GENDER STATISTICS FOR EVIDENCE-BASED POLICIES:

Women's economic empowerment, health and gender-based violence

Edited by

Joy M. Kiiru, Laura Barasa, Phylis Machio, Mary Njeri & Maureen Gitonga

UNIVERSITY OF NAIROBI

UN WOMEN | WOMEN COUNT

Articles in this publication do not imply endorsement by UN Women of the accuracy of the information contained therein or of the views expressed. The opinions expressed are those of the authors and do not necessarily reflect the policies or views of UN Women.

Design and Layout:
Spear Sharp Education

TABLE OF CONTENTS

SECTION 3: GENDER-BASED VIOLENCE 185

Acknowledgement

Acronyms and Abbreviations

ADB	African Development Bank
AIDS	Acquired Immunodeficiency Syndrome
ANC	Antenatal Care
ASDSP	Agricultural Sector Development Support Programme
AWSC	African Women Studies Centre
CBK	Central Bank of Kenya
DRC	Democratic Republic of Congo
ESCWA	United Nations Economic and Social Commission for Western Asia
FAO	Food and Agriculture Organization
FGDs	Focus Group Discussions
FinAccess	Financial Access
FSD	Financial Sector Deepening
GBV	Gender Based Violence
GDP	Gross Domestic Product
GEST	Gender Equality Studies and Training Programme
GoK	Government of Kenya
HOI	Human Opportunity Index
HIV	Human Immunodeficiency Virus
IAP	Indoor Air Pollution
IASC	Inter-Agency Standing Committee
ICPD	International Conference on Population and Development
IEA	International Energy Agency
IFC	International Finance Cooperation
IAGAS	Institute of Anthropology, Gender and African Studies
ILO	International Labour Organization
IOp	Inequality of Opportunity
KARF	Kenya Audience Research Foundation
KDHS	Kenya Demographic and Health Survey
KICD	Kenya Institute of Curriculum Development
KIHBS	Kenya Integrated Household Budget Survey
KII	Key Informant Interview
KIPPRA	Kenya Institute for Public Policy Research and Analysis
KNBES	Kenya National Bureau of Economic Survey
KNBS	Kenya National Bureau of Statistics
KRA	Kenya Revenue Authority
KYC	Know Your Customer
LIMIC	Low Income and Middle-Income Countries
LPG	Liquified Petroleum Gas
LSE	Life Skills Education
mCPR	Modern Contraceptive Prevalence Rate
MDGs	Millennium Development Goals
MFIs	Microfinance Institutions

MMR	Maternal Mortality Rate
MoE	Ministry of Education
MoEST	Ministry of Education Science and Technology
MoH	Ministry of Health
NACC	National Aids Control Council
NASCOP	National Aids and STI Control Programme
NGAAF	National Government Affirmative Action Fund
NGOs	Non-Governmental Organizations
NHIF	National Hospital Insurance Fund
NSSF	National Social Security Fund
OECD	Organization for Economic Cooperation and Development
OLS	Ordinary Least Squares
PE	Physical Education
PNC	Pre-Natal Care
PRB	Population Reference Bureau
PSM	Propensity Score Matching
PSRI	Population Studies Research Institute
RAS	Refugee Affairs Secretariat
RPB	Reproductive Health Bill
RUM	Random Utility Model
SAARC	South Asian Association for Regional Cooperation
SACCOS	Savings and Credit Cooperatives
SDfG	State Department for Gender
SDGs	Sustainable Development Goals
SMEs	Small and Medium Enterprises
SRH	Sexual Reproductive Health
SSA	Sub-Saharan Africa
STDs	Sexually Transmitted Diseases
STEP	Skills Toward Employment and Productivity
STIs	Sexually Transmitted Infections
UHC	Universal Health Coverage
UN	United Nations
UNHCR	United Nations High Commission for Refugees
UNODC	United Nations Office on Drugs and Crime
UN Women	United Nations Entity for Gender Equality and the Empowerment of Women
UON	University of Nairobi
UNFPA	United Nations Population Fund
USA	United States of America
USAID	United States Agency for International Development
WEF	World Economic Forum
WHO	World Health Organization
WRC	Women Refugee Commission

Reflections on Gender Statistics and Graduate Student Research; The Journey and the Methodology

Joy Kiiru[1] and Maureen Gitonga[2]

Women in Kenya comprise 50.31 per cent of the population (World Bank, 2019). Their role in leadership and development is critical for Kenya to experience inclusive growth and shared prosperity. However, gender norms still tilt the balance and increase socio-economic marginalization and inequalities. Research reveals that when provided with an environment of equal opportunity, women can evidently, through their contributions, enhance and even double their contribution to the progress of their families and societies.[3] In order to provide solid evidence to policy makers, efforts are being made to compile data that illustrates socio-economic inequalities between men and women, and how these have impacted on socio-economic outcomes. The availability of gender-sensitive indicators and sex-disaggregated data is critical for a country like Kenya that aspires for gender equality and economic empowerment for women. Research can inform the need for and formulation of new policies or provide data for improvement of existing programmes. While the need for evidence-informed policy making is critical, there has been a gap in data availability and in analytical rigour of existing data. This has been coupled with a disconnect between researchers and policymakers in sharing research findings and integrating such into the policy making process. To address such challenges, a collaboration between the University of Nairobi, KNBS, the SDfG and UN Women was initiated. It demonstrates the synergies that accrue when data producers, users and policy makers work together to collect, analyse and decipher policy messages from gender statistics.

The genesis of this work can be traced to 2018 when a national baseline assessment on gender statistics in Kenya was being carried out. The University of Nairobi was invited by the SDfG to join the Inter-Agency Gender Statistics Technical Committee team of the Making Every Woman and Girl Count (Women Count hereafter). 'The Women Count programme is UN Women's global gender data programme that aims to bring about a radical shift in how gender statistics are created, used and promoted. The programme seeks to address the urgent need to increase the availability of accurate information on gender equality and women's rights in order to inform policy and decision-making'.[4] One of the key findings from the country assessment study was

---

1   Dr. Joy Kiiru is Senior Lecturer, UON. She served as Project Coordinator.
2   Maureen Gitonga is the Gender Statistics Programme Specialist at UN Women Kenya Country Office.
3   Jafar, N. (2009). Gender indicators in evidence-based policy making: Available at https://unstats.un.org/unsd/gender/Ghana_Jan2009/Doc24.pdf Date accessed 12th April 2021.
4   See https://www.unwomen.org/en/how-we-work/flagship-programmes/making-every-woman-and-girl-count

that there existed several nationally representative data-sets that were largely under-exploited with respect to analytical rigour. Such data-sets were potentially useful for informing policy and decision makers through deeper and more rigorous analysis and sharing of study results with relevant policy and decision makers.

The University of Nairobi is the biggest public university in Kenya and is also highly ranked in terms of research, academics and community engagements within the region. Collaboration with such an academic institution was deemed critical for several reasons. First, the University brings expertise through the staff directly involved in the programme and provides a good platform for capacity building and creation of a pool of gender statisticians. Second, the university holds immense convening power and has established partnerships with state and non-state actors. Collaboration with various stakeholders can stimulate and enrich policy discussions and encourage a participatory approach to policy and decision-making processes. Finally, the University of Nairobi as a strategic partner has several facilities and infrastructure that promote and support research and the research management process.

The Women Count Students Grants Programme

In March 2019, UN Women initiated a collaboration between the University of Nairobi, KNBS and the SDfG to build capacity for deeper analysis of gender statistics through support to graduate student research. The project had three critical components;

i.   provision and access to sex-disaggregated data-sets from KNBS.
ii.   capacity-building for gender statistics through expert mentorship and training.
iii. dissemination of gender statistics related research at national, regional and global levels.

The ultimate goal of the collaboration was three-fold: the first was the beginning of a process by UN Women to build a pool of gender statisticians through the provision of small research grants and expert coaching and training, the second objective was access to the largely under-exploited gender statistics data-sets at KNBS for deeper analysis by graduate students under the supervision of more senior academic staff at the University of Nairobi. The third objective of the project was to stimulate public discussions on various policy messages emanating from graduate students' research.

The project was designed following a multidisciplinary approach where various disciplines at the university were incorporated with a view of integrating both qualitative and quantitative methods of research and analysis. A call was made to graduate students from the School of Economics, IAGAS, AWSC, and PSRI to apply for small research grants to complement their Master's thesis research funding. A total of 37 applications were received against 16 small grants on offer. A shortlisting and selection committee comprising members from the university, KNBS and the SDfG was set up.

The selection and recruitment process involved a series of interviews and oral presentations of research ideas. This sought a clear demonstration of potential to complete the research and graduate within the project period (by December 2019). At the end of the selection process, 20 students were pre-selected on the condition that their qualification for a research grant would only be feasible upon successful submission and defence of the research proposal within a specified period. The University of Nairobi's standards and policies guided the entire proposal drafting, submission and defence processes. The selected students' designated university supervisors were recruited to be part of the project as expert mentors and advisors. At the end of the proposal preparation period, 17 of the 20 graduate students qualified for research grants. Since only 16 grants were on offer, one graduate student was designated '*reserve student*' meaning that the student would not receive any direct financial benefits; but, would be part of other project activities including conferences and other capacity-building opportunities under the project.

Research production and thesis writing

Once the grant awarding process was complete, grantees were expected to work under their respective supervisors on research and thesis writing. The project arranged several activities on the side to support this process for all grantees.

The UN Women gender statistics programme was already being implemented at the regional and global levels hence provided an opportunity for knowledge exchange. Once graduate students began drafting their full proposals, a knowledge-sharing forum was organised convening regional 'Women Count' project implementers alongside the team in Kenya, comprising graduate students, their supervisors and project implementers at the four institutions (UON, KNBS, SDfG and UN Women). In May 2019, the project held a three-day regional forum where graduate students had the opportunity to present their research proposals before an international audience and get feedback.

The issue of data sources and analysis featured prominently with many comments revolving around access to relevant data-sets. The project team in Kenya was taken to task to ensure that relevant data-sets were available and accessible to graduate students and that the analysis would be rigorous enough to answer the various research questions proposed.

Following the forum, KNBS facilitated a two-day workshop to inform graduate students of the various gender-disaggregated data-sets available on their portal and how to access them. Other capacity issues raised during the workshop included: academic writing, policy writing and the presentation of research to various audiences, prompting collaborative solutions to ensure that the supported graduate students were well equipped to deliver on the project objectives. At University of Nairobi's request, UN Women supported a three-day scientific writing workshop to help graduate students master the skills needed, not only for academic writing but also for communication, especially communicating research to non-technical audiences.

By June 2019, several graduate students had preliminary research findings and were ready to present to various audiences for feedback as they finalized the writing process. The project team took advantage of the 2nd Annual conference organized by KIPPRA under the theme '*A gendered approach towards unlocking the potential for sustainable development*'. The three-day conference was attended by high-ranking policy makers, civil society, researchers, and the media among other stakeholders. Through a partnership between UN Women and KIPPRA, the project secured invitations for all graduate students under the Women Count project and three presentation slots were slated for their research. The project team, with the help of student supervisors, selected the most advanced papers to be presented. These included work on gender wage differentials and media framing of femicide. This research was presented at a time when women in Kenya were being paid less than men for similar work (at 55 Kenya shillings for every 100 shillings paid to a man).[5] The conference presented an excellent opportunity to share the results and policy implications of these two studies with policy makers and the general public. A third presentation detailed the graduate students' research programme as an element of the Women Count project in Kenya. It highlighted the synergies that can be created through strategic collaboration with research producers, users and policy makers to advance gender statistics as a tool to promote gender equality and inclusivity.

The *16 days of activism against GBV* (25th November to 10th December 2019) foregrounded the paper on femicide as good evidence that there is need for action to stop violence against women. Given it's publicity, several organizations requested for the research and sought to work together with the lead author of the research.

Several organizations have since expressed interest in working with the young researchers to create evidence for various policy issues. Additionally, OXFAM requested to support graduate student training, offering two fully paid scholarships for graduate students to undertake a three-week training on feminist economics in Turkey. In addition, in April 2020, GEST at the University of Iceland collaborated with UN Women, under the students grants programme to offer two fully paid scholarships for alumni to undertake further training on gender equality in Iceland.

The multiple success of the graduate student research programme demonstrates the untapped potential and positive effects of working with young researchers to influence research-based evidence for policy-making and advocacy.

The publication

This publication is as a result of public demand for research produced under the graduate students' research programme. Upon graduation, former students grantees were invited to produce a research paper abstract in collaboration with their former supervisors for publication in a peer-reviewed research compendium. Expert

---

5   WEF (2017) Global Gender Gap report available at https://www.weforum.org/reports/the-global-gender-gap-report-2017 date accessed 13th April 2021

reviewers in the areas of women's economic empowerment, women's reproductive health and GBV were identified to review and work with authors to produce the final papers for this publication.

Their research is organized into three sections: Section 1 contains five papers on women's economic empowerment, covering such areas as financial health and access to credit, gender wage differentials, household energy choice and health outcomes, among others. Section 2 contains seven papers on women's reproductive health. These papers cover contraceptive use, teenage pregnancies, high school curriculum and SRH, among other papers. Section 3 has two papers on GBV. The first is the paper on media framing on femicide while the second paper analyses the reporting of sexual violence.

Each section begins with a brief introduction and summary of the papers and highlights the key policy recommendations derived from the each paper. We invite you to read the papers for knowledge and empowerment. Do not hesitate to reach out to us for more information pertaining to any of the research papers, the student grants programme or the publication in general.

SECTION 1:
WOMEN'S
ECONOMIC EMPOWERMENT

Introduction

Laura Barasa[1]

Women's economic empowerment is vital for achieving gender equality and inclusive economic growth and development. Women contribute to economic growth in different capacities; as employees, entrepreneurs, farmers, paid and unpaid domestic workers, among others. However, the socio-economic challenges in their daily lives results in unequal opportunities and outcomes.

Globally, women earn less than men. In addition, women are less likely to have access to financial institutions or to operate a bank account. 65% of men reported having a bank account against women at 58% (World Bank, 2015). This presents us with the challenge of IOp reinforced by gender inequality.

Few empirical studies in Kenya specifically investigate the impact of gender inequality on the economy. Yet such studies would be instrumental in raising awareness and contributing to evidence-based public policy. Empowering women is central to achieving the 2030 Agenda for Sustainable Development and specifically, the SDG 5: on Gender equality and womens' empowerment.

This section contains five studies on women's economic empowerment. The first examines inter-industry wage differentials in Kenya, by gender. It argues that while legislation is in place to narrow the gender wage gap, it seems to be doing so at a slow rate. Using a counter-factual analysis, the study investigates wage gaps in four main sectors: commerce and trade; manufacturing and construction; agriculture, fisheries, and mining; and service. It demonstrates that women earned less than their male counterparts in all four sectors. Unobservable characteristics (such as gender-based discrimination) rather than observable characteristics (like education levels), largely explain the wage gap in the commerce and trade sector as well as in the manufacturing and construction sector. This study concludes that there is evidence of wage discrimination against women in the labour market in these two sectors. In contrast, human capital differences and other observable differences explain the gender wage gap in the agriculture, fisheries, mining, and the service sectors. The study recommends that programmes encouraging women to undertake

---

1   Laura Barasa is a lecturer at School of Economics, University of Nairobi

Science, Technology, Engineering, and Mathematics are crucial in enhancing their competitiveness in the labour market. It notes that the government and the civil society initiatives are important in achieving wage equality.

The second study focuses on the determinants of household energy choice and the impact of the energy mix on women's health outcomes. The study argues that traditional energy types, such as solid fuels have deleterious effects on women in particular. The use of traditional fuels is linked to a higher incidence of women suffering from respiratory diseases and developing pregnancy complications. It notes that, biomass and coal are the main sources of household energy for a vast majority of the global population, which undermines the achievement of SDG 7 that advocates for affordable and clean energy for all. Results from a multinomial logit model analyzing the choice of household energy demonstrate that households with good infrastructure have a higher probability of using modern sources of energy such as low-pressure gas. Household income was also positively associated with the use of modern fuel types. However, larger households and rural households were more likely to use traditional sources of energy such as firewood. Rural households also had a higher probability of using traditional sources of energy compared to urban households. The results from a logit model investigating the impact of the energy mix on health outcomes reveals that women using firewood were more likely to have adverse health outcomes in comparison to those using electricity. This study concludes that programmes aimed at increasing income in rural areas and rural electrification would be vital for enhancing the adoption of modern energy sources.

The third study investigates the relationship between sources of credit and financial health, and the determinants of financial health with a focus on gender. It argues that while the financial inclusion gap has narrowed significantly, household financial health has deteriorated. Individuals are unable to exploit financial products to cope with shocks and risks. Using a probit model, the study finds that a majority of individuals seek credit from unregulated sources, including mobile money source providers and digital loans. Those borrowing from formal unregulated sources have worse financial health compared to individuals borrowing from formal regulated sources such as banks. While the study finds that women are financially excluded and more likely to borrow from formal unregulated sources, financial health is not determined by gender but by the source of credit. This study concludes that financial inclusion does not guarantee sound financial health. Transparency and consumer protection protocols should be put in place to encourage and promote non-predatory financial services.

The fourth study investigates the determinants of women's financial inclusion among women entrepreneurs in Dagoretti North Sub-County in Nairobi City, Kenya. The findings indicate that women's access and usage of financial services is affected by socio-economic factors like education level, age, social networks, and assets ownership. Documentation, distrust, financial literacy, accessibility, relationship with service providers, technological know-how, access by groups, and their financial status are

key determinants of women's financial inclusion. The study concludes that women entrepreneurs are still experiencing challenges in accessing financial services and products, thus the state, county governments and other development partners should facilitate training for informal women group members, particularly on financial access, management, loaning procedures and group management.

The fifth paper investigates the institutional challenges that affect fish traders' access to financial capital in Homa Bay County. Findings of the study indicate that the financial institution factors affecting access to financial services include lack of flexible terms of the repayment period, the policy of denying members financial access when a member has defaulted, prohibitive demands including the need for guarantors and security before one is offered a loan. This affected women more than men. Another institutional factor was perceived discrimination against individual loan applicants, perceived high interest rates, short repayment period and need for collateral. The study concludes that various factors limit access to financial capital from financial institutions by fish traders, especially women.

It is clear that the central arguments of these studies revolve around the achievement of gender equality. Empowering women and closing gender gaps will be vital for achieving economic growth and development, and the Agenda for Sustainable Development. I invite you to read the studies in this section that explore socio-economic challenges facing females in further detail and provide policy recommendations.

Inter-Industry Gender Wage Differentials in Kenya

Ahmed Abdiaziz[1] and Joy Kiiru[2]
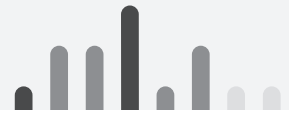
Abstract

In developed countries, the gap between male and female pay has been reducing significantly due to legislation and regulation. However, globally, the gap is widening, and even where the gap is narrowing, it is unacceptably slow. Using the 2013 World Bank Skills Towards Employability and Productivity Survey (WBSTEPS), this study seeks to investigate inter-industry gender wage gaps in Kenya. The results of the inter-industry gender pay differences reveal that even after accounting for personal characteristics and gender pay differences across the industries (except in the agriculture, fisheries, and mining sectors), women still receive less pay than men. In the commerce and trade sector, men's wages were 27.2 per cent higher than women's. Based on a counter-factual analysis, women's earnings would increase by 17.5 per cent if they had the same characteristics as men. In the services sector, men earned 28.5 per cent higher than women and women's wages would increase by 22 per cent if they had the same characteristics as men. In the manufacturing and construction sector, men earned 23.1 per cent more than women and the counter-factual analysis showed that their earnings would increase by 18.4 per cent if they had the same characteristics as men. In the agriculture, fisheries, and mining sectors, 57.9 per cent of the difference was due to human capital characteristics such as endowments. Admittedly, we find evidence of gender penalty in Kenya's labour market as there exists inter-industry gender wage differentials explained less by the observable characteristics such as age, marital status, experience, tenure, education, profession, and sector of employment but more by the unobservable variables such as discrimination.

Key words: inter-industry, gender wage gaps, counterfactual analysis

---

1   Ahmed Abdiaziz is a PhD student (Economics), UON.
2   Dr. Joy Kiiru is a Senior Lecturer, UON. She served as Project Coordinator.

Introduction and statement of the problem

Gender wage disparities in both developed and developing economies have become a priority agenda because of their perverse implications on poverty, as well as sustainable development. That is why SDG 5 aims at promoting gender equality, and by extension, close the persistence of gender gaps. Literature in SSA indicates that women are more likely to be employed on a part-time basis in the informal sector, and often in precarious employment with less pay (Agesa, 1999; Kabubo-Mariara, 2003; Nordman & Wolff, 2009). Over the last few decades, there has been considerable momentum on the examination of the existence of inter-industry gender pay disparities, both across time and countries, with certain sectors paying more than others even after controlling the divergence in workers' endowments. This is more pronounced when examined from a gender perspective.

Gender parity is vital to the competitiveness of a country and enterprise efficiency, which accelerates growth and development of countries because it. Kenya ranked 109 in the 2020 WEF with a gender gap score of 0.67, meaning that women were 33% less likely to have the same opportunities as men. Globally, an estimated $160.2 trillion is lost in terms of human capital due to gender disparity. This is double the value of global GDP (World Bank, 2018). Countries that are more gender-equal such as Iceland, Finland, and Sweden, rank top among the happiest nations in the world, motivated by social inclusion and free public services. The ILO report shows that gender pay gaps are found almost in all countries (ILO, 2018, 2019). First, on average, women earn 20 per cent less than men across the world. Second, factors that often determine wages such as level of education do not seem to explain the gender pay gap. Mothers earn lower wages than non-mothers, in what is commonly referred to as the '*motherhood penalty*'. There is also a tendency for wages to be lower in enterprises where the workforce is predominantly female. Closing the gender wage gap is vital to obtaining social justice for employed women and achieving the SDGs.

Among the greatest social injustices the world-over is the presence of gender disparities in earnings. In the past few years, there have been attempts to substantially reduce this phenomenon, with developed countries making huge strides towards this goal. Even though the gender earnings gap is narrowing in developing countries, they still lag behind on the world map. More effort is needed if SDG 5 is to be achieved, which requires achieving full, productive, decent work and employment for women and men, young people and persons with disabilities, and equal pay for work of equal value.

Prior to 1994, the share of formal employment to total employment dominated Kenya's labour market. However, the informal sector later became dominant with a larger share of employment.

As shown in Table - T1, the trends of wage employment both in the formal and informal sectors, have been on a steady rise since 2014. For instance, wage employment in the formal sector rose by 5 per cent, while that of the informal sector rose by a paltry 3

per cent. Whereas the statistics paint a positive picture of the employment situation, it conceals the vital differences that exist in employment in terms of gender. According to the KNBES (2019), there exists a marked gender difference in wage employment, more so in some sectors.

The manufacturing industry has had the highest gender wage differential since 2018. This is a clear indication that certain sectors have a contributing role in creating gender wage differentials. Nonetheless, the numbers are still deficient because they do not point out to the differences in the skill endowment of the employees. This leads to an inconclusive evidence of discrimination against women in the labour force.

Notably, the statistics suggest that females' participation in the workforce is low, more so in the industrial sector. Female participation is also low in the non-industrial sectors such as administrative and support services. On the other hand, females dominate in household, human health, and social work activities. Interestingly, the education sector showed equal gender distribution in employment. However, even though differences still existed in the education sector, equal gender distribution in the employment pattern was more evident from 2010 to 2015.

According to the WEF (2018), at the global level, working women are paid 63 per cent of what men earn for the same job and earn 50 per cent less than men annually. Additionally, women are much more likely to perform unpaid duties, including household activities. Such gender wage disparities in the labour market are prevalent in Africa, but significantly in Kenya (Kabubo-Mariara, 2003; ADB, 2005). Women are less likely to participate in the labour force, and while in it, they earn significantly less than men with the patterns being more pronounced in some sectors such as agriculture. While consensus exists regarding the presence of systemic gender earnings differentials in Kenya, the existence and extent of the gender earnings gaps across sectors is less obvious. Despite improvements in recent years, differences in employment between men and women still persist KNBS, 2017.

Women's industrial participation has been low and diverging. Whereas their participation in agriculture remains high, it has been on a decline. Empirical studies in Kenya reveal the existence of gender wage disparities (Agesa, 1999; Kabubo-Mariara, 2003). These studies, however, use the Oaxaca-Blinder decomposition framework to examine the gender pay gap with industry variables treated as control variables in the earnings equation. Earlier studies on wage differentials have thus failed to capture inter-industry wage differentials. This study departs from the use of the Oaxaca-Blinder decomposition framework and applies a measure of the gender wage gaps by industry proposed by Fields & Wolff (1995) and Horrace & Oaxaca (2001) as it considers the inter-industry gender pay variations.

In this study, it is hypothesised that gender differences in wages are more amplified in some sectors than in others and seeks to examine how industry effects contribute

to gender pay differentials in Kenya. More specifically the study seeks to establish the existence and magnitude of gender pay differentials at the industry level and to decompose the gender wage differentials to unearth the contribution of the different factors in explaining gender wage differentials.

Review of related literature

Several theories of wage formation have been put forward over time to explain what determines wages. These include the efficiency wage hypothesis which holds that labour efficiency depends on the wage paid to workers. These models suggest that the efficiency of workers is positively related to their real wage and that wage cuts automatically lead to increased labour costs. Adam Smith was the first to propose the idea of compensating wage differentials in 1776. Smith pointed out that compensating wage differentials exist to reward employees for non-wage considerations of the job. This theory suggests that pay disparities among employees exist due to different characteristics of jobs within and between firms.

He postulates that gender pay disparities exist not due to employer discrimination against women, but due to differences in worker productivity, education and tenure. According to the human capital theory, human capital is associated with individual attributes such as education, sex, race, and employment history. Education increases workers' skills, and subsequently increases their productivity and earnings (Mincer, 1974; Becker. 1964). Further, institutions such as labour unions advocate and influence both monetary and non-monetary considerations in the labour market. They individually bargain for higher wages as employees face difficulties in demanding for higher wages (Freeman & Medoff, 1984).

A study by Kabubo-Mariara (2003) explored the causes of gender earnings disparity in Kenya using multinomial logit techniques and the OLS. The author found that years of schooling determined the choice of occupation and earnings. Decomposition results of gender pay gaps show the existence of gender bias in favour of men across sectors. Another study by Agesa (1999) found that gender wage disparities were attributable to discrimination. Milana (2018) found that being female decreased the expected salary by 60 per cent before taking into consideration other factors. The authors found a significant gender pay differential in the film industry, with women making 55 cents for every dollar a man earned. In another study Confurius, Gowricharn & Dagevos (2018) established the inability of the human capital theory to account for the observed differences in SSA and the Netherlands.

Industry affiliation has also been found to influence gender wage disparities. Moser (2018) explored the sources of the gender pay gap and showed that industry affiliation accounted for 46 per cent of the gender pay gap. Georgia, Khitarishvili, Rodriguez-Chamussy & Sinha (2018) established the presence of intra-industrial pay gap. They noted that higher inter-industry gender pay differentials existed in healthcare and

training, followed by trade and manufacturing. Various authors also reported similar findings (Ulyana, 2012; Heinze & Wolf, 2010; Magda, Rycx, Tojerow & Valsamis, 2008; Gannon, Plasman, Ryex & Tojerow, 2007).

Blundell, Dias, Goll & Meghir (2019) investigated the effect of education on gender wage disparities in the United Kingdom. They found that training could reduce the gender pay gap due to the dominance of part-time work and unemployment. In Europe, Machini & Puhani (2003) found that men with college education on average received, higher wages in comparison to female graduates. In addition, the authors found that the college major considerably explained wage differences among female and male workers. Similarly, Dolado, Felgueroso & Jimeno (2003) showed that young and more learned women had higher participation in the labour market relative to their older and less educated counterparts.

Kaya (2019) investigated gender wage differentials across earnings distribution by evaluating the role of corporate segregation. The author noted that the existence of discriminatory employment patterns was greater at the top of the ladder than at the lower levels. This pattern became worse later in women's careers, among workers in the same firm. In another study, Fitzenberger & Wunderlich (2002) found that gender pay differences have considerably reduced in the lower portion of the wage distribution for low and medium-skilled women than for high-skilled women.

A study by Denning, Jacob, Lefgren & Lehn (2019) noted that differences in the number of hours worked contributes to gender earnings inequality and that women worked fewer hours. Simon, Sanroma & Ramos (2017) also investigated gender pay variations among permanent and part-time employees. They concluded that employees working on part-time basis experienced a substantial pay gap in Spain largely due to earnings distribution. Hence, human capital endowments often define the wage disparity.

Literature review reveals that gender wage disparities are persistent and have been subject to extensive empirical investigation. Overall, the results demonstrate the existence of pay premia in different jurisdictions and different periods, casting doubt on the existence of a perfectly competitive labour market. Thus, literature suggests that a worker's wage is not exclusively determined by their endowment characteristics, but also other attributes that include differences in the sector of employment. Nevertheless, empirical evidence in the Kenyan context is lacking. Among other factors identified in the literature as contributing to the wage premia are gender and the divergent endowment set of individuals.

The endeavour to measure discrimination encounters several challenges. The exclusion of unobservable variables such as ability and motivation, among others that explain wage differentials, causes selectivity bias in the estimates. Additionally, rather than exploring the extent of inter-industry gender wage disparities, most studies focus on the disparities in earnings between male and female workers in developing countries.

It is also difficult to generalise conclusions due to data limitations in many countries since the surveys are conducted over different periods. Several studies that focus on high-income countries, like the USA and some countries in Europe indicate the presence of inter-industry gender pay variations for identical enterprises, and workers in similar occupations, controlling for labour and enterprise characteristics. This study addresses the shortcomings using a novel globally comparable data collection technique for twelve low-income countries including Kenya. This data-set, therefore, allows for the determination of the extent and magnitude of gender wage differences and the decomposition of the gender wage differentials in order to bring out the contribution of various factors to gender pay disparities in Kenya.

Materials and methods

This study adopts the standard Mincerian (log-earnings) theoretical framework to investigate inter-industry gender earnings disparities. According to this theory, the divergence in the earning profiles of individuals is due to the human capital differences, including years of schooling, innate attributes, and their experience in the labour market. This study estimated a statistical econometric model of the standard Mincerian (log-earnings) function by gender.

Data sources

The STEP survey conducted in 2013 by the World Bank was used to test the hypothesis. The survey gathered sex-disaggregated data on the supply, demand, and distribution of skills in several developing countries including Kenya. In addition, the survey includes information about family, health characteristics, and language, which provide additional information that serve as controls.

Findings and Discussion

On average, the individuals in the sample were 32 years old, with the minimum observed being 15 years and the maximum at 64 years old, working for approximately 49 hours a week. The minimum time spent at work was one hour while the maximum time was 126 hours a week. On average, the wages were about Kshs. 146 per hour with the highest paid receiving Kshs. 10,000. The average earnings per month were Kshs. 21,475 with the highest paid earning Kshs. 1,290,323 and the least paid Kshs. 240 per month. This illustrates a case of the existence of pay differentials among employees.

In terms of experience, the average years of tenure in employment was four years. The minimum period of experience was less than one year and the highest was 44 years, implying that wage earners also exhibit considerable differences in their level of experience. About 56 per cent of the sample were men. Also, 2 per cent of the sample was employed in agriculture, fisheries, and mining; while 15 per cent were employed in the manufacturing and construction sectors. In addition, 29 per cent of the workforce in the trade sector was male, while that of the service sector was 54 per cent. This was not

surprising given that the sample was primarily based in urban locations. On average, the workers had 10 years of schooling (i.e., high school education and vocational training). The highest number of years in schooling was 22 (i.e., tertiary and university education).

Table - T2 presents the summary of the statistics.

Test of differences in wage distributions across industries

The test of differences in wages across the sectors presented in Table - T3 reveals that men earn higher wages than women across all sectors. As to whether the difference in wages between males and females is statistically different, a univariate test of differences in means was adopted and it is evident that the observed wage differences by gender are statistically significant in the service, trade, manufacturing and construction sectors. However, no significant differences are observed in the agriculture, fisheries, and mining sectors. This can be attributed to the small sample observed within these sectors. Nonetheless, failure to observe gender gaps in the sectors could potentially be because they are characterised by low pay and menial work.

Gender analysis of wage differentials

This study used a Mincerian wage equation model to examine the existence of gender wage differentials across sectors, augmented with three dummy variables. An OLS regression, with the outcome variable being the natural logarithm of the monthly earnings, was estimated. The results in Table - T4 show the male sample, female sample and the combined sample. The base industry with the highest number of observations was the service sector.

It was observed that employees working in the agriculture, manufacturing, and construction sector, on average, received a higher income than those in the service sector. The difference was insignificant for the agriculture, fisheries, and mining sector. Studying the male sample, the same pattern was observed. The difference in wages between agriculture, fisheries, mining, and service sectors was statistically significant. In the female sample, the difference in earnings across the agriculture, fisheries, mining, manufacturing and construction, commerce/trade and the service sectors was statistically non-significant. This is in line with existing literature such as Heinze & Wolf (2010) and Magda et al. (2008) who found that the gender wage gap varied across establishments. The findings of this study are also supported by those of Gunewardena et al. (2009) who found substantial differences in the remuneration for males and females with the same productive characteristics.

