



**University of Nairobi**

EVALUATING THE IMPACT OF ECONOMIC EMPOWERMENT AND PSYCHOSOCIAL'S  
INTIMATE PARTNER VIOLENCE IN NAIROBI'S INFORMAL SETTLEMENTS:  
CONTROL-CASE STUDY OF KARIOBANGI-KOROGOCHIO

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A thesis submitted to the school of mathematics in partial fulfillment of the requirements for the award of the degree of Master of Science Biometry of the University of Nairobi.

**November, 2016**

**DECLARATION**

This thesis is my original work and has not been presented for a degree in any other University.

Signature.....

Date .....

**APPROVAL**

This thesis has been submitted for examination with my approval as University Supervisor.

Signature.....

Date.....

## DEDICATION

This work is dedicated to my family. You have been a great inspiration in my life.

## ACKNOWLEDGMENTS

I am greatly indebted to my supervisors Dr. Kamanu for his invaluable help and making me achieve my academic goal through their mentorship, guidance and vast academic knowledge, without him this work would never have come to existence. I would also like to acknowledge the entire staff of Mathematics Department of the University of Nairobi for giving me moral and academic support. I would also like to express my gratitude to my family for their moral and support and love. Finally, I thank God who gives life, wisdom and very great insight.

## ABSTRACT

This study seeks to assess the impact of financial inclusion and psychosocial support on intimate partner violence (IPV). It aims to measure the effect of economic empowerment and psychosocial support on IPV amongst women living in informal settlements in Nairobi. This can be achieved by comparing exposure to IPV across socio-demographic characteristics to identify potential confounding factors; determining factors contributing to IPV amongst women who received the economic intervention; and determining individual and household economic empowerment variables associated with lower risk of IPV among women. The study employs a case-control design to investigate the effect of economic empowerment on IPV. Prospective cohorts of 168 of above 18 year-old women, and victims of IPV were recruited into the study and assigned to control and intervention arms by simple random sampling technique. Quantitative data is collected by use of questionnaire and qualitative data by focus group discussions interviews. SPSS IBM 20, Microsoft Excel and R statistical analysis package are used to analyze the data; descriptive analysis used to summarize the data while binary logistic regression is fitted to the data with two or more independent variables to determine the binary dependent outcome variable and estimate the odd ratios. Chi-square test at 5% level of significance is then used to determine if economic empowerment and psychosocial support reduce IPV. The study finds that economic empowerment of women coupled with psychosocial support significantly reduces incidences of physical assault on women hence it is a significant contributor to IPV among women living in informal settlements of Nairobi. The study recommends that besides economic empowerment and psychosocial support, all the significant determinants of IPV – womens education levels, IPV related legislation, affirmative action in the job market and involvement in community development – be addressed in entirety in order to eradicate IPV.

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## LIST OF ABBREVIATIONS AND ACRONYMS

AIDS	:	Acquired Immunodeficiency syndrome
FIDA	:	International Federation of Women Lawyers
HIV	:	Human Immunodeficiency Virus
IMAGE	:	Intervention Macrofinance AIDS and Gender Equity
IPV	:	Intimate Partner Violence
KDHS	:	Kenya Demographic and Health survey
KWFT	:	Kenya Women Finance Trust
MDG's	:	Millennium Development Goals
MOH	:	Ministry of Health
NFHS	:	National Family Health Surveys
PPS	:	Probability Proportional Population size
SES	:	Social Economic Status
SPSS	:	Statistical Package for Social Scientist
STI's	:	Sexually Transmitted Infections
UDHR	:	Universal Declaration of human rights
UNHCR	:	United Nation Human Commission of Refugees
UNMDG	:	United Nations Millenium Development Goals
WHO	:	World Health Organization

## CHAPTER 1

### INTRODUCTION

The United Nations Sustainable Development Goals have articulated a global agenda that recognizes the importance of addressing the intersections between poverty, gender inequality and health Heise et al (1999). In the report, financial inclusion and economic empowerment provide a foundation for development that is focused on ending extreme poverty and increasing shared prosperity. Schuler (1996), points out that economic development is more than increase in incomes: it involves addressing inequality in all of its forms. In his study women are seen to be facing violence from their male counter parts right from their families to place of work. Sexual assault, physical assault and psychological torture are found to be the most prevalent form of abuse being experienced.

The most common forms of violence against women is that perpetrated by husband or other intimate male partner Krug(2002).IPV takes a variety of forms, including physical violence(ranging from slaps, punches and kicks to assault with weapon and homicide) and sexual violence (including forced or coerced sex or forced participation in degrading sexual acts).A population based study found out that 15% to 71% of women have ever been physically or sexually assaulted by their partners at some point in their lives(Garcia-Moreno *et al.* 2006)

Physical and sexual IPV against women has been shown to affect womens health, limit to the degree to which women are able to work, earn an income, or make decisions about their childrens schooling and use of health services, and therefore it is an important barrier to development.

