were aged 40 years and above. This shows that majority of the community members who participated in jigger eradication activities were aged between 21 and 30 years. This shows that youth were more likely to participate in community projects compared to elderly members in the society.

In relation to gender, the findings showed that out of 273 community members, 54.9% were males while 45.1% females. Among them, 14.6% of males and 14.6% of females took part in jigger eradication activities. This shows that although the proportion of male participants was slightly higher than female participants, their participation in jigger eradication was the same.

With regard to marital status, the study established that among the 153 (56.0%) respondents who reported that they were single, 50 (18.3%) were involved in jigger eradication activities while 103 (37.7%) were not. In addition, the findings revealed that out of the 120 (44.0%) respondents who were married, 30 (10.9%) participated in jigger eradication activities whereas 90 (32.9%) did not. This shows that most of the respondents who were single and those who were married did not participate in jigger eradication activities.

### **5.3.2 Extent to Which Social Cultural Factors Influence Participation of Stakeholders in Eradication of Jiggers**

Chi-square results revealed that there was a significant relationship between respondents perception and their involvement towards jigger eradication activities, at  $p < 0.05$  level. In particular the table showed that among the 80 (29.3%) community members who reported that they are involved in jigger eradication activities, 28.2% of them were of the view that jiggers can be eradicated. This shows that most of the respondents who were involved in jigger eradication activities perceived jigger menace as a problem that can be eradicated.

Among those who felt that jiggers cannot be eradicated, the major reason they gave was that jigger menace was a curse or witchcraft. Pertaining the way in which jigger victims are treated in the community, majority of the respondents (85.7%) stated that they were stigmatized. As a consequence, this problem hindered their turn out during jigger eradication events hence undermining strategies used to curb the problem in the area under study. These findings were in agreement with the results obtained by Sharma, (2010) who stated that local media in Kenya and East- Africa puts across that cultural believes and social stigma hinder those infected with jiggers to seek help.

### **5.3.3 Political Factors Influence Participation of Stakeholders in Eradication of Jiggers**

Study findings revealed that there was a significant relationship between political leaders view in relation to jigger menace in the community and their involvement in jigger eradication activities, at  $p < 0.05$  level of significance. The results showed that majority of the community members (53.8%) who reported that leaders viewed jigger menace as a problem, most of them (45.4%) further reported that the leaders were involved in jigger eradication activities. This clearly indicates that political leaders' perception towards jigger menace had a great influence on their participation in jigger eradication activities.

To verify these findings, the study established that out of 167 (61.2%) community members who reported that political leaders offered them with support during jigger eradication activities, 36.6% of them stated that they were given funds, 16.1% indicated shoes while 8.4% of them stated that they were given detergents. However, among the 106 community members who cited

re not offering them with any support, all of them stated that the major  
nese leaders was lack of funds.

### **s Influencing Participation of Stakeholders in Eradication of Jiggers**

ective, the study established that major cause of jiggers was poverty and  
ults concurred with Karuga (2010) who agrees with Ahadi Kenya that the  
infestation is poverty and poor hygiene. Similarly, Ehreberg (2009) cited  
jigger menace is associated with poverty and most cases of jiggers have  
Caribbean, Asia, Latin America and sub Saharan Africa. Kamau (2014)  
er are caused by poor hygiene and unsanitary dwellings. When people are  
heir own hygiene, they easily fall victim to jiggers which degrades their  
a vicious cycle of poverty. This has affected their lives in many negative  
e caused death.

medical assistance, the study established that majority of the community  
e not seeking medication once infected by jiggers with only 34.8% of  
e reporting that they sought medication once infected by jiggers. Among  
stance, 25 (9.2%) rated the assistance offered in health facilities as  
(%) rated it as inadequate

### **ons that can be put in Place to Enhance Full Participation of Jigger Eradication Activities**

tion of the stakeholders in jigger eradication activities, over 60.0% of the  
uggested that all the community members should be sensitized on dangers  
e, community members should be trained on jigger eradication activities,  
provide fund to support in offering campaign on jigger eradication events  
water in the community could enhance good hygiene. Other suggestions  
ed donation of basic need by well-wishers and creation of jobs in the  
curbing poverty.