On the other hand, human capital characteristics influenced wage distributions. The education premium was positive, supporting the observation that education is positively associated with compensation. It was observed that the education premium was higher for men (β=0.455) than for women (β=0.424). This is in line with the theoretical expectation that education increases workers' skills and subsequently increases their productivity, hence increased earnings (Mincer, 1974). Further, empirical evidence

demonstrates the existence of gender-earning disparities across sectors. Various studies found that men with college education on average received higher wages than female graduates and that the college major considerably explained wage differences among female and male workers (Kabubo-Mariara, 2003; Machini & Puhani,2003; Agesa, Agesa, & Dabalen, 2013; Agesa, Agesa, & Dabalen, 2009).

The findings also show that marital status is negatively associated with wages, contrary to the empirical literature which finds that being married is associated with higher wages (Nwaka, Guven-Lisaniler, & Tuna, 2016).

Inter-industry gender wage differentials

Even after accounting for individual characteristics, Table - T5 shows that gender pay differences exist across the industries except in the agriculture, fisheries, and mining sectors.

It was observed that females' wages in the service sector were lower than those of the males with higher education being associated with a higher premium. In addition, more years of work experience and a worker's age were associated with higher earnings. The findings also revealed that in the manufacturing and construction sectors, females' wages were 0.21 per cent lower than males' wages. In the service sector where women dominate, the education premium was considerably lower. This implies that the acquisition of more education was not highly compensated in the service sector. Further, the results revealed that women in the commerce/trade sector earned 0.21 per cent less than males. It is also in this sector where the education premium was the least when compared to other sectors.

Decomposition of inter-industry gender wage differentials

In order to investigate the factors that explain the inter-industry gender wage differences, this study decomposed the male-female earnings gap by applying the Oaxaca (1973) and Blinder (1973) approach. Table - T6 displays the results of the inter-industry gender wage differentials.

At 36.7 per cent, the gender pay disparity was highest in the agriculture, fisheries, and mining sector. This was followed by the service sector at 28.5 per cent. The commerce/trade and manufacturing and construction sectors had a gap of 27.2 per cent and 23.1 per cent, respectively.

A smaller portion of the inter-industry gender wage variation was attributed to returns on skills even after accounting for a wide range of individual characteristics; age, marital status, experience, tenure, education and profession, among others. In the agriculture, fisheries, and mining sector, 57.9 per cent of the difference was due to human capital characteristics such as endowments. In the manufacturing and construction sector, over three types of the gender wage differences could not be explained by observable characteristics. In the commerce/trade sector and the services sector over the wage gap was due to unobservable factors (such as discrimination) at four times and one

and a half times, respectively. This demonstrates that discrimination against women is highest in the trade and commerce sector, followed by the manufacturing and construction sector. In contrast, this is less true in the agriculture, fisheries, mining, and services sector where the difference is mainly attributed to human capital and other observable factors. This proves that men have an unfair advantage over women in relation to wages.

The average gross hourly wage for males is Kshs 9.679 in agriculture, fisheries and mining sector while that of women is Kshs 9.223, yielding a wage difference of 0.457. This wage difference can be decomposed into three parts; the endowment part, which reveals the mean increase in the females' wage if they had the same characteristics as males. The second part measures the change in females' wage when using the males' coefficients to the females' characteristics. The third part quantifies the simultaneous effect of change in endowments and coefficients.

In the manufacturing and construction sector the mean wage for men is Kshs. 12,605.70 and that of women is Kshs. 9,697.20, which amounts to a difference of 23.1 per cent (Table - T6). The endowment component suggests that women's' wage would increase by 18.4 per cent if they had the same characteristics as men. The coefficient's component implies that women's wages would increase by 15 per cent if men's coefficients were applied to the women's characteristics. In the commerce/trade sector, the mean men's wage is Kshs. 12,059.10 while that of females is Kshs. 8,778.60. This amounts to a difference of 27.2 per cent with the endowment component reflecting that women's wage would increase by 19.3 per cent if they had the same characteristics as men. The coefficient's part amounts to an increase of 17.5 per cent if men's coefficients were applied to the women's characteristics. In the services sector, the mean men's wage is Kshs. 14,806.10 while that of women is Kshs. 10,582.30, which amounts to a difference of 28.5 per cent with the endowment component suggesting that women's wage would increase by 22.0 per cent if they had the same characteristics as men. The coefficients part amounts to an increase of 20.9 per cent if men's coefficients were applied to the women's characteristics.

Conclusion

Gender wage disparities exist in numerous countries and is a pertinent policy issue in the developing world. The Kenyan government has emphasised supporting women by implementing projects and programmes to promote women empowerment such as; gender mainstreaming in national development processes and championing for the socio-economic empowerment of women. This study analysed inter-industry gender wage differentials in Kenya using an OLS regression and data from the 2013 World Bank STEP survey.

The study demonstrates the existence of inter-industry gender wage differentials. After controlling for relevant individual characteristics, a small portion of the inter-industry gender earnings differentials is explained by gender differences in characteristics.

This is an indication that wage discrimination against women is greater compared to the differences in human capital, especially in the commerce/trade sector and the manufacturing and construction sector. However, in the agriculture, fisheries, mining, and the services sector, much of the differences are attributed to human capital and other observable factors. This clearly shows that women are treated unfairly compared to men.

Policy Relevance of the Work

The empirical analysis in this study reveals that inter-industry gender wage disparities exist partly because of the differences in human capital endowments of men and women and partly due to unobservable factors such as discrimination. We established that gender earnings inequality was greatest in the services sector followed by the commerce/trade sector and the manufacturing and construction sector, respectively. We also found that when women had the same characteristics as men, women's wages increased in the services, commerce/trade and in the manufacturing and construction sectors. Consequently, more emphasis should be put on improving wage equality in these sectors. This can be achieved collectively by the government and the civil society. For instance, in the manufacturing and construction sector, more women should be empowered through training in Science, Technology, Engineering, and Mathematics at the tertiary level of education for them to be competitive. Further, institutions and governments should create awareness concerning gender earnings differentials.

Areas for further research

The current study examined inter-industry gender wage differentials in Kenya. The results show that there exists male-female differences in earnings across industries and therefore future studies should look into public-private gender wage differentials in Kenya and use panel data to make causal interpretations.

References

Agesa, R. U. (1999). The urban gender wage gap in an African country: Findings from Kenya. *Canadian Journal of Development Studies/Revue canadienne d'études du développement*, *20* (1), pp.59-76.

Agesa, R. U., Agesa, J., & Dabalen, A. (2009). Changes in wage distributions, wage gaps and wage inequality by gender in Kenya. *Journal of African Economies, 18(3)*, pp.431-460.

Agesa, R. U., Agesa, J., & Dabalen, A. (2013). Sources of the persistent gender wage gap along the unconditional earnings distribution: Findings from Kenya. *Oxford Development Studies*, *41*(1), pp.76-103.

Becker, G. S. (1964). Human capital: A theoretical and empirical analysis, with special reference to education. University of Chicago press.

Blinder, A. S. (1973). Wage discrimination: Reduced form and structural estimates. *Journal of Human resources*, pp.436-455.

Blundell, R., Dias, M. C., Goll, D. A., & Meghir, C. (2019). *Wages, experience and training of women over the lifecycle* (No. w25776). National Bureau of Economic Research.

Combet, B., & Oesch, D. (2019). The gender wage gap opens long before motherhood. Panel evidence on early careers in Switzerland. *European sociological review*, 35(3), pp.332-345.

Confurius, D., Gowricharn, R., & Dagevos, J. (2019). Labour market participation of Sub-Saharan Africans in the Netherlands: The limits of the human capital approach. *Journal of Ethnic and Migration Studies,* 45(13), pp.2328-2347.

Denning, J. T., Jacob, B., Lefgren, L., & Lehn, C.V. (2019). The Return to hours worked within and across occupations: Implications for the gender wage gap (No. w25739). National Bureau of Economic Research.

Dolado, J. J., Felgueroso, F., & Jimeno, J.F. (2003). Where do women work? Analysing patterns in occupational segregation by gender. *Annales d'Economie et de Statistique,* pp.293-315.

Exchange, G. (1984). Efficiency-wage theory: Four views,. *American Economic Review*, 74(2), pp.79-83.

Fields, J., & Wolff, E. N. (1995). Interindustry wage differentials and the gender wage gap. *ILR Review,* 49(1), pp.105-120.

Fitzenberger, B., & Wunderlich, G. (2002). Gender wage differences in West Germany: A cohort analysis. *German Economic Review*, 3(4), pp.379-414.

Freeman, R. B., & Medoff, J.L. (1984). What do unions do? *Indus. and Lab. Rel. Rev.,* 38, p.244.

Gannon, B., Plasman, R., Ryex, F., & Tojerow, I. (2007). Inter-industry wage differentials and the gender wage gap: Evidence from European countries. *Economic and Social Review,* 38(1), p.135.

Gunewardena, D., Abeyrathna, D., Ellagala, A., Rajakaruna, K., & Rajendran, S. (2009). Glass ceilings, sticky floors or sticky doors? A quantile regression approach to exploring gender wage gaps in Sri Lanka. *Labor Markets and Economic Development,* p.426.

Heinze, A., & Wolf, E. (2010). The intra-firm gender wage gap: A new view on wage differentials based on linked employer–employee data. *Journal of Population Economics, 23*(3), pp.851-879.

Horrace, W. C., & Oaxaca, R.L. (2001). Inter-industry wage differentials and the gender wage gap: An identification problem. *ILR Review,* 54(3), pp.611-618.

ILO: (2018/2019). *Global Wage Report: What lies behind gender pay gaps?* Geneva: International Labour Office.

Kabubo-Mariara, J. (2003). Wage determination and the gender wage gap in Kenya: Any evidence of gender discrimination?

Kaya, E. (2019). Gender wage gap across the quantiles: What is the role of firm segregation?

Khitarishvili, T., Rodriguez-Chamussy, L., & Sinha, N., (2018). *Occupational segregation and declining gender wage gap: The case of Georgia.* The World Bank.

Leibenstein, H. (1957). The theory of underemployment in densely populated backward areas. *Economic backwardness and economic growth.*

Machin, S., & Puhani, P. A. (2003). Subject of degree and the gender wage differential: Evidence from the UK and Germany. *Economics Letters,* 79(3), pp.393-400.

Magda, I., Rycx, F., Tojerow, I., & Valsamis, D. (2008). Wage differentials across sectors in Europe: An East-West Comparison.

Milana, T. (2019). Gender inequality in Hollywood: The magnitude, determinants, and influence of the gender wage gap in the Film industry.

Mincer, J. (1974). Schooling, Experience, and Earnings. Human Behavior & Social Institutions No. 2.

Morchio, I., & Moser, C. (2020). The gender pay gap: Micro sources and macro consequences. *Available at SSRN 3176868*.

Nordman, C. J., & Wolff, F. C. (2009). Islands through the glass ceiling? Evidence of gender wage gaps in Madagascar and Mauritius. *Labor Markets and Economic Development,* 25, pp.521-544.

Nwaka, I. D., Guven-Lisaniler, F., & Tuna, G. (2016). Gender wage differences in Nigerian self and paid employment: Do marriage and children matter? *The Economic and Labour Relations Review*, 27(4), pp.490-510.

Republic of Kenya (2019). Economic survey – KNBS. Nairobi: Government Printer.

Republic of Kenya (2019). KNBS. (2017). *Women and men in Kenya facts and figures,* KNBS, Nairobi: Government Printer.

Shah, F. (2005). The Kyrgyz Republic: *A gendered transition, soviet legacies and new risks: Country gender assessment.* East and Central Asia Regional Department and Regional and Sustainable Development Department, Asian Development Bank.

Simon, H., Sanroma, E., & Ramos, R. (2017). Full-and part-time wage differences in Spain: An analysis along the wage distribution. *International journal of Manpower.*

Ulyana, K. (2012). Inter-industry wage differentials. Evidence from developed and developing countries. *Unpublished Doctoral dissertation, Kyiv School of Economics.*

WEF (2017). *The Global Gender Gap Report. Geneva.* WEF.

WEF (2018). *The Global Gender Gap Report. Geneva.* WEF.

Weiss, A. (1980). Job queues and layoffs in labour markets with flexible wages. *Journal of Political economy*, 88(3), 526-538.

Wodon, Q. T., & De La Briere, B. (2018). *Unrealized potential:* The high cost of gender inequality in earnings. World Bank.

Wodon, Quentin T.; de la Brière, Bénédicte. (2018). Unrealised potential: The high cost of gender inequality in earnings. The cost of gender inequality. Washington, DC: World Bank.

Tables and figures

Table - T1: Employment Trends in Kenya ('000s)

	2014	2015	2016	2017	2018
Wage Employees	2401.80	2513.70	2592.00	2699.50	2765.10
Self-employed and unpaid family workers	103.00	123.20	132.50	139.40	152.20
Sub -Total	**2504.80**	**2636.90**	**2724.50**	**2838.90**	**2917.30**
Informal Sector	11851.00	12566.20	13308.30	14103.80	14865.90
TOTAL	**14355.80**	**15203.10**	**16032.80**	**16942.70**	**17783.20**

Source: Republic of Kenya (2019) – KNBS, Economic Survey.

Table - T2: Summary Statistics

Variable	N	Mean	Std. Dev.	Min	Max
Age (in years)	2,422	31.75	9.650	15.00	64.00
Hours Worked (in the last 7 days)	2,415	49.15	21.67	1.00	126.00
Hourly earnings (Kshs.)	2,235	146.1	400.5	0.884	10,000
Monthly wage (Kshs.)	2,235	21475	44803	240.00	1,290,323
Industry (=1 if Agriculture, fishery, mining, 0 otherwise)	2,420	0.0236	0.152	0.00	1.00
Industry (=1 if Manufacturing and construction, 0 otherwise)	2,420	0.151	0.358	0.00	1.00
Industry (=1 if Trade, 0 otherwise)	2,420	0.289	0.454	0.00	1.00
Industry (=1 if Services, 0 otherwise)	2,420	0.536	0.499	0.00	1.00
Experience (years)	2,419	4.533	5.053	0.00	44.00
Sex (=1 if male, 0 if female)	2,422	0.563	0.496	0.00	1.00
Age in years started schooling	2,318	6.731	1.059	3.00	18.00
Education (years)	2,412	10.505	4.479	0.00	22.00

Table - T3: Inter-Industry Gender Wage Differentials

	Agriculture, fishery, Mining Sector	Manufacturing and Construction Sector	Commerce/ Trade Sector	Services Sector
Constant	6.832*** (2.91)	6.836*** (8.81)	8.580*** (13.28)	5.800*** (12.65)
Gender (=1 if female, 0 otherwise)	-0.0919 (-0.24)	-0.238** (-2.06)	-0.212*** (-2.65)	-0.246*** (-4.26)
Education (Natural logarithm of years of schooling)	0.392** (2.23)	0.332*** (4.78)	0.256*** (4.84)	0.576*** (13.80)
Tenure (years in current employment)	-0.455 (-0.80)	0.148 (0.98)	0.115 (0.81)	0.238*** (2.74)
Tenure squared	0.116 (1.26)	-0.0188 (-0.76)	0.00123 (0.05)	-0.0210 (-1.46)
Marital Status (=1 if married, 0 otherwise)	0.167 (0.25)	-0.0587 (-0.57)	-0.101 (-1.05)	-0.145** (-2.18)
Marital Status (=1 if divorced/ widowed/separated, 0 otherwise)	-0.978 (-1.08)	-0.110 (-0.65)	-0.578*** (-3.44)	-0.0986 (-0.77)
Age (Years)	0.501 (0.68)	0.472** (2.32)	-0.0252 (-0.13)	0.574*** (4.34)
N	31	347	618	1226

t statistics in parentheses, *p<0.1, **p<0.05, ***p<0.01

Table - T4: *Gender Wage Gap across the Wage Distribution by Industry of Employment*

	Males	Female	Difference (1-2)	Standard Error	t-stat	p-value
Agriculture, fishery, mining	9.679	9.223	0.457	0.424	1.10	0.291
Manufacturing and construction	9.442	9.18	0.263	0.102	2.55	0.011
Trade	9.395	9.088	0.306	0.081	3.80	0.000
Services	9.602	9.276	0.326	0.061	5.35	0.000

Source: Author (2019). Based on STEP survey conducted in 2013 by the World Bank.

Table - T5: *Gendered Analysis of Wage Differentials*

	Male Sample	Female Sample	Overall Sample	Inter-Industry Analysis
Education (Natural logarithm of years of schooling)	0.455*** (9.70)	0.424*** (11.68)	0.432*** (15.03)	0.436*** (15.15)
Tenure (years in current employment)	0.132 (1.30)	0.211** (2.50)	0.183*** (2.85)	0.192*** (2.98)
Tenure squared	-0.00402 (-0.24)	-0.0182 (-1.33)	-0.0125 (-1.21)	-0.0135 (-1.30)
Marital Status (=1 if married, 0 otherwise)	-0.0690 (-0.87)	-0.0963 (-1.51)	-0.104** (-2.08)	-0.108** (-2.16)
Marital Status (=1 if divorced/widowed/ separated, 0 otherwise)	-0.355*** (-3.08)	-0.0576 (-0.38)	-0.265*** (-3.05)	-0.320*** (-3.71)
Age (Years)	0.632*** (4.00)	0.271** (2.26)	0.405*** (4.35)	0.435*** (4.66)
Industry (=1 if Agriculture, fishery, mining, 0 otherwise)	0.104 (0.32)	0.196 (0.78)	0.149 (0.86)	0.270 (1.29)
Industry (=1 if Manufacturing and construction, 0 otherwise)	-0.0932 (-0.78)	-0.122** (-2.12)	-0.115** (-1.97)	-0.0138 (-0.22)
Industry (=1 if Commerce/Trade, 0 otherwise)	-0.144** (-1.97)	-0.121* (-1.86)	-0.127*** (-2.68)	
Gender (=1 if female, 0 otherwise)			-0.246*** (-5.78)	
Industry (=1 if Agriculture, fishery, mining, 0 otherwise)#Gender (=1 if female, 0 otherwise)				-0.293 (-0.80)
Industry (=1 if Manufacturing and construction, 0 otherwise) #Gender (=1 if female, 0 otherwise)				-0.215* (-1.80)
Industry (=1 if Commerce/Trade, 0 otherwise) #Gender (=1 if female, 0 otherwise)				-0.265*** (-4.51)
Constant	5.776*** (10.55)	7.227*** (16.81)	6.785*** (20.58)	6.550*** (19.98)
N	952	1270	2222	2222
Breusch-Pagan test χ^2 (p-value)	2.30 (0.13)	17.35 (0.00)	1.49 (0.223)	3.70 (0.055)
Shapiro-Wilk test of Normality	4.760 (0.000)	4.492 (0.000)	4.823 (0.000)	4.688 (0.000)

t statistics in parentheses, *p<0.1, **p<0.05, ***p<0.01

Table- T6: Decomposition of Inter-Industry Gender wage differentials

	Agriculture, Fisheries, Mining Sector		Manufacturing and Construction Sector		Commerce/ Trade Sector		Services Sector	
	Coef.	Exp(b)	Coef.	Exp(b)	Coef.	Exp(b)	Coef.	Exp(b)
Male	9.679*** (0.328)	15980.20	9.442*** (0.048)	12605.70	9.398 *** (0.055)	12059.10	9.603*** (0.038)	14806.10
Female	9.223*** (0.320)	10122.40	9.178*** (0.112)	9697.20	9.087*** (0.059)	8778.60	9.270*** (0.049)	10582.30
Male-Female Wage Differentials (Difference)	0.457 (0.450)	1.579	0.262** (0.122)	1.30	0.310*** (0.080)	1.374	0.332*** (0.062)	1.400
Endowments	-0.448 (0.742)	0.639	0.169 (0.120)	1.184	0.176*** (0.059)	1.193	0.199*** (0.048)	1.220
Coefficients	0.058 (0.517)	1.060	0.140 (0.119)	1.150	0.162 (0.103)	1.175	0.190*** (0.057)	1.209
Interaction	0.846 (0.825)	2.331	-0.046 (0.114)	0.955	-0.020 (0.085)	0.980	-0.054 (0.041)	0.948
Explained wage differentials due to observables (%)	57.9		23.5		19.0		39.5	
Unexplained wage differentials due to non-observable (%)	42.1		76.5		81.0		60.5	
% Wage Differences	36.7%		23.1%		27.2%		28.5%	

Notes: The decomposition results show the average wage prediction by group and their difference across the four industries considered in the analysis. Two wage equations are estimated separately for males and females in sector/industry-standard errors in parenthesis. The % pay difference is calculated as (hourly male wage — hourly female wage)/hourly male wage.

Effects of Household Energy Choice on Health Outcomes of Women

Maureen Wanyonyi[1] and Daniel Mwai[2]

Abstract

The determination of the factors that influence energy choice and its impact on health outcomes is vital for formulating and adopting relevant growth policies. Most empirical work on sources of economic growth for different countries established that the use of traditional types of energy has deleterious effects on health outcomes in households.

This study sought to examine the determinants of household energy choice as well as the impact of household energy mix on women's health outcomes in Kenya. The study used a multinomial logit model and a logit regression model to analyse data from the 2015/16 KIHBS.

The study found that the determinants of energy choice included household total expenditure, infrastructure, household size, marital status of the household head and location of the household. This study established that women who used firewood were more likely to suffer adverse health outcomes such as respiratory diseases, adverse pregnancy outcomes, cardiovascular diseases, lung cancer and cataracts (Lambe, et al., 2015) among other diseases. The study also established that married women and those with better educational attainment were less likely to suffer adverse health outcomes from their choice of the energy mix.

Key words: energy choice, health, Kenya

1   Ms Maureen Nanjala Wanyonyi, Policy Analyst, KIPPRA.
2   Daniel Mwai is a Lecturer at the School of Economics UON.

Introduction and statement of the problem

Globally, approximately three billion people rely exclusively on biomass and coal as their primary sources of domestic energy, with most of the users being rural inhabitants. According to the IEA, 2.5 billion people in developing countries living in the rural areas depend on biomass to meet their domestic energy needs. This is an indication of adverse environmental degradation that diminishes our well-being. More strikingly, biomass accounts for about 95 per cent of the domestic energy in low-income developing countries (WHO, 2017).

The use of biomass as a source of energy has significant health implications. When fuels are burned in poorly ventilated rooms, incomplete combustion occurs, exposing households to respiratory diseases. In developing countries, women—who are traditionally responsible for cooking—and their children, are the most exposed to the high levels of air pollution that includes carbon monoxide (CO), particulate matter (PM) and other pollutants (Bruce, Perez-Padilla, & Albalak, 2000; Amegah & Jaakkola, 2016).

Literature confirms the lasting negative effects of exposure to IAP on human health and labour productivity resulting from reliance on biomass (Duflo, Greenstone, & Hanna, 2008). The adverse health effects associated with biomass use for cooking and lighting have led to international development agencies initiating interventions aimed at ensuring a switch from traditional to modern energy e.g., from firewood to LPG, electricity or even solar energy.

There exists global evidence pointing to significant negative effects of solid fuel use on health outcomes of women (Dockery, et al., 1993; Pope, et al., 1995) However, there is sparse evidence from developing countries where IAP is the highest (Ezzati, & Kammen, 2002; Mannucci, & Franchini, 2017). Consequently, lack of empirical evidence on the magnitude of health loss due to exposure to IAP within the different socio-economic and demographic profiles in developing countries hinders the ability to articulate clear cut policies to address this problem. This study sought to fill this knowledge gap by examining the relationship between energy choice and health outcomes of women in the households since they are more prone to the adverse health effects of traditional energy sources.

Research objectives

The main objective of this study was to investigate the effects of household energy choice on health outcomes of women. Specifically, this study sought to analyse the determinants of household energy choice in Kenya and to examine the impact of household energy mix on women's health outcomes in Kenya.

Review of related literature

The energy ladder hypothesis—also known as the energy transition theory—is the first advanced hypothesis in economic literature to explain household energy choices. According to Hossier & Dowd (1987), the energy ladder hypothesis

describes the mechanisms of how households move from primitive types of energy to more advanced and sophisticated methods of cooking as their economic status improves. The hypothesis compares the use of energy for cooking between poor households and non-poor households. The hypothesis states that under the assumption of rationality and utility-maximization, households tend to maximize utility by transitioning from primitive energy sources to better and cleaner cooking energy sources as income increases.

The energy ladder hypothesis asserts that, at the lower levels of the ladder, households tend to use traditional energy cooking fuels such as biomass and firewood which are affordable but inefficient and significant pollutants (Masera, Saatkamp & Kammen, 2000). However, as income increases, households tend to transition from primitive energy types to more sophisticated and advanced fuels for cooking. These fuels are more expensive but cleaner and efficient (Masera et al., 2010).

Mensah & Adu (2015) further note that in the energy ladder hypothesis, household's progression from traditional, inefficient and high polluting fuels to more sophisticated energy sources is linear and occurs in three main stages. In the first stage, households predominantly depend on biomass energy for cooking. In this stage, households are unable to obtain advanced efficient energy technologies due to low income. However, as the household income increases, they transition to a second stage where they switch from biomass to fuels such as kerosine, charcoal and coal. A further increase in household income enables the household to advance to the highest ladder by acquiring the most advanced and modern energy types such as LPG and electricity. Thus, the energy ladder hypothesis implies that households at the lowest end of the ladder tend to experience high IAP compared to those up the ladder because of the energy type they use for cooking.

However, various studies suggest that the energy ladder hypothesis does not fully explain why households use different types of energy for cooking. According to Masera et al. (2010) households do not switch from primitive to sophisticated energy for cooking in a linear fashion, but by use of a stacking strategy. The fuel stacking hypothesis avers that households rarely abandon even the most traditional mode of cooking when their income increases, but instead add more sophisticated cooking technologies to the initial traditional and old technologies. This theory provides that transition from traditional to advanced fuels is not entirely discrete and stepwise. A similar assertion is made by Akpalu, Dasmani, & Aglobitse (2011) who suggest that even though households tend to switch to more advanced energy for cooking, household energy substitution is not always fully complete, particularly in developing economies.

The fuel stacking hypothesis provides that households do not completely transition from one energy source to the other but instead use multiple fuels for cooking and lighting. Masera et al. (2010) argue that the fuel stacking hypothesis is the most ideal theory that explains how households use different types of energy for cooking. The

theory posits that households enjoy and maximize fuel security as a result of the possession of various cooking technologies.

In the fuel stacking hypothesis, households use multiple fuels for cooking based on their socio-economic status. The theory provides that households stack different types of energy even when their income level and economic status improve. This is because of socio-cultural factors and the unreliability in the supply of advanced cooking energy types such as LPG and electricity (Mensah & Adu, 2015).

Capuno et al. (2018) examined the effects of cooking fuel choice on respiratory health of children in the Philippines. The authors used the PSM methodology to establish the impact of cooking energy choices on respiratory diseases. This was to control for the systematic differences that could arise due to households self-selecting themselves into different energy types for cooking. The study found that there was 2.4 per cent reduction of respiratory diseases in children when biogas, LPG, or electricity were used as energy for cooking.

In yet another study, Laxmi et al. (2003) examined the effects of household energy types on women's health and time allocation. The study found that the use of biomass energy for cooking increased the likelihood of respiratory and eye diseases. The results further showed that women spent a lot of time searching for fuel, leading to loss of productive time, which had adverse effects on their welfare.

In a similar study, Burke & Dundas (2015) investigated the effects of the use of biomass energy for cooking on the labour force participation of females in 114 developing countries. Using panel data estimation techniques, the authors found that the use of biomass energy substantially diminished females' labour force participation. The authors concluded that biomass energy exerts a huge opportunity cost on women's labour force participation due to time lost in cooking and searching for solid fuels.

Pant (2012) also examined the health costs associated with the use of cheaper fuel by poor and rural households in Nepal. Using a probit regression model, the study found that use of biomass fuel was associated with greater health costs in rural Nepal. The author reported that households that used biomass for cooking and heating were more likely to suffer from eye diseases and asthma. Furthermore, the use of biomass for cooking and heating was 61.3 per cent more expensive and more harmful than biogas.

Khan et al. (2017) also studied the effects of household IAP caused by cooking on different health outcomes in Bangladesh. The authors observed that the use of solid fuel increased the likelihood of acute lower respiratory diseases, pregnancy complications and caesarean delivery among women. In yet another study, Rey-Ares et al. (2016) examined the effects of household air pollution on lower tract respiratory infection in children under five and pregnancy health outcomes in Chile and Argentina. The study found that using traditional cooking technologies increased the likelihood of adverse pregnancy outcomes and lower tract respiratory infections in children.

In India, Mishra, Retherford, & Smith (1999) used a logistic regression to investigate the effects of the use of biomass energy for cooking on the prevalence of tuberculosis. The study found that the use of biomass energy for cooking significantly increased the propensity of suffering from tuberculosis as compared to the use of cleaner energy.

Murray et al. (2011) examined the effects of household cooking fuel type on the risk of suffering from acute lower respiratory diseases in Bangladesh. Using bivariate and multivariate logistic analysis, the authors found that children from low-income families using traditional fuel for cooking and heating were more likely to suffer from acute lower respiratory diseases. The authors concluded that if a household adopted a household ventilation mechanism, the prevalence of children suffering from acute respiratory diseases would reduce significantly.

Wichmann & Voyi (2006) studied the effects of cooking and heating fuel on the respiratory health of pre-school children in South Africa. By use of the logistic regression model, the study found that school-going children from households that use traditional methods of cooking were more likely to suffer from lower respiratory diseases as compared to those from households that use cleaner sources of fuel. Authors observed that 66 per cent of the children living in households that used traditional methods of cooking and fuel suffered from lower respiratory diseases.

In Kenya, Osiolo & Kimuyu (2017) used a two-stage Heckman estimation to examine the demand for household air pollution abatement. The study found that the type of energy used for cooking, household location, nature of the housing and the level of income of the household significantly affected the demand for IAP abatement interventions by households.

The reviewed literature on household energy use provides the theoretical mechanisms through which households use different energy types for cooking. According to the energy ladder theory, poor households tend to use traditional and primitive energy types for cooking but as their income rises, the households begin to use more sophisticated types of energy. However, according to the fuel stacking theory, households do not completely abandon primitive types of energy with increasing income but tend to stack different energy types. The main argument for the fuel stacking theory is that the unreliability of modern types of energy might force households to use traditional energy for cooking.

The literature reviewed indicates that generally, the use of traditional sources of energy for cooking tends to increase the prevalence of women suffering from respiratory diseases and the likelihood of developing complications during pregnancy. In Kenya, reviewed studies on the effects of household energy mix on health outcomes of women are sparse. Few studies examine the impact of household energy mix on women's health. This study sought to fill this knowledge gap by examining the main determinants of household energy use and more importantly the impact of household energy mix on women's health outcomes in Kenya.

Materials and methods

The theoretical framework describes the main determinants of household energy choice. These determinants are useful in explaining the link between household energy choice and the health impacts on women. The methodology also provides an empirical model that explains the impact of energy choice on women's health outcomes, variable definition, measurements and data source and the model diagnostic tests.

Theoretical Framework

To achieve the first objective of investigating the main determinants of household energy choice in Kenya, we adopt the McFadden (1984) RUM. The RUM assumes that households can rationally choose the alternative energy fuel that yields the maximum possible utility. The model assumes that the utility derived from the choice of energy type depends on the alternatives' characteristics as well as the household characteristics.

Since a household has to choose from five energy options i.e., firewood, charcoal, kerosene, LPG and electricity, we assume that the probability household i chooses some alternative of energy type j i.e P_{ij}, is equal to the probability that utility derived by household i from energy type j i.e., U_{ij} being the largest of all the utility of the alternatives i.e $U_{i1}..U_{i5}$. Now denote the probability of the household i by choosing the energy alternatives j as $y_i \in \{1,..,5\}$.

To achieve the second objective, this paper follows the theoretical approach by Edwards & Langpap (2012) on the formulation of the effects of energy choice on health outcomes. In this approach, we assume that households seek to maximize utility from consumption of health goods and non-health goods. The general form of the household's utility maximization problem is as follows: U=u(h,m).

Data source, measurement and description of variables

In this study, we used data from the KIHBS 2015/16 conducted by the KNBS. The KIHBS data contains information on the type of energy the household uses, and health characteristics, among other household characteristics. The data-set is nationally representative. It covers Nairobi, Central, Coast, Eastern, North Eastern, Nyanza, Western and Rift Valley. This study focuses on women because they are customarily responsible for cooking and as such, are highly exposed to IAP.

See Table - T7 and Table - T8 for a tabulation of the coefficients.

Findings and policy implications

The study sought to specifically examine the main determinants of household energy choice as well as the impact of household energy mix on women's health outcomes in Kenya.

The study analyses the 2015/16 KIHBS data using a multinomial logit model to examine the determinants of the household energy choice. The effect of household energy mix on women's health outcomes is analysed using a logit model.

The study found that households that had piped water, which was a proxy for good infrastructure, had a higher probability of using modern sources of energy. Larger households were more likely to use firewood and charcoal and less likely to use LPG. Furthermore, married women were more likely to use firewood and less likely to use charcoal and LPG. Location-wise the study found that households in rural areas were more likely to use traditional sources of energy compared to those in urban areas.