In their study to understand the social determinants of IPV, Vyas & Watts (2009) found

evidence related to the strength of association between different indicators of women's and men's empowerment and women's ever and past year of IPV in low and middle income countries. They also found that household poverty or low socioeconomic status (SES) was associated with risk of violence; that women's secondary education and to some extent men's secondary education was a general protective but there was also strong evidence of a protective effect from primary education. The reasons for this may be that secondary education or higher education give women greater options not to marry a man who they think is violent or leave a violent relationship, or it increases communication skills enabling them to better deal with spousal conflict. It may also be that women with higher education are more valued by their partner. However, there was also some evidence that women were at increased risk when they had higher educational attainment than their partner. The finding on women's employment and risk of IPV was conflicting for instance out of 11 studies, five found a protective association and six documented a risk of association with past year experience IPV.

Garcia-Moreno 2006, WHO study on women health and domestic violence, documented prevalence of physical or sexual assault between 31% and 49% in three countries in Africa participating in this study. Despite the pervasiveness of violence, there has been limited analysis from the informal settlements of Nairobi about the extent to which women's economic empowerment may reduce women's risk of IPV.

Violence has a significant impact on the health and life expectancy of women. The World Bank estimates that rape and domestic abuse account for 5 percent of healthy years of life lost to women of reproductive age in developing countries Heise *et al.* (1999). Domestic violence can also have long-term psychological effects. Odunjinrin O. (1993) observes that one out of every four suicide attempts by women is preceded by abuse. In addition, economic effects of IPV include decreased productivity; expenditures on health services and negative impacts on future human capital formation.

Microfinance institutions and formal financial institutions have expanded access to credit and saving services to various populations in terms of the rich, middle class and the poor against collateral leaving the lowest income populations to fend for them as they can hardly afford collateral. Financial inclusion solely from this evidence may be an effective channel for interceding between poverty and gender inequality. Acquiring new business skills and capital may enhance their self-esteem, self-confidence, conflict-resolution ability and household decision-making power and expand their social networks. However, it may not be sufficient in dealing with psychological effects that come with IPV thus sparking interest in the potential of combining financial inclusion and psychosocial support interventions to deal with IPV Koenig *et al.* (2003).

## 1.1 Background

The United Nations Millennium Development Goals highlight the need to address gender inequality as a foundation for human development (UNMDG, 2007). Violence against women is an explicit manifestation of gender inequality and is increasingly being recognized as an important risk factor for a range of poor health and economic development outcomes. A substantial body of international research has documented the magnitude and forms of such violence across a range of settings, in low-, middle-, and high-income countries (Garcia-Moreno *et al.*, 2005; Watts & Zimmerman, 2002). IPV violence perpetrated by a spouse or intimate partner is the most common form of gender-based violence, and in addition to causing direct injury or loss of life, it increases vulnerability to a range of negative health outcomes, including HIV/AIDS (Campbell, 2002; Dunkle *et al.*, 2004).

Although IPV occurs across all socioeconomic groups, studies suggest that women who live in poverty are more likely to experience such violence. The fundamental link between violence and the continued subordinate status of women in society is also well recognized (Heise *et al.*, 1999). Although it has been suggested that women who are

more economically and socially empowered may be protected from IPV, interventions that aim to empower women and focus on addressing poverty or gender inequalities in urban informal settlements have not yet been designed and tested (Usdin *et al.*, 2005; Jewkes, 2002).

### **1.1.1 Women's economic empowerment and IPV**

Poor women are often most vulnerable to violence because “they are most exposed to the risk of violence and least able to remove themselves from violent situations” (Kabeer, 1999). Yet, womens economic empowerment may promote male insecurity and feelings of economic inadequacy, leading to more violence in relationships. In support of the idea that economic empowerment can decrease IPV, Blumberg (1991) provides evidence that having their own income improves womens ability to have a say over fertility preferences, input into household decision-making, and boost their self-esteem. It then follows that when women feel empowered; they are better able to take action at the household level to improve their own and their childrens well-being.

In contrast to the inverse association between womens economic empowerment and domestic violence, Blumberg (1991) also points to evidence that as women gain more domestic power due to earned income, they may also face resistance and violence from their spouses. Oropesa (1997) reports that in households where women are sole or dual-earners, there is no more or less violence than in households where husbands are the breadwinners, providing evidence that there is no relationship between womens economic empowerment and abuse. He does find that when both spouses are unemployed there is a greater risk of violence.

Domestic violence has led to serious physical and mental injuries and even death. This inhospitable character has had detrimental effects on the lives of most women with more than 20% of this group succumbing to injuries because of this vice (Jeyaseelan *et al.*, 2007). A research done by Ujamaa Africa about this beastly act has shown that economic

empowerment of women in Nairobi's Kariobangi and Korogocho has had negative and positive effects. On the negative scale, wrangles have been occasioned in some of those families more than before, with men breadwinners feeling threatened by the economic boost of the newly empowered women.