## 5.4 Conclusions of the study

Based on the above findings, several conclusions were made. To start with, the study concluded that respondent's age and education level had a significant influence towards their participation in jigger eradication activities. However, respondent's gender and marital status had no significant influence towards their participation in jigger eradication activities. There was a significant relationship between respondents' perception and their involvement towards jigger eradication activities. Most of the respondents who were involved in jigger eradication activities perceived jigger menace as a problem that can be eradicated. However, those who felt that jigger cannot be eradicated, all of them felt that jigger menace is a curse or witchcraft. Jigger victims were stigmatized in the community hence hindering their turn out during jigger eradication events. Political leaders' perception towards jigger menace had a great influence on their participation in jigger eradication activities. Those who felt that jiggers can be eradicated supported the community by offering them, funds, shoes and washing detergents. A significant proportion of respondents were not capable of affording enough basic needs to their families and the assistance offered at health facilities among jigger victims was inadequate.

## 5.5 Recommendations of the study

Arising from the study findings, the following recommendations were made:-

1. Ministry of Public Health should educate community members on dangers related to jigger menace and how they can be prevented. The ministry should promote collaboration with various stakeholders as it seems that the private sector especially Non-Governmental organizations have been investing most efforts in this vermin control.
2. The Ministry of Health should provide adequate jigger medication to ensure that those infected can access treatment whenever they need to. The results show that jigger medication is not available in most of the health care centers in Kandara Sub County.
3. The community members should be sensitized and mobilized to enhance their participation in jigger eradication activities. From the findings, it is clear that the community members lack adequate information on jiggers and jigger prevention.

4. Leaders should be more involved in jigger eradication by offering material support and financial support to curb the menace. The area leaders should also set funds aside to curb the menace. They should also stop politicizing the issue and take it as a serious concern in the community.

5. The government should ensure the implementation of the jigger eradication guidelines that were launched on 3<sup>rd</sup> March 2013 by the first Lady Margaret Kenyatta. The guidelines outlined measures on prevention, control and eventual eradication of jiggers.

6. The NGO's and other private stakeholders should continue collaborating with the government and other partners in eradication of jiggers since the government cannot fight this menace alone.

### **5.6 Areas for further research**

1. Since the sample of respondents was drawn from Kandara Sub County, the findings may not be a representative of all sub Counties in Kenya. Hence, a similar study should be conducted in other Sub Counties affected by the menace to find out whether the same result would be obtained. This will facilitate better decisions on the management of the menace.
2. The study also recommends a study on the influence of community members participation in sustainability of jigger eradication projects

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APPENDICES

APPENDIX 1

LETTER OF TRANSMITTAL

MIRIAM MUGURE MWANGI,

P.O BOX 147,

THIKA.

Dear Sir/madam,

RE: FACTORS INFLUENCING PARTICIPATION OF STAKEHOLDERS IN  
ERADICATION OF JIGGERS IN KANDARA SUB COUNTY, MURANGA COUNTY.

I am a Master of Arts student in the University of Nairobi, Thika extra Mural centre ( Reg. No 150/70408/2013). I am undertaking a study that seeks to explore out the factors that influence participation of stakeholders in eradication of jiggers in kandara Sub County as a partial fulfillment for the requirement for an award of a Masters in Arts degree in Project Planning and Management.

You have been selected to provide information through the issued questionnaire. This is a request for your participation in responding to the attached questionnaire. Your response will help facilitate the study.

Be assured that any personal information given will be treated with utmost confidentiality and will only be used for this study.

Thank you for your participation.

Yours faithfully,



Miriam Mwangi.

## APPENDIX II:

### QUESTIONNAIRE FOR THE COMMUNITY MEMBERS

The questionnaire seeks to gather information from the Kandara Sub County members who are the key victims of the jiggers menace. It is sub divided into four sections addressing each of the study variables. The identity of the respondents will not be disclosed. Participation by the participants will be voluntary and all the information given will be used for the research purpose. Kindly spare your time to provide answers based on your experience in the eradication of the jigger menace. In case of any clarification or need for translation, please feel free to ask.