This study established that women using firewood were more likely to have adverse health outcomes compared to those that used electricity. The study also found that women in larger households were less likely to have adverse health outcomes, compared to those in smaller ones. The results established that married women were more likely to have adverse health outcomes from the choice of the energy type. The study also found that the household head's education was negatively associated with acute respiratory diseases. [3]

This study demonstrates that household income is positively associated with alternative fuel types available to women. The implication of this finding is that programmes aimed at increasing rural household incomes would be instrumental in increasing energy alternatives.[4]

Conclusion and policy recommendations

This study found that the use of firewood, which is a traditional source of energy, increases the propensity of households experiencing adverse health outcomes. Despite the existence of policies geared towards connecting most households to electricity and the expansion of retail networks of LPG, much more needs to be done to improve both access and affordability of modern types of energy. This is likely to reduce the likelihood of women experiencing adverse health outcomes brought about by traditional energy fuels.

The government can promote the use of modern energy by building the capacity of women through enhanced educational attainment. Women should be enlightened on the health effects of different types of energy. This proposition is based on the finding that women with higher educational attainment are less likely to suffer adverse health outcomes related to energy source.

---

3 https://link.springer.com/article/10.1007/s10668-016-9774-y?shared-article-renderer
4 https://energsustainsoc.biomedcentral.com/articles/10.1186/s13705-017-0136-x

Limitations of the study

In examining the main determinants of household energy choice and the impact of household energy mix on women's health outcomes, addressing endogeneity is critical. Endogeneity implies that the independent variable is correlated with the error term, which leads to biased estimates. This study does not address endogeneity. Based on the aforementioned, future studies in this area might use instrumental variables or panel data to address the potential endogeneity of energy choice on health outcomes.

References

Akpalu, W., Dasmani, I., & Aglobitse, P. B. (2011). Demand for cooking fuels in a developing country: To what extent do taste and preferences matter? *Energy Policy,* 39(10), 6525-6531.

Amegah, A. K., & Jaakkola, J. J. (2016). *Household air pollution and sustainable development goals.* Bulletin of the WHO, 94(3), 215.

Barnes, B., Mathee, A., Thomas, E., & Bruce, N. (2009). Household energy, indoor air pollution and child respiratory health in South Africa. *Journal of Energy in Southern Africa*, 20(1), 4-13.

Behera, B., & Ali, A. (2017). Factors determining household use of clean and renewable energy sources for lighting in SSA. *Renewable and Sustainable Energy Reviews,* 72, 661-672.

Bruce, N., Perez-Padilla, R., & Albalak, R. (2000). Indoor air pollution in developing countries: A major environmental and public health challenge. *Bulletin of the WHO*, 78(9), 1078-1092.

Burke, P. J., & Dundas, G. (2015). Female labor force participation and household dependence on biomass energy: Evidence from national longitudinal data. *World Development,* 67, 424-437.

Capuno, J. J., Tan Jr, C. A. R., & Javier, X. (2018). Cooking and coughing: Estimating the effects of clean fuel for cooking on the respiratory health of children in the Philippines. *Global public health,* 13(1), 20-34.

Davis, M. (1998). Rural household energy consumption: The effects of access to electricity—evidence from South Africa. *Energy Policy, 26*(3), 207-217.

Duflo, E., Greenstone, M., & Hanna, R. (2008). Indoor air pollution, health, and economic well-being. SAPI EN. S. Surveys and perspectives integrating environment and society, (1.1)

Edwards, J. H., & Langpap, C. (2012). Fuel choice, indoor air pollution, and children's health. *Environment and Development Economics, 17*(4), 379-406.

Ezzati, M., & Kammen, D. M. (2002). The health impacts of exposure to indoor air pollution from solid fuels in developing countries: Knowledge, gaps, and data needs. Environmental Health Perspectives, 110(11), 1057.

Khan, M. N., Islam, M. M., Islam, M. R., & Rahman, M. M. (2017). Household air pollution from cooking and risk of adverse health and birth outcomes in Bangladesh: A nationwide population-based study. *Environmental Health*, 16(1), 57.

Khan, M. S. B., & Lohano, H. D. (2018). Household air pollution from cooking fuel and respiratory health risks for children in Pakistan. Environmental Science and Pollution Research, 1-9.

Lambe, F., Jürisoo, M., Wanjiru, H., & Senyagwa, J. (2015). Bringing clean, safe, affordable cooking energy to households across Africa: An agenda for action. Prepared by the Stockholm Environment Institute, Stockholm, and Nairobi, for the New Climate Economy. Available at: http://newclimateeconomy. report/misc/working papers.

Laxmi, V., Parikh, J., Karmakar, S., & Dabrase, P. (2003). Household energy, women's hardship and health impacts in rural Rajasthan, India: The need for sustainable energy solutions. *Energy for Sustainable Development,* 7(1), 50-68.

Mannucci, P. M., & Franchini, M. (2017). Health effects of ambient air pollution in developing countries. *International Journal of Environmental Research and Public Health*, *14*(9), 1048.

Masera, O. R., Saatkamp, B. D., & Kammen, D. M. (2000). From linear fuel switching to multiple cooking strategies: A critique and alternative to the energy ladder model. *World Development,* 28(12), 2083-2103.

McFadden, D. (1984). Econometric Models for Probabilistic Choice among Products. *Journal of Business*, *13*-S29.

Mensah, J. T., & Adu, G. (2015). An empirical analysis of household energy choice in Ghana. *Renewable and Sustainable Energy Reviews*, *51*, 1402-1411.

Mishra, V. K., Retherford, R. D., & Smith, K. R. (1999). Biomass cooking fuels and prevalence of tuberculosis in India. *International Journal of infectious diseases, 3*(3), 119-129.

Murray, E. L., Brondi, L., Kleinbaum, D., McGowan, J. E., Van Mels, C., Brooks, W. A., & Bridges, C. B. (2012). Cooking fuel type, household ventilation, and the risk of acute lower respiratory illness in urban Bangladeshi children: A longitudinal study. Indoor air, 22(2), 132-139.

Osiolo, H. H., & Kimuyu, P. (2017). Demand for indoor air pollution abatement interventions. *Biophysical Economics and Resource Quality,* 2(3), 12.

Pant, K. P. (2012). Cheaper fuel and higher health costs among the poor in rural Nepal. Ambio, 41(3), 271-283.

Rey-Ares, L., Irazola, V., Althabe, F., Sobrino, E., Mazzoni, A., Serón, P., &Rubinstein, A. (2016). Lower tract respiratory infection in children younger than 5 years of age and adverse pregnancy outcomes related to household air pollution in Bariloche (Argentina) and Temuco (Chile). *Indoor air*, 26(6), 964-975.

Wichmann, J., & Voyi, K. V. (2006). Impact of cooking and heating fuel use on acute respiratory health of preschool children in South Africa. *Southern African Journal of Epidemiology and Infection*, *21*(2), 48-54.

Pope III, C. A., & Dockery, D. W. (2006). Health effects of fine particulate air pollution: Lines that connect. *Journal of the air and waste management association*, 56(6), 709- 742.

Table - T7: *Variables, measurements and expected signs of the coefficients for the determinants of household energy choice.*

Variable	Measurement and Description	Apriori Coefficients
Household energy choice	This is the dependent variable and is an energy mix available for consumption by the households. (firewood, charcoal, LPG etc.)	Dependent variable
Household income	Natural logarithm of household income proxied by the natural logarithm of per adult equivalent of total household food and non-food consumption expenditure, price deflated regionally.	Positive (+)
Household Size	Number of individuals in the household.	Indeterminate (+/-)
Infrastructure	0 measured by access to tapped water. 1 if they have access to tap water 0 otherwise	Indeterminate (+/-)
Price	Natural logarithm of energy price.	Negative (-)
Age	Age in years of the household head	Indeterminate (+/-)
Head gender	Female = 1; Male = 0 of the household head	Indeterminate (+/-)
Woman's Marital status	=1 if a woman is married; 0 otherwise	Indeterminate (+/-)
Education	=Highest schooling level attained by the household head Primary=1, Secondary=2, University=3, Other=4	Indeterminate (+/-)
Residence	=1 if residence is in urban; 0 otherwise.	Positive (+)
Household size	Total number of members of the household	Positive (+)

Table - T8: *Variables measurements and expected signs of the coefficients for the effects of household energy choice on health outcomes.*

Variable	Measurement	Apriori Coefficients
Dependent variable		
Respiratory disease	=1 if a woman suffered from upper and lower respiratory disease; 0 otherwise	
Independent variables		
Energy choice	=This is the main independent variable relating to energy choice by the households; 1=Firewood, 2=Charcoal, 3=Kerosene, 4=LPG 5=Electricity	Indeterminate (+/-)
Age	=Age in years.	Positive (+)
Age squared	=Age squared	Negative (-)
Household wealth index (Income)	=Household consumption expenditure. This combines both food and non-food household consumption expenditure.	Indeterminate
Woman marital status	=1 if a woman is married; 0 otherwise	Positive (+)
Household head	=1 if the mother is household head; 0 otherwise	Indeterminate
Household head occupation	=1 if the household head is formally employed; 0 otherwise	Negative (-)
Household location	=1 if the is in urban; 0 Rural.	Indeterminate
Household size	Total number of members in household	Negative (-)
Household head education	=Highest schooling level attained by the household head Primary=1, Secondary=2, University=3, Other=4. It is assumed that those women who are most educated are more likely to be considerate of the type of energy they use for cooking.	Indeterminate
Household infrastructure	=This variable would capture the number of rooms in the household, type of floor and roofing material.	Negative (-)

Gender, Access to Credit and Financial Health in Kenya: Lessons from 2019 Kenya FinAccess Survey

Juneweenex Mbuthia[1] and Joy Kiiru[2]

Abstract

Over the years, financial inclusion in Kenya has been improving and the gender gap in access to financial services has been narrowing. The 2019 FinAccess Household Survey report suggests that, despite the narrowing financial inclusion gap, the national financial health has been on a decline. This implies that more men and women are unable to use financial products and services for investment and daily needs to cope with shocks and risks. The co-existence of high financial inclusion with poor household financial health forms the crust of the research problem in this study. This study seeks to investigate the relationship between sources of credit and household financial health and to analyse the determinants of household financial health, with a particular emphasis on gender and financial health. We use the 2019 FinAccess survey data and employ probit models for analysis. We find that a majority of Kenyans seek credit from unregulated sources, which include online or digital credit platforms. Individuals borrowing from such sources are less likely to be financially healthy compared to those seeking credit from formal regulated sources such as banks. Women constitute 58 per cent of those excluded from financial services. They are also more likely to seek credit from unregulated sources compared to men. However, we find that the financial health of an individual is not determined by gender, but by the credit source. They are more likely to access credit from formal non-prudential sources and are over-represented in the financially excluded category. This factor exposes them to poor financial health. The need for transparency and customer protection protocols for formal non-regulated credit sources markets is paramount.

Key words: financial access, financial health, credit source, Kenya

---

1 Juneweenex Waithira Mbuthia, a Policy Analyst (Young Professional) at KIPPRA.
2 Dr. Joy Kiiru is Senior Lecturer, UON. She served as Project Coordinator.

Introduction and statement of the problem

The financial sector in Kenya has been gradually transformed due to the adoption of technological innovations such as use of digital applications, mobile money services and Automated Teller Machines (ATM). These innovations have expanded access to credit by individuals, which has further improved the access to affordable credit and deposit facilities. This has increased efficiency in the allocation of credit, eased the transfer of money through agent and mobile banking and thus increased financial inclusion (FSD, 2016).

Over the years, financial inclusion has been increasing and has narrowed the gender gap in terms of access to credit. The Global Financial Inclusion report indicates that financial access has risen globally (World Bank, 2018). This has been attributed to the use of mobile phones and the internet. This, notwithstanding, the gains have been uneven across countries. The report also reveals that being a man increases the probability of operating a bank account. Consequently, the gender gap in financial inclusion has remained at 9 per cent in most developing countries since 2011. This is despite the introduction of new formal loans and other financial services.

The financial sector in Kenya can be divided into formal and informal sub-sectors. The formal sub-sector is further categorised into formal prudential, formal non-prudential and formal registered financial service providers. The formal prudential financial products and service providers which includes commercial banks, MFIs, insurance providers, deposit-taking SACCOs and capital markets intermediaries. The formal non-prudential financial providers include money transfer services like M-Pesa and Postbank while formal registered financial providers comprise mobile money applications, digital applications, non-deposit taking SACCOs and Development Finance Institutions (DFIs). The informal financial providers comprise groups, shop owners, family, shylocks and friends. The government regulates the formal sources through the CBK and other regulators while most of the informal institutions are unregistered but have an appropriate organizational structure (FSD, 2019).

According to Rahul (2019), even with increased digital credit, women are still disadvantaged in accessing credit and yet they are the primary potential borrowers. Economic participation for most women is predominantly in the informal sector. Digital credit, being uncollateralized provides a more accessible source of credit for women. However, women's participation in the digital credit market is even lower when loan volume is taken into consideration—women borrow only 31 per cent of the total volume of digital loans.

The 2019 FinAccess survey reveals that the financial gender gap is narrowing. Access to formal credit has increased by 6 per cent for men and by 9 per cent for women from 2016 to 2019. This can be explained by the rapid growth of digital loan applications and the use of mobile money to access credit. Access to mobile money is recognized as a formal channel of financial inclusion. In addition, the survey

revealed that the digital applications loan portfolio rose from 0.6 per cent to 8.3 per cent from 2016 to 2019. This indicates that emerging unregulated loan providers play a vital role in the financial sector.

Figure - vvshows increasing access to credit from the formal financial category over the period 2006 to 2019. Informal credit has declined from 32.1 per cent in 2006 to 6.1 per cent in 2019. These changes are mainly due to the uptake of mobile and digital financial services since inception of mobile money in Kenya in 2007. Partnerships and innovations such as mobile and agent banking have also positively contributed to the increase in access to financial services (FSD 2019).

According to the 2019 Kenya FinAccess survey, financial inclusion has increased from 26.7 per cent in 2006 to 89 per cent in 2019. Furthermore, the financial access gap between males and females has narrowed from 20 per cent in 2016 to 14 per cent in 2019. The survey also revealed that the national financial health has declined from the national level of 39.4 per cent in 2016 to 21.7 per cent in 2019. This implies that more Kenyans are unable to use financial services for their daily needs, cope with risks and shocks and invest in their livelihoods for the future. This can be attributed to the emerging and rapid uptake of unregulated digital loans as an alternative source of credit that has also introduced new risks. For example, mobile credit recorded the highest cases of customers losing money in 2019 compared to 2013.

Therefore, while financial inclusion is increasing, the national financial health is deteriorating. This clearly shows that the problem is no longer access to credit but the nature and quality of credit, which is a function of several factors namely: loan volume, repayment conditions and customer protection, among others. There is a dearth of literature on studies exploring the nexus between access to credit, financial health and gender. This study aims to fill this gap by exploring the latest national representative data on financial inclusion from the 2019 Kenya FinAccess survey.

The overall objective of the study is to analyse the relationship between sources of credit and household financial health and estimate the determinants of household financial health. The study will specifically:

i.   Analyse the relationship between household credit sources and household financial health.
ii.   Analyse the determinants of household financial health and disaggregate access to credit by source and gender.
iii.   Investigate whether prudential and non-prudential (unregulated) sources of credit are associated with financial health.

Review of related literature

Theories on access to credit are derived from a market interaction where there is demand and supply of financial services. The demand side constitutes individuals, households and firms, while the supply side constitutes formal and informal institutions that provide financial services. Financial services include insurance, credit,

payment and savings. The financial services sector operates efficiently when demand equals supply. According to Levine (2005), information asymmetry and transaction costs cause inefficiency in financial services. An efficient financial services sector fosters wealth creation by mobilizing savings and increasing investments that lead to better allocation of wealth in the society. Further, seminal literature by Rajan & Zingales (1996) and Apergis (2007) reveals that increased access and use of financial products and services is positively associated with economic growth. However, an increase may not necessarily translate to a fair, equitable and desirable distribution of income and wealth among different groups in the population. This means that a country may experience heightened economic growth but end up with greater inequality in its financial services sector.

Stiglitz & Weiss (1981) argue that there is information asymmetry between the agency and the shareholders of the organizations. This leads to major constraints with regards to accessing financial services and products. The authors argued that only the borrower knows their real financial structure and strength in loan repayment. Hence, the borrower has superior private information that leads to information asymmetry. This forces the lender to operate under a moral hazard and adverse selection. The lenders therefore impose both quantitative and qualitative restrictions on the loan borrowed by the individual. This prompts higher interest rates leading to increased adverse selection and risks. The conceptual basis of the model relies on imperfect financial services that are characterized by adverse selection and information asymmetry. Banks experience difficulties and high costs when obtaining borrowers' accurate information. They also face challenges in monitoring a borrower's actions. The above risks force financial institutions to structure their financial products based on the exposure from the target group as well as the competition.

Empirical Literature

Zins & Weill (2016) focused on the determinants of financial inclusion in Africa. The study used the World Bank's Global Findex database with 37 African countries to estimate access to formal financial services. The authors found that being a man, older and richer and attaining higher education favoured credit access with a higher influence arising from training and employment status. In addition, mobile and digital banking has led to greater credit access compared to traditional banking. The authors also found that the female gender was negatively associated with formal account ownership, savings and credit. In addition, being female also increased the likelihood of using informal financial institutions compared to formal financial institutions.

Akudugu (2013) investigated the determinants of access to financial products in Ghana. The author found that for every five individuals only two could access credit and other financial products from the formal financial providers. The study showed that besides education, employment status and age, there were other factors that determined access to financial products and services. These included

the accessibility of the source of financial goods and services, availability of key documents and the level of trust. The study was inconclusive on gender effects owing to inadequate data disaggregation. Hoyo & Tuesta (2014) found that there was no conclusive effect of gender on access to financial products and services in Mexico. The results may also point to the nature of data containing limited information on women and their interaction with the financial market.

Fungáčová, & Weill (2015) analysed the determinants of financial inclusion in China in comparison to the rest of the BRIC countries i.e., Brazil, Russia, India and South Africa. The study found that gender was not associated with formal and informal sources of credit. Women borrowed and saved more from the informal sources compared to men. This means that women were less likely to borrow from formal sources of credit. Other factors that influenced credit access were individuals' level of income, education and age. The authors concluded that the level of income dictates the choice of source of financial goods and services, especially loans.

Aterido et al. (2013) analysed gender and access to credit in nine countries in Africa. The results revealed that there was no significant gender discrimination. Therefore, the gender gap in Africa seems to be associated with female participation in other sectors besides the financial sector. This suggests that women are discriminated upon in other areas of the economy such as formal education and employment. Moreover, the study confirmed that women in Africa rely heavily on informal financial services for loans.

Using data from the Global Findex and World Bank Women Business (WBWB) and Law and Institution Development, Demirguc-Kunt et al. (2013) investigated financial inclusion alongside gender dimensions in different countries. The study indicates that women are financially excluded and that this is mainly explained by differences in educational attainment, earnings and employment stages. The study also established that women faced credit access impediments in countries where government regimes had inefficient legal frameworks that failed to protect women from early marriages and discrimination in inheritance.

According to the 2016 Kenya FinAccess survey report, men are more likely to access credit facilities from formal institutions such as banks, SACCOs and employers. Contrastingly, women had a higher likelihood of accessing credit facilities from MFIs, local shops and friends. This suggests that women face impediments in accessing credit from the formal institutions and this may lead to poor performance of women-owned businesses. Women's diminished access to finance has led many researchers to question whether women face discrimination in the credit market and whether gender plays a role in access to finance services.

Lenka & Barik (2018) examined the relationship between the access to financial products and the adoption of internet and mobile phones in SAARC countries. The authors found a positive relationship between the use of mobile phones and the internet and the expansion of financial services. Similarly, Kabakova & Plaksenkov (2018) identified three

factors influencing the access to financial products and services namely, economic, technological and social factors. Hence, an increase in use of digital and mobile means to access credit had a significant positive effect on overall financial inclusion. In addition, Ouma et al. (2017) also demonstrated that an increase in the use of mobile phones in accessing credit improved income and savings among poor people living in SSA.

Abor et al. (2018) investigated the interaction between improved financial services and household livelihoods. The findings indicated that increased access to financial services and adoption of mobile phones increased the household's overall per capita consumption. Similarly, according to Evans (2018), internet and mobile phone use has a positive effect on financial inclusion. This means the increased uptake of internet and mobile phones translates to increased access to financial goods and services, which fosters economic growth in the country.

According to Francis et al. (2017), digital credit has significantly accelerated access to financial services, which can occur in two ways. The first is through an increase in financial health and the second is that targeted individuals have little or no financial literacy on digital platforms. Individuals have demonstrated little awareness of the products, terms and conditions of the loans and fees charged on borrowings. They thus end up over-borrowing, especially when the only thing required is dialling a mobile phone to make a loan request and thereafter it becomes difficult to repay the loan (McKee et al., 2017). In addition, Caliskan et al. (2017) revealed that digital credit products have raised several privacy issues. Majority of the borrowers do not have a full understanding of how private information is used e.g.; the data used for determining loan eligibility by loan providers.

The reviewed literature therefore highlights various determinants of credit access. These include financial literacy, income level, gender, age, education level, availability of financial institutions and collateral. It is evident that financial inclusion has increased over the years and the gender gap has narrowed. The increase has been primarily attributed to the uptake of emerging digital loans and mobile money in the global world and specifically in Kenya. However, there is still a difference between how men and women use digital credit. Despite increased access to credit by both genders, most of the borrowers report having made late loan repayments. This indicates declining financial health as more individuals access credit in the country. This can be explained by looking beyond access to credit and into the quality of the credit accessed and how it is utilized. In this case, the source and amount of loan given to an individual is a proxy for the loan quality. This study sought to fill this knowledge gap by investigating gender, access to credit and financial health in Kenya. Specifically, the study focused on the determinants of choice of credit source and financial health.

Methodology

We employed a statistical model that jointly estimated the factors that influence use of any credit source (financial inclusion), or none at all (financial exclusion) to study

the determinants of the choice of credit sources. Our statistical model includes four household credit sources: formal regulated, formal unregulated, informal sources and those excluded from financial services.

Description of the data-set

This study employed the 2019 Kenya FinAccess Survey data conducted by FSD Kenya, the CBK and the KNBS. The survey sampled 11,000 households with 89 per cent response rate of 9,709 households. The sample represented individuals aged 16 years and above out of which 51 per cent were female.

Findings and Discussion

Descriptive statistics reveal that access to financial services in Kenya was at 89 per cent. About 38 per cent of Kenyans accessed credit from formal sources, 40 per cent from formal unregulated 7 per cent from informal sources while 14 per cent were excluded from financial services.

At 58 per cent, women formed the majority of those excluded from financial services. Women also dominated formal non-prudential credit sources and informal sources of credit at 63 per cent and 73 per cent respectively. However, women had a lower likelihood of accessing formal credit compared to men. This finding is supported by Demirguc-Kunt et al. (2013) who established the existence of gender gaps in access to credit from formal sources.

Age was a significant determinant of access to credit for those still in the labour force. For example, while older persons were more likely to access formal credit, they were also less likely to access informal and formal non-prudential sources of credit. This finding supports efforts for targeted credit for the youth. Other studies with similar findings include Allen et al. (2016) and Tuesta (2014).

Marital status was positively and significantly associated with formal credit access. Married individuals had a 2.9 per cent higher probability of accessing credit from formal sources than the unmarried ones. Rojas-Surez (2010) found similar results with marital status being one of the demographic factors that significantly influences credit access.

The level of education had a significant effect on the credit source. The probability of accessing formal credit was higher for individuals who had attained primary (10 per cent), secondary (12 per cent) and higher education (18 per cent), compared to individuals with no education. We also found that education was important for accessing credit from formal sources (Hoya & Tuesta, 2014).

An individual whose income was classified as middle-income or high-income had a 17 per cent higher probability of accessing credit from formal credit sources than a low-income individual. However, middle-income and high-income individuals were 11 per cent and 13 per cent less likely to access credit from formal unregulated sources, compared to their low-income counterparts. Middle-income or high-income individuals

had a 2 per cent lower probability of accessing credit from informal sources than low-income individuals. These findings are in line with existing literature by Fungáčová & Weill (2015) where income was positively associated with formal credit.

Mobile ownership was positively associated with access to formal credit. In contrast, mobile ownership was negatively associated with informal credit. Specifically, an individual who owned a mobile phone was 28 per cent more likely to access formal credit and 38 per cent more likely to access credit from formal non-prudential sources compared to one who did not own a mobile phone. This finding is important because of the link between mobile phone use and credit access through mobile credit and digital applications (Lenka & Barik, 2018; Ouma et al., 2017; Abor et al., 2018).

This study also found that individuals who had attained primary and secondary education were more likely to be financially healthy (1.51 per cent and 3.49 per cent respectively) compared to those with no education. A married individual had a 3.32 per cent higher probability of being financially healthy than the unmarried. Middle-income and high-income individuals had a 10 per cent and 9 per cent higher probability of being financially healthy compared to low-income individuals. An individual who accessed formal credit had an 8 per cent higher likelihood of being financially healthy compared to financially excluded individuals.

Finally, individuals who used credit from unregulated sources had a 3 per cent lower likelihood of being financially healthy compared to individuals who were financially excluded. This finding is similar to that of Francis et al. (2017) which concluded that digital credit had significantly accelerated access to financial services, but individual financial health was worsening. Women had a higher likelihood of accessing credit from formal non-prudential sources. In addition, a majority of women were in the financially excluded category. These factors exposed individuals especially women, to poor financial health.

Summary and conclusion

This study examined gender, access to credit and financial health in Kenya using the 2019 Kenya FinAccess survey data. The study aimed to analyse the relationship between sources of credit and household financial health to estimate the determinants of household financial health and to disaggregate access to credit by source and gender in Kenya. The findings show that more men access formal credit while more females access credit from formal unregulated and informal sources. The study demonstrates that the main determinants of choice of credit source in Kenya are sex, age, marital status, education, income and mobile phone ownership. Furthermore, the main determinants of financial health comprise education, income and credit source.

The study exposes that a majority of the individuals accessed credit from formal unregulated sources. Several characteristics including gender, age, marital status, income and education were positively associated with access to formal credit in Kenya. Individuals with secondary and higher education, middle-income and high-income and

those that accessed formal credit had a higher likelihood of being financially healthy. Finally, individuals accessing credit from formal unregulated sources had a lower likelihood of being financially healthy as compared to those accessing credit from formal regulated sources.

Policy Implication

Women still constitute the majority of those excluded from financial services although access to financial services does not guarantee financial health for households and individuals. Financial inclusion should be accompanied by customer protection and regulation to ensure non-predatory financial services.

Areas of further research

The analysis was based on 47 counties in Kenya using the 2019 Kenya National FinAccess data-set. This study can be extended by looking at specific counties or regions for the geographical scope. Further studies could also investigate more socio-economic and demographic characteristics among the determinants of financial health in Kenya such as technological dynamics.

References

Abor, J. Y., Amidu, M., & Issahaku, H. (2018). Mobile telephony, financial inclusion and inclusive growth. *Journal of African Business,* 19(3), 430-453.

Akudugu, M. A. (2013). The determinants of financial inclusion in Western Africa: Insights from Ghana. *Research Journal of Finance and Accounting,* 4(8), 1-9.

Allen, F., Carletti, E., Cull, R., Qian, J. Q., Senbet, L., & Valenzuela, P. (2017). Improving access to banking: Evidence from Kenya.

Allen, F., Carletti, E., Cull, R., Qian, J. Q., Senbet, L., & Valenzuela, P. (2014). The African financial development and financial inclusion gaps. World Bank Group, *Policy Research Working Paper* (N0. 7019).

Allen, F., Demirguc-Kunt, A., Klapper, L., & Peria, M. S. M. (2016). The foundations of financial inclusion: Understanding ownership and use of formal accounts. *Journal of Financial Intermediation*, 27, 1-30.

Asongu, S. A., & Odhiambo, N. M. (2017). Mobile banking usage, quality of growth, inequality and poverty in developing countries. *Information Development*.

Asongu, S., & Boateng, A. (2018). Introduction to special issue: Mobile technologies and inclusive development in Africa.

Aterido, R., Beck, T., & Iacovone, L. (2013). Access to finance in SSA: Is there a gender gap? *World Development, 47*, 102-120.

Beck, T., & Demirgüç-Kunt, A. (2008). Access to finance: An unfinished agenda. The world bank economic review, 22(3), 383-396.

Beck, T., Demirgüç-Kunt, A., & Levine, R. (2007). Finance, inequality and the poor. *Journal of economic growth,* 12(1), 27-49.

Beck, T., Demirgüç-Kunt, A., & Maksimovic, V. (2004). Bank competition and access to finance: International evidence. *Journal of Money, Credit and Banking*, *36*(3), 627-648.

Beck, T., Maksimovic, V., & Demirgüç-Kunt, A. (2003). Bank competition, financing obstacles, and access to credit. *World Bank policy research paper* (No. 2996).

Bruhn, M. (2009). "Female-owned firms in latin america: Characteristics, performance, and obstacles to growth." World Bank Policy Research Paper 5122.

Deléchat, M. C. C., Newiak, M. M., Xu, R., Yang, M. F., & Aslan, G. (2018). *What is Driving women's financial inclusion across countries?* International Monetary Fund. Working Paper (No. 1838).

Demirgüç-Kunt, A., Klapper, L. F., & Singer, D. (2013). Financial Inclusion and Legal Discrimination against Women: Evidence from Developing Countries. *World Bank Policy Research Working Paper,* (No.6416.)

Demirgüç-Kunt, A., Klapper, L. F., Singer, D., & Van Oudheusden, P. (2015). The global findex database 2014: Measuring financial inclusion around the world. *Policy Research working paper* (No. 7255).

Dupas, P., & Robinson, J. (2013). Savings constraints and microenterprise development: Evidence from a field experiment in Kenya. *American Economic Journal: Applied Economics,* 5(1), 163-192.

Evans, O. (2016). Determinants of Financial Inclusion in Africa: A Dynamic Panel Data Approach.

Evans, O. (2018). Connecting the poor: The internet, mobile phones and financial inclusion in Africa. *Digital Policy, Regulation and Governance,* 20(6), 568-581.

FSD and CBK. (2016). FinAccess National Survey Financial Sector Deepening Kenya. (2019). Financial access in Kenya: Results of the 2019 National Survey. FSD Kenya, Nairobi.

Francis, E., Blumenstock, J., & Robinson, J. (2017). *Digital credit: A snapshot of the current landscape and open research question.* Retrieved on 2nd October 2018 from https://people.ucsc.edu.

Fungáčová, Z., & Weill, L. (2015). Understanding financial inclusion in China. *China Economic Review*, 34, 196-206.

Kabakova, O., & Plaksenkov, E. (2018). Analysis of factors affecting financial inclusion: Ecosystem view. *Journal of Business Research,* 89, pp.198-205.

Lenka, S. K., & Barik, R. (2018). Has expansion of mobile phone and internet use spurred financial inclusion in the SAARC countries? *Financial Innovation,* 4(1), 5.

Mazer, R., & McKee, K. (2017) Consumer protection in digital credit. [Online] Available: http://www.cgap.org [Accessed]: 15th October 2018.

Ouma, S. A., Odongo, T. M., & Were, M. (2017). Mobile financial services and financial inclusion: Is it a boon for savings mobilization? *Review of development finance,* 7(1), 29-35.

Rojas-Suarez, L. (2010). Access to financial services in emerging powers: Facts, obstacles and recommendations. Development Centre, OECD.

Stiglitz, J., & A. Weiss. (1981). Credit rationing in markets with imperfect information. *American Economic Review*, Vol. 71, No. 3, pp 393–410.

Tuesta, D., Sorensen, G., Haring, A., & Camara, N. (2015). *Financial inclusion and its determinants: The case of Argentina* (No. 1503).

Walker, J., & Ben-Akiva, M. (2002). Generalized random utility model. *Mathematical social sciences,* 43(3), 303-343.

World Bank. (2008). *Banking the Poor: Measuring Banking Access in 54 Economies,* World Bank, Washington, DC

World Bank. (2014). Global Financial Development Report, Financial Inclusion. World Bank, Washington, DC

World Bank. (2017). UFA (2020) Overview: Universal Financial Access by 2020. http://www.worldbank.org/en/topic/financialinclusion/brief/achieving-universal-financial-accessby-2020

Zins, A., & Weill, L. (2016). The determinants of financial inclusion in Africa. *Review of Development Finance*, 6(1), 46-57.