## **1.2 Statement of the problem**

Studies have yielded conflicting information on the association between violence and women's economic empowerment. While women with greater economic resources, such as ownership of land, capital and other valuables, are less likely to report violence (Jejeebhoy & Cook, 1997), employed women have been found to report violence more frequently than unemployed ones (Jeyaseelan *et al.*, 2007; Krishnan, 2005). Yet, studies in developing countries have documented both elevated and lowered odds of reported violence among women participating in microcredit programmes (Schuler *et al.*, 1996; Koenig *et al.*, 2003). Hence, this study seeks to evaluate the impact of economic empowerment and psychosocial support on intimate partner violence in Nairobi's informal settlements of Kariobangi and Korogocho in a controlled case study.

## **1.3 Hypothesis**

This study is premised on the hypotheses that:

- (i) There is no significant relationship between socio-demographic characteristics and exposure to IPV;
- (ii) There are no factors that confound the effect of economic empowerment on IPV;
- (iii) Economic empowerment does not influence the odds of experiencing IPV.

## **1.4 Objectives**

### **1.4.1 Main objective**

To measure the effect of economic empowerment and psychosocial support on IPV amongst women living in informal settlements of Kariobangi and Korogocho in Nairobi.

### **1.4.2 Specific objectives**

The specific objectives of this study were;

- (i) To compare exposure to IPV across socio-demographic characteristics to identify potential confounding factors.
- (ii) To determine factors contributing to IPV amongst women who received the economic intervention.
- (iii) To determine individual and household economic empowerment variables associated with lower risk of IPV among women.

### **1.5 Scope of the study**

The study is conducted in Korogocho and Kariobangi informal settlements which are predominantly occupied by low income earners where women experience IPV. The majority of women of this population are victims of IPV with many of them having men as sole bread winners. The geographical location of the areas borders other classes of people who are financially fair off vis--vis them. Despite their sharing a good fraction of resources, there are distinct social and religious beliefs between them.

### **1.6 Justification of the study**

Intimate partner violence has been an endemic problem among residents of slums. This has been catalyzed by the deplorable economic states in these settlements (Shaidi, 2012). This study will help in projecting the main confounding factors that propagate IPV; create better understanding of the vice and provide a platform for possible remedies/interventions aimed at curbing it.

The study will also help in sensitizing residents of informal settlements of Nairobi like Kariobangi and Korogocho and beyond of the need of being accommodative to the pro-

grammes that improve their welfare and in so doing aid in getting rid of the catastrophes that are associated with IPV.

Moreover, the study will provide a baseline for further study of IPV in the urban areas and across the country; thus help in understanding the fundamental and inherent factors that contribute to IPV prevalence among women living in informal settlements of urban areas.

This research will make a major contribution to the discussion of the link between economic empowerment and intimate partner violence and further explore the impact of community based financial inclusion and psychosocial support on Intimate Partner Violence in low income populations.

## CHAPTER 2

### LITERATURE REVIEW

#### 2.1 Introduction

This chapter aims at the review of the literature of how different scholars and researchers have used various statistical data to determine the effects of economic empowerment on intimate partner violence (IPV) in various parts of the world with special interest on women. IPV has of late been an impediment to poverty eradication and a hindrance to the achievement of the United Nations Millennium Development Goals. Violence against women is a clear manifestation of gender inequality and is soaring as a risk to good health and economic development. It is perpetuated in various forms with most prevalent being less severe physical injuries, severe physical injuries, mental torture and worse, death. Postulations have it that women who are economically empowered have reduced exposure to IPV in comparison with their counterparts who are not (Jeyaseelan *et al.*, 2007)

#### 2.2 Literature review

Lancet (2002) identifies and analyses causes of intimate partner violence among families living in South Africa's Pretoria estates using logit regression model. He finds that out of about 400 families investigated, there are few social and demographic characteristics/factors that increase the odds of IPV; among them poverty, age, education level, socio-norms, alcohol and relationships conflicts. He recommends that promoting sexual equality, employment and empowerment of female employers in health services would sink this vice. This would be bolstered by legislative measures and fiscal policies aimed at reducing alcohol consumption, hence reducing cases of IPV.

Dalal(2011) seeks to establish whether economic empowerment protects women from in-

timate partner violence in a sample population of 124,385 of ever married women from 29 states of India who fall within reproductive age 15-49 in both urban and rural area. He classifies women into two categories; the working and the not working. He carries out a Chi-square test to find out if there is proportional difference between the dependent variable which is IPV and independent variables like age, educational level, rural/urban settlement and religion. Besides, he employs multivariate logistic regression to examine the influence of independent variables on economic empowerment in finding exposure to intimate partner violence. From the study, it is clear that economic empowerment cannot unilaterally protect women from IPV. Educational levels, cultural norms and religion add to the shielding of women from IPV.