#### SECTION (A) DEMOGRAPHIC DATA

Please tick where appropriate

1. Gender  
(i) Male ( )  
(ii) Female ( )
  
2. Age in years  
(I) 18 years and below( )    (ii) 21-30( )  
(iii) 31-40 ( )                      (iv) 40 and above ( )
  
3. Marital status  
(I) Single( )                                      (ii) Married( )
  
4. Level of education  
(i) Primary level ( )                              (ii) Secondary level ( )  
(iii) College level ( )                              (iv) University Level ( )

## SECTION (B) INFLUENCE OF SOCIAL CULTURAL FACTORS ON JIGGER ERADICATION

(5) (a) Are you involved in jigger eradication activities? (i) Yes ( ) (ii) No

(b) If no, why? (i) Not informed ( ) (ii) Not interested ( ) (iii) Any other reason

(c) If yes, to what extent are you involved? (i) Largely involved (ii) Moderately involved

(6) a) Have you ever been trained on jigger eradication techniques?

(i) Yes ( ) (ii) No

(b) If Yes, how many times have you been trained? (i) 1-5 ( ) (ii) 5-10 ( ) (iii) 10 and above

(c) If no, why? (i) No trainings offered (ii) Any other?

d) Do you think the training offered is of any relevance towards eradication of jiggers?

(i) Yes ( ) (ii) No

(ii) If no/Yes, How?

(d) To what extent has the training been useful in the eradication of jiggers?

i) Very useful ( ) (ii) Moderately useful ( ) (iii) Not all useful

(7) According to your understanding, what causes jiggers?

(i) Poverty ( ) (ii) Poor hygiene ( ) (iii) Any other

(8) (a) Do you think jiggers can be eradicated? (i) Yes ( ) (ii) No

(b) If No, why? (i) It's a curse/witchcraft ( ) (ii) any other

(c) If Yes, how?

(9) How are jigger victims treated in the community?(i) With care/love( ) (ii) With stigma  
(iii) Any other

(10) (a) Do jigger victims come out during jigger eradication activities?(i) Yes( ) (ii) No

(b) If no, why? (i) Stigmatization ( ) (ii) Ignorance (iii) any other

(c) If Yes, how is the turn out? (i) High (ii) Moderate (iii) Low

### SECTION (C) INFLUENCE OF ECONOMIC FACTORS ON JIGGER ERADICATION

10) (a) Are you able to afford daily basic needs? (i) Yes ( ) (ii) No ( )

(b) If No, why?(i) Cannot afford ( ) (ii) Any other

(c) If Yes, are they (I) Adequate (ii) Inadequate

(11) (a) Is there enough water to help you in cleaning and maintaining your personal hygiene?

(i) Yes ( ) (ii) No

b) If yes, what is your main source of water? (i) Rainfall ( ) (ii) Dam ( ) (iii) Borehole ( )  
(iv) Others ( )

c) If no, how does it affect your hygiene?

(12) (a) Are you able to afford soap and other detergents that are used to fumigate jiggers?

(i)Yes ( ) (ii) No

(b) If no, Why? (a) Can't afford ( ) (b) Any other

(c) Do you seek medication once you are infected by jiggers? (i) Yes ( ) (ii) No( )

(13) (a) If yes Do you access jigger medication in hospitals?(i) Yes( ) (ii) No

(b) If Yes, is it (i) Adequate ( ) (ii) Not adequate

## SECTION (D) INFLUENCE OF POLITICAL FACTORS ON JIGGER ERADICATION

(14) a) Does your leaders acknowledge that jigger menace is a problem? (i) Yes ( ) (ii) No

b) If No, why?

(15)(a) Are your leaders involved in jigger eradication activities? (i) Yes ( ) (ii) No ( )

(b) If yes, How? (i) Largely ( ) (ii) Moderately

(c) If No, Why (a) Ignorance ( ) (ii) Any other

(16)(a) Is there any support given by your leaders during eradicating jiggers events?

(i) Yes ( ) (ii) No

(b) If Yes, what kind of support? (i) Funds ( ) (ii) Shoes ( ) (iii) Detergents ( ) (iv) Others ( )

c) If No, why?( i) lack of Funds ( ) (ii)Any other

## APPENDIX III

### INTERVIEW FOR THE COMMUNITY LEADERS

Kindly spare your time to answer the following questions based on your experience in the eradication of jiggers. All information will be confidential and for the research purpose only.