Tables and figures

Figure - F1: Access to credit by category (per cent) in Kenya, 2006-2019

Year	Formal prudential	Formal non-prudential	Formal registered	Informal	Excluded
2019	43.9	38.6	0.4	6.1	11.0
2016	42.3	32.6	0.4	7.2	17.4
2013	32.4	33.7	0.8	7.8	25.3
2009	21.0	15.4	4.1	26.8	32.7
2003	15.0	4.0	7.7	32.1	41.3

Formal prudential   Formal non-prudential   Formal registered   Informal   Excluded
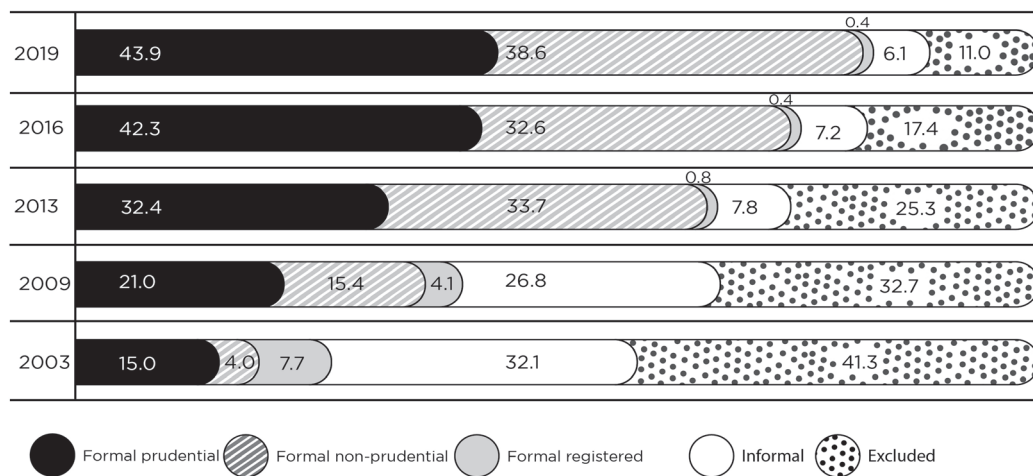
Gendered Institutional Factors Influencing Uptake of Financial Capital among Agribusiness SMEs in Fish Trade in Homa Bay County, Kenya.

Cynthia Oliech[1] and Salome Bukachi[2]

Abstract

Access to financial capital by SME in agribusiness in the fishing industry contributes to rural development through job creation and provision of food and nutrition. Fish traders in Kenya continue to experience institutional challenges in financial access that has limited their operations. This study investigated the institutional challenges that affect access to financial capital for fish traders in Homa Bay County. The study employed a cross-sectional descriptive design and used both quantitative and qualitative methods in collecting data. These included secondary sources, in-depth survey and KIIs. The study reached a total of 10 women and 10 men fish traders and employed purposive and convenience sampling approaches for selection of participants. The data collection was analysed through content and thematic analysis. Findings of the study indicated that the factors affecting access to financial services included lack of flexible terms for the repayment period, the policy of denying members financial access when a member had defaulted, demanding financial requirements including the need for guarantors and collateral before one was offered a loan, which affected women more than men. Another institutional factor was perceived discrimination against individual borrowers as well as perceived high-interest rates and a short repayment period. The study concludes that various factors relating to financial institutions limit access to financial capital by fish traders, especially women.

Key words: financial capital, gender, agribusiness, SMEs, fish trade, institutional factors, Kenya

---

1 Cynthia Oliech is a Gender Officer at UNDP Kenya.
2 Prof Salome Bukachi Associate Professor, IAGAS, UON.

Introduction and statement of the problem

SMEs have gained popularity but the world over as key pillars of economic growth. These enterprises continue to create jobs, provide goods and services, enhance competition and foster innovation, thus boosting the country's GDP (Economic Survey, 2016; Henry et al., 2003). However, the growth of SMEs in Kenya is hindered by lack of access to financial capital which has dealt a death blow to most micro-SMEs (KNBS, 2017; ILO, 2008, GoK, 2015). The challenges of agribusiness SMEs are compounded with a spectrum of gendered institutional factors. Further, formal capital lending institutions including banks, SACCOs and creditors are unwilling to give SMEs credit due to their low income, lack of collateral and unsound business profiles (Kabukuru & Afande, 2016; Korir, 2015; Gichuki et al., 2014). Fishing as an agribusiness SME provides employment and livelihood for both men and women contributing to one of Kenya's big four agenda for food and nutrition security and rural development. Fish production is one of the key global development goals embodied in Agenda 2030 under the fourteenth SDG, in which countries like Kenya seek to support the restoration of fish stocks to improve safe and diversified healthy diets (World Bank, 2018; ILO, 2008; Economic Survey, 2016). As such, the fishing industry is estimated to generate foreign exchange earnings which contribute to 0.5 per cent GDP per annum (FAO 2013). Fish production thus attracts a lot of women through the provision of labour, value addition and ownership. However, access to financing for fish traders is shaped along gender lines, leading to limited or low access to financing especially for women traders (GoK, 2014, 2015; Nwosu & Orji, 2017). Morsy & Youssef (2017), support the fact that women's access to finance is very low globally despite the overall progress in the sector. This calls for more studies to help shed light on the gender disparity in financial access.

Review of related literature

Access to capital for fish traders enhances reduction of gender inequality and poverty in the rural areas (Nwosu & Orji, 2017). Indeed, financial access for fish traders can bring general socio-economic well-being and further promote the Kenyan government's big four agenda (FAO, 2019).

A study conducted by GoK (2013) focusing on the determinants of lending to farmers by commercial banks in Kenya found that physical distance and the location of a financial institution, including collateral requirements are some of the determinants that influence access to financial capital by agribusiness entrepreneurs. This plays a big role in discouraging women entrepreneurs from applying for loans. The report further noted that entrepreneurs are discouraged from seeking financial services from financial institutions located far away from their locality. According to Miles (2017), the location of the institution increases the transactional cost incurred in transportation and communication. Mobile money services have been cited as a major opportunity for women's financial inclusion to address many of the barriers they face while accessing and using financial services, particularly those related to mobility and time. Findex (2014 & 2016) shows that phone ownership by women is globally higher than their

bank account ownership, implying a preference for mobile money services over fixed financial institution services. Further, GoK (2014) contends that the long-distance to banks complicates loan monitoring for the financial institutions, leading to their denying of credit to the fish traders.

Credit accessibility was reported by Holloway et al. (2017), IFC (2017), UN Women (2016) and Korir (2015) as one of the financial institutional factors that affects uptake of financial capital by agribusiness SMEs. From the studies, it was reported that the access problem was exaggerated by the financial institutions' lending policies. The manifestation of these challenges is felt in their complicated application process and registration procedure. Their policies require some level of literacy and are usually written in English, yet most of the women Agri-entrepreneurs are illiterate. FAO (2019) also indicates that women are usually decimated in their quest to access financial capital for their businesses in developing countries. Chandio et al. (2017) underscores that access to information both from the agribusiness SMEs and the financial providers' perspectives, is very important because it determines the extent to which small entrepreneurs can access financial services. In another study (Awotide et al., 2015; ICF 2017) opine that for SMEs such as fish trading, traders require information to identify the potential supplier of the financial products and to evaluate the cost of financial services and products. The financial service providers, on the other hand, require this information to evaluate the risk of SMEs who apply for financial capital and their prospects in the market segment.

Materials and methods

This study adopted a cross-sectional descriptive research design to describe access to financial capital for men and women fish traders. The study adopted both quantitative and qualitative approaches and collected data using secondary and primary sources. In-depth interviews and KIIs provided comprehensive information and understanding on gender issues. Quantitative data was generated from FinAccess (2019), while primary qualitative data was generated from field interviews. On sampling, fish traders who participated in the in-depth interviews were selected through purposive and convenience sampling while key informants were sampled purposively. Both quantitative data collected from the socio-demographic characteristics of the respondents and the secondary analysis were analysed through descriptive statistics and content analysis. The qualitative data was transcribed, coded and then analysed thematically. In the discussion of the findings, direct quotes from study informants were used to project their voices.

Findings and discussion
Demographic factors

The study investigated the socio-demographic characteristics of fish traders to understand their general background. In this study, a total of 20 fish traders were

interviewed where 60 per cent of them were men and 40 per cent women. Gender is a critical variable since it aids in understanding the gendered factors that influence access to and use of financial capital. Traders that were aged between 17 and 25 and those between 26 and 35 accounted for 25 per cent of the respondents. Those between 36 and 45 years accounted for 20 per cent while those between 46 and 55 years accounted for 10 per cent of the respondents. Those aged 55 and above accounted for 20 per cent of the total respondents. Age of the fish traders is an important variable because it reveals their level of experience in accessing and using financial services. Age of the traders is also useful in understanding the potential age category at which access to financial capital is highest.

In terms of the level of education, 15 per cent of the study participants had received no formal schooling, 45 per cent had attained primary level of education, 30 per cent had attained secondary education while only 10 per cent had attained tertiary level of education. Fish traders' levels of education was instrumental in understanding the relationship between literacy levels and access to financial capital for agri-business. Fifty percent of the respondents were married, while only 10 per cent were widowed. The single accounted for 25 per cent and the separated accounted for 15 per cent of the total respondents as shown in Table - T9. Marital status of the fish traders was a key variable because it could show the dynamics of fish traders' access to finance as determined by a household's socio-economic status.

Institutional factors

The findings from the qualitative and quantitative data are presented in Table - T10. Quantitative data was specifically utilized in investigating the specific fish trader savings and loan products, the gendered loan products, lending arrangements and loan repayment grace periods.

The results show that 78 per cent of the respondents agreed that there were financial institutions who focused on savings and loan products for fish traders in the study area. Some 22 per cent of the respondents stated otherwise. It showed that 92 per cent of the financial institutions lend to individuals as opposed to groups. The results show that fish traders' cooperatives are very few and only provide financing to their active members. However, these cooperatives are currently facing financial challenges and are unable to finance their members adequately.

It emerged that the financial services offered to the fish traders were not flexible in terms of the repayment period.

One of the key informants illustrates this phenomenon as follows:

"The challenge we have with the financial institutions is that they have very short repayment periods and yet our business is sometimes not very good. There are seasons when fishing activities go down and the catch is not very good. At that time, we do not make any profit thereby making it difficult to repay the loans. The financial institutions should consider loan products with that in mind." KII, BMU Official.

Unfavourable policies

The study established that the financial institutions have policies that are not dynamic and responsive or favourable to the needs and situation of majority of the women fish traders. The policies do not match with the real needs of the study participants. This situation is exemplified by the respondents who noted that:

"The banks and all the other financial institutions are not keen to help us… We, fish traders have very unique financial needs and challenges and they should understand that instead of denying us loans based on some policies that are not even practical in our livelihood." Fish Trader, Female, 34 years.

The above findings were supported by one key informant who stated that:

"The Homa Bay County Women Sacco is looking into changing its lending policy to be accommodative of agricultural enterprises." KII, Finance Officer.

The study established that even though loans are offered to individuals, group members are not advanced loans when one of their members defaults.

One of the respondents indicated that;

"The problem with these financial institutions is that they offer loan services to individuals but when that individual defaults, the whole group suffers. They do not loan a member of a group when one of them has defaulted. This makes us fear the financial services because they expose the whole group to the risk of one person." Fish Trader, Female, 40 years.

The study further established that terms and conditions used by the financial institutions were sometimes difficult for the fish traders to meet. The need for guarantors and security before one or a group is offered a loan was highlighted as a major obstacle for most female fish traders owing to the nature of the assets they own. Most women depend on their *chamas* for credit while men mostly depend on SACCOs and banks. This implies that women are disadvantaged by the amount of credit they can get, given the small sums of money present in most *chamas*, as opposed to men who can access more from the banks, given their ownership of property, that can be used as collateral. However, the men still reported that, in spite of their position as owners of family property, their mode of livelihood was largely centred on the lake which would limit their having assets for use as collateral when securing loans. One of the respondents puts this into perspective:

"The requirement to have guarantors and security — which is mostly movable and immovable properties — is a challenge to most of us. Getting a guarantor is not easy and sometimes you may not have the required collateral, for example land, meaning your loan will not be processed." Fish Trader, Male, 46 years.

Employment status

From the study results, it emerged that some of the financial institutions only consider those in formal employment and on regular pay for loans. Consider the following voice from one of the informants:

"The other problem with the financial institutions is that they seem to discriminate people. Most of the institutions see fish traders as people who cannot pay back the loan... and this is the reason most fish traders, especially women prefer borrowing money from the 'Chama', because they are flexible and readily available at a lower rate." KII, KCB Bank Official.

High-interest rates

Findings of the study indicate that there are challenges with financial institutions which are associated with the high interest rates they charge. Majority of the study participants noted that almost all the financial institutions including Saccos were charging high-interest rates compared to the *chamas*. Published findings confirm that less secured high-risk loans may attract higher rates (Kabukuru & Afande 2016). Some of the respondents noted that:

"...as much as we want the financial institutions to allow us to access their loans.... the problem is they charge very high interest, so we end up just working for them in the name of paying back the loan together with interest." Fish Trader, Male, 33 years.

"Financial institutions give us short loan repayment terms/periods, failure to which your property will be auctioned. Most financial institutions do not give an extension to pay the loan when we face challenges. For example, the omena traders during rainy seasons." Fish Trader, Female, 29 years.

The above assertions were corroborated by key informants who opined that the interest rates charged by financial institutions were high for most of the traders, especially women and that the repayment periods were also short.

Conversely, some of the key informants associated with financial institutions indicated that the interest rates were as low as 4 per cent, payable on reducing balance, which they considered favourable terms for the fish traders.

"Our bank does not charge high-interest rates because we know the nature of fishing as an economic production...Our payment is flexible and sometimes we can negotiate with our clients (fish traders) depending on the season..." KII, Coop Bank Official.

The above findings were supported by key informants who noted that financial institutions were aware of the challenges facing the fish traders in loan repayment. One of the key informants indicated that:

"Members engaged in agribusiness (fish traders) face challenges in repayment of loans especially in situations where the commodity takes a while to be ready for the market. Loan repayment is not 100%. This is the biggest challenge facing the SACCOs currently. During the low season, the fish traders and fishers migrate to

other beaches and this makes it difficult to trace them to pay back the loans." KII, Finance Officer.

Distance to financial institutions

Findings of the study show that distance to the bank hinder the fish traders from accessing bank services. They, therefore, opt to borrow funds from SACCOS, *chamas* and digital Apps such as *M-shwari*. Hidden biases and structural inequalities are also fuelling the gender gap in access to financial value for women, (2018). This is attributed to the unavailability of these financial services within the vicinity of the beaches. One respondent illustrates this:

"You know fish traders like us here in Kananga are very far from town and getting time to go to these financial institutions becomes difficult, therefore we resort to using loan services from chamas that are here… sometimes we borrow from these Mobile Apps such as Tala and Mshwari." Fish Trader, Male, 41 years.

One key informant supported the sentiments with the following statement.

"We need a financial institution or a bank agent to save money, here in Kananga Beach. We do not have a bank or bank agents, as you know fish traders get a lot of money during good seasons, but they do not have a bank to save the money." KII, BMU Chair.

Findings show that financial institutions are located in Homa Bay town and for a trader to access them they have to incur transport costs by motorbike or boat. The situation is different for men and women. Men find it easy to travel to town while women are assigned productive and reproductive gender roles that hinder their movement and require them to work for longer hours, hence reducing their access to finance. Online banking is an important productive resource in terms of facilitating access to information, finance and markets; its accessibility has helped promote women's economic empowerment, as it allows women to function across various sectors simultaneously. The gender gap in access to online banking is shrinking though it still requires more interventions in mobile phone ownership and banking due to factors such as low literacy levels that hinder women from owning phones and operating bank accounts. USAID (2020) contributes to this finding by stating that the gender gap in access to ICT is shrinking and mobile phone ownership has also increased for both men and women.

Findings from Kenya Economic Outlook (2016), Korir (2015) and GoK (2013) are also in keeping with the findings of this study. While examining challenges facing the fishing industry in Homa Line and Kendu Bay zone in Homa Bay County, the three pointed out that lack of banking facilities hindered the fishers and fish traders from saving money and more women are disadvantaged compared to men. They pointed out that most banks were situated in towns like Kisii, Homa Bay and Kisumu that were far from beach management units where fishers and fish traders were located hence making it difficult for women to reach them.

Loan processing time

Findings show that financial institutions delay in processing the loans and the fish traders do not get credit on time. This affects their access to financial services causing them to seek finance from merry-go-rounds, *Chamas*, digital apps and MFIs which are more reliable and accessible. One of the respondents indicated that:

"The problem with the financial institutions, specifically, the bank is that when we apply for a loan it takes time to be released, we are not given the money at the time of need." Fish Trader, Female, 39 years.

The above statement was supported by one key informant who asserted that:

"Yes, formal institutions require that all the due process be followed to ensure that everything is watertight... Unfortunately, many fish traders find this to work against them. They feel we are too slow with our processes; they tend to be in a hurry..." KII, KCB Bank Official.

Limited information

The study established that limited information on financial access negatively affects fish traders' financial access. Study respondents indicated that most of the financial institutions close to the beaches have never enlightened fish traders about their products and how the fish traders can access their financial services. Some of the traders, especially women, were trained by NGOs through their *chama* groups. One respondent noted that:

"The banks and many other financial institutions have never come close to us here as our Sacco does. We need training on how to use the services they are offering but they have failed to live up to that... When we go to the bank, they tell us that they will send their officer to engage with us and educate us, but we have never seen that." Fish Trader, Male, 38 years.

The findings of this study also concur with those of World Bank (2018) conducted in Tanzania among 198 fish traders and processors which revealed that only 6 per cent of fish traders and 2 per cent of the fish processors had bookkeeping knowledge and training related to financial access.

Other challenges

The findings of the study indicate that most of the financial institutions had no savings and loan products dedicated to women fish traders. Further, women face limited access due to their financial dependency on men, limited access to and control over resources and property, lack of awareness and low level of education and training. The institutions also charge women high-interest rates and give them short repayment periods compared to the *chamas* and merry-go-rounds and other informal lending institutions. This is attributed to lack of control over productive resources and income that impact women's access to finance. In terms of income, women earn less than men. Consequently, their enterprises earn lower profits than those run by men. Male

entrepreneurs are twice as likely to have access to formal savings accounts and three times more likely to have access to formal loans than female entrepreneurs according to USAID (2020) & World Bank 2015/2016 & 2018.

Findings of the study also demonstrate that financial institutional factors that affect women's access to financial services are anchored on cultural beliefs and practices, literacy, location, the tendency of men to decide for women which economic activities to engage in and many other decisions on the use of household resources and income. Women's limited access to and control of productive assets increases their financial dependency on men, hence hindering their access to financial services. Access to finance for women is also limited by barriers in inheritance and land ownership. Buvic & Berger (1990), Ngeno (2013) and FAO (2019) reported that financial institutions through their lending policies create most of the access barriers.

Conclusion

Access to finance is a crucial element in providing the best opportunity to ensure women's voices are heard, their concerns are addressed and their contribution to the economy maximized. The GoK stands behind women's economic empowerment in all its aspects, including access to financial services and supports the formulation and implementation of the Women Enterprise Fund, Uwezo Fund and NGAAF to enhance women's financial access. Fish trading has a positive effect on the economy of men and women engaged in this form of agri-business. Sustainable economic growth necessitates that the traders be included in financial facilities and have adequate access and use of such services. GoK, KNBS & KDHS (2020) contribute to this by stating that access to finance is guided by cultural beliefs and practices, literacy and location. Men tend to decide which economic activities the women will engage in. In many communities men are the decision makers on the use of productive resources and incomes. As already seen, women's access to and control over productive assets is limited. This increases their financial dependency on men and hinders their access to financial services. Kenya's Constitution sought to address; customary law, traditional norms, legal gaps and lack of awareness that affect women. However, its impact is still low both at national and county levels. In Kenya, few women own property, leading to lack of collateral for formal loans. In certain contexts, women are unable to own customary administered land because men control it. Registered freehold land ownership in rural Kenya is estimated between 95 and 99 per cent for men and 15 per cent for women. Women own 1 per cent of registered land titles, with 5 per cent of registered titles being in joint names. In many parts of Kenya, access and control of land is determined mainly by men.

The study also concludes that financial institutions have various factors which limit access to financial services based on gender. Such factors include womens' perception of credit-worthiness, limited information, level of education, high-interest rates, short repayment periods, requirements for security and guarantors, the proximity of the financial services as well as inadequate policies to cater for specific needs of the

female fish traders. This implies that an increase in any of these variables significantly affects the level of financial access for women within the fish value chain. However, these factors affect men and women differently. Buvic & Berger (1990) back this up by indicating that women self-select themselves out of the loan application process due to the complicated application process, low financial literacy and risk aversion.

Policy Relevance

The study demonstrates that institutional factors affect the uptake of capital among in agri-business traders. Improving financial access for fish traders requires a gendered perspective from both the demand and supply angles. Structural barriers and hidden gender biases affecting women fish traders and more particularly, poor women, need to be captured, understood and addressed by banks and other financial institutions located where this production occurs. The Kenyan government should develop an agri-business gender equality strategy and policy that will afford these traders financial access and equality in service and product provision. Some critical measures include re-evaluating the policy environment of the financial institutions and transforming these institutions through workshops and seminars that bring together all the stakeholders in the fishing industry. The measures would also expand the capacity of fish traders' cooperatives and strengthen them to provide finance to their members. Such an approach would enhance a robust understanding and transform gender norms and gender-capacity development among the stakeholders, thus increasing social capital and access to various financial products. Sex-disaggregated data would help track relative progress in women's financial inclusion across the country. The policy makers and the government should complement this with digital and mobile banking to enhance access to inclusive financial access.

Area for further studies

A longitudinal study should be conducted to further understand the enablers of financial access among female fish traders as well as mobile money ownership, usage and the coping mechanisms to challenges that women fish traders face regarding financial access in Kenya.

References

Awotide, B. A., Abdoulaye, T., Alen, A., & Manyong, V.M. (2015). Impact of access to credit on agricultural productivity; *Evidence from smallholder cassava farmers in nigeria.* A Paper Presented at the International Conference of Agricultural Economists (ICAE). Milan, Italy.

Chandio, A, A., Jiang, Y, & Guangshun., W. (2017). Effects of agricultural credit on wheat productivity of small farmers in Sindh, Pakistan; *Are short-term loans better?* Agriculture.

CBK. (2019) *FinAccess Household Survey*

FAO (2019). Food and Agriculture Organisation of the UN. Rome, Italy. http://www.fao.org/kenya/fao-in-kenya/kenya-at-a-glance/en/

Federation of Women Lawyers. Kenya, (2019). http://fidakenya.org/

Gichuki, C. N., Mulu-Mutuku, M.,&Kinuthia, L. N. (2014). Performance of women-owned enterprises accessing credit from village credit and savings associations in Kenya. *Journal of Global Entrepreneurship Research.* 4:16.

GOK (2013). County Integrated Development Plan (*CIDP)* (2013-2017). GoK, Nairobi Kenya.

GOK (2014). *ASDSP* Ministry of Agriculture Livestock and Fisheries, Nairobi Kenya.

GOK (2015). *Economic Review of Agriculture.* GoK, Nairobi, Kenya. Available at:http://www.kilimo.go.ke/wp-content/uploads/2015/10/Economic-Review-of-Agriculture_2015-6.pdf

Henyr, C., Shamar, M., Lapenu, C., & Zeller, M. (2003). Microfinance Poverty Assessment tool: *World Bank publications*, Elsevier.

Holloway, K., Niazi, Z., & Rouse, R. (2017). Empowerment through financial inclusion; A review of existing evidence and remaining knowledge gaps. Innovations for Poverty Action (IPA).

IFC (2017). *Women's entrepreneurship facility: Establishment of a financial intermediary fund.*

ILO (2008). Women entrepreneurs in Kenya and factors affecting women entrepreneurs in micro and small enterprises in Kenya. ILO Regional Office for Africa, Addis Ababa, Ethiopia.

Kabukuru A., & Afande, F.O. (2016). *Analysis of Challenges Faced by Women Entrepreneurs in Accessing Finance in Kenya (A Case of Beauty Sector in Nairobi Central Business District).* Journal of Poverty, Investment and Development, 24 (8).

KNBS. (2018). *Economic Survey* (2018). ISBN: 978-9966-102-06-5

Korir, G. K. (2015). Factors Affecting Access to Credit by the Small Business Producer Groups in Trans-Nzoia County. The UON. Kenya.

Miles, S. K. (2017). Advancing women's financial inclusion through gender-sensitive business environment reform. *Donor Committee for Enterprise Development (DCED).*

Morsy, H., & Youssef, H. (2017). *Access to finance—mind the gender gap.* EBRD Working Paper 202, European Bank for Reconstruction and Development, London.

Nwosu, E. O. & Orji, A. (2017). Addressing poverty and gender inequality through access to formal credit and enhanced enterprise performance in Nigeria: An Empirical Investigation. *African Development Review.* 29, pp 56–72.

UN Women (2016). *Progress of the world's women* (2015-2016) Annual Report.

World Bank (2018). *Improving Access to Finance for SMEs: Opportunities through Credit Reporting, Secured Lending and Insolvency Practices.*

USAID (2020). *Final Gender Analysis report.*

World Bank. (September 16, 2018) *Kenya poverty and gender assessment: Reflecting on a decade of progress and the road ahead.*

Tables and figures

Table - T9: *Socio-demographic characteristics of the study participants*

Socio-economic variable	Frequency (n) N=20	Percentage (%) 100
Gender		
Men	12	60
Women	8	40
Age		
17-25	5	25
26-35	5	25
36-45	4	20
46-55	2	10
Over 55	4	20
Level of education		
No education	3	15
Primary	9	45
Secondary	6	30
Tertiary	2	10
Marital status		
Single	5	25
Married (5M,5F)	10	50
Separated	3	15
Widowed	2	10
Total	20	100

Source: Research data (2019)

Table - T10: *Financial institutional factors that affect the uptake of financial services.*

Variable		Per cent	
Have fish traders focused savings and loans products	Yes	78	
	No	22	
Have specific loan products for women and men	Yes	33	
	No	67	
Lends to	Individual	92	
	Group	6	
	Both	2	

Source: FinAcess Data (2019)

Determinants of Women's Financial Inclusion for Economic Empowerment: Insights from Semi-Urban Women Entrepreneurs in Kenya

Millicent Okello[1] and Owuor Olungah[2]

Abstract

One of the most important components of women's economic empowerment is financial inclusion. It is a catalyst to women's economic development through achieving SDGs and eliminating gender inequalities in economic development. This study investigated the determinants of women's financial inclusion in Dagoretti North Sub-County of Nairobi City County, Kenya.

We employed a cross-sectional descriptive study design using both quantitative and qualitative methods. The study extensively analysed secondary data from FinAcess household survey data and Global Findex, KIIs and semi-structured interviews with 25 women entrepreneurs who were selected through snowball sampling method. The quantitative data collected was analysed through content analysis and described through descriptive statistics, while qualitative data was analysed thematically along the study objectives. From the study, women's access and usage of financial services is affected by socio-economic factors like level of education, age, social networks and assets ownership. Documentation, distrust, financial literacy, accessibility, relationship with service providers, technological know-how, access by groups and financial status are key determinants of women's financial inclusion. The study concluded that women entrepreneurs in the study area were experiencing challenges in accessing financial services and products and thus the state, county government and other development partners should facilitate training for the informal women groups, particularly on financial access, management, loaning procedures and group management.

Key words: financial inclusion, economic empowerment, entrepreneurs, women, determinants, and Kenya

1 Millicent Okello is a Project Manager-Energy, Practical Action, East Africa.
2 Owuor Olungah is an Associate Professor of Anthropology, IAGAS.

Introduction and statement of the problem

It is well documented globally that financial inclusion is a catalyst for women's economic empowerment. This form of empowerment is considered a prerequisite for sustainable development, a strategy for pro-poor growth and the achievement of all the UN SDGs. It is also a fundamental issue on rights and equitable societies (OECD, 2018; Finnegan, 2015). It is significant, especially for developing countries as it is considered critical in the attainment of the SDGs and particularly in the achievement of gender equality and poverty reduction. Financial inclusion has been embraced by many development practitioners as an imperative instrument for women's economic empowerment. The Micro-Credit Summit held in Washington DC in 1997 considered micro-finance as a miraculous tool for reducing poverty and enlarging women's livelihood options especially for poor women (Sharma, 2011; Women Economic Empowerment, 2011; OECD, 2018). Financial inclusion means that financial services such as transactional bank accounts, loans and insurance are available to the people who need them and are persistently and efficiently using them to meet their financial needs. It is about giving people access to the money in the world (World Bank, 2018).

In Kenya, financial inclusion ranks high across the African continent at 89 per cent, just behind South Africa and Seychelles which are at 93 per cent and 97 per cent respectively (FinAcces, 2019). Though there has been a high rise in the uptake of financial services, disparities between men and women remain, with access standing at 88 per cent for women and 90 per cent for men. Golla et al. (2011) acknowledge that economically empowered women exhibit both the ability to prosper and progress economically as well as wielding the power to make economic decisions and act on them. Financial inclusion has a way of enabling women's economic empowerment because the provision of affordable financial services allows individual women, men and businesses to carry out bank transactions, save and borrow money, buy life and non-life insurance as well as contribute towards micro-pension; all of which contribute to economic growth (Uddin et al., 2017; World Bank, 2018; Odira, 2017).

Although the factors that determine women's financial inclusion in Kenya and elsewhere are well researched and understood in quantitative terms through reports such as Global Findex (2017) and FinAccess (2019), this study provides evidence on the qualitative aspects and specifically with respect to the women entrepreneurs in Dagoretti North Sub-County. The study sought to establish the factors that determine the financial inclusion of women as a form of economic empowerment and the outcome has added impetus to the discourse.

Review of related literature

The World Bank defines financial inclusion as a situation where individual men and/or women; as well as businesses can use affordable financial products and services in meeting their needs (World Bank, 2018). The products and services include; a bank account for making and receiving payments, saving products (including investments and pensions) that match poor people's cash flow patterns, affordable credit/loan,

bank overdrafts, money transfer facilities, life and non-life micro insurance and micro pension schemes (OECD, 2018; World Bank, 2018).

A study carried out in Garissa County in 2013 identified factors that influence women's participation in micro-financing programmes. The results flagged out cultural factors that deny women the right to own property, male chauvinism, marriage types, family size and gender stereotype, among others. In addition, women's negative attitude towards the programmes, family type and inheritance practices also affect women's participation in micro-financing programmes. Gender roles and responsibilities which mostly consist of productive and reproductive work consumes a lot of time for women hence reducing their participation in community space, including financial participation. Further, the study also established that personal attributes such as women's level of education, religious affiliation, political affiliation and social networking affected their participation in micro-financing (Chemjor, 2013).

Another study conducted in Imenti North Sub-County established that there exists a significant relationship between loan repayment patterns and the women's utilization of financial services. This meant that a unit increase in default rates reduces the utilization of financial services by the women (Kilonzo, 2014). Another study by Ursula (2013) found that cultural factors, including traditional and social practices, generational poverty, domestic violence, gender hierarchy shown within the families, inheritance laws and customs, devaluation of women's work and lack of power to make decisions in society, level of education, the family set up, religious affiliation and the community social networks affected women's financial inclusion (Odira, 2017; Chemjor, 2013).

Studying the supply and demand-side determinants of financial inclusion in Bangladesh, Uddin et al. (2017) recorded that the supply side factors range from bank size and its efficiency to the interest rate charged. On the demand side, they found out that literacy levels of the borrowers and their age had a positive influence on financial inclusion. Another study in Argentina analysed the determinants of financial inclusion from a micro-economic perspective and found out that, on the supply side, the locals accessed formal financial institutions using traditional channels (Tuesta et al., 2015). Allen et al. (2012) also found a positive relationship between financial inclusion and better access to formal financial services for 123 countries. The supply-side determinants come out in form of lower banking costs, proximity to banking halls and less paperwork. The demand side determinants are individual characteristics, a person's income level and geographical location (rural or urban) (Tuesta et al., 2015; Finnegan, 2015; Zain & Weill, 2016).

Materials and methods

The study was conducted in Dagoretti North Sub-County, a semi-urban settlement in Nairobi city, the capital of Kenya. The study area provides a mixed bag of experiences because it represents women entrepreneurs from diverse backgrounds. Dagoretti North Sub-County hosts over fifteen formal financial institutions believed to be engaging with women in the provision of financial services. The study adopted a cross-sectional

descriptive research design to guide the investigation. The study sampled 25 women entrepreneurs between 20 and 60 years and used an individual woman entrepreneur as the unit of analysis. While the respondents for the semi-structured interviews were sampled through snowballing technique, the key informants were selected through purposive sampling. Data was collected through secondary data analysis, semi-structured interviews and KIIs. In terms of data analysis, quantitative data from the secondary analysis of the Global Findex (2017) and FinAccess (2019) reports were analysed quantitatively through descriptive statistics while qualitative data was transcribed, coded and analysed thematically. The analysis was systematic to develop an understanding of the determinants of financial inclusion among women entrepreneurs in economic empowerment. Quotes from the participants have been used along with the presentation of the findings to project the voices of the study respondents. The study ensured complete adherence to key ethical principles that include informed consent, confidentiality, anonymity, respect, right of withdrawal and dissemination of results, among others.

Findings and discussion

Socio-demographic characteristics

Overall, 25 women entrepreneurs were interviewed for this study, with 56 per cent of the total respondents being between 31 and 40 years, 16 per cent between 21 and 30 years, 24 per cent between 41 and 50 years and 4 per cent between 51 and 60 years. Most of the respondents were married (56 per cent), 32 per cent single, 8 per cent were widowed while 4 per cent were separated. Majority of them (76 per cent) had secondary level of education while those with primary and tertiary levels of education accounted for 12 per cent each. The age and the education attainment are crucial factors in determining the stability of business and the capability of the women to make independent decisions.

The following were the business types; running a pharmacy, bookshop, spa, butchery, selling bags, electronics, fruits and mobile money; each recording 4 per cent. Restaurant and clothing boutique recorded 12 per cent each while second-hand clothes, food vendor, green groceries and cosmetics each recorded 8 per cent of the total respondents. Majority (88 per cent) had been in business for more than 5 years but less than 10 years and the remaining 12 per cent had been in business for more than 10 years.