Kim *et al.* (2007) point out that IPV is the most common form of gender-based violence. They note that the menace occurs across all socioeconomic groups. However the study suggests that women who live in poverty are more likely to experience such violence because of the economic pressure experienced in the socio-economic setup. Also, women in poverty stricken families cannot contribute equally to decision-making because they lack the economic muscle. They further note that although it has been alluded to that women who are economically empowered may be shielded from IPV, interventions that aim to empower women and focus on addressing poverty or gender inequalities are yet to be designed and tested. Intervention with microfinance for AIDS and gender equity (IMAGE) study use a cluster-randomized design to test the hypothesis with an aim of merging microfinance-based poverty alleviation programs with participatory training on HIV risk and prevention, gender norms, domestic violence and sexuality based. This is to examine if such intervention can improve family/populations economic well being, empower women and lead to eradication of IPV.

Kabeer (1999) ascertains that its theoretical plausible that women in economic turmoil are prone to IPV because they are unable to remove themselves from violent situations.

Besides, they fear reporting IPV incidences because of the presumption that their partners will still perpetuate physical and emotional violence on them. Moreover, a woman's economic empowerment would promote male insecurity and feelings of economic inadequacy, breeding more violence in the relationship.

Blumberg (1991) admits that economic empowerment goes a long way in decreasing IPV. He posits that economically empowered women have a say over fertility preferences and they, too, have significant contribution to the household decision making. Thus, these women are well placed to take action at the household level to better their own well being and that of their offspring. In addition, they may bring issues of concern to the public domain by mobilizing women groups, media coverage and other forums with an aim of thrilling the idea (Rakowski, 1991). Rao (1997) points out that the higher the income of the woman the greater the control in household income and this decreases the odds of IPV.

Oropesa (1997) in a study of Mexican households discovered that those women who are the sole or dual earners face mild or no violence compared to households where men are the breadwinners. This illustrates that there is no association between economic empowerment and IPV. However it's clear that when both spouses are unemployed there is great risk of violence in the households because they face resistance and hostility from their spouses (Blumberg 1991).

Sandra Umoh & Deborah, (2012) acknowledge that wife battering has detrimental effects on relationships and in most cases leads even to premature dissolution of marriages because women who are the victims cannot withstand any more violence from their husbands. IPV has also led to some women going for judicial separation to shield them from premature death that is associated with perilous drunkenness, drug abuse and aggression caused by loss of jobs and queries from work on the husband's side. In addition

some of the husbands find it difficult to meet their family obligations and this breeds agony that brings the twin evils of frustration and violence that are used as a scapegoat.

### **2.3 Conclusion**

In view of the literature reviewed, it is evident that economic empowerment does not single handedly reduce intimate partner violence. There are quite a number of other factors that have significant contribution to IPV. Most studies reveal that lower educational level, poverty/poor economic statuses, alcoholism cultural and religious beliefs are some of the most significant determinants of intimate partner violence. Besides, some women who have economic strength still suffer violence from their partners which disavows the hypothesis that economic empowerment diminishes intimate partner violence. Outdated cultural practices also contribute to large extent on intimate partner violence as they advocate for submissiveness of women to their husbands which is, in turn, misconstrued by some men as license to wife battering.

This study will thus prove that there is more to addressing the menace of IPV other than mere economic empowerment of women. That is why this study is premised on evaluating the impact of economic empowerment and psychosocial support on intimate partner violence in Nairobi's informal settlements of Kariobangi and Korogocho in a control-case study. That is to mean, one, there is no significant relationship between socio-demographic characteristics and exposure to IPV; two, there are no factors that confound the effect of economic empowerment on IPV; and three, economic empowerment does not significantly influence the odds of experiencing IPV.

## CHAPTER 3

### METHODOLOGY

The study is based on the analysis of the data obtained from Ujamaa-Africa 2014/2015 cluster randomized control study participants who are currently receiving micro-loan and a new set of women who are not receiving any micro-loan.

The participants being studied were in the control arm of the 2014/2015 Ujamaa-Africa cl-RCT study. They received the micro-loan at the beginning of October 20th 2015 and now form a sampling frame for the intervention arm of the study. A total of 87 non micro-loan beneficiaries were recruited into the study to form a sampling frame for the control arm. A case-control study design is used.

Two groups of participants, Intervention group, (those currently receiving micro-loan) and control group (Those who are not receiving anything) are included in the case-control study. A sample of 82 ( $n = 82$ ) from the list of the current micro-loan beneficiaries was selected to form intervention group and 81 ( $n = 81$ ) from the 87 non micro-loan beneficiaries were selected to form control group by simple random sampling method.

#### **3.1 Method**

A prospective cohort of 168 ( $n = 168$ ) women, of 18 and above years of age, who are victim of intimate partner violence, were recruited into to the study. Only 139 ( $n = 139$ ) completed the study and were included in the analysis. The women went through 8 weeks basic training on micro business management skills. The 168 women were randomly assigned to control and intervention arm by simple random sampling technique. The intervention group comprised of ( $n_{\text{intervention}} = 82$ ) and control group of ( $n_{\text{control}} = 81$ ). The intervention arm received a micro loan of 5000 Kenya shillings (USD 50) and further receive 8, two-hour session of support group *Tupone Pamoja Initiative*

(TPI). Quantitative data were collected at the beginning and at the end of the study. SPSS (version IBM 20) and R statistical analysis package were used to analyze the data.