1. Do you acknowledge that jigger menace is a serious problem in this area?
2. Are you involved in jigger eradication activities?
3. Do you allow community members including school pupils to participate in jigger eradication activities?
4. Are jigger victims able to access medical assistance from government hospitals?
5. Are there any funds set aside for fighting jiggers?
6. Is the ministry of Public Health involved in eradication of jiggers?
7. To what extent has jigger eradication been successful in your area?
8. If not, what do you think has contributed?
9. How often are the community members trained on jigger eradication techniques?
10. To what extent has the training been useful in eradication of jiggers?
- 11) In your own opinion, do you think there has been adequate involvement of the stakeholders in eradication of jiggers?

APPENDIX IV

TABLE FOR DETERMINING SAMPLE SIZE FOR A GIVEN POPULATION

N	S	N	S	N	S
10	10	220	140	1200	291
15	14	230	144	1300	297
20	19	240	148	1400	302
25	24	250	152	1500	306
30	28	260	155	1600	310
35	32	270	159	1700	313
40	36	280	162	1800	317
45	40	290	165	1900	320
50	44	300	169	2000	322
55	48	320	175	2200	327
60	52	340	181	2400	331
65	56	360	186	2600	335
70	59	380	191	2800	338
75	63	400	196	3000	341
80	66	420	201	3500	346
85	70	440	205	4000	351
90	73	460	210	4500	354
95	76	480	214	5000	357
100	80	500	217	6000	361
110	86	550	226	7000	364
120	92	600	234	8000	367
130	97	650	242	9000	368
140	103	700	248	10000	370
150	108	750	254	15000	375
160	113	800	260	20000	377
170	118	850	265	30000	379
180	123	900	269	40000	380
190	127	950	274	50000	381
200	132	1000	278	75000	382
210	136	1100	285	1000000	384

NOTE N IS POPULATION SIZES IS SAMPLE SIZE (Krejcie and Morgan, 1970)

## APPENDIX V

### SAMPLE SIZE FOR THE STUDY

WARD NAME	POPULATION
GAICHANJIRU	4050
RUCHU	3501
NGARARIA	2020
KAGUNDUINI	3750
MURUKA	1780
TOTAL	15,001
TOTAL SAMPLE	375

THIS IS TO CERTIFY THAT:  
**MISS. MIRIAM MUGURE MWANGI**  
of UNIVERSITY OF NAIROBI, 0-1000  
Thika, has been permitted to conduct  
research in *Muranga County*

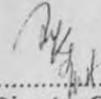
Permit No : NACOSTI/P/15/7798/7024  
Date Of Issue : 20th July, 2015  
Fee Received : Ksh 1000

on the topic: **FACTORS INFLUENCING  
PARTICIPATION OF STAKEHOLDERS IN  
ERADICATION OF JIGGERS. A CASE OF  
KANDARA SUB COUNTY, MURANGA  
COUNTY, KENYA.**

for the period ending:  
**4th December, 2015**



.....  
**Applicant's  
Signature**



.....  
**Director General  
National Commission for Science,  
Technology & Innovation**



**NATIONAL COMMISSION FOR SCIENCE,  
TECHNOLOGY AND INNOVATION**

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P.O. Box 30623-00100  
NAIROBI-KENYA

Ref No

Date:

20<sup>th</sup> July, 2015

NACOSTI/P/15/7798/7024

Miriam Mugure Mwangi  
University of Nairobi  
P.O. Box 30197-00100  
NAIROBI.

**RE: RESEARCH AUTHORIZATION**

Following your application for authority to carry out research on *“Factors influencing participation of stakeholders in eradication of jiggers. A case of Kandara Sub County, Muranga County, Kenya,”* I am pleased to inform you that you have been authorized to undertake research in Murang’a County for a period ending 4<sup>th</sup> December, 2015.

You are advised to report to the County Commissioner and the County Director of Education, Murang’a County before embarking on the research project.

On completion of the research, you are required to submit two hard copies and one soft copy in pdf of the research report/thesis to our office.

  
DR. S. K. LANGAT, OGW  
FOR: DIRECTOR GENERAL/C.E.O

Copy to:

The County Commissioner  
Murang’a County.

The County Director of Education  
Murang’a County.