With regard to sources of seed capital, about half (52 per cent) of the respondents acquired starting capital from their savings, 16 per cent from their family members, or from their spouses, 8 per cent from banks in form of loans while 4 per cent got capital from merry-go-rounds with a further 4 per cent getting their seed capital from mobile loan apps as shown in Table - T11.

Variables related to financial inclusion

Table - T12 shows variables affecting women's financial inclusion. From FinAccess household survey data (2019), results show that variables such as place of residence, asset ownership such as land, household size, social groups and networks, are key determinants of financial inclusion among women in Kenya. Residence has a positive and significant effect on access to financial capital by women at 1 per cent level (p=0.000). The probability of women in urban areas having access to financial capital is 4.31 per cent higher than women who reside in rural areas. The findings imply that women in urban areas are more likely to have access to financial inclusion than their rural counterparts. Land ownership affects access to financial inclusion in that, women owning land had 33 per cent higher chances than those without land.

The results obtained in Table - T12 show that financial inclusion is highly affected by women's socio-economic factors. These quantitative findings were supported by two respondents who had this to say:

> *"When you have an asset like land you will not have problems when you want to secure a loan from any of these banks..." Entrepreneur, 31 years.*

> *"...and those of us living in the city have an advantage compared to those in the rural settings in terms of access and use of financial services and products because it is easy to access small loans using our household assets." Entrepreneur, 30 years.*

Documentation

Lack of documents required by many financial institutions acted as a barrier to all income levels of women. Documents enable financial institutions to minimize challenges of asymmetric information thus assigning a level of risk to each of their customers. Many women indicated that they had challenges securing all the documents required by financial institutions. Others noted that having the right documents and keeping them safely was also a challenge.

Respondents noted the following:

> *"When we want to open an account with financial institutions, it is a requirement that we have our legal documents such as the national identity card, KRA pin, birth certificate, and many other documents which if we don't, then we will remain unbanked." Entrepreneur, 43 years old.*

> *"For some of us it is very difficult to acquire all those documents that banks want before one opens an account with them." Entrepreneur, 29 years old.*

> *"Banks and all other financial institutions targeting women ask for so many documents. Sometimes you just want to open a saving account to save your profits but you will be asked for so many documents for identification. This is just too much and some of us opt for M-Pesa and Mshwari as our main accounts for saving." Entrepreneur, 44 years old.*

Findings from content analysis indicate that documentation requirements for opening an account exclude women in rural and informal sector, who are less likely to have wage slips or formal proof of domicile. Men and women of all levels of education cited lack of documentation and too much paperwork involved in formal financial services as a major barrier in accessing bank services.

These sentiments were corroborated by one key informant who confirmed the detailed documentation required by financial institutions:

> *"Today in Kenya you must just produce all the documentation like the KRA pin, national identity card, birth certificate, among others that are needed for you to open an account... in depositing certain amounts of money we still require certain paper work which people see as tedious but we don't have options..." KII, Equity Bank Official.*

Indeed one must produce and complete several documents to the satisfaction of the financial institution to access banking products. In light of the anti-money laundering laws and KYC requirements, banks must undertake due customer diligence. In most cases, people in the informal sector do not have documents such as the proof of residence. This then precludes them from enjoying the formal financial products. These findings confirm those by Demirguc-Kunt et al. (2018), Golla et al. (2011) and World Bank (2018) who found that the detailed documentation demanded by financial institutions acted as a barrier to access and uptake of formal financial services.

Financial literacy

Quantitative and qualitative data reveal that financial literacy is a factor for the financial inclusion of women. Financially literate women have a higher chance of financial inclusion than those who are not. It is increasingly important for women to decide on how to invest and how much to borrow from financial institutions hence the need for financial literacy. Women who are less financially literate are more likely to have problems with debt, less likely to save, more likely to engage in high-cost credit and less likely to plan for the future. This is projected by one key informant who asserted that:

> *"Financially literate women are better placed to empower themselves. Banks and financial institutions are also keen on financial literacy as a good predictor of who should and who should not be allowed certain services...financial literacy means better financial decisions and management as well as choices on products and services..." KII, Barclays Bank Official.*

Literacy equips one with the knowledge and skill sets to understand financial products in the market. Financially literate people can understand the advantages and disadvantages of the various financial products. Financially literate women are therefore well informed in making their decisions about financial services and products. It is a prerequisite for creating investment awareness and intuitively seems to be a key tool for financial inclusion of women. These findings corroborate those by Bruhn & Zia (2011) who established that entrepreneurs with high levels of financial literacy displayed

better business performance. Similarly, Njoroge (2012) and, Zan & Weill (2016) detected a positive relationship between financial literacy and women business performance.

Distance

Despite the respondents being located within a pool of financial institutions, some highlighted distance to institutions as a hinderance to accessing financial services. From the findings, the distance to the financial institution has a negative impact on financial inclusion of women entrepreneurs. This means that the greater the distance from the financial institutions, the less likely for the women to be financially included.

> *Distance is a barrier for many...22 per cent of adults without an account said that financial institutions are too far away, with about 33 per cent citing distance as a barrier in Kenya. FinAccess Data, 2019: 21.*

Conversely, qualitative findings show that the study respondents are not affected by distance because of the proximity of the financial institutions, services and products. The study location was within Nairobi City County, the capital of Kenya, which houses many financial institutions.

The following quotes illustrate these assertions.

> *"Here the banks are not far so we don't worry about distance like others who are far from the city..." Entrepreneur, 33 years old.*

> *"Here in Kawangware we have banks and even the banks' agents are many...so I wouldn't say that distance or proximity to the banks is a challenge for us but some of the women who are in our chamas have always complained of distance because most of these institutions are not found in their localities." Entrepreneur, 41 years old.*

Distance prevents people, especially women, from financial inclusion as it diminishes their chances of accessing financial products. As such, financial products, whether formal or informal, should be made easily accessible for people to utilize them. This implies that access to financial services is a function of the distance between the provider and the consumer of the financial product. These findings agree with those from Global Findex (2017) which recorded that a large share of non-account holders cited distance as the reason for not having an account in Tanzania.

Relationship with Service Providers

Women's association and relationship with financial service providers is a key determinant of acquiring financial services. There is a notable difference between people who access and use or are associated with a certain financial institution, compared to those who simply do not because they have no demand for these services.

Some of the respondents put this into perspective:

> *"...it depends on the relationship you have built with them. Some people can just go to the bank and get loans without even being asked for many documents but the things they do to some of us... If you have built relationships with people in the banks you will not have problems when you want services and in fact, you will*

*be served promptly. Getting loans can take a few hours as compared to others…"
Entrepreneur, 26 years old.*

*"When you are in good standing with these banks, trust me, you can't have a
problem when you want loans from them." Entrepreneur, 24 years old.*

The above sentiments were supported by those from one key informant who had this
to say:

*"Financial institutions are keen to maintain their trusted customers all the time.
We have customers that have been with us for many years and we have grown
together and so we must treat them well at all times, though not in comparison
to others… I must tell you the number of men is bigger than that of women but
the gap is not so big… all I am saying is that their loyalty and the fact that they
believed in us, it's only good that we reciprocate that. When they come for loans
or other services, we give them." KII, Cooperative Bank Official.*

Distrust

Distrust in a financial system features as a great barrier to using financial services for
some women more than for others. The study established that lack of confidence in
the services offered by certain financial institutions affects women's uptake of such
services. The view is expanded by the following voice of a respondent:

*"Some of these institutions do not have proper records. I think you can remember
what happened with Chase Bank a few years ago. Imagine if you had your money
there for business and you wanted to support your business or take care of an
emergency, then it meant that you had to wait…" Respondent, 31 years old.*

As observed, there is some lack of trust in the stability of financial institutions. This
distrust can stem from social norms, cultural stereotypes, discrimination against
certain groups, past experiences of government expropriation of financial institutions
and uncertainty. Lack of customer trust in the financial system could be a result of
improper supervisory mechanisms coupled with a culture of corruption. These results
corroborate those of Kessy & Temu (2010), Finnegan (2015) and Global Findex (2017)
who established that negative experiences and perceptions of financial institutions
make people mistrust such institutions leading to self-exclusion.

Access by groups and financial status

Results show that some financial institutions require women to be in groups to access
and use some services such as loans, credit facilities or financial management training.
Women who cannot mobilize themselves to meet this threshold often shy away from
accessing the services. Consider the voice below:

*"…. especially these microfinance institutions which require that we must be in
groups of 10 to 20 people for us to have a credit and savings account with them…'
Entrepreneur, 29 years old.*

One key informant supported the above sentiments by indicating that banks and other financial institutions would want women to be in groups for them to access certain financial products and services.

He stated that:

"Having women in groups increases their power to act on issues affecting them in their communities...so for some products, we require groups for them to access and use..." KII, Cooperative Bank Official.

It is apparent that financial institutions see security in numbers while most women would wish to succeed on their own and avoid the encumbrances that come with group activities.

There is a perception by the women entrepreneurs that banks give priority to people with *lots of money* and this makes them shy away from the services provided by the banks.

One respondent stated as follows:

"If you have the money, you will have no problem accessing the services offered in the banks. It seems like banks prefer those with fat accounts not the strugglers. I am informed that they even get lower interest rates." Entrepreneur, 27 years old.

This assertion was corroborated by another respondent who indicated that those who transacted large amounts of money were favoured by the banks:

"...they concentrate on customers who are rich and give them good money. Those who own supermarkets and big hardware stores are given priority even when they are going to make their deposits. They will not queue like some of us..." Entrepreneur, 30 years old.

These qualitative findings were corroborated by those from quantitative findings that stated that:

"The probability of operating an account at a formal financial institution is higher for the richer, more educated, older, urban, employed, married or separated individuals. The likelihood of saving formally is higher for the same individual characteristics. Finally, the probability of borrowing formally increases for older, educated, richer and married men..." Global Findex Data, 2017: 35.

Equally, there are various reasons why many Kenyans are denied credit. Factors such as bad/no credit history was cited as one of the main reasons for being denied credit by providers. Other factors: long/tedious financial processes, unexplained denial, an outstanding debt, lack of documentation or guarantor and insufficient income/savings in the bank account, among others (FinAccess data, 2019).

Technological know-how

Technological growth and internet connectivity influence women's inclusion in financial services and products. The rapid growth of internet connectivity has a significant impact on the financial inclusion of women and men. This means that as internet connectivity grows in the country, a majority of women become financially included.

This is expressed by one key informant who posits the following:

> *"Technological innovations such as internet connectivity improves access to financial products by the populace. Internet connectivity cuts down on the distance one has to cover hence cutting on the cost of transportation in accessing financial services..." KII, Barclays Bank Official.*

Internet connectivity has a significant impact on women's financial inclusion. This means that as connectivity increases in the country, majority of the people will gain financial inclusion. Connectivity cuts down on the time and distance covered in accessing financial services. In Kenya, 4G internet connectivity has increased uptake of banking products as people prefer to do their banking online. This has mostly been necessitated by lowered cash transactions in the economy. World Bank (2018), Zin & Weill (2016), Ngek (2016) and Global Findex (2017) found that technological innovations such as internet connectivity serve to improve access to financial products by the populace.

Conclusion

Women's financial inclusion is associated with both voluntary and involuntary exclusion. It is determined by a broad spectrum of factors which when moderated ensures that more women can be financially included, leading to their economic empowerment. Financial inclusion of women has an empirical positive impact economically, which is crucial for sustainable economic growth since it acts as a key factor in increasing prosperity and reducing poverty. There is need for greater financial awareness spread by financial institutions to meet the needs of most women and to enhance their economic empowerment through financial inclusion. Greater internet connectivity and enhanced capacity of women to take advantage of the existing opportunities must be upgraded. Women should be encouraged join self-help groups and merry-go-rounds, form saccos and improve on the management of those groups which are sources of cheap capital for their small-scale businesses.

The research concludes that inclusive economic growth can only be accomplished by achieving financial inclusion for women, majority of whom are unbanked and financially excluded.

Policy Relevance of the Work

The results of this study can support policy-making and regulation processes for financial institutions, government and other stakeholders in adjusting their policies so as to maximize the growth potential of women by creating awareness of their financial needs. Besides facilitating women training on financial access, financial management, leadership and loaning processes, there is a need for redesigning more robust financial services and products specifically for women that take into consideration their situation and leverage on their challenges. To achieve this, there is need to bring more women leaders and other policy champions to dialogue and foster the implementation of policies that address the real needs of women. In the wake of advanced technology, there is need to redesign and digitize financial services and products prudently with new channels which are risk-proof by expanding on the already developed mobile and online platforms. Continuous investment by financial institutions and the Central Bank can generate extensive sex-disaggregated financial inclusion data in the country to foster a better understanding of where immediate action and changes need to be directed. These policy adjustments will be useful to women's financial inclusion, development and economic empowerment.

Areas for further research

A study that compares financial inclusion within informal and formal financial services in empowering women in Kenya should be conducted.

References

Allen, F., Demirgüç-Kunt, A., Klapper, L., & Peria, M. S. (2012). "The foundations of FI. Understanding ownership and use of formal accounts.". The World Bank. development research group. finance and private sector development team. *Policy Research Working Paper*.

Bruhn, M., &Zia, B. (2011). Stimulating managerial capital in emerging markets: The impact of business and financial literacy for young entrepreneurs, *Policy Research Working Paper* 5642.

CBK, KNBS and FSD Kenya. (2019). The 2019 FinAccess household survey on access, Usage, Quality and Impact. Nairobi, Kenya: FSD Kenya.

Chemjor, S. J. (2013). Factors affecting women participation in microfinancing programmes in Kenya: A case of micro and small enterprises in Garissa County. Unpublished MA Thesis, UON. Nairobi.

Demirgüç-Kunt, A., Klapper, L., Singer, D., Ansar, S., & Hess, J. (2018). The Global findex database 2017: Measuring financial inclusion and the Fintech Revolution. Washington, DC: World Bank.

Finnegan, G. (2015). Strategies for women's financial inclusion in the Commonwealth. London: United Kingdom: Commonwealth Secretariat. Available Online at: thecommonwealth.org

Golla, A. M., Malhotra, A., Nanda, P., & Mehra, R. (2011). Understanding and measuring women's economic empowerment: Definition, framework and indicators. International Centre for Research on Women (ICRW). Washington D.C.

Kessy. S., & Temu, S. S. (2010). The impact of training on performance of micro and small enterprises served by microfinance institutions in Tanzania. *Research Journal of Human Measurement. 38* (2): 607-612.

Kilonzo, J. A. (2014). Factors influencing utilization of WEF: A survey of Buuri Division of North Imenti, Kenya. Unpublished MA Thesis. UON. Nairobi.

Ngek, N. B. (2016). Performance implications of financial capital availability on the financial literacy performance nexus in South Africa. *Investment Management and Financial Innovations, 13*(2-2), 354-362. DOI:10.21511/imfi.13(2-2).2016.10.

Njoroge, R. N. (2012). Relationship between financial literacy and entrepreneurial success in Nairobi Country Kenya. Unpublished MA Thesis. UON. Nairobi.

Odira, B. A. (2017). Organizational Factors Influencing Uptake of WEF in Kitui Central Sub-County in Kenya. Unpublished MA Thesis. South Eastern University. Kenya.

Organization for Economic Cooperation and Development (OECD) (2018). Closing the Gender Gap: Act Now. Paris. Available online at: http:// www.oecd.org/ gender/closingthegap.htm.

Sharma, K. (2011). Small loans, big dreams: Women and microcredit in a globalizing economy. *Economic and Political Weekly, 46* (43), 58-63.

The Global Findex Database (2017). Measuring financial inclusion and the fintech revolution. Available from: http://www. worldbank.org/en/programs/global findex. [Last accessed on 2019 Nov 11].

Tuesta, D., Sorensen, G., Haring, A., & Camara, N. (2015). Financial inclusion and its determinants. The case of Argentina. Working Paper, No 13/03. Madrid, January.

Uddin, A. Chowdhury, M. A. F., & Islam, M. N. (2017). Determinants of financial inclusion in Bangladesh: Dynamic Gmm & Quantile Regression Approach. *The Journal of Developing Areas 51*(2), 221-237. Tennessee State University College of Business. Retrieved May 17, 2019, from Project MUSE database.

Ursul, S. A. (2013). Factors influencing economic status of women in Kenya: A case of Mumias District in Kenya. Unpublished MA Thesis. UON. Nairobi.

Women's Economic Empowerment (WEE) Issue paper 23 April 2011. Retrieved from: https://www.oecd.org/dac/gender-development/47561694.pdf

World Bank (2018). Financial inclusion is a key enabler to reducing poverty and boosting prosperity. Washington, D.C.

Zins, A., & Weill, L. (2016), The determinants of financial inclusion in Africa. *Review of Development Finance*, *6* (1), 46-57.

Tables and figures

Table - T11: *Respondent's socio-demographic characteristics.*

Characteristic	Frequency (n) N=24	Percentage (%)
Age		
21-30	4	16
31-40	14	56
41-50	6	24
51-60	1	4
Marital status		
Single/Unmarried	8	32
Married	14	56
Widowed	2	8
Divorced	1	4
Level of education		
Primary	3	12
Secondary	19	76
Tertiary	3	12
Type of business		
Pharmacy	1	4
Bookshop	1	4
Restaurant	3	12
Spa	1	4
Clothing Boutique	3	12
Selling bags	1	4
Second-hand clothes	2	8
Food vendor	2	8
Mobile money transfer	1	4
Green groceries	2	8
Electronics	1	4
Cosmetics	2	8
Tailoring	1	4
Selling shoes	1	4
Cereals	1	4
Butchery	1	4
Fruits	1	4
Duration in business		
5 to 10 years	22	88
10 years and above	3	12
Sources of capital		
Personal savings	13	52
Family and relatives	4	16
Spouses	4	16
Loan from banks	2	8
Chama (Merry go round)	1	4
Mobile loan App	1	4

Source: Research Data (2019)

Table - T12: *Marginal effects of determinants of financial inclusion.*

Financial inclusion	dy/dx	Std.Err.	Z	P>|z|
Residence	0.0431	0.0083	5.2000	0.0000
Landownership	0.0330	0.0088	3.7700	0.0000
Social network	0.0073	0.0078	0.9400	0.3470
Household size	-0.0054	0.0018	-3.0700	0.0088
Islam	0.0484	0.0085	5.7200	0.0000
African	-0.0770	0.0698	-1.1000	0.2700
Hindu	-0.7676	0.1297	-5.9200	0.0000
Other	-0.0131	0.0394	-0.3300	0.7390

Source: Adapted and modified from FinAccess Data (2019).

SECTION 2:
WOMEN'S REPRODUCTIVE HEALTH

Introduction

Phylis Machio[1]

In 2017, an estimated 295,000 maternal deaths were reported globally, representing an MMR of 211 deaths per 100, 000 live births (WHO, 2019). Developing countries accounted for roughly 99 per cent of these maternal deaths, with SSA alone accounting for 66 per cent of them (WHO, 2015, 2019). It is estimated that 27 per cent of maternal deaths are caused by post-partum haemorrhage, 14 per cent by hypertension and 8 per cent by abortion (Say et al., 2014).

Family planning can considerably lower maternal morbidity and mortality, especially those associated with unintended pregnancies (Tsui et al., 2010). In 2012, approximately 40 per cent of pregnancies (85 million) were unintended worldwide (Sedgh et al., 2014). According to Bearak et al. (2020) 61 per cent of unintended pregnancies were aborted between 2015 and 2019, meaning approximately 73.3 million abortions occurred each year. Half of the pregnancies among adolescents aged 15 to 19 are unintended and more than half of these end up in abortion, often under unsafe environments (Darroch et al., 2016).

Contraceptive prevalence still remains low. In 2019, about half (45 per cent) of women of reproductive age (15-49 years) were using modern contraceptives globally. However only a quarter (25 per cent) of women of reproductive age in SSA used modern contraceptives (UN, 2020). The situation is worse among adolescents. In 2016, 38 million adolescents aged between 15 and 19 were sexually active and did not want a child in the following 2 years, yet only 39 per cent of them were using modern contraceptives (Darroch et al., 2016). In Kenya only 53 per cent of women of reproductive age were using modern contraceptives in 2015 (Kenya Bureau of Statistics et al., 2015).

Maternal healthcare services also play an important role in reducing maternal mortality. Access to ANC services, skilled delivery care and support during the first weeks of delivery can reduce maternal mortality (WHO, 2014). Yet, according to Yaya & Ghose (2019) only 58 per cent of women in Africa used ANC services compared to a global average of 78 per cent. More women in Africa, however, utilized skilled birth assistance at 87 per cent which was lower than that of Europe at 96 per cent (Yaya & Ghose, 2019). In Kenya, while 96 per cent of women received ANC from a skilled provider, only 58 per

---

1   Phylis Machio is a Lecturer, School of Economics, UON.

cent made the recommended 4 or more antenatal visits. Sixty-two per cent of women delivered with the help of a skilled birth attendant and 53 per cent received PNC within 2 days of delivery (Kenya Bureau of Statistics et al., 2015).

Reducing maternal mortality requires that women of reproductive age access family planning and that pregnant women access maternal healthcare services. The papers in this section explore the determinants of use of modern contraceptives and maternal health services among women, with a view of recommending policies to increase uptake of these services.

The first paper seeks to estimate the extent of repeat adolescent pregnancies among women aged 15-24 and to identify characteristics of women who experienced this. The study utilizes data from the 2014 KDHS. The study found that nearly one in every five adolescents in Kenya has had a repeat pregnancy. The probability of having a repeat adolescent pregnancy declined with the education level and increased with the poverty level. The study recommends special programmes targeting the prevention and reduction of the incidences of repeat pregnancies among adolescents.

The second paper estimates the relationship between couples' decision-making power and contraceptive use in Kenya. The study analyses the 2014 KDHS data and estimates a logistic regression model. The results indicate that contraceptive use is higher in households where husband/partner alone make contraceptive decisions or where the decisions were made jointly by husband and wife compared to where women make decisions alone. The study recommends family planning programming that emphasizes on joint responsibility of both husband and wife in matters of contraceptive use.

The third paper analyses the effect of women's autonomy on use of modern contraceptives among women aged 15–49 in Kenya. The study estimates a logistic regression model and uses data from the 2014, 2008/9 and 2003 KDHS. The findings of the study show that modern contraceptive use in Kenya is influenced by women's level of decision-making autonomy. Women who took part in making key household decisions had higher odds of using modern family planning methods, compared to those reporting no involvement in key household decisions. Similarly, women living in clusters with a high women autonomy level had higher odds of modern contraceptive use. The study recommends that reproductive health programmes put more emphasis on improving the individual and collective position of women in communities.

The fourth paper reviews the content and pedagogy of LSE programmes and gathers student experiences with this programme with a view of evaluating its ability to address the students' SRH information needs and knowledge gaps. The study collected data from 60 students who completed secondary school in 2017 and from 15 key informants. This data was complemented with the desk review of the LSE curriculum. The study concludes that the conventional methods of teaching sex education cannot exclusively meet the needs of students. There is need for continuous rethinking on more innovative, proactive and participatory methods that meet the current needs of students.

The fifth paper estimates the determinants of uptake of ANC, health facility delivery and PNC services in Kenya. The paper uses data from 2014 KDHS and estimates a logistic regression model. The study found that women with higher education, in the rich wealth quintile, covered by health insurance and with low parity had higher likelihood of using maternal healthcare services. The study recommends promotion of female education and subsidizing maternal healthcare services to ensure that women of all social status can access them.

The sixth paper sets out to establish the socio-economic and facility-based determinants of access to SRH services among female refugees between 10 and 19 years. The results reveal a low access to SRH services among adolescent refugees. Here, 60 per cent of the respondents stated that parents and guardians provided them with the initial information on SRH but it was mostly limited to menstruation and menstrual hygiene. Another 47 per cent stated that their most preferred sources of information were social media and the internet. Friends or peers was at 23 per cent. The study recommends interventions to enhance the knowledge of SRH issues especially for the out-of-school adolescent refugees who would not be able to access the information from a school. There is also need to broaden the SRH content taught in school to go beyond abstinence and include contraceptives and STI other than HIV and AIDS. It is also essential to build the capacity of teachers, parents and guardians so that they are able to talk freely about SRH matters with this critical population.

The seventh paper explores inequality of opportunities in maternal health among adolescents. Maternal deaths among adolescents are a major public health issue. Adolescent pregnancies are negatively associated with low access to maternal and child health services. This results in mother and child deaths or disabilities, which undermines the achievement of SDG 3 that seeks to ensure health and well-being of all individuals regardless of their age. The concept of IOp relates to the probability of adolescents accessing maternal healthcare irrespective of their circumstances such as gender, family background, family wealth and place of birth. This study argues that the IOp in adolescents' maternal health perpetuates socio-economic inequalities.

This study used the HOI to examine inequality in accessing maternal healthcare including ever-pregnant, ANC, facility delivery and PNC. The study finds that the HOI is lower than the coverage rate of the opportunities. This suggests inequality in the distribution of opportunities. This study also uses the Shapley decomposition to show that the primary circumstances contributing to IOp are wealth status, education and location, which are beyond the adolescent control. This study recommends that the free maternity policy should ensure equal access for adolescents. Advocating for laws and policies that uphold adolescent maternal health rights is paramount in reducing the current unequal opportunities.

References

Bearak, J., Popinchalk, A., Ganatra, B., Moller, A.-B., Tunçalp, Ö., Beavin, C., Kwok, L., & Alkema, L. (2020). Unintended pregnancy and abortion by income, region, and the legal status of abortion: Estimates from a comprehensive model for 1990–2019. *The Lancet Global Health,* 8(9), e1152–e1161. https://doi.org/10.1016/S2214-109X(20)30315-6

Darroch, J., Woog, V., Bankole, A., & Ashford, L. (2016). Adding it up: Costs and benefits of meeting the contraceptive needs of adolescents. Guttmacher Institute.

Kenya Bureau of Statistics, MoH, Kenya AIDS Control Council, Kenya Medical Research Institute, National Council for Population and Development, & ICF International. (2015). *KDHS* (2014) (DHS Final Reports FR 308). KNBS, MoH/Kenya, National AIDS Control Council/Kenya, Kenya Medical Research Institute, National Council for Population and Development/Kenya, and ICF International. https://dhsprogram.com/publications/publication-fr308-dhs-final-reports.cfm

Mayor, S. (2004). Pregnancy and childbirth are leading causes of death in teenage girls in developing countries. BMJ : *British Medical Journal, 328*(7449), 1152.

Say, L., Chou, D., Gemmill, A., Tunçalp, Ö., Moller, A.-B., Daniels, J., Gülmezoglu, A. M., Temmerman, M., & Alkema, L. (2014). Global causes of maternal death: A WHO systematic analysis. *The Lancet Global Health,* 2(6), e323–e333. https://doi.org/10.1016/S2214-109X(14)70227-X.

Sedgh, G., Singh, S., & Hussain, R. (2014). Intended and unintended pregnancies worldwide in 2012 and recent trends. *Studies in Family Planning,* 45(3), 301–314. https://doi.org/10.1111/j.1728-4465.2014.00393.x.

Tsui, A. O., McDonald-Mosley, R., & Burke, A. E. (2010). Family planning and the burden of unintended pregnancies. *Epidemiologic Reviews,* 32(1), 152–174. https://doi.org/10.1093/epirev/mxq012.

UN. (2020). *World Fertility and Family Planning 2020: Highlights.* United Nations Department of Economic and Social Affairs, Population Division.

World Bank. (2006). *Maternal mortality at a glance.* World Bank. https://openknowledge.worldbank.org/handle/10986/9617.

WHO. (2014). *Maternal mortality: Fact sheet.* WHO. https://apps.who.int/iris/bitstream/handle/10665/112318/WHO_RHR_14.06_eng.pdf

WHO. (2015). *Trends in maternal mortality: 1990 to 2015: Estimates by WHO, UNICEF, UNFPA, World Bank Group and the United Nations Population Division.* WHO. http://www.who.int/reproductivehealth/publications/monitoring/maternal-mortality-2015/en/

WHO. (2019). *Trends in maternal mortality (2000-2017): Estimates by WHO, UNICEF, UNFPA, World Bank Group and the United Nations Population Division.* WHO. https://data.unicef.org/resources/trends-maternal-mortality-2000-2017/

Yaya, S., & Ghose, B. (2019). Global inequality in maternal healthcare service utilization: Implications for SDGs. *Health Equity, 3*(1), 145–154. https://doi.org/10.1089/heq.2018.0082

Prevalence and Determinants of Repeat Adolescent Pregnancy: Evidence from the 2014 KDHS

Christabel Gero[1] and Alfred Agwanda[2]

Abstract

An important aspect of global and national policy concern is the occurrence of pregnancy during adolescent period (WHO, 2020). Adolescent pregnancies raise concern because of the associated adverse health, educational, social and economic outcomes (WHO, 2020). The extent of repeat adolescent pregnancies is still unknown in Kenya despite the negative socio-economic and health effects they pose. This study sought to estimate the extent of repeat adolescent pregnancies among women aged 15-24 and to identify characteristics of women who experienced these repeat adolescent pregnancies. The study utilized data from the 2014 KDHS. Nearly one in every five adolescents in Kenya has had a repeat pregnancy. The probability of having a repeat adolescent pregnancy declines with wealth status and education, but increases with early child bearing. There is need for special programmes targeting the prevention and reduction of the incidences of repeat adolescent pregnancies.

Key words: repeat adolescent pregnancy, Kenya, adolescence

---

1   Christabel Gero is a Research and Policy Analyst at the Africa Center for People, Institutions and Society (ACEPIS), and an alumnus of the PSRI at UON.
2   Alfred Agwanda is an Associate Research Professor PSRI, UON.

Introduction and statement of the problem

The change from childhood to adulthood is referred to as adolescence, which is between ages 10 to 19. It's mainly defined by a progressive change in physical, biological, emotional and social status (WHO, 2011). Adolescence is a critical stage in the life of an individual. The changes that adolescents go through in terms of family structure, livelihood, schooling, community, and identity are unmatched by any other period of their lives.

An important aspect of global and national policy concern is occurrence of pregnancy during adolescence (WHO, 2020). Adolescent pregnancies raise concern because of the associated adverse health, educational, social and economic outcomes (WHO, 2020). These outcomes occur in the short and long term (Pinto & Surita, 2017; WHO, 2020; Nove et al., 2014; Neal et al., 2012). Adolescent mothers and their babies are at a higher risk of experiencing poor health outcomes such as obstetric fistula, sepsis, stillbirths, preterm births, birth asphyxia, poor child survival and mental disorders (WHO, 2011; 2015). Socially, adolescent mothers often face violence, discrimination and stigma with a high risk of economic disadvantages compounded with premature cessation of schooling and early marriage (Mollborn, 2017).

In Low Income and Middle-Income Countries (LIMIC) such as Kenya, pregnancy and childbirth complications are the leading causes of death among girls aged 15–19 and accounting for 99 per cent of global maternal deaths of women aged 15–49 (Neal et al., 2012; WHO, 2020). Babies born to mothers under the age of 20 face higher risks of low birth weight, preterm birth and severe neonatal conditions (WHO, 2015). The younger the adolescent mother, the more vulnerable she is to poor outcomes, both socio-economically and medically, including repeat pregnancies (Chen, 2007; Rigby, 1998; Leftwich, 2017).

An adolescent is said to have undergone repeat pregnancy if she has had two or more pregnancies during her adolescence. Adolescent repeat pregnancy is now considered a global challenge (Govender et al., 2018) because it presents further health risks for both the mother and child (WHO, 2012; Govender et al., 2018). Repeat adolescent pregnancy reduces the adolescents' ability to become self-sufficient and improve her future well-being as well as that of her children. Relative to women with first adolescent births, women with repeat adolescent births are less likely to work or maintain economic self-sufficiency, receive PNC, complete school, and have school-ready children (Leslie et al., 2017). Repeat adolescent mothers are also more likely to have a preterm delivery, require financial help, and have children with emotional and behavioural problems (Elfenbein et al., 2003).

Despite these concerns, there is absence of studies in LIMIC on the magnitude and characteristics of repeat teenage pregnancy (Maravilla et al., 2017). While extensive studies on adolescent repeat pregnancy have been carried out in other settings, studies on this theme are scarce in SSA (Govender et al., 2018). In recent times, a few studies

have been carried out in South Africa (Govender et al., 2018; Mphatswe 2016), Uganda (Burke et al., 2018) and Tanzania (Mlawa, 2016; Govender et al., 2018).

The extent of repeat adolescent pregnancies is still unknown in Kenya despite the negative socio-economic and health effects they pose. This study therefore sought to estimate the extent of repeat adolescent pregnancies among women aged 15-24 and to identify characteristics of women who experienced these repeat adolescent pregnancies.

Review of related literature

 A repeat adolescent birth is more likely to occur if the teen mother was younger at sexual debut and first birth, has low educational expectations, intended her first birth, is living with a husband/partner, did not graduate from high school after her first birth, was unemployed or not enrolled in school after her first birth (Manlove et al., 2000).

Studies have also found that dropping out of school before falling pregnant and failing to enrol in school after the birth of the first child increases chances of repeat adolescent pregnancy (Matsuhashi et al., 1989). Having partners who are older or who want another child (Bull & Hogue, 1998) and being married before or after the first birth (Kalmuss & Namerow, 1994) are also associated with repeat adolescent pregnancy. Characteristics such as having a weak or non-existent mother-daughter relationship (Bull & Hogue, 1998), an unsupportive family and a mother who never completed high school (Kalmuss & Namerow, 1994) or who was an adolescent parent herself (Maynard & Rangarajan, 1994) are also linked to repeat pregnancies during adolescence.