### **3.1.1 Inclusion criteria**

#### Intervention group

The participants from the Ujamaa-Africa 2014/2015 cl-RCT are included. They are currently receiving the micro loan and are active members in the study.

#### Control group

The women who are not currently receiving any micro-loan from any organization or merry-go-round (Chama) must be victims of intimate partner violence.

### **3.1.2 Exclusion criteria**

#### Intervention group

Women who are in the program and are not currently active in micro-loan program.

#### Control group

Women receiving any form of micro-loan as well as those who are not receiving any form of micro-loan but are not victims of IPV.

### **3.1.3 Dependent and independent variables**

The bi-annual incidence of IPV is the dependent variable while the direct and indirect factors such as dependency on the intimate partners and severity of the violence incidences forms the independent variables.

## **3.2 Theorems formulae and models**

### **3.2.1 Binary logistic regression model**

Binary logistic regression is a general linear model which examines the influence of various predictors (independent variables) on response variable measured on binary scale by

estimating the probability of event's occurrence and odd ratios. The binary response e.g. YES /NO, Success/ Failure and Case-control.

$$\text{logit}P(Y) = \log(P/1 - P-) = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \cdots + \beta_KX_K \quad (3.1)$$

where;  $Y = 1, Y = 0$ ; is the binary response variable where 1 indicates treatment and 0-control.

$P$ =is the probability that event of interest occurred

$X_1, X_2, X_3, \dots, X_k$ =the independent variables being investigated

$\beta_0 =$  is a constant

$\beta_1, \beta_2, \beta_3, \dots, \beta_k$ =regression coefficients to be estimated.

Where  $P$  is the probability when  $Y = 1$  i.e. the probability when the event of interest has occurred and  $1 - P$  is the probability when ( $Y = 0$ ), i.e. when the event of interest has not occurred. The logistic regression model has three very important components, random component which specifies the distribution for outcome  $Y$  conditioned on  $X(Y/X)$ , systematic component relates the parameters  $\beta$  to explanatory variables  $X$  and the link function which connects random and systematic component.

### 3.2.2 Random component

Supposing that  $Y$  is the response variable, which is YES/NO for the outcome variable, treatment/control. Such that  $Y = 1$  if the respondent is treated with the probability  $P(Y = 1/X) = p$  or ( $Y = 0$ ) otherwise with probability  $P(Y = 0/X) = 1 - p$ , then  $Y$  is Bernoulli distributed,  $Y \sim \text{Bern}(p)$  with probability distribution

$$f(y, p) = p^y(1 - p)^{1-y} \quad (3.2)$$

For the group data part of the IPV data, the age strata,  $Y$  being the response variable, the  $P(Y_i = 1/X) = p_i$ , for all  $i$ . Defining  $\alpha = \sum_{\text{all } i} Y_i$ , the number of women receiving the treatment in a sample for each arm of study ( $n = 20$ ) in both strata. Then  $\alpha$  is a random variable binomially distributed with  $n$  and  $p$  parameters,  $\alpha \sim B(n, p)$ .

### 3.2.3 Systematic component

For the random variable  $Y_i, i = 1, 2, \dots, n$  with expected values  $E(Y/X) = p_i, i = 1, 2, \dots, n$ , relates the predictors  $X_1, X_2, \dots, X_n$  as linear predictors

$$\beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \dots + \beta_K X_K$$

### 3.2.4 Link component

The expected value,  $p_i = E(Y/X)$  relates to explanatory variables by logit link  $\ln(p_i/1 - p_i)$  hence the logistic regression model says

$$\ln(p_i/1 - p_i) = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \dots + \beta_K X_K \quad (3.3)$$

### Assumptions

Logistic regression assumes that independent variables are not multivariate normal. The dependent variable is a binary outcome. The  $P(Y = 1)$ , the probability of event occurring hence the factor level 1 of the dependent variable represents desired outcome. The error term has to be independent, i.e. each observation must be independent. Assumes little or no multi-collinearity.

### 3.2.5 Chi-square test

Chi-square is a statistical test commonly used to compare observed data with data we would expect to obtain according to a specific hypothesis. For the IPV data, it is hypothesized that Economic empowerment and support group will improve in the treatment arm compared to control arm. The test assess if the deviations (differences between observed and expected) result is attributed to the intervention or was due to other factors. The chi-square tests null hypothesis, which states that there is no significant difference between the expected and observed result of the study.

$$\chi_c^2 = \sum \frac{(O_i - E_i)^2}{E_i} \quad (3.4)$$

where

$O$ – is the observed event

$E-$  is the expected event

### **Assumptions**

There are two very important assumptions which must be met for the chi-square test to hold.

- (1) Sample size assumption: The chi-square test can be used to determine differences in proportions using a two-by-two contingency table. That is a contingency table of the results of intervention/control at baseline and follow-up must be generated.
- (2) Independence assumption: The observations must be independent.

### **3.3 Data collection**

The main outcome is the bi-annual incidence of intimate violence. Questionnaires with two parts were administered to the participant after signing informed consent. The first part is designed to establish baseline information in the last 6 months while the second part solicits current information of the participants. The questions in the two parts are directly similar except that they the baseline construction questions are worded as "in the last six months?".

The questionnaires were issued to the participants in two different sessions, first the interventions and secondly the control group. The participants folded the survey and put into a basket at the back of the room. This method will make the participants more confident to answer questions and reduces non response biasness. The data is then entered into the statistical package for social scientist (SPSS).

### **3.4 Permission on use of data**

The Executive director, Research manager and the business program manager of Ujamaa Africa granted permission for the study to be conducted with the micro-loan subjects.

## CHAPTER 4

### RESULTS AND DISCUSSION

In this chapter discussion of results is done.

#### 4.1 Empirical results

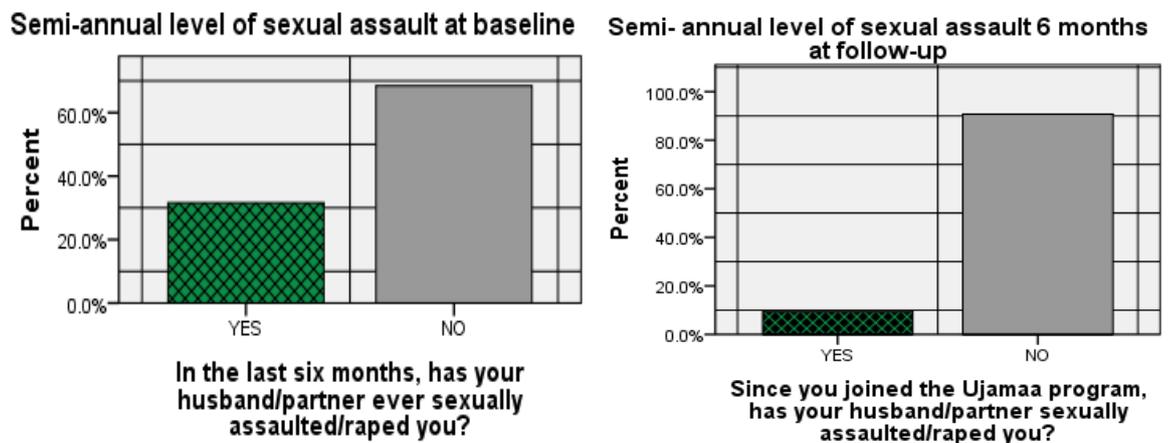


Figure 4.1: Sexual assault in the intervention group.

The intervention group registered a significant change 29.3% (24/82) to 7% (5/71); (p-value = 0.00935). There was no significant change in control group (p value=0.3143).

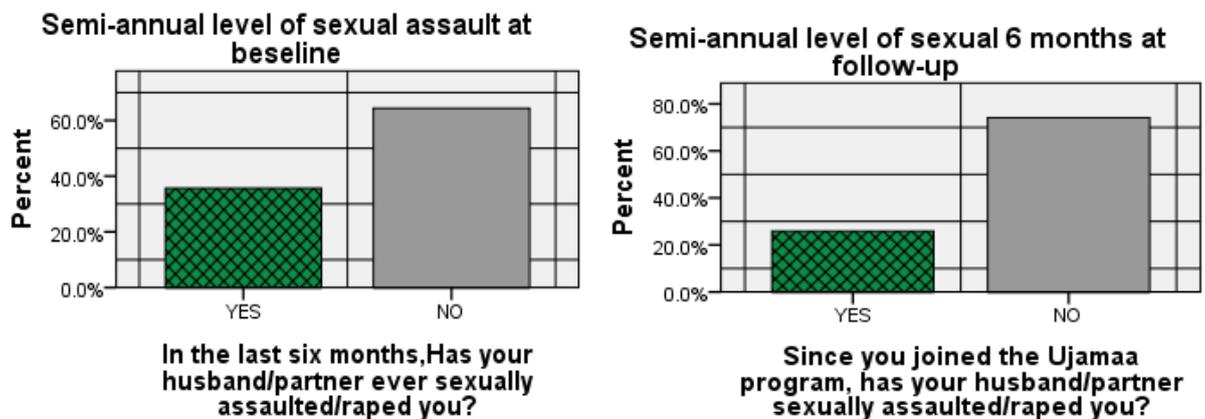


Figure 4.2: Sexual assault in control group.