The likelihood of adolescent mothers experiencing a subsequent pregnancy is also influenced by their positive attitudes and intentions towards childbearing (Stevens-Simon et al., 1996). Some adolescent mothers experience repeat pregnancy due to their ambivalence about using contraceptives to prevent unwanted pregnancy (Stevens-Simon et al., 1998). Others may opt for early motherhood since they feel their occupational and educational options are limited (Merrick, 1995). Therefore, lack of a reason to avoid repeat pregnancy, in one way or another, is reason enough to intentionally get pregnant (Stevens-Simon et al., 2005). Adolescents in marriage or in serious long-term relationships are more vulnerable to experiencing a repeat pregnancy (Kalmuss & Namerow, 1994). It has been argued that some adolescent mothers who experience repeat pregnancy usually report that it was more of a 'planned affair' and not an 'accident' (Matsuhashi et al., 1989). According to Gillmore et al. (1997), repeat pregnancy is evidently witnessed among adolescents that have friends who have ever experienced an adolescent pregnancy.

Studies in LIMIC using DHS data found that repeat pregnancy was more common among adolescents from poorer communities (Maravilla et al., 2017). Poverty has been associated with repeat adolescent pregnancies and births in low, middle and high-income settings (Aslam et al., 2017; Maravilla et al., 2017). Poverty deprives a girl of the power to make decisions over further births, family planning use and access to abortion (Maravilla et al., 2017). Poverty also increases her chances of deciding to complete

her family size early due to lack of viable alternatives (Maravilla et al., 2017). A study by Amongin et al. (2020) in Uganda arrives at a similar conclusion that household poverty and young age at first birth appear to be major factors associated with repeat adolescent births. A more recent study in Uganda (Amongin et al., 2020) highlighted limited information as a factor associated with repeat adolescent births.

Despite the high adolescent pregnancy rate in Kenya, few studies have been carried out to determine the magnitude of repeat adolescent pregnancies, despite the negative socio-economic and health effects that they cause. This study aimed at establishing the extent and factors associated with repeat adolescent pregnancy.

Materials and methods

Data source

This study used data from the 2014 KDHS. This is a nationally representative survey where a total of 31,079 women of reproductive age 15-49 were sampled from 40,300 households covering 1,612 sample points (clusters) all over Kenya. The survey gathered detailed information on fertility, marriage, use of family planning methods, birth histories, and socio-economic characteristics of eligible women. This study focused on women aged 15-24. The survey had 11,483 such women.

Variable definition

The dependent variable in this study was having two or more births or pregnancies that occurred during adolescence (under age 20). This is a binary variable that takes value 1 if a woman experienced repeat adolescent pregnancy and 0 if not. The independent variables included in the analysis were; wealth index (measured as an index), place of residence (urban or rural), region (county of residence at time of survey), level of education (measured as non-formal, primary and secondary or higher), age, religion (measured as Roman Catholic, other Christians, Muslim, no religion and other), ethnicity (measured as Nilotic, Cushitic, Bantu and other linguistic groups) and current marital status (measured as married and never married).

Methods

The logistic regression model was used to estimate the determinants of repeat pregnancy. Logistic regression predicts the probability that an observation falls into one of two categories of a dichotomous dependent variable based on one or more independent variables that can either be continuous or categorical.

The binary logistic regression is specified as:

$$P(Y = 1, X_i) = \frac{\exp(\beta_0 + \beta_1 X_i)}{1 + \exp(\beta_0 + \beta_1 X_i)}$$

Where Y is repeat adolescent pregnancy, X_i is the vector of independent variables and β_i are the parameters to be estimated.

Findings and Discussion

Bivariate analysis

The first objective of this study was to estimate the proportion of young women who had repeat pregnancies during their adolescent period. The results are presented in Figure - F2 The total sample size was 11,483 out of which 883 (7.7 per cent) had no information and were therefore omitted from further analysis. The analysis, therefore, considered only 10,600 of which 48.6 per cent had no births or pregnancies. About 24 per cent had 2 more births or pregnancies during the adolescent period.

Figure - F2 presents the distribution of women by number of children/pregnancies occurring between age 12–20 and the socio-demographic characteristics obtaining. Large differences in proportion with repeat pregnancies occur by age, marital status, region of residence, education and household wealth index. Overall, about 49 per cent of women aged 15-24 had never given birth before age 20 while about 24 per cent had 2 or more children before age 20. Among those aged 15-19 and belonging to the 1995-1999 birth cohort, 82 per cent had no children while 4 per cent had 2 or more children during adolescence. For those aged 20-24 of the 1990-1994 birth cohort, only 4 per cent had no children, while 51 per cent had 2 or more children before age 20.

Nyanza region had the highest proportion (30 per cent) of young women aged 15-24 with a repeat pregnancy or birth while North Eastern region had the lowest (19 per cent). The difference by place of residence was negligible, since 24 per cent of adolescents from both urban and rural areas of residence experienced repeat pregnancy. The gap in the proportion with 2 or more births/pregnancies was highest by wealth index of the household. There were about 30 per cent of adolescents from the poorest wealth index compared to 16 per cent of adolescents from the richest wealth index with two or more children during adolescence. On religion, adolescents with no religion had the highest proportion of repeat pregnancy at 53 per cent, while those of Muslim faith were the lowest at 22 per cent of repeat pregnancy.

About 30 per cent of adolescents of Nilotic communities experienced repeat pregnancy during adolescence compared to 21 per cent of adolescents of Bantu and other communities. Adolescents with no education exhibited the highest proportion of repeat adolescent births at 46 per cent, while 13 per cent of adolescents with secondary school level of education and above experiencing repeat adolescent pregnancy. On current marital status, about 5 per cent of never married adolescents and about 60 per cent of ever married adolescents had two or more births during adolescence.

Multivariate analysis

In order to identify factors associated with propensity for repeat pregnancies during adolescence, a multivariate logistic regression was carried out. The results are presented in Table - T13. The most important factors associated with propensity of having repeat adolescent pregnancy are age, entry into marriage, education and poverty status of the household. Adolescents with no education were 279.5 per cent (3.795 times) more likely to have repeat adolescent pregnancy compared to those with secondary school education or higher. Similarly, adolescents with primary school education were 186.6 per cent (2.866 times) more likely to have repeat adolescent pregnancy compared to those with secondary school education or higher. All the findings were significant at p<0.0001 level. Thus, the propensity for repeat adolescent pregnancy was higher among women with no or low education than those with higher education. On age, the 1995-1999 cohort of adolescents (aged 15-19) were 62.3 per cent less likely to undergo repeat adolescent pregnancy compared to the 1990-1994 cohort of adolescents (aged 20-24) (p<0.0001). This is as expected, since older adolescents normally have a higher propensity to have repeat adolescent pregnancy than younger ones.

Adolescents from Nyanza province were 93.5 per cent more likely to experience repeat adolescent pregnancy than those from Nairobi (p=0.024). Results on place of residence were insignificant, thus adolescents from both urban and rural places of residence were equally predisposed to experience repeat adolescent pregnancy. Among the religions, adolescents of the Roman Catholic Church were 72.6 per cent less likely to experience repeat adolescent pregnancy compared to adolescents of other religions (p=0.028).

Adolescents from the poorest wealth index were 8 per cent more likely to have repeat adolescent pregnancy than adolescents from the richest wealth index. Adolescents from the poorer wealth index were 98.5 per cent more likely to have repeat adolescent pregnancy than adolescents from the richest wealth index. These two findings were all significant at p<0.001 level. Adolescents from the middle wealth index were 53.7 per cent more likely to undergo repeat adolescent pregnancy than adolescents from the richest wealth index (p=0.016). Thus, the propensity for repeat adolescent pregnancy seems to decline with increase in wealth index levels. Those adolescents who were never married were 94 per cent less likely to experience repeat adolescent pregnancy than the ever-married adolescents (p<0.001).

Discussion

This study sought to explore factors associated with incidence of repeat adolescent pregnancy in Kenya. Out of 10,600 cases, 24 per cent had repeat pregnancy while about 48 per cent had never been pregnant. Chances of repeat adolescent pregnancy declined with increasing wealth index. This is consistent with studies elsewhere (Maravilla, 2017). Propensity of having repeat adolescent pregnancy decreased with education. These findings indicate that repeat adolescent pregnancy is more common in settings of high

poverty and low educational attainment as previously reported (Aslam et al., 2017, Maravilla et al., 2017; Wilkie et al., 2016; Burke et al., 2018).

In this study, we find that being married is a significant determinant of repeat adolescent pregnancy. Earlier studies indicated that adolescents whose partners are older, or want another child (Bull & Hogue, 1998), and being married before or after the first birth (Kalmuss & Namerow, 1994) are factors associated with repeat adolescent pregnancy. The findings suggest that early marriage is a sure catalyst for repeat pregnancy.

The effect of religion may be weak or inconsistent, as only those who belong to the Roman Catholic Church had a lower propensity to have repeat pregnancy. Although Sinha et al. (2007) observed that youth who frequented church and were religious were less sexually experienced; Fonda (2015) stated that among developed nations, adolescent fertility rate was higher among communities with no clear spiritual allegiance. In terms of regional differences, only Nyanza region had an elevated risk of repeat pregnancy compared to other regions. However, the effect of region may be compounded by prevalence of early marriages.

Conclusion and Recommendations

In Kenya, over one in every five women have repeat pregnancy during adolescence. Experiencing another birth before the 20th birthday is likely to push the adolescent woman and her offspring into worse outcomes than what she experienced following the first birth. The factors associated with repeat adolescent pregnancy include poverty, lack of education, and early marriage.

The results here have a number of policy implications. First it calls for enhancement of the regulatory mechanisms governing early or child marriage. Secondly, repeat pregnancies may result from lack of information and inaccessibility of family planning options among young people. This requires refocusing interventions targeting increasing accessibility of contraceptives among young women. Third, Kenya needs to implement special policies and programmes targeting the prevention and reduction of incidences of repeat pregnancies. Kenya does not have a clearly set out policy or programme on repeat adolescent pregnancy. There is need for a special programme for monitoring the incidences of repeat adolescent pregnancy and prevention of the same.

References

Adolescent pregnancy. (n.d.). Retrieved September 26, 2020, from https://www.who.int/news-room/fact-sheets/detail/adolescent-pregnancy

Amongin, D., Nakimuli, A., Hanson, C., Nakafeero, M., Kaharuza, F., Atuyambe, L., & Benova, L. (2020). Time trends in and factors associated with repeat adolescent birth in Uganda: *Analysis of six demographic and health surveys.* PLOS ONE, 15(4), e0231557. https://doi.org/10.1371/journal.pone.0231557

Aslam, R. W., Hendry, M., Booth, A., Carter, B., Charles, J. M., Craine, N., Edwards, R. T., Noyes, J., Ntambwe, L. I., Pasterfield, D., Rycroft-Malone, J., Williams, N., & Whitaker, R. (2017). Intervention now to eliminate repeat unintended pregnancy in teenagers (INTERUPT): A systematic review of intervention effectiveness and cost-effectiveness, and qualitative and realist synthesis of implementation factors and user engagement. *BMC Medicine, 15*(1), 155. https://doi.org/10.1186/s12916-017-0904-7

Burke, Santo, Bernholc, Akol, & Chen. (2018). Correlates of rapid repeat pregnancy among adolescents and young women in Uganda. *International Perspectives on Sexual and Reproductive Health,* 44(1), 11. https://doi.org/10.1363/44e5518

Chen, X.-K., Wen, S. W., Fleming, N., Demissie, K., Rhoads, G. G., & Walker, M. (2007). Teenage pregnancy and adverse birth outcomes: A large population based retrospective cohort study. *International Journal of Epidemiology, 36*(2), 368–373. https://doi.org/10.1093/ije/dyl284

Clark, L. F., Desai, M., Cordero, F. J., Drake, P., Okonta, V., Glasman, J., & Potter, S. C. (2017). Engaging teen moms in their goals for the future to reduce rapid repeat pregnancies. *Journal of Adolescent Health, 60*(2), S111–S112. https://doi.org/10.1016/j.jadohealth.2016.10.400

Davis, T. M. (2002). An examination of repeat pregnancies using problem behavior theory: Is it really problematic? *Journal of Youth Studies, 5*(3), 337–351. https://doi.org/10.1080/1367626022000006018

Ds, E., & Me, F. (2003). Adolescent pregnancy. *Pediatric Clinics of North America, 50*(4), 781–800, viii. https://doi.org/10.1016/s0031-3955(03)00069-5

Fonda, M. (2013). The potential impacts of religion and spirituality on first nation teenage fertility. *International Indigenous Policy Journal, 4*(1), Article 1. https://doi.org/10.18584/iipj.2013.4.1.4

García-Moreno, C., Pallitto, C., Devries, K., Stöckl, H., Watts, C., & Abrahams, N. (2013). *Global and regional estimates of violence against women: Prevalence and health effects of intimate partner violence and non-partner sexual violence.* WHO.

Gillmore, M. R., Lewis, S. M., Lohr, M. J., Spencer, M. S., & White, R. D. (1997). Repeat Pregnancies among adolescent mothers. *Journal of Marriage and Family,* 59(3), 536–550. JSTOR. https://doi.org/10.2307/353944globalstrategyreport2016-2030-lowres.pdf. (n.d.). Retrieved September 26, 2020, from https://www.who.int/life-course/partners/global-strategy/globalstrategyreport2016-2030-lowres.pdf

Govender, D., & Naidoo, S. (2018). Scoping review of risk factors of and interventions for adolescent repeat pregnancies: A public health perspective. *African Journal of Primary Health Care & Family Medicine,* 10(1), 1–10. https://doi.org/10.4102/phcfm.v10i1.1685

Guide to DHS Statistics. (n.d.). Retrieved September 26, 2020, from https://dhsprogram.com/Data/Guide-to-DHS-Statistics/index.cfm

Heise, L., Ellsberg, M., & Gottmoeller, M. (2002). A global overview of gender-based violence. *International Journal of Gynecology & Obstetrics,* 78, S5–S14. https://doi.org/10.1016/S0020-7292(02)00038-3

Kalmuss, D. S., & Namerow, P. B. (1994). Subsequent childbearing among teenage mothers: The determinants of a closely spaced second birth. *Family Planning Perspectives, 26*(4), 149–159. JSTOR. https://doi.org/10.2307/2136238

Leftwich, H. K., & Alves, M. V. O. (2017). Adolescent pregnancy. *Pediatric Clinics of North America, 64*(2), 381–388. https://doi.org/10.1016/j.pcl.2016.11.007

MacQuarrie, K. L. D., Mallick, L., & Allen, C. (2017). *Sexual and reproductive health in early and later adolescence: DHS data on youth Age* 10-19 (DHS Comparative Reports No. 45). 81–83.

Manlove, J., Mariner, C., & Papillo, A. R. (2000). Subsequent fertility among teen mothers: Longitudinal analyses of recent national data. *Journal of Marriage and Family, 62*(2), 430–448. https://doi.org/10.1111/j.1741-3737.2000.00430.x

Maravilla, Joemer C., Betts, K. S., & Alati, R. (2018). Trends in repeated pregnancy among adolescents in the Philippines from 1993 to 2013. *Reproductive Health, 15*(1), 184. https://doi.org/10.1186/s12978-018-0630-4

Maravilla, Joemer C., Betts, K. S., & Alati, R. (2019). Increased risk of maternal complications from repeat pregnancy among adolescent women. *International Journal of Gynecology & Obstetrics, 145*(1), 54–61. https://doi.org/10.1002/ijgo.12776

Maravilla, Joemer C., Betts, K. S., Couto E Cruz, C., & Alati, R. (2017). Factors influencing repeated teenage pregnancy: A review and meta-analysis. *American Journal of Obstetrics and Gynecology, 217*(5), 527-545.e31. https://doi.org/10.1016/j.ajog.2017.04.021

Maravilla, Joemer Calderon, Betts, K. S., Abajobir, A. A., Couto e Cruz, C., & Alati, R. (2016). The role of community health workers in preventing adolescent repeat pregnancies and births. *Journal of Adolescent Health, 59*(4), 378–390. https://doi.org/10.1016/j.jadohealth.2016.05.011

Matsuhashi, Y., Felice, M. E., Shragg, P., & Hollingsworth, D. R. (1989). Is repeat pregnancy in adolescents a "planned" affair? *Journal of Adolescent Health Care, 10*(5), 409–412. https://doi.org/10.1016/0197-0070(89)90220-9

Maynard, R., & Rangarajan, A. (1994). Contraceptive use and repeat pregnancies among welfare-dependent teenage mothers. *Family Planning Perspectives,* 26(5), 198–205. JSTOR. https://doi.org/10.2307/2135939

Merrick, E. N. (1995). Adolescent childbearing as career "choice": Perspective From an Ecological Context. *Journal of Counseling & Development,* 73(3), 288–295. https://doi.org/10.1002/j.1556-6676.1995.tb01750.x

Mollborn, S. (2017). Teenage Mothers Today: What we know and how it matters. *Child Development Perspectives,* 11(1), 63–69. https://doi.org/10.1111/cdep.12205

Mlawa, M. (2016). *Factors associated with repeated teen pregnancy at Mkuranga District Hospital, Pwani region, Tanzania* (Doctoral dissertation, Muhimbili University of Health and Allied Sciences).

Mphatswe, W., Maise, H., & Sebitloane, M. (2016). Prevalence of repeat pregnancies and associated factors among teenagers in KwaZulu-Natal, South Africa. *International Journal of Gynecology & Obstetrics,* 133(2), 152–155. https://doi.org/10.1016/j.ijgo.2015.09.028

Neal, S., Matthews, Z., Frost, M., Fogstad, H., Camacho, A. V., & Laski, L. (2012). Childbearing in adolescents aged 12–15 years in low resource countries: A neglected issue. New estimates from demographic and household surveys in 42 countries. *Acta Obstetricia et Gynecologica Scandinavica,* 91(9), 1114–1118. https://doi.org/10.1111/j.1600-0412.2012.01467.x

Nitz, K. (1999). Adolescent pregnancy prevention: A review of interventions and programs. *Clinical Psychology Review,* 19(4), 457–471. https://doi.org/10.1016/S0272-7358(98)00087-7

Nove, A., Matthews, Z., Neal, S., & Camacho, A. V. (2014). Maternal mortality in adolescents compared with women of other ages: Evidence from 144 countries. *The Lancet Global Health,* 2(3), e155–e164. https://doi.org/10.1016/S2214-109X(13)70179-7

Pe´rez MM, Barquero ML, Sa´nchez ML, De L, Los Rios Gestoso GTR, Aso CM, consequences of teen pregnancy.

Population Fund (Ed.) (2013). *Motherhood in childhood: Facing the adolescent pregnancy*. UNFPA.

Rigsby, D. C., Macones, G. A., & Driscoll, D. A. (1998). Risk factors for rapid repeat pregnancy among adolescent mothers: A review of the literature. *Journal of Pediatric and Adolescent Gynecology, 11*(3), 115–126. https://doi.org/10.1016/S1083-3188(98)70130-5

Silva, J. L. P., & Surita, F. G. (2017). Pregnancy in adolescence - A challenge beyond public health policies. *Revista Brasileira de Ginecologia e Obstetrícia, 39*(2), 41–43. https://doi.org/10.1055/s-0037-1600899

Sinha, J. W., Cnaan, R. A., & Gelles, R. J. (2007). Adolescent risk behaviors and religion: Findings from a national study. *Journal of Adolescence,* 30(2), 231–249. https://doi.org/10.1016/j.adolescence.2006.02.005

Stevens-Simon, C., Kelly, L., & Singer, D. (1996) *Absence of negative attitudes toward childbearing among pregnant teenagers:* A Risk Factor for a Rapid Repeat Pregnancy? | JAMA Pediatrics | JAMA Network. (n.d.). Retrieved September 26, 2020, from https://jamanetwork.com/journals/jamapediatrics/article-abstract/518118

Stevens-Simon, C., Sheeder, J., Beach, R., & Harter, S. (2005). Adolescent pregnancy: Do expectations affect intentions? *The Journal of Adolescent Health: Official Publication of the Society for Adolescent Medicine,* 37(3), 243. https://doi.org/10.1016/j.jadohealth.2005.01.007 *subsequent_teen_preg.pdf.* (n.d.). Retrieved September 26, 2020, from https://www.beststart.org/resources/preconception/subsequent_teen_preg.pdf

Wado, Y. D., Sully, E. A., & Mumah, J. N. (2019). Pregnancy and early motherhood among adolescents in five East African countries: A multi-level analysis of risk and protective factors. *BMC Pregnancy and Childbirth, 19*(1), 59. https://doi.org/10.1186/s12884-019-2204-z

WHO | *Disease, injury and causes of death country estimates,* 2000-2015. (n.d.). WHO; WHO. Retrieved September 26, 2020, from http://www.who.int/healthinfo/global_burden_disease/estimates_regional_2000_2015/en/

WHO | *Making health services adolescent friendly.* (n.d.). WHO; WHO. Retrieved September 26, 2020, from https://www.who.int/maternal_child_adolescent/documents/adolescent_friendly_services/en/

Wilkie, G. L., Leung, K., Kumaraswami, T., Barlow, E., & Moore Simas, T. A. (2016). Effects of Obstetric Complications on Adolescent Postpartum Contraception and Rapid Repeat Pregnancy. *Journal of Pediatric and Adolescent Gynecology,* 29(6), 612–616. https://doi.org/10.1016/j.jpag.2016.05.002

Woldemicael, G. (2005). *Teenage childbearing and child health in Eritrea* (WP-2005-029; 0 ed., p. WP-2005-029). Max Planck Institute for Demographic Research. https://doi.org/10.4054/MPIDR-WP-2005-029

Tables and figures

Table - T13: Percentage distribution of women aged 15-24 by number of children/pregnancies occurring between age 12 and 19.

	Number of birth/pregnancies					Observations	Proportion with repeat pregnancy (%)
	0	1	2	3	4		
Kenya	48.6	27.3	17	6.3	0.7	10600	24
Age groups							
15-19	81.9	14.4	3.4	0.3	0	6078	3.7
20-24	4	44.7	35.2	14.4	1.7	4522	51.3
Region							
Coast	48.4	29.6	16.4	5	0.6	1399	22
North Eastern	54.2	26.4	13.2	5.2	1	592	19.4
Eastern	53.3	26.8	13.9	5.3	0.8	1714	20
Central	56.8	27	13.6	2.5	0.1	811	16.2
Rift Valley	43.6	29	19.8	6.8	0.8	3152	27.4
Western	54.1	22.3	15.9	7.2	0.5	1077	23.6
Nyanza	45.9	24.1	18.9	9.9	1.2	1542	30
Nairobi	37.7	39.3	18.2	4.5	0.3	313	23
Place of residence							
Urban	44.1	32.1	17.8	5.4	0.6	3857	23.8
Rural	51.2	24.6	16.5	6.9	0.8	6743	24.2
Religion							
Roman Catholic	48.9	28.7	16.4	5.3	0.7	2153	22.4
Other Christian	48.4	27.2	17.4	6.4	0.6	6702	24.4
Muslim	51.6	26.5	14.2	6.6	1	1566	21.8
No religion	21.4	26.2	35.9	14.5	2.1	145	52.5
Other	54.5	9.1	4.5	18.2	13.6	22	36.3
Wealth index							
Poorest	45.6	24.3	19.2	9.4	1.5	2573	30.1
Poorer	51.2	21.3	18.1	8.8	0.7	2171	27.6
Middle	51.8	25.8	16.5	5.1	0.7	2097	22.3
Richer	48.7	30.2	16.5	4.2	0.4	1933	21.1
Richest	46.2	37.4	13.5	2.7	0.2	1826	16.4
Ethnicity							
Nilotic	43.2	26.5	20.6	8.6	1	3550	30.2
Cushitic	54.2	24.9	13.5	5.9	1.4	930	20.8
Bantu	51	28.1	15.5	5	0.5	5869	21
Other	50.4	28.6	13.7	6.9	0.4	248	21
Education							
No education	29.7	24.5	27.1	15.7	3	886	45.8
Primary	48.5	21.7	20.4	8.6	0.9	5167	29.9
Sec or higher	52.5	34.3	11.1	2	0.1	4547	13.2
Marital status							
Never Married	70.1	25.2	4.1	0.6	0.04	6930	4.74
Ever Married	8.2	31.4	41.2	17.1	2.1	3670	60.4

Figure - F2: *Proportion of repeat adolescent pregnancy*
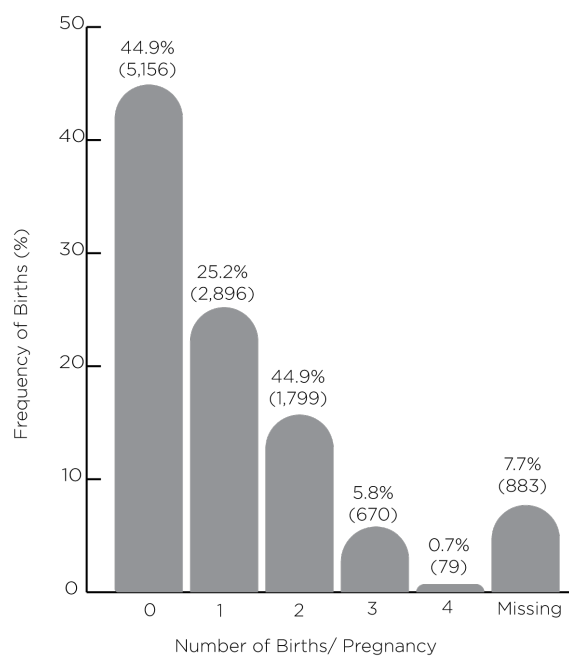
Decision-making Power and Contraceptive Use among Couples of Child-bearing Age in Kenya

Philip Kivati Mutunga[1] and Wanjiru Gichuhi[2]

Abstract

Due to the patriarchal nature of many African households, men hold power over many decisions, including family planning and family size. Decisions about contraceptive use and childbearing between couples may be affected by lack of equality in decision-making. In Kenya, few studies exist on the relationship between decision-making and contraceptive use. The key objective of this study is to determine the effect of the power of decision-making between couples and contraceptive use in Kenya. The study analysed the 2014 KDHS couple's data-set. The study estimated a logistic regression. The results indicated that contraceptive use was higher in households where husband/partner alone made contraceptive decisions or where the decisions were made jointly by husband and wife compared to those where the woman made decisions alone. The results also revealed that desire for more children, education level of couples, wealth status and place of residence significantly influenced contraceptive use. Given the results, decision-making for contraceptive use stands out as an important factor for family planning uptake in Kenya. As recommended by ICPD 1994, male involvement in contraceptive decision-making is critical for contraceptive use among couples. There is need for family planning programmes that emphasize joint responsibility of both husband and wife in relation to contraceptive use.

Key words: decision making power, patriarchal, contraceptive use, couples, child-bearing age

1   Philip Kivati Mutunga is an MSc graduate, UON.
2   Wanjiru Gichuhi is a Senior Lecturer, PSRI, UON.

Introduction and statement of the problem

In the last decade, Kenya has recorded increased contraceptive prevalence rates among married women, from 46 per cent to 58 per cent, with unmet need for contraceptive use reducing to 18 per cent in the same period. However, from 2012 to 2017 the annual growth rate in use of modern contraceptives has been slow despite the improvement in contraception (Ahmed et al., 2019). Couples of child-bearing age face a greater risk of experiencing pregnancy due to the coital exposure in comparison to all the other groups of women (Ochako et al., 2016). Generally, it is assumed that women choose a method and pattern of contraceptive use without external pressure and influence (Ehsanpour et al., 2010). However, some studies have shown that the decision to use contraceptives does not lie solely on women. Accordingly, SRH relations involve the synergy of both partners to play a part in contraceptive decisions (Plana, 2017). The decision on the number and spacing of children may lie with the spouse or other influential relatives (Eliason et al., 2014). Familial decisions on family planning are shaped by quality and power dynamics in a relationship and not unilaterally by women (Picavet et al., 2011; Allendorf, 2007).

Due to the patriarchal nature of African households, men wield power in decision-making on family matters, inclusive of family size and contraceptive use (Adegbola & Habeebu-Adeyemi, 2016; Blackstone & Iwelunmor, 2017). As a result, women either engage in consultative decision-making with their partners or explicitly lean on their partner's decision regarding their reproductive life (Chipeta, Chimwaza & Kalilani-Phiri, 2010; Bogale et al., 2011). Some married women use contraceptives covertly since they prefer having control of contraception while some men believe that it is the responsibility of women (Picavet et al., 2011). Despite the fact that a majority of women embrace contraceptive use, approval from their partners could still be required before a certain method is adopted (Muanda et al., 2017). But literature shows that men's role in contraceptive use has been overlooked in the past when designing fertility and family planning research programmes (Oyediran, Ishola & Feyisetan, 2002).

Existing literature has provided substantial evidence that women empowerment and autonomy are favourable determinants of women reproductive health and goals (Allendorf, 2007; Kulczycki, 2008; Mboane & Bhatta, 2015; Adegbola and Habeebu-Adeyemi, 2016; Eshete & Adissu, 2017). These studies provide evidence that women with considerable autonomy in the household have an advantage when it comes to controlling their body, fertility, desires and reproductive goals (Uddin, Hossin & Pulok, 2017). However, these studies have been criticised on grounds that they only considered women's views and not men or spouses. This has led to a growing body of research which focuses on power dynamics between men and women. Since spouses may have varying reproductive goals, partner influence remains fundamental. Consequently, partners' influence with regard to contraceptive use should be examined to inform new programmes (Ochako et al., 2015).

Few studies have been done on the influence of decision-making power on contraceptive use among couples in Kenya (Bankole & Singh, 1998; Onyango, Owoko & Oguttu, 2010; Wambui, 2012; Irani, Speizer & Fotso, 2014; Withers et al., 2015). This study, therefore, estimated the effect of decision-making power between a couples on the use of contraceptives in Kenya. Understanding how household power dynamics affect contraceptive use will help design policies to promote contraceptive use and women empowerment. This will go a long way in fulfilling SDG 5 on gender equality which emphasizes women empowerment through decision-making. It would also assist in meeting the spirit of the Maputo Protocol, Article 14 which recognises women's right to control their fertility, determine whether or not to have children, the number and spacing of children, and, their right to choose any method of contraception without external influence (African Union, 2003).

Review of relevant literature

Interactive relationship qualities and dynamics, inclusive of sexual decision-making, have been cited as strong predictors of contraceptive use (Mosha, Ruben & Kakoko, 2013; Chaudhary et al., 2017; Harvey et al., 2018). Poor joint consultation has been cited as a primary deterrent for adoption of a modern contraceptive method among women willing to adopt a family planning method. It was not common for couples to consultatively agree on this decision (Irani, Speizer & Fotso, 2014; Muanda et al., 2017). In minor cases when a couple consulted on fertility matters, it was out of concern for the woman's health or avoidance of economic strain in the provision of food, clothing and education for their children. This suggests that women acquire boldness to decide on their holistic health and contraceptive use when involved in their decision-making process. It has been recommended that programmatic interventions should be formulated to better a woman's negotiating power within the household, including her fertility. In this regard, in order to achieve higher levels of contraceptive prevalence, efforts need to be directed to improving spousal agreement and communication which will in turn stimulate men's interest in contraceptive use (Berhane et al., 2020).

A female-only approach to family planning matters results in men viewing contraceptive use with suspicion. For instance, studies in Uganda and Kenya reveal that men perceive contraceptive use as an easy and fool-proof way for their wives to practise infidelity (Kabagenyi et al., 2014; Withers et al., 2015). Involving men in contraceptive decisions targeting their spouses ensures success in achieving fertility goals which reduces opposition, even where women are well educated and motivated to decide on their own (Withers et al., 2015; Olaleye & Bankole, 1994; Bankole & Singh, 1998).

In Kenya, attempts have been made to investigate men's participation in family planning and what may motivate them to engage in the contraceptive dialogue. It was revealed that husbands/partners may affect contraceptive use through either perceived or explicit approval or disapproval (Wambui, 2012; Onyango, Owoko & Oguttu, 2010). Many studies in the recent past have focused on couple's knowledge, attitude, discussion and intention on family planning (Prata et al., 2010; Mwaikambo et al., 2011). However,

in order to increase contraceptive utilization among couples of reproductive age, it is important to understand the role of decision-making power on contraceptive use (Eshete & Adissu, 2017).

Out of the 12 publications reviewed in this study Mwaikambo et al. (2011) was a worldwide systematic review (Harvey et al., 2018) was conducted in the USA, one in Asia and the rest were done in SSA, with four being done in Kenya. Four studies (Onyango, Owoko & Oguttu, 2010; Wambui, 2012; Withers et al., 2015; Berhane et al., 2020) focused on data obtained from men alone, another three (Chaudhary et al., 2017; Eshete & Adissu, 2017; Muanda et al., 2017) focused on data obtained from women while only three (Mosha, Ruben & Kakoko, 2013; Irani, Speizer & Fotso, 2014; Harvey et al., 2018) incorporated views of couples. Seven of the studies utilized qualitative analysis techniques while five were quantitatively done. Only one study in Kenya (Irani, Speizer & Fotso, 2014) embraced the couple approach and was quantitatively analysed. The other three focused on men and were analysed qualitatively. The same study was the only one at the national level while the rest were done regionally and all three concentrated on Nyanza and Western regions.