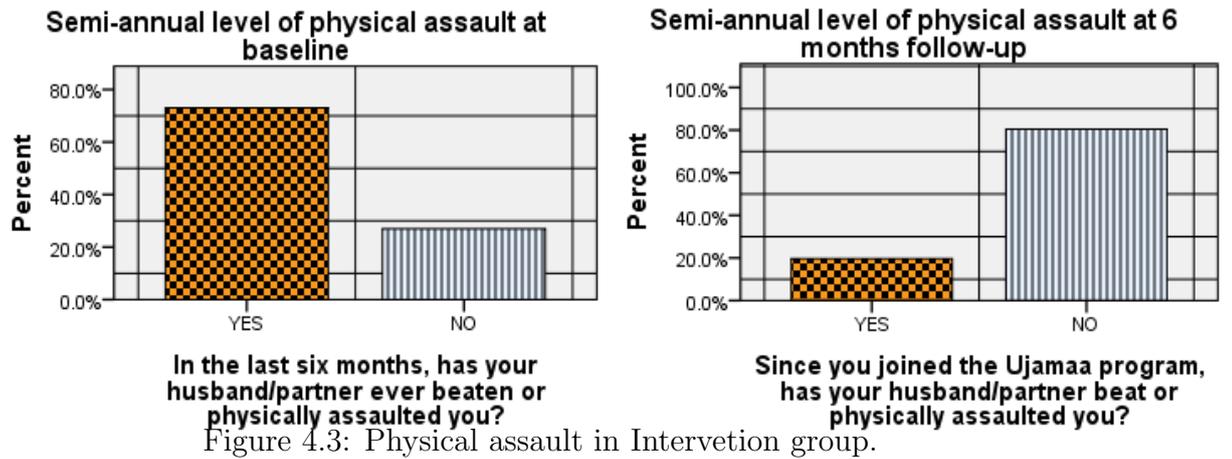


Figure 4.3: Physical assault in Intervetion group.

The intervention group shows significant change in physical violence from 69.5% (57/82) to 15.5% (11/71) (p value= 0.0000).

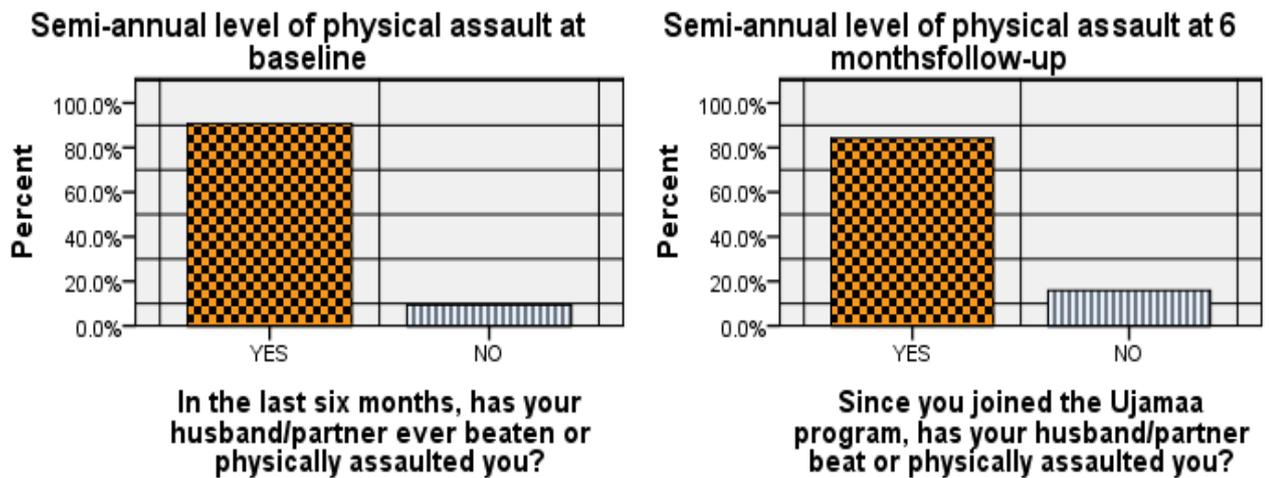


Figure 4.4: Physical assault in control Group.

There was no changed observed in the control group (p value=0.3658).

A total of 163 participants were enrolled into the interventions and control group. The intervention group ( $n = 82$ ) and control group ( $n = 81$ ). Data from the IPV study,

which provided loans and support group sessions to 82 ( $n = 82$ , intervention) women, showed high loan repayment rates as well as positive economic and health impacts. Retention rate in the program was 71/82 (87%) for the intervention and 68/81(84%) for the control arms at the six month follow-up. The loan repayment rate within the six month timeframe was as high as 95%, with 22/71 (31%) completely repaying their loan, and all save 10 women repaying at least a third of their loan.

Furthermore, at the end of the first six months of the project, Intervention arm recorded a significant profit increase from Sh. 266.36 to Sh.548.36 (p value= 0.009) on an average business day, from Sh. 486.61 to Sh. 864.71(p value=0.007) on a good business day and from Sh. 164.18 to Sh. 367.20(p value=0.007) on a bad business day. Thus, there was a significant increase in average profits from Sh. 247.67 to Sh. 556.65(p value=0.006).

The control group ( $n = 68$ ), showed no significant change in the profits. On a good business day, the profit changed from Sh. 274.05 to Sh. 265.80 (p-value = 0.841), on a bad business day from Sh. 92.38 to Sh. 85 (p value = 0.641) and on average business day from Sh. 168.33 to Sh164 (p value = 0.874). Thus the average profit changed from Sh. 174.02 to 178.25 ( p value = 0.879; no significant change).

The study showed significant reduction in Physical and Sexual assault on the intervention arm at 6 months follow up. Physical abuse reduced from 69.5% (57/82) to 15.5% (11/71) ; (p value= 0.0000) while sexual assault reduced from 29.3% (24/82) to 7% (5/71); (p-value = 0.00935). The control registered non-significant change in physical and sexual assault (p value=0.3658 and p value = 0.3143 respectively) six months later.

## 4.2 Logistic regression model and output

$$\begin{aligned} \text{Logit}(P) = & 0.23108 - 0.07817\text{womenraped} - 0.665\text{womenbeaten} \\ & +1.537\text{profitbadday} + 0.841\text{profitgoodday} \end{aligned}$$

Table 4.1: Inferential result summary

	Profit on a Good day	Profit on a Bad day	Physical assault	Sexual assault
Change	Ksh.486.61-864.71	Ksh 164.18-367.20	69.5%-15.5%	29.3%-7%
Intervention P-value	0.007	0.007	0.0000	0.00935
Control P-value	0.641	0.3658	0.3658	0.3143

Coefficients: Null deviance: 225.96 on 162 degrees of freedom

Table 4.2: Coefficients:

	Estimate	Std. Error	z value	Pr(>  z )
(Intercept)	0.23108	0.38093	0.607	0.5441
wmnrp	-0.07817	0.36056	-0.217	0.8284
wmnbtn	-0.66505	0.40629	-1.637	0.1017
Pbdum	1.53770	1.11278	1.382	0.1670
Pgdum	0.84077	0.38036	2.210	0.0271*

Residual deviance: 209.78 on 158 degrees of freedom

AIC: 219.78

## CHAPTER 5

### CONCLUSION AND RECOMMENDATION

#### 5.1 Conclusion

The research found that after economic empowerment the number of cases of women reporting physical assault dropped significantly showing that economic empowerment is a significant contributor to IPV among women living in the informal settlements in Nairobi. This could be linked to the idea that economic empowerment amongst women makes them contribute fair; perhaps equal to the family financial obligations which make men change their attitude about them. Such contribution also breeds mutual respect between the partners because women do not entirely cling to their male counterparts for survival. Instead, men see the women as compliments in the relationship. In addition, the women are liberated in that they can move out in case they experience any form of physical assault from their partners.

Besides, this study points out that economic empowerment among women has led to a sharp reduction in break-ups in these families in the informal settlements under scrutiny. This could be associated with the woman being able to provide for the family in case the male partner is not able to meet the family obligation. This then compromises the husbands position and his attitude towards the woman. The study proves that economic empowerment and psychosocial group support, *Tupone pamoja Initiative (TPI)*, significantly reduces intimate partner violence among women in low income population.

Yet, intimate partner violence does not start with economic disempowerment and end with economic empowerment. Early marriages and desperation for marriage, for instance, have been seen as contributors to IPV because out of the urge to get married some women end up in wrong relationships. Still, other women out of ignorance on the

consequences of this beast like act opt to keep into their marriages and stay in pain for the sake of their children. In addition, a fraction of women takes battery as part of marriage life, which needs to be solved internally. This is a misconception that needs to be addressed and debunked, economic empowerment or no!

## **5.2 Recommendation**

Thus, all the significant determinants of IPV need to be addressed. First, women need to be encouraged to go to school, beyond secondary level as this will equip them with communication skills that are vital in self expression. This will also illuminate their minds in matters to do with decision making and enable them to challenge their male counterparts in employment opportunities on equal measure. Research shows that there is an inverse relationship between higher education and intimate partner violence.

Comprehensive legislation needs to be put in place to curb this vice, with the perpetrators arrested and heavily sentenced. Situational factors like alcoholism need to be addressed because they are in some cases predictors of intimate partner violence, in that some drunken men descend on their partners in pretence of being drunk.

Empowering women is also paramount in taming IPV. This could be done by some of them being appointed to different leadership positions in government and corporations. This would boost their ego and largely alter the demeaning attitude men have towards them.

Further, women need to be involved in community development as well as in legislation and implementation of the same. This will go a long way in addressing this issue of IPV. Furthermore, formation of movements and non-governmental organizations like FIDA need to be encouraged to help curb and eradicate IPV and all other forms of gender-based violence. Also, gender equality needs to be a message of every leaders whether

political, religious or other.

Of much significance is the establishment and entrenchment in society of more financial institutions and organizations such as Kenya Women Finance Trust (KWFT). Such organizations owned and managed by women will empower women economically through job creation and related opportunities. This will not only empower women, but also make them enlightened and stop them from relying so much on their male counterparts which has been known to fuel intimate partner violence. With these, womens male partners will value them as co-principals in meeting family financial obligations, and decisively toll the death knell on intimate partner violence.

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