Based on this scarcity of knowledge and the importance of using the couple approach rather than the gender biased approach this study provides insight on how decision-making power among couples influences contraceptive use at the national level. This study will depart from the previous studies that use qualitative data by adopting quantitative techniques.

Materials and methods

The study uses descriptive, bivariate and multivariate analysis. A logistic regression model was estimated, for bivariate and multivariate analysis. Logistic regression analysis was used to establish the statistical significance of decision-making and background variables on contraceptive use. Binomial logistic regression is a predictive analysis method which is used if the dependent variable falls in two distinctive categories and is based on one or more independent variables which might either be continuous (interval or ratio) or categorical (nominal or ordinal). Contraceptive use is a binary variable (using or not using) and thus this study will estimate a logistic regression.

The analysis of the study fitted two logistic regression models. Initially, we estimate the effect of decision-making on contraceptive use without including background variables. A bivariate logistic regression (Model I) was done whereby decision-making was regressed on contraceptive use. Later the model is re-estimated with controls. A multivariate logistic regression (Model II) was fitted to test whether decision-making effect on contraceptive use was reduced or increased when other variables were controlled for.

The logistic regression equation for the study is represented as:

$$P(Y=1|X) = \frac{\exp\left(\beta_0 + \beta_1 D + \beta_2 R + \beta_3 T + \beta_4 E + \beta_5 W + \beta_6 A\right)}{1 + \exp\left(\beta_0 + \beta_1 D + \beta_2 R + \beta_3 T + \beta_4 E + \beta_5 W + \beta_6 A\right)}$$

Where: Y is contraceptive use, D is decision maker for contraceptive use, A is age, T is place of residence, R is religion, E is education level, W is wealth index and β_0, β_1, β_2, β_3, β_4, β_5, β_6 are parameters to be estimated. X is a vector of all the independent variables.

Source of Data

The data used in this study is from the 2014 KDHS. The survey was executed by the KNBS and partners from May to October 2014. The 2014 KDHS was conducted in order to estimate fertility, measure fertility changes and contraceptive prevalence among other demographic indicators. A total of 5,265 couples were identified and interviewed while 2,978 had responded to the question on decision-making in the use of contraceptives.

Findings and Discussion

Descriptive statistics

Table - T14 shows the characteristics of the study population. Out of 5,265 couples interviewed, 74.8 per cent reported using at least one contraceptive method, while 25.2 per cent reported not using any method. Regarding decision-making for contraceptive use, about 60 per cent of the decisions were made jointly, 29.4 per cent made exclusively by women whereas 10.9 per cent was made solely by husbands or partners.

Regarding age, 48.8 per cent of couples involved in the study were aged 25-34 followed by those aged 35-39 at 32.1 per cent while those aged 15-24 comprised 19.1 per cent. The results also showed that 54.2 per cent of couples within child-bearing age reported not wanting any (more) children while 45.8 per cent wanted (more) children.

A sizeable proportion of couples (60.6 per cent) had primary level of education while those with secondary and higher education comprised 35.7 per cent of the study population. Only 3.7 per cent of couples reported not having any education. Majority of couples (43.4 per cent) were from rich households, those from poor households comprised 33.2 per cent while 23.4 per cent of the study population comprised couples from middle income households.

More than 90 per cent of couples professed Christianity, Muslim couples made up 4.4 per cent while couples who reported not belonging to any religious affiliation were the least at 1.1 per cent. Majority of couples interviewed in the study were residing in the rural areas (60.3 per cent) while 39.7 per cent were in urban areas.

Association between contraceptive use and study variables

The study sought to determine the association between contraceptive use and decision-making/background variables as shown in Table - T15 This was done to establish any significant association between contraceptive use and each of the variables.

Apart from age and place of residence, all the other independent variables had a significant association with contraceptive use. Overall, there was a high significant association between decision-making and contraceptive use at a 0.001 significance level. Contraceptive use was highest among couples where husbands or partners made the decisions at 80.1 per cent while it was lowest among couples where women exclusively made such decisions at 66.1 per cent. The association between desire for more children and contraceptive use was significant at a 0.01 significance level.

Education level and contraceptive use had a high significant association at a 0.001 significance level. Couples with secondary and higher education level were the highest users at 74.8 per cent, followed by those with primary education level at 73.1 per cent. Couples with no education were the least users at 61.1 per cent.

Wealth index was highly associated with contraceptive use at a 0.001 significance level. Couples from rich households had the highest proportion of contraceptive users at 79.2 per cent followed by couples from middle income households at 72.7 per cent. Least users were couples from poor households at 70.5 per cent.

Religion had a significant association with contraceptive use at a 0.01 level. Christian couples were the highest contraceptive users at 94.5 per cent. Muslim couples were the second highest users at 63.4 per cent and the least were those unaffiliated to any religion at 59.4 per cent. It was noted that more than half of Muslim couples and those of no religion were not using contraceptives.

Logistic regression of study variables on contraceptive use

Besides age and religion, all the other independent variables had a significant effect on contraceptive use among couples of child-bearing age. Decision-making was found to have a significant relationship with contraceptive use at a significance level of 0.001. Couples who reported that contraceptive decisions were made by the husbands/partners were 2.1 times more likely to use contraceptives than those whose decisions were made by women alone. Similarly, couples who reported to be making joint decisions for contraceptive use were 1.8 times more likely to use contraceptives compared to the reference category. Once the background variables were introduced into the regression model, they did not obliterate the effect of decision-making on contraceptive use. Results still indicated that husband/partner and joint contraceptive decision-making increased contraceptive use by 2.1 and 1.8 times compared to when only women made contraceptive decisions, respectively.

Desire for more children had a significant effect on contraceptive use. Couples who wanted no more children were 1.3 times more likely to use contraceptives compared to those who wanted more children. Education level were significant on contraceptive use. Only secondary school and higher level of education was significantly associated with contraceptive use. Couples with secondary school and higher education were 1.7 times more likely to use contraceptives compared to those with no education at all. Wealth index was also significantly related to contraceptive use. Couples from rich

households were 1.7 times more likely to use contraceptives compared to those from poor households. Similarly, place of residence had a significant effect on contraceptive use. Couples residing in urban dwellings were 0.7 times less likely to use contraceptives compared to their counterparts dwelling in the rural residences.

Discussion

Decision-making had a high significant association with contraceptive use. Couples with joint decision-making on contraceptive use were more likely to use contraceptives compared to those whose decisions on the same were made by women.

These findings are in line with a study done in Bangladesh which concluded that women's unilateral decision-making is unlikely to have a positive influence on contraceptive use (Uddin, Hossin & Pulok, 2017). Another research in Nigeria revealed that women who regarded family planning as a women's business, were less likely to have used contraceptive methods than their counterparts who did not agree (Ankomah, Oladosu & Anyanti, 2011). Husband/partner decision-making and decisions made jointly proved to be an important determinant of contraceptive use.

Desire for more children had a significant relationship with contraceptive use. Couples who did not want more children were more likely to use contraceptives compared to those who wanted more. The study contradicted one done in Indonesia which concluded that a significant proportion of women who have no desire to continue bearing children do not, in fact, use contraceptives (Withers, Kano & Pinatih, 2010). Kenya has made strides in meeting her contraceptive prevalence targets in the recent years and couples are indeed using contraceptives to either prevent pregnancy or space their children.

Education was significantly related to contraceptive use. Couples with secondary and higher levels of education had higher likelihood of contraceptive use. This concurs with a study done in Kenya which stressed the significance of increased schooling and its positive effect on choices and decision-making (Jalang'o et al., 2017). Only secondary school and higher levels of education were significant to contraceptive use with reference to those having no education. Couples with secondary school education were more likely to use contraceptives compared to those with no education. This was also revealed in another study done in Western Ethiopia (Tekelab, Melka & Wirtu, 2015). Education promotes dialogue and breaks down cultural obstacles thus helping couples reach a consensus on reproductive health matters. It also enables the parties to get more information and understanding on various methods available, thus facilitating joint decision-making for contraceptive use.

Couples from rich households were the highest contraceptive users at 79.2 per cent. Couples from rich households were more likely to use contraceptives than those from poor ones. The findings do not differ with expectations as economic empowerment favours contraceptive use. Using contraceptives prevents unplanned pregnancies, helps space children and releases couples to spend more time in economic production.

Conclusion and policy recommendations

The results of the study confirm that partner/husband involvement in decision-making is crucial for contraceptive use among couples of child-bearing age in Kenya. This strongly implies that the husband/partner is central and should not be treated as peripheral to contraceptive matters affecting couples.

The government and the family planning stakeholders should put in place concerted efforts to encourage joint decision-making on contraceptive use for all genders in both rural and urban areas. This will ensure increased contraceptive use and discourage covert use (Withers et al., 2015). There is need for family planning programmes which emphasize joint responsibility for couples in order to increase contraceptive use in the country. This could be achieved through community-based interventions like community health workers and local government who can disseminate family planning information to both men and women through door-to-door initiatives or at village barazas (Kabagenyi et al., 2014; Withers et al., 2015). This will help in defeating obstructive gender norms and simultaneously help in educating men on various contraceptive methods available.

Encouraging a sense of equality in power relations among couples is visibly more effective than furthering the autonomy of women when it comes to increasing contraceptive prevalence. Programmes should focus on interventions aimed at improving a woman's capacity in the household to consult and negotiate for joint decision-making with her partner, among other decisions related to her reproductive health. In addition to being encouraged to visit health clinics for contraceptive information, couples could be encouraged to meet providers one on one, which helps reduce perceived stigma on men and creates a comfortable environment for the couple to discuss which methods may be appropriate for them. This would also provide an opportunity for men to debunk all myths associated with contraceptive use and become aware of the availability of both short-term and long-term reversible contraceptives for spacing births.

Further Research

Although the husband/partner and joint decision-making proved to be highly significant to contraceptive use, it would be crucial to conduct further research on the factors affecting decision-making on contraceptive use among couples in Kenya.

References

Adegbola, O., & Habeebu-Adeyemi, F. (2016) The influence of male partners on contraceptive usage in sub-Saharan Africa-Lagos experience, *Journal of Clinical Sciences, 13*(3), p. 112. doi: 10.4103/2468-6859.185247.

Ahmed, S., Choi, Y., Rimon, J. G., Alzouma, S., Gichangi, P., Guiella, G., & Tsui, A. (2019). Trends in contraceptive prevalence rates in sub-Saharan Africa since the 2012 London Summit on Family Planning: Results from repeated cross-sectional surveys, *The Lancet Global Health, 7*(7), pp. e904–e911.doi: 10.1016/S2214-109X(19)30200-1.

Allendorf, K. (2007) Couples' reports of women's autonomy and health-care use in Nepal, *Studies in Family Planning, 38*(1), pp. 35–46. doi: 10.1111/j.1728-4465.2007.00114.x.

Ankomah, A., Oladosu, & Anyanti (2011). Myths, misinformation, and communication about family planning and contraceptive use in Nigeria. *Open Access Journal of Contraception,* p. 95. doi: 10.2147/OAJC.S20921.

Adugnaw, B., Sibhatu, B., Alemayehu, A., Sudhakar, M., Alemayehu, B., & Kebede, D. (2011) *Men's knowledge and spousal communication about modern family planning methods in Ethiopia,* p. 10.

Bankole, A., & Singh, S. (1998) Couples' fertility and contraceptive decision-making in developing countries: Hearing the man's voice, International family planning perspectives, 24(1), p. 15. doi: 10.2307/2991915.

Blackstone, S. R., & Iwelunmor, J. (2017). Determinants of contraceptive use among Nigerian couples: Evidence from the 2013 demographic and health survey, *contraception and reproductive medicine,* 2(1), p. 9. doi: 10.1186/s40834-017-0037-6.

Bogale, B., Wondafrash, M., Tilahun, T., & Girma, E. (2011). Married women's decision-making power on modern contraceptive use in urban and rural southern Ethiopia, *BMC Public Health*, *11*(1), p. 342. doi: 10.1186/1471-2458-11-342.

Chaudhary, T. K., Dangol, B. K., Rai, L., & Rai, M. K. (2017) Predictors of use of contraception among married women of reproductive age in a rural area of Nepal. *Journal of Advanced Academic Research*, 3(3), pp. 88–99. doi: 10.3126/jaar.v3i3.16857.

Chipeta, E., Chimwaza, W., & Kalilani-Phiri, L. (2010). Contraceptive Knowledge, Beliefs and Attitudes in Rural Malawi: Misinformation, Misbeliefs and Misperceptions, Malawi Medical Journal, 22(2). doi: 10.4314/mmj.v22i2.58790.

Ehsanpour, S., Mohammadifard, M., Shahidi, S., & Nekouyi, N. S. (2010) A comparative study on attitude of contraceptive methods users towards common contraceptive methods, 15, p. 9.

Eliason, S., Awoonor-Williams, J. K., Eliason, C., Novignon, J., Nonvignon, J., & Aikins, M. (2014). Determinants of modern family planning use among women of reproductive age in the Nkwanta district of Ghana: A case–control study, *Reproductive Health,* 11(1), p. 65. doi: 10.1186/1742-4755-11-65.

Eshete, A., & Adissu, Y. (2017). Women's joint decision on contraceptive use in Gedeo Zone, Southern Ethiopia: A community based comparative cross-sectional study. International Journal of Family Medicine, 2017, pp. 1–9. doi: 10.1155/2017/9389072.

Harvey, S. M., Oakley, L. P., Washburn, I., & Agnew, C. R. (2018). Contraceptive method choice among young adults: Influence of individual and relationship factors. *The Journal of Sex Research,* 55(9), pp. 1106–1115. doi: 10.1080/00224499.2017.1419334.

Irani, L., Speizer, I. S., & Fotso, J. C. (2014) Relationship characteristics and contraceptive use among couples in urban Kenya. International Perspectives on Sexual and Reproductive Health, 40(01), pp. 011–020. doi: 10.1363/4001114.

Jalang, O., R., Thuita, F., Barasa, S. O & Njoroge. (2017) Determinants of contraceptive use among postpartum women in a county hospital in rural KENYA, *BMC Public Health, 17*(1), p. 604. doi: 10.1186/s12889-017-4510-6.

Kabagenyi, A., Jennings, L., Reid, A., Nalwadda, G., Ntozi, J., & Atuyambe, L. (2014). Barriers to male involvement in contraceptive uptake and reproductive health services: A qualitative study of men and women's perceptions in two rural districts in Uganda, *Reproductive Health, 11*(1), p. 21. doi: 10.1186/1742-4755-11-21.

Kulczycki, A. (2008) Husband-wife agreement, power relations and contraceptive use in Turkey. *International Family Planning Perspectives*, *34*(03), pp. 127–137. doi: 10.1363/3412708.

Mboane, R., & Bhatta, M. P. (2015). Influence of a husband's healthcare decision making role on a woman's intention to use contraceptives among Mozambican women, *Reproductive Health,* 12(1), p. 36. doi: 10.1186/s12978-015-0010-2.

Mosha, I., Ruben, R., & Kakoko, D. (2013). Family planning decisions, perceptions and gender dynamics among couples in Mwanza, Tanzania: A qualitative study, *BMC Public Health, 13*(1), p. 523. doi: 10.1186/1471-2458-13-523.

Muanda, M. F., Ndongo, G. P., Messina, L. J., & Bertrand, J. T. (2017) Barriers to modern contraceptive use in rural areas in DRC, *Culture, Health & Sexuality,* 19(9), pp. 1011–1023. doi: 10.1080/13691058.2017.1286690.

Mwaikambo, L., Speizer, I. S., Schurmann, A., Morgan, G., & Fikree, F. (2011). What Works in Family Planning Interventions: *A Systematic Review, Studies in Family Planning, 42*(2), pp. 67–82. doi: 10.1111/j.1728-4465.2011.00267.x.

Ochako, R., Mbondo, M., Aloo, S., Kaimenyi, S., Thompson, R., Temmerman, M., & Kays, M. (2015). Barriers to modern contraceptive methods uptake among young women in Kenya: A qualitative study, *BMC Public Health, 15*(1), p. 118. doi: 10.1186/s12889-015-1483-1.

Olaleye, D. O., & Bankole, A. (1994). The impact of mass media family planning promotion on contraceptive behavior of women in Ghana, *Population Research and Policy Review,* 13(2), pp. 161–177. doi: 10.1007/BF01080201.

Onyango, M. A., Owoko, S., & Oguttu, M. (2010). Factors that influence male involvement in sexual and reproductive health in Western Kenya: A Qualitative Study, p. 13.

Oyediran, K. A., Ishola, G. P., & Feyisetan, B. J. (2002) Factors affecting ever-married men's contraceptive knowledge and use in Nigeria. *Journal of Biosocial Science*, 34(4), pp. 497–510. doi: 10.1017/S0021932002004972.

Plana, O. (2017) Male contraception: Research, new methods, and implications for marginalized populations. *American Journal of Men's Health,* 11(4), pp. 1182–1189. doi: 10.1177/1557988315596361.

Prata, N., Passano, P., Sreenivas, A., & Gerdts, C. E. (2010). Maternal mortality in developing countries: Challenges in scaling-up priority interventions, Women's Health, 6(2), pp. 311–327. doi: 10.2217/WHE.10.8.

Tekelab, T., Melka, A. S., & Wirtu, D. (2015) Predictors of modern contraceptive methods use among married women of reproductive age groups in Western Ethiopia: A community based cross-sectional study. *BMC Women's Health, 15*(1), p. 52. doi: 10.1186/s12905-015-0208-z.

Uddin, J., Hossin, M. Z., & Pulok, M. H. (2017) Couple's concordance and discordance in household decision-making and married women's use of modern contraceptives in Bangladesh, *BMC Women's Health,* 17(1), p. 107. doi: 10.1186/s12905-017-0462-3.

Wambui, T. (2012). *Perceptions of family planning and sexually transmitted infections among low-income men in Western Kenya.* Linköping: Linköping University.

Withers, M., Dworkin, S. L., Onono, M., Oyier, B., Cohen, C. R., Bukusi, E. A., & Newmann, S. J. (2015) Men's perspectives on their role in family planning in Nyanza province, Kenya, Studies in Family Planning, 46(2), pp. 201–215. doi: 10.1111/j.1728-4465.2015.00024.x.

Withers, M., Kano, M., & Pinatih, G. N. I. (2010). Desire for more children, contraceptive use and unmet need for family planning in a remote area of Bali, Indonesia. *Journal of Biosocial Science*, *42*(4), pp. 549–562. doi: 10.1017/S0021932010000052.

Tables and figures

Table - T14: Distribution of Characteristics of the Study Population

Variable	Frequency (N=2978)	Valid Per cent (%)
Current Contraceptive Use		
Not using	750	25.2
Using	2228	74.8
Decision Making for Contraceptive Use		
Women	876	29.4
Husband, partner	326	10.9
Joint decision	1776	59.6
Age groups		
15-24	568	19.1
25-34	1453	48.8
35-49	957	32.1
Desire for More Children		
Wants more	1363	45.8
Wants no more	1615	54.2
Educational Level		
No education	108	3.7
Primary	1806	60.6
Secondary+	1064	35.7
Wealth Index		
Poor	988	33.2
Middle	697	23.4
Rich	1293	43.4
Religion		
Christian	2815	94.5
Muslim	131	4.4
No religion	32	1.1
Type of Place of Residence		
Urban	1182	39.7
Rural	1796	60.3

Table - T15: *Association between Contraceptive Use and Study Variables*

Variables	Current use (N=2978)	
	Not Using Per cent(n)	Using Per cent(n)
Women	33.9(297)	66.1(579)
Husband/partner	19.9(65)	80.1(261)
Joint decision	21.8(388)	78.2(1388)
	Pearson Chi-square = 50.610, df = 2, p = 0.000	
15-24	25.4(144)	74.6(424)
25-34	23.8(346)	76.2(1107)
35-49	27.2(360)	72.8(697)
	Pearson Chi-square = 3.458, df = , p = 0.177	
Wants more	22.7(309)	77.3(1054)
Wants no more	27.4(441)	72.6(1166)
	Pearson Chi-square = 8.897, df = 1, p = 0.003	
No education	38.8(42)	61.1(66)
Primary	26.9(485)	73.1(1321)
Secondary+	21.1(223)	74.8(2228)
	Pearson Chi-square = 23.524, df = 2, p = 0.000	
Poor	29.5(291)	70.5(697)
Middle	27.3(190)	72.7(507)
Rich	20.8(269)	79.2(1024)
	Pearson Chi-square = 24.315, df = 2, p = 0.000	
Christian	24.5(689)	75.5(2126)
Muslim	36.6(48)	63.4(83)
No religion	40.6(13)	59.4(19)
	Pearson Chi-square = 13.925, df = 2, p = 0.002	
Urban	26.2(310)	73.8(872)
Rural	24.5(440)	75.5(1356)
	Pearson Chi-square = 1.129, df = 1, p = 0.301	

Women's Autonomy and Contraceptive Use in Kenya: A Multilevel Analysis

Barnabas Abok[1] and Elizabeth Owiti [2]
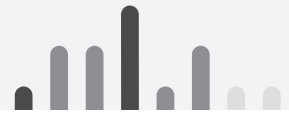
Abstract

The mCPR in Kenya has steadily increased from 39 per cent in 2008-09 to 58 per cent in 2014. Although rising, the mCPR remains low, with unmet need for modern contraceptives estimated at 18 per cent in 2014. It is documented that women's status and ability to independently decide on their reproductive health influences their uptake of reproductive health services. The objective of this study was to analyse how women's autonomy influences the use of modern contraceptives among women aged 15–49 in Kenya. The study estimated a multilevel logistic regression model. Data was drawn from the 2014, 2008/9, and 2003 KDHS.

The findings of this study show that modern contraceptive use in Kenya is influenced by women's individual factors, including their level of education, level of autonomy decision-making, and household wealth status. Modern contraceptive use is also influenced by cluster level factors like the region of residence, cluster level indicator of women's autonomy and socio-economic development. Compared to those reporting no involvement in key household decisions, women who took part in key household decisions had higher chances of using modern family planning (OR=1.5). Similarly, women living in clusters with a high women autonomy level had higher prevalence of modern contraceptive use (OR=4.3).

In Kenya, a high level of women autonomy at both individual and community level is associated with increased use of modern contraceptives. Reproductive health programmes should focus on scaling up access to family planning services, products and information, and put more emphasis on improving the individual and collective positions of women in communities.

Key words: women's autonomy, contraceptive use, Kenya

---

1   Barnabas is currently a Head of Region for the Women's Integrated Sexual Health Lot 2 (WISH2) Project at International Planned Parenthood Federation Africa Regional Office (IPPFARO)
2   Dr Elizabeth Owiti is a Lecturer at the School of Economics UON.

Introduction and statement of the problem

Accessing family planning and reproductive health services supports the well-being of users, has positive environmental, economic, and social benefits for families and communities (WHO, 2018). Use of modern family planning methods reduces the number of risky births and abortions. Reduced fertility and improved birth spacing improves the well-being of the children, mothers and the households' income. The children are more likely to achieve the potential childhood development and growth milestones; physical, cognitive, and soft skills, therefore improving their ability to learn and become productive as adults. The mothers get healthier and get the opportunity to acquire desired expertise and skills, participate better in the labour market and earn more income, which leads to gender equality and inclusive economic growth (Kavanaugh & Anderson, 2013). Households' savings due to reduced fertility allows parents to buy assets and invest in their children's health and education. This leads to more competitive adults with increased in economic growth (Canning & Schultz, 2012).

Kenya's mCPR among women aged 15-49 increased from 39 per cent in 2003 to 58 per cent in 2014 with contraceptive needs of 18 per cent remaining unmet (KNBS and ICF International, 2015). Castle & Askew, (2015) note that over a third of women stop using modern family planning within one year of starting to use them. This is due to concerns about health and/or side effects (29 per cent), desire for pregnancy (26 per cent) and pregnancy (11 per cent) (KNBS and ICF International, 2015). There is geographic variation in contraceptive use and its unmet needs in Kenya. The total need is highest among women aged 35-39 (82 per cent) and lowest among those between 5-19 years and those between 45-49 years. In terms of regions, North Eastern region has the lowest demand (33 per cent) and Eastern the highest (83 per cent). Women who have no education (47 per cent) and women in low wealth quintile (60 per cent) have a lower demand for contraceptives. The unmet need for family planning is higher in rural areas and decreases as the level of women's education increases. Adolescent and young women are the most vulnerable and under-served populations with a higher unmet need for family planning, leading to 47 per cent of unintended births among adolescents (15–19 years) (NCPD, 2017). More than 20 per cent of boys and 10 per cent of girls, aged 15 to 24 engaged in sex before age 15 and nearly 18 per cent of girls aged 15-19 have given birth (PRB's, 2015). Adolescent and youth births are higher among the poor with lower education.

Despite the known benefits of family planning and the global and local initiatives to scale up family planning access, modern contraceptive use remains sub-optimal among women in Kenya. Besides, gross inequalities exist between the country's regions in the use of modern contraceptives. Although there has been research on how various socio-economic factors affect use of modern contraceptives in Kenya, few studies exist on the link between demand for contraceptives and autonomy of women. Women's status and ability to decide on their reproductive health choices independently may influence their uptake of reproductive health services as well

as diffusion of contraception. This study applied a multilevel logistic regression model to explore the link between women's autonomy and utilisation of modern contraceptives using both individual and cluster level variables.

Review of related literature

Grossman (1972) postulates that health is a unique good that individuals demand to consume. Individuals demand health to derive utility. On the other hand, health is a component of human capital stock that helps in production. A person's stock of health controls the amount of time spent in production. Besides, a person inherits an initial health stock which depreciates as he/she grows older and increases with more investment in health. A person dies when the health stock goes lower than a particular level. The ideas brought out in Grossman's model stand true when demand for contraceptive health services is considered; women demand and utilize reproductive health services to improve child spacing which reduces the number of high-risk births, thus enhancing the mother's health. Improved fertility control gives women greater opportunities to acquire skills that increase their earnings and allows them to accumulate more physical assets.

The health belief model, which was developed by Rosenstock et al. (2012), can be used to explain variations in women's contraceptive behaviour. Contraceptive behaviour encompasses decision-making on use of contraceptives, including initiating contraceptives, continuation or stopping contraceptive use, contraceptive misuse, contraceptive non-use, and adherence. The model postulates that human beings are rational and consider different factors when making decisions and/or acting on their health. When applied to contraceptive behaviour, the health belief model has a number of constructs. The first is the perceived threat of unwanted pregnancy as well as perceived burden of pregnancy that motivates the use of contraceptives. The second is cost-benefit analysis involving assessment of perceived barriers against the benefits of using contraceptives. The third is cues to action which concerns what triggers the use of contraceptives, it is the modifying and/or enabling factor that interacts with the person's perceptions about pregnancy to influence use of contraceptives.

Women's autonomy, defined as the freedom and capacity to take independent actions, entails their capability to make decisions and control resources. Different studies have used different parameters including women's education, employment status, wealth status and household decision-making as proxies for measuring women's autonomy (Adebowale et al., 2016; Ejembi et al.,2015; Dias & de Oliveira, 2015; Ejembi et al.,2015). The studies postulate that education equips women with SRH information, thus giving them the independence to make decisions. Additionally, employment enhances a woman's self-esteem and confidence hence improving her power to make SRH decisions.

Studies that have used decision-making as a parameter to directly measure a woman's autonomy have focused on the woman's participation in key household decisions like household resource access, control and movement. The studies that

have applied a direct measure of women's autonomy have shown a strong linkage between participation of women in decision-making and use of contraceptives and demonstrated its significant influence on women's reproductive health behaviour (Adebowale et al., 2016; Ejembi et al.,2015; Larsson & Stanfors, 2014; Wado, 2013; Ahmed, et al., 2010; Saleem & Bobak, 2005). These studies postulate that the likelihood of a woman being involved in making decisions in her household is higher among the highly educated, the richest (20 per cent), those residing in urban settings, those in employment and those exposed to the media.

Studies on effects of wealth on women's reproductive health behaviour have outlined these effects at individual/household and cluster level. At individual level, the studies show that contraceptive uptake increased with the rise in education and wealth status. The studies also show an increase in the Total Fertility Rate (TFR) with a reduction in education and wealth status (Adebowale et al., 2014; Kaggwa, 2008; Stephenson et al., 2007). At community level, studies have shown positively significant effects of community and level of wealth/poverty on women's contraceptive decisions. The studies show that contextual effects of community wealth are higher in rural areas than in urban locations. (Dias & de Oliveira, 2015; Dias & de Oliveira, 2012; Stephenson et al., 2007). These findings signify that persistent differences in contraceptive prevalence rates between regions could mainly be propelled by the difference in women's status within the different regions.

Materials and methods

The dependent variable in this study was modern contraceptive use, a binary variable which was coded as 'Yes' for respondents currently using modern family planning (condoms, pills, lactational amenorrhea method, injections, pills, IUCDs, implants, and female sterilization) and 'No' for those not using modern contraceptive methods. The explanatory variables were defined at individual and cluster level. At individual level, the key independent variable was the woman's level of autonomy. This variable was established through measuring the woman's engagement in household decisions. DHS Woman's Questionnaire has questions on who usually decides about healthcare for the respondent, about purchasing major household assets and about visits to the respondent's family or relatives. Responses to these questions were then categorized as:

  i.   Respondent
  ii. Husband/partner
  iii. Jointly with Husband/partner
  iv. Someone else and
  v.   Other.

Autonomy index was generated using Additive Index based on the responses. Other individual level explanatory variables included a woman's wealth status, education, and age. Household variables included wealth and husband/partner education. At community level, the response variables of interest were cluster women's autonomy.

Other cluster level independent variables included: residence (rural or urban), region, community poverty level, level of women's education in the community, fertility norms and level of partner's education in the community.

Data was analysed using multilevel logistic regression model. Multilevel models are designed to analyse data that is structured in a hierarchical manner. A hierarchy is made up of lower/micro level observations nested within higher/macro-level observations (Kreft & Leeuw, 1998). Model 1 entails assessing how individual/household characteristics affect use of modern contraceptives, thus includes only individual level independent variables. Model 2 assesses how cluster level factors affect use of modern contraceptives, thus includes the cluster level independent variables. Model 3 assesses combined effects of individual/household and cluster level independent variables on use of modern contraceptives.

Data Source

Secondary data-sets from the 2003, 2008/9, and 2014 KDHS were utilized in the study. The surveys used two-stage sampling where clusters or PSU were sampled first then households identified from the clusters. The data was collected through a woman's questionnaire in the DHS tools together with the contraceptive calendar, which is a tool used to take retrospective history of women's pregnancy, births, terminations, and history of contraceptive use. Approval was obtained from the DHS programme to utilize the data. The study's target population was adolescents and women in the reproductive age bracket (15-49 years). A total of 46,482 respondents were included: 2014 KDHS, 30,314 (65.2 per cent); 2008/09 KDHS, 8,256 (17.8 per cent); and 2003 KDHS, 7,912 (17.0 per cent).

Findings and Discussion

Sample characteristics

Distribution of sample by background characteristics is presented in Table - T16. A majority of women below 39 years (83 per cent) (with an even distribution across the age groups) had their first birth at the age of 20-24 years (57.2 per cent); were married (61.0 per cent) and had given birth to and had less than 3 living children (55.6 per cent and 57.8 per cent respectively); had attained primary school level of education (51.2 per cent); were protestants (63.6 per cent), lived in rural areas (64.5 per cent) and participated in key household decision-making (79.8 per cent). On the other hand, majority of the husbands (67.2 per cent) were above 49 years and had attained primary school level of education (45.3 per cent). There is a proportional distribution of wealth quintile with each wealth index having close to 20 per cent of the sample.

Figure - F3 shows that with a rise in women's wealth status, utilization of contraceptives increases while unmet needs drop. However, there is a slight rise in rates of discontinuation with the improvement in women's wealth status.

Determinants of contraceptive use in Kenya

Findings of multilevel logistic regression analysis of the relationship between explanatory factors and use of modern family planning are summarised in Table - T17.

Individual and cluster level factors influencing use of modern contraceptives in Kenya was assessed through multilevel regression analysis. Model 1 outlines findings of individual level variables, Model 2 cluster level variables, and Model 3 individual and cluster level variables. We identified a number of individual and cluster level factors influencing contraceptive use in Kenya.

In Model 1, at individual level, women's autonomy, wealth status and education level had statistically significant association with the use of modern contraceptives. The likelihood of using modern family planning methods increased with increase in women's autonomy. Compared to those reporting no involvement in key household decisions, women who took part in key household decisions had higher odds of using modern family planning (OR=1.5). Women in middle, richer and richest wealth quintile had more than double likelihood of using modern family planning methods (OR=2.1, 2.3, and 2.3 respectively) compared to those in the poorest quintile. Similarly, women's attainment of primary or higher education increased the likelihood of modern contraceptive uptake (OR=2.2 – 2.9). These findings corroborate those of previous studies which showed that advancement in women's education, autonomy, and wealth status increased the likelihood of contraceptive use (Adebowale et al., 2016; Ejembi et al., 2015; Larsson & Stanfors, 2014; Wado et al., 2013; Ahmed, et al., 2010; Saleem & Bobak, 2005).

In Model 2, the study found that residing in clusters with higher women autonomy levels increased the prospects of modern contraceptive use. Among cluster variables, residential area, region, cluster women's autonomy, cluster poverty and cluster women's education were significantly associated with use of modern contraceptives. Women living in clusters with a high women autonomy level had higher prevalence of modern contraceptive use (OR=4.3). Similarly, living in clusters with more women who had attained secondary school or higher education levels raised women's prospects of using modern family planning by 70 per cent (OR=1.7). Living in a cluster with higher poverty level reduced the prospect of modern contraceptive use by 42 per cent (OR=0.58). These results are in line with previous studies which show positive association between the extent of women empowerment in a community and use of modern family planning (Dias & de Oliveira, 2015; Dias & de Oliveira, 2012; Wado et al., 2013).

In Model 3, the following individual level factors still had significant association with use of modern contraceptives: woman's autonomy, wealth status, and education. Similarly, cluster level of autonomy, and residence had significant association with modern contraceptive use. The direction of association between the explanatory factors and use of modern contraceptives remained the same, although there were some slight variations in the level of significance and strength of association.

Conclusion

Women's status and ability to independently decide on their reproductive health influences their uptake of reproductive health services, including modern contraceptives. This study demonstrates that modern contraceptive use in Kenya is not only influenced by women's autonomy, wealth status and level of education at individual/household level but also at cluster/community level. These findings affirm findings of previous studies which show that sustained improvement in women's SRH requires correction of inequalities and challenging of negative community gender and social norms that disadvantage their quest to achieve their full potential. In addition to increasing access to SRH information, products and services, reproductive health programmes in Kenya must put more emphasis on efforts to improve the individual and collective position of women in communities.

Policy Implications

By demonstrating the existence of both individual and cluster level association between women's autonomy and modern contraceptive use in Kenya, the study calls for more attention to efforts aimed at improving investment in girls' education, economic empowerment of women and creation of an enabling environment in communities to support meaningful involvement of women in key household decisions. Policy makers in the reproductive health and community development sector in Kenya need to strengthen the policy framework in the country to allow for improved synergy between reproductive health and women empowerment programmes. Besides, in geographical locations with low Contraceptive Prevalence Rate (CPR), there is need to develop context-specific strategies to challenge negative community gender and social norms that limit meaningful involvement of women in key decision-making processes.

Areas for further research

Given the cultural diversity within the country, we recommend that more studies be done to establish the specific gender and social norms that negatively impact on women's autonomy in different communities as this will allow for development of community-specific and culturally appropriate strategies to counter the same. To address a possible risk of recall bias due to the cross-sectional design of DHS and to enable assessment of causal relationship between the response variables and explanatory factors, the study recommends future use of prospective longitudinal methodology.

References

Adebowale, A. S., Gbadebo, B., & Afolabi, F. R. (2016) *Wealth index, empowerment and modern contraceptive use among married women in Nigeria: Are they interrelated? Journal of Public Health*

Adebowale, S. A., Adedini, S. A., Ibisomi, L. D., & Palamuleni, M. E. (2014). (2014). *Differential effect of wealth quintile on modern contraceptive use and fertility: Evidence from Malawian Women.* BMC Women's Health 14:40

Ahmed, S., Creanga, A. A., Gillespie, D. G., & Tsui, A. O. (2010). (2010). Economic status, education and empowerment: Implications for maternal health service utilization in developing countries. PLoS ONE 5(6)

Canning D., & Schultz, T. P. (2012). *The Economic consequences of reproductive health and family planning.* The Lancet 380(9837), 165–171.

Castle S., & Askew, I. (2015). *Contraceptive discontinuation: Reasons, challenges, and solutions.* New York, USA: Population Council.

Dias J. G., & de Oliveira I.T. (2015). *Multilevel effects of wealth on women's contraceptive use in Mozambique.* PLoS ONE 10(3)

Dias J. G., & de Oliveira I.T. (2012). *Disentangling the relation between wealth and contraceptive use in India: A Multilevel Probit Regression Approach.* Springer Science and Business Media.

Ejembi, C. L., Dahiru, T., & Aliyu, A. A. (2015). *Contextual factors influencing modern contraceptive use in Nigeria.* DHS Working Papers No. 120. Rockville, Maryland, USA: ICF International

Grossman, M. (1972). On the concept of health capital and the demand for health. *Journal of Political Economy*, 80 (2): 223 - 255

Hall K. S. (2012). The health belief model can guide modern contraceptive behavior research and practice. *Journal of Midwifery Women's Health*, 57(1): 74 – 81.

Kaggwa E. B. (2008). *The role of individual and community normative factors: A multilevel analysis of contraceptive use among women in union in mali. International Family Planning Perspectives* 34(2):79-88

Kavanaugh M. L., & Anderson, R. M. (2013) *Contraception and beyond: The health benefits of services provided at family planning centers.* New York: Guttmacher Institute.

KNBS, MoH/Kenya, NACC/Kenya, Kenya Medical Research Institute, and National Council for Population and Development/Kenya (2015). KDHS 2014. Rockville, MD, USA.

Kreft I., & Leeuw J.D. (1998). *Introducing Multilevel Modeling. London:* SAGE Publications Limited.

Larsson C., & Stanfors M. (2014). Women's Education, Empowerment, and Contraceptive Use in Sub – Saharan Africa: Findings from Recent Demographic and Health Surveys. African Population Studies 28:2

National Bureau of Statistics-Kenya and ICF International. (2015). *2014 KDHS Key Findings.* Rockville, Maryland, USA: KNBS and ICF International.

National Council for Population and Development (NCPD) (2017). *2015 Kenya National Adolescents and Youth Survey (NAYS).* Nairobi: NCPD

PRB (2015). Status Update on Adolescent Sexual and Reproductive Health in Kenya. Washington: PRB

Saleem, S., & Bobak, M. (2005). *Women's qautonomy, education and contraceptive use in Pakistan: A National Study.* Reproductive Health 2:8

Schultz, T. P. (1969). An economic model of family planning and fertility. *Journal of Political Economy* 77(2):153-180

Stephenson, R., Baschieri, A., Clements, S., Hennink, M., & Madise, N. (2007). Contextual influences on modern contraceptive use in Sub-Saharan Africa. *American Journal of Public Health* 97:7

United Nations Population Fund (UNFPA) (2014). Programme of Action Adopted at The International Conference of Population and Development Cairo, 5-13 September 1994. 20th Anniversary Edition. Geneva: UNFPA

Wado, Y. D. (2013). *Women's autonomy and reproductive healthcare-seeking behavior in Ethiopia.* DHS Working Papers. Rockville, Maryland, USA: ICF International

WHO (2018). Family Planning: A Global Handbook for Providers (2018 Update). Geneva: WHO

Tables and figures

Table - T16: Percentage Distribution of Sample by Background Characteristics

Background Characteristics	Total	
	No.	%
Woman's age		
15-19Yrs	9,334	20.1
20-24Yrs	8,498	18.3
25-29Yrs	8,533	18.4
30-34Yrs	6,620	14.2
35-39Yrs	5,575	12.0
40-44Yrs	4,434	9.5
45-49Yrs	3,488	7.5
Total	**46,482**	**100.0**
Age at first birth		
15-19Yrs	2,057	6.3
20-24Yrs	18,571	57.2
25-29Yrs	11,861	36.5
Total	32,489	100.0
Current marital status		
Not Married	18,128	39.0
Married	28,354	61.0
Total	**46,482**	**100.0**
Ideal number of children		
<3	7,376	15.9
3-4	14,355	30.9
4-6	7,379	15.9
7-8	1,439	3.1
>9	15,933	34.3
Total	**46,482**	**100.0**
Number of living children		
<3	26,621	57.8
3-4	10,980	23.9
4-6	5,671	12.3
7-8	2,433	5.3
>9	323	0.7
Total	**46,028**	**100.0**
Woman's education		
No education	6,598	14.2
Primary	23,789	51.2
Secondary	12,294	26.4
Higher	3,801	8.2
Total	**46,482**	**100.0**
Partner/husband's education		
No education	3,089	14.3
Primary	9,770	45.3
Secondary	6,335	29.3
Higher	2,393	11.1
Total	**46,482**	**100.0**

Gender Statistics for Evidence-Based Policies:
Women's economic empowerment, health and gender-based violence

Table - T16 continued: *Percentage Distribution of Sample by Background Characteristics*

Background Characteristics	Total	
	No.	%
Religion		
Roman Catholic	9,551	20.6
Protestant	29,497	63.6
Muslim	6,382	13.8
No religion	841	1.8
Other	126	0.3
Total	**46,397**	**100.0**
Residential area		
Rural	29,993	64.5
Urban	16,489	35.5
Total	**46,482**	**100.0**
Participates in key household decisions		
No	4,373	20.2
Yes	17,316	79.8
Total	**21,689**	**100.0**
Wealth index		
Poorest	10,143	21.8
Poorer	8,394	18.1
Middle	8,528	18.3
Richer	8,884	19.1
Richest	10,533	22.7
Total	**46,482**	**100.0**

Table - T17: *Determinants of Contraceptive Use in Kenya – Multilevel Logistic Regression*

VARIABLES	Model 1		Model 2		Model 3	
	OR	SE	OR	SE	OR	SE
Contraceptive Use						
Women's Autonomy: Participates in Key Household Decisions (Ref: No)						
Yes	1.47***	(0.09)			1.23***	(0.07)
Wealth (Ref: Poorest)						
Poorer	1.64***	(0.12)			1.52***	(0.11)
Middle	2.06***	(0.15)			1.74***	(0.13)
Richer	2.35***	(0.18)			1.82***	(0.15)
Richest	2.28***	(0.18)			1.59***	(0.15)
Woman's Age (Ref: 15-19Yrs)						
20-24Yrs	1.25*	(0.15)			1.18	(0.14)
25-29Yrs	1.54***	(0.19)			1.34**	(0.16)
30-34Yrs	1.54***	(0.20)			1.29**	(0.16)
35-34Yrs	1.49***	(0.20)			1.20	(0.16)
40-44Yrs	1.54***	(0.21)			1.18	(0.16)
45-49Yrs	0.80	(0.12)			0.59***	(0.09)
Woman's Education (Ref: No Education)						
Primary	2.16***	(0.19)			1.90***	(0.17)
Secondary	2.57***	(0.25)			2.27***	(0.22)
Higher	2.87***	(0.35)			2.56***	(0.31)

Table - T17 continued: Determinants of Contraceptive Use in Kenya – Multilevel Logistic Regression

VARIABLES	Model 1		Model 2		Model 3	
	OR	SE	OR	SE	OR	SE
Number of Living Children (Ref:<3)						
3-4	1.64***	(0.08)			1.79***	(0.09)
4-6	1.58***	(0.11)			1.89***	(0.13)
7-8	1.40***	(0.13)			1.78***	(0.18)
>9	0.86	(0.21)			1.13	(0.28)
Ideal Number of Children (Ref: <3)						
3-4	0.66***	(0.03)			0.67***	(0.03)
4-6	0.38***	(0.02)			0.42***	(0.03)
7-8	0.32***	(0.04)			0.34***	(0.04)
Current Marital Status (Ref: Not Married)						
Married	3.14***	(0.36)			3.09***	(0.37)
Religion (Ref: Roman Catholic)						
Protestant	1.17***	(0.06)			1.20***	(0.06)
Muslim	0.54***	(0.05)			0.58***	(0.06)
No Religion	0.66**	(0.12)			0.64**	(0.11)
Other	0.69	(0.19)			0.70	(0.19)
Partner's Education (Ref: No Education)						
Primary	2.42***	(0.27)			2.06***	(0.23)
Secondary	2.38***	(0.27)			2.11***	(0.24)
Higher	2.05***	(0.26)			1.84***	(0.23)
Level 2: Community/Cluster						
Residential Area (Ref: Rural)						
Urban			1.24***	(0.05)	1.29***	(0.08)
Region (Ref: Nairobi)						
Central			2.10***	(0.19)	1.95***	(0.21)
Coast			0.81**	(0.08)	1.16	(0.12)
Eastern			1.11	(0.11)	1.25**	(0.14)
Nyanza			0.98	(0.10)	0.71***	(0.07)
Rift Valley			0.74***	(0.07)	0.67***	(0.07)
Western			1.02	(0.11)	0.88	(0.10)
North Eastern			0.05***	(0.01)	0.19***	(0.06)
Cluster level of women's autonomy (Ref: Low)			4.33***	(0.60)	3.29***	(0.58)
Cluster level of poverty (Ref: Low)			0.58***	(0.06)	0.77*	(0.11)
Cluster women's education (Ref: No education or Primary)			1.73***	(0.27)	2.06***	(0.45)
Cluster level fertility norms (Ref: Ideal No. of Children <4)			1.12	(0.15)	2.24***	(0.37)
Cluster partner's education (Ref: No education or Primary)			1.07	(0.12)	0.93	(0.15)
Constant	0.02***	(0.00)	0.13***	(0.02)	0.01***	(0.00)
ICC	0.05		0.07		0.04	
Observations	16,907		46,455		16,907	
Number of groups	1,586		1,590		1,586	

Robust seEform in parentheses *** p<0.01, ** p<0.05, * p<0.1

Figure - F3: *Contraceptive use by household wealth status (2003-2014)*
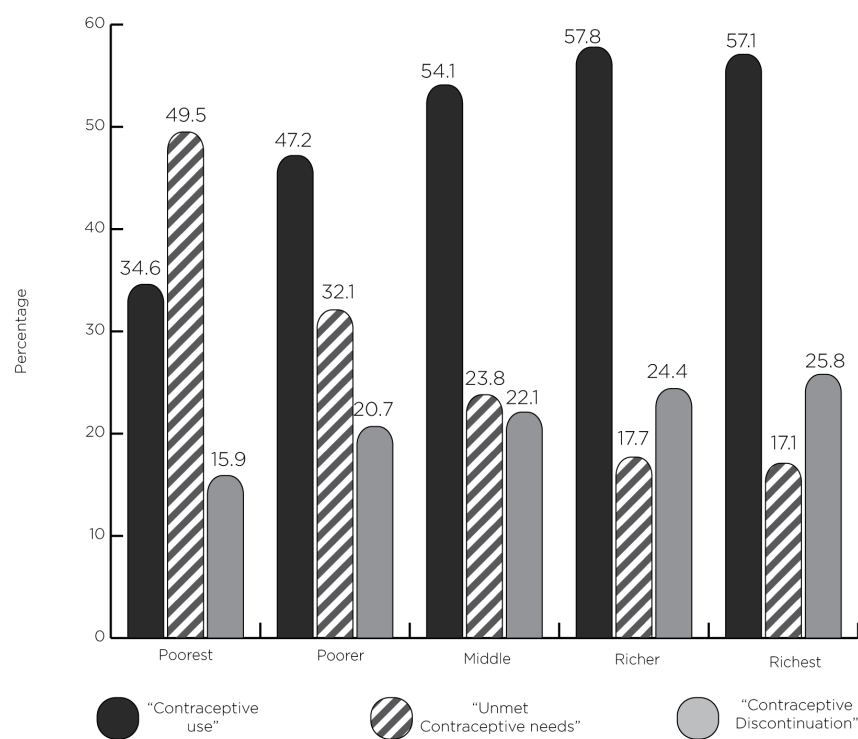
Secondary School Life Skills Education and Students' Sexual Reproductive Health in Kenya: Case Study of Ruiru Sub-County

Racheal Njenga[1] and Dennis Khamati Shilabhukha[2]

Abstract

In 2018, Kenya introduced the LSE programme as a compulsory component of the basic education to fill the adolescents' sexual and reproductive knowledge gap. The aim of this study is to evaluate the content and pedagogy of SRH as a component of the LSE policy and to gather students' experience with this programme. The study collected qualitative data from 60 students who completed secondary school in 2017 and from 15 key informants. This data complemented the desk review of the LSE curriculum. Findings show that this curriculum was designed to promote psycho-social competences. The pedagogical approach of LSE curriculum was found to lack a standard participatory approach as prescribed by the MoEST. The students who have gone through LSE had mixed views on how the programme has impacted their sexual lives. The study concludes that the conventional methods of teaching sex education cannot exclusively meet students' needs. There is need for continuous rethinking of more innovative, proactive and participatory methods that meet the current students' needs. The study recommends that the MoEST should come up with comprehensive and age-appropriate SRH education which is characterized by a positive approach to sexuality that accepts sexual feelings, desire and pleasure as essential components of young people's sexuality.

Key words: education, life skills, Life Skills Education, sexual and reproductive health, sexual and reproductive health education, sexuality

---

1   Racheal Njenga is an MSc graduate, UON.
2   Dennis Khamati Shilabhukha is a Research Fellow, IAGAS.

Introduction and statement of the problem

Population statistics indicate that one in every five persons on earth is an adolescent aged between 10-19, and 85 per cent of them live in developing countries (WHO, 2018). Further, WHO (2018) points out that an estimated 1.7 million adolescents die every year mainly from accidents, violence and pregnancy-related complications that are either preventable or treatable. These are not isolated statistics. According to Darroch et al. (2015) and UNFPA (2016), globally, unplanned teenage pregnancies, sexual engagements and unsafe sexual practices remain a challenge to sustainable development. In the same vein, WHO (2018) estimates that 16 million girls aged 15 to 19 and 2.5 million girls aged below 16 get pregnant in the Sub-Saharan region every year. Approximately 3.9 million of these girls undergo unsafe abortions annually (WHO, 2018).

Teenage pregnancy is one of the leading causes of maternal and child mortality (Darroch et al., 2015; UNFPA, 2016). It is also a major contributor to the intergenerational cycle of poverty and poor health (WHO, 2018). Early sex is then associated with health problems including STIs like HIV and AIDS, early and unwanted/unplanned pregnancy, unsafe abortion, sexual coercion or violence and infertility (de Romero & Ray, 2007). To buttress this argument, the KDHS reports that teenage pregnancy rates in Kenya stand at 18 per cent (KDHS, 2014). On the other hand, the UNFPA reports that 378,397 adolescent girls in Kenya aged between 10 and 19 became pregnant between July 2016 and June 2017. In recent years, Kenya has seen a heightened social concern regarding adolescents' SRH issues due to the negative impact of early sexuality (Maticka-Tyndale et al., 2005).

According to Maticka-Tyndale et al. (2005), the leading causes of teenage pregnancy include lack of information and manipulation by partners, especially older ones, into having unprotected sex. This goes against WHO's dictates of reproductive health which champion that people should be able to make sound decisions to have a safe sex life with the ability to reproduce when they want to and as often as they want (WHO, 2018). In the domain of reproductive health rights, everybody has a right to access reproductive health information that will enable them to make responsible decisions about their sexuality, thereby making LSE quite essential. Life skills are behaviours that enable individuals to adapt to and deal with the demands and challenges of life effectively. There are many such skills, but core ones include the ability to make decisions, solve problems, think critically and creatively, clarify and analyse values, communicate and listen, be assertive, and negotiate, cope with emotions and stress, empathise with others and be self-aware (WHO, 2018). Life skills go a long way in enhancing the physical and emotional well-being of adolescents (Clark & Aggleton 2015). They enhance their ability to be healthy and remain free from early or unwanted pregnancy, STDs (including HIV and AIDS), sexual violence, coercion, sexual assault, rape, prostitution, malnutrition and unsafe abortion.

In Kenya, LSE was introduced in the curriculum when HIV and AIDS was declared a national disaster. LSE was introduced to help school children, and their teachers respond to challenges facing young people especially in the area of HIV and AIDS. Its

aim was to provide students with skills that would help them respond to situations requiring decision-making, problem-solving, communication, their sexuality and peer influence. The LSE programme is meant to promote positive health choices, practising healthy behaviour, recognizing and avoiding risky behaviour and making informed decisions (Bearinger, et al., 2007). In 2002, however, there was a review and LSE was integrated into different subjects like humanities which were appropriate hosts for implementation. However, it was discovered that the teaching of LSE within the host subjects depended on the teacher's competences, creativity and innovativeness. As a result, there was a recommendation in 2006 that LSE be taught as a stand-alone subject. Given the need for information by young people, this study seeks to provide insights on the nature of LSE in Kenyan secondary schools and how it addresses the students' SRH information needs and knowledge gaps. The study aims at evaluating the content and pedagogy of SRH component of the LSE policy and gathering students' experiences with this programme.

Review of related literature

A life skills programme can contribute positively to the reproductive and sexual health of young people (UNICEF, 2000). This can be realized if such a programme is made compulsory and contains important components such as positive public health policies and youth-friendly health information. As a number of studies have demonstrated, possessing life skills is critical to young people's ability to positively adapt to and deal with the demands and challenges of life (UNICEF, 2000; Kirby, 2001). LSE programmes vary in form, content, extent and intensity when addressing the issues identified in various contexts.

Although, the SRH curricula always vary in the intensity and focus, it can easily be categorized into two main groups: abstinence-only education and sex or HIV education (Sidze et al., 2017). Studies show that on one hand, abstinence-only programmes do not demonstrate total positive outcomes on adolescents' sexual behaviour or any effect on contraceptive use among participants who are sexually active (Sidze et al., 2017; Keogh et al., 2018). On the other hand, sex and HIV and AIDS programmes have led to positive results on some behavioural patterns related to sex and HIV and AIDS. These include delays in the onset of sex, decrease in the number of sexual partners and reduced frequency of sex. Such programmes have also been associated with an increase in condom and contraceptive use among the youths (UNICEF, 2000). In a nutshell, SRH programmes should aim at helping teenagers make safer sexual choices, become responsible and make a positive difference in their lives.

A study done on SRH education policies and programmes in Kenya found that it has had setbacks because of the conservative social-cultural norms, lack of comprehensiveness in topics coverage, lack of teacher training on the subject matter and insufficient teaching and learning materials (Keogh et al., 2001). The study aimed at examining sexual and SRH education in Kenya and implementation of the same in schools. The

study also examined concepts and messages that are used in line with the approach to sexuality education. It covered three counties: Homa Bay, Mombasa and Nairobi. The study acknowledged the government's commitment to provide sexuality education by its adoption of international and regional polices on SRH education and the development and revision of SRH education policies. The study recommends that SRH education be comprehensive and be prioritized from the primary school level. There is also need for integration and incorporation of a broad range of SRH topics into LSE. The subject should be examinable and sufficient time should be allocated to it in the class timetable. There is also need to improve teacher training and develop programmes that monitor and evaluate the teaching of SRH education in schools. Additionally, there should be coordination between the government, NGOs and other bodies that run SRH education and programmes for adolescents in Kenya. The findings of the study may be the reason Keogh et al. (2018) postulate that school-based comprehensive SRH education is key to the achievement of adolescents' SRH and rights. With age appropriate school-based SRH education, adolescents will also achieve full potential in other areas of their lives.

However, the implementation of such programmes is fraught with several challenges. A study done in four countries from two different regions (Latin America and Africa) highlighted some of the challenges, which were associated with planning and implementation. The challenges related to programme planning included lack of adequate funding for CSE, poor or lack of coordination between different stakeholders in CSE programmes and lack of adequate monitoring and evaluating tools and systems. On the other hand, implementation-related challenges included lack of goodwill to integrate CSE into other subjects, the problem of adapting CSE curriculum to local contexts that meet the SRH needs of the adolescents, lack of goodwill and poor participation of different CSE curriculum development stakeholders. Despite facing similar CSE implementation challenges, the different countries employed different strategies to overcome them. These strategies offer useful lessons to other countries facing similar implementation challenges.

Students' experiences on SRH programmes

In analyzing student experiences on SRH programmes, (Kalanda, 2010) has looked at how LSE and SRH education changes the behaviour of students and teachers. Kalanda draws evidence from Malawi and observes that some of the issues affecting the youth are school dropout, HIV and AIDS and drug abuse. In an effort to address these issues, the government of Malawi introduced LSE and SRH education. Among the factors he analysed were the level of knowledge among the primary and secondary school students after the introduction of and implementation of LSE/SRH programmes in the Malawian schools. He studies the effectiveness of these programmes and the resultant behaviour change in students and teachers. He was concerned with the extent to which LSE/SRH objectives were achieved in the period of 6 years from 2002. The findings of the study suggest that the knowledge of LSE/SRH content among students is low, with most areas having a score of less than 50 per cent. This is an indication that the LSE/SRH

programme is not sufficiently taught in primary schools. This is attributed to inadequate teaching and learning materials, shortage of teachers, lack of proper orientation of teachers to the subject and inadequate time allocation to LSE/SRH lessons. The score was higher among secondary school students which is attributed to a longer period of exposure to LSE/SRH education. The study indicates that most teachers felt that LSE/SRH was positively changing the behaviour of students. The teachers that have taught LSE/SRH reported having benefited from the subject. The study recommends that in the long term, the LSE/SRH programme should be introduced in all university faculties and all teacher training institutions. The MoEST should increase LSE/SRH resources and make the subject examinable to increase the level of commitment towards it.

Following in the footsteps of Kalanda, other scholars such as Hindin & Fatusi (2009) have tried to examine trends and interventions of adolescent SRH education in developing countries. They have noted that the environment in which youths make SRH decisions is rapidly evolving. At the same time, the rates of sexual initiation among adolescents is rising, childbearing and marriages are progressively unlinked. They additionally note that multiple sexual partners and HIV and AIDS prevalence add to risks associated with early sexual activities. All these risk factors have led to the conclusion that there is need for more comprehensive SRH education, comprising more than the abstinence-only message. There is need for well-designed impact evaluations to analyse the quality and content of SRH education and intervention. Such analysis should target young people in school and out of school; meaning there should be programmes at the community level as well. There is need for programmes that go beyond HIV and AIDS to focus on a wider range of SRH topics, and integration of gender perspectives in SRH education. There are different sexual and reproductive needs among the genders and some of the consequences of sexual activities are gender specific. For that matter, SRH education, particularly in developing countries, should be designed to be gender-sensitive, aiming at empowering adolescents. Special consideration should be given to young women regarding sexual negotiation behaviour on the basis of accurate information. Furthermore, there should be a shift from SRH education focusing on abstinence-only and the ABC (abstinence, being faithful and use of condoms) which has been the main focus in the last few years and has been found to have had little or no impact on the desired SRH outcomes for young people. The broader thinking is hinged on the need for a shift in the way SRH education is conceptualized so that it is easily adapted to meet the needs of young people in specific contexts.

Materials and methods

The study was carried out in Ruiru Sub-County, Kiambu County which is one of the counties in the central Kenya region. The study collected both secondary and primary data. Secondary data entailed analysis of reports from the MoE, KICD, MoH Division of Reproductive Health and local not-for-profit organizations dealing with SRH. These were sources of the key documents reviewed as secondary sources of quantitative data.

Key measures were; demographics, content and pedagogical approach, experiences and perceptions of students and teachers on LSE's addressing of reproductive health information needs and gaps among adolescents.

The study also collected qualitative and quantitative data. Qualitative data was collected through a semi-structured questionnaire. From youths who had completed secondary school in 2017. A list of these youths was obtained from three secondary schools. The schools were purposively sampled to represent the three regions of the study site. From the list, the researcher randomly sampled 60 youths who were interviewed from their respective locations. The youths were divided on the basis of their sex and regions, classified into rural villages, urban and informal settlements to obtain a wider perspective of the study. From each region, 20 respondents were randomly sampled. The sample size was 60 youths (29 boys and 31 girls). Information was collected on the perceptions and attitudes of respondents regarding SRH in LSE. It also helped in the clarification of answers and probing for more information from the respondents. It captured the demographic information of the respondents, their experiences and perception of SRH in LSE.

The study also collected qualitative data from key informants using the KII guide. The key informants included 15 LSE teachers from 15 different schools in the study area. The informants were purposively selected on the basis of their expertise and knowledge of the subject matter to explore the link between LSE and SRH among adolescents, in order to give a deeper understanding of the nature, content and teaching methodologies, attitudes of students and teachers as well as classroom and school environment factors.

The quantitative data from the study was analysed through computation of various descriptive statistics such as means, percentages, frequencies and standard deviations to derive summaries of various findings. On the other hand, qualitative data was analysed thematically in line with the study objectives. Verbatim and anecdotal quotes have been used alongside presentation of the findings to project the voices of the informants.

Findings and Discussion

Content and Pedagogy of LSE Policy on SRH

The study's first objective sought to examine LSE curriculum policy on SRH in Kenya's secondary schools in terms of content and pedagogy. It was established that LSE has been taught in secondary schools in Kenya for close to two decades. LSE was introduced in the curriculum when HIV and AIDS was declared a national disaster and was taught as a single topic of the HIV and AIDS syllabus.

Findings show that the LSE curriculum policy was developed with the major objective of equipping the adolescents with psycho-social competences which would enable them to develop adaptive and positive behaviour so as to deal effectively with challenges and demands of everyday life. Analysis of the curriculum content policy shows that LSE was allocated one lesson per week across all levels in secondary schools, replacing the

Physical Education lesson. It has since been established that with the new syllabus, LSE is designed to promote general skills for day-to-day living, such as self-appreciation, improving interpersonal relationships, acquiring decision-making skills, respecting other people's rights and coping with stress and emotions. Within LSE, SRH education is also covered but not examinable. Teachers give more attention to examinable subjects. Table - T18 presents the topics that are covered in the curriculum.

The study findings also show that the content of SRH within LSE is structured to include age-appropriate content from form one to form four. The curriculum reasonably covers communication skills for the adolescents which broadly focuses on refusal skills and risk avoidance skills. It is structured to have gender-specific messages for both boys and girls at different age brackets. This was illustrated by one respondent who noted that:

> *"Our teacher would separate us from girls when she wanted to tell them something that she felt was only relevant to the girls and not boys…" Respondent 39. Male 20 years.*

Another respondent confirmed the above assertion by indicating that some schools would have gender-specific messages tailored for them:

> *"Our teacher would tell us in detail about sex and reproduction freely and also touch on a few things about boys just to let us know." Respondent 11, Female 18 years.*

In as much as it is required that the LSE teachers tailor the sexual education to the needs of boys and girls and sometimes separate them in case of mixed schools, some respondents noted that LSE was conducted in the same classroom for both boys and girls. This is exemplified by the following comment:

> *"When we were being taught life skills, we were never divided… the teacher would come just like for any other lessons and teach us in our class while we are just together." Respondent 23, Male 19 years.*

Study findings indicate that the curriculum has deficiencies in a number of areas such as the exclusion of key topics like practical aspects of reproduction, abortion, information on access and use of condoms, sexual health services, and omission of other social and contextual aspects, such as harassment and parental monitoring. This was supported by one key informant who noted the following:

> *"For the Life Skills Education to deliver on its objectives it has to be context-specific so that issues happening here in Kiambu County are contextualized and looked at differently from issues in other parts of the country. There are some cultural practices in some areas that the curriculum must speak to or else it stands to fail."*

These findings are in line with a study by Kirby (2001). For SRH education programme to be effective, it should provide information about sexuality, including human body development, sexual relationships, interpersonal skills, sexual health, sexual behaviour and socio-cultural issues related to human sexuality. The programme should provide opportunities for learners to explore, interrogate and assess sexual behaviour and attitudes. This would help them develop values, create self-esteem, develop the ability

to relate with both genders and ensure an understanding of their responsibilities to each other. The SRH education should aim at developing interpersonal skills, including ability to create healthy and satisfying relationships, dealing with peer pressure, communication, assertiveness, decision-making and problem-solving skills. It should enable the learners to take responsibility regarding sexual relationships. Having gone through the programme, adolescents should be able to address issues, like abstinence, the ability to resist pressure and safe sex.

Moreover, the results reveal that the curriculum has a weak focus on gender and human rights issues, such as the rights of people living with HIV and AIDS. Equally, topics such as forced sex, GBV and intimate partner violence were largely ignored. These findings show that the information provided to students in SRH was not sufficient to help in reducing the risk of unintended pregnancy, which is a menace in the country. It also does not explore sexual rights and the ability to detect sexual violence of any nature.

The quantitative findings were corroborated by qualitative findings from the semi-structured interviews and KIIs. Majority of key informants agreed that sexuality education offered in secondary schools was not comprehensive. The following voices amplify the above statements:

> *"The Life Skills Education curriculum is not the best for the needs of students. It is focused on Biology and more so the physical and excludes topics related to sexual reproductive health and rights, and the approach prescribed by the ministry is more academic and theoretical... with little attention given to improving students' practical skills..." KII 10, Life Skills Teacher.*

> *"Sexuality education must include information on contraceptives and pregnancy prevention and take a holistic approach to education to provide adolescents with the requisite skills to transition to adulthood...." KII 15, Life Skills Teacher.*

Conversely, one key informant lauded the curriculum as well articulated to meet the needs of adolescents. She held a more restrictive viewpoint, citing religious and cultural inhibitions about discussing sexual matters with students:

> *"For me I feel it covers what these young boys and girls need to know at that particular age... We must be careful not to introduce these young people into sexual behaviour with what we are teaching them thinking that it will help them. Topics such as abortion, contraceptives and sexual orientation should be excluded from sexual and reproductive education initiatives targeting adolescents." KII 8, LSE Teacher.*

Students' experience with SRH programming in LSE

The study sought to establish how students experience SRH programming in LSE. Findings show that all the students who participated in the semi-structured interviews had taken lessons in LSE and SRH education. The study noted that sexual reproductive education in LSE developed self-awareness on the importance of abstinence. The youths noted that the teachers emphasised abstinence from sexual activity and taught students on how to resist pressure for unwanted sex or that which they were not ready for.

Though some students perceived that the LSE curriculum was limited in meeting their needs, there were a number of benefits gained from the programme. Results show that while LSE/SRH enabled youths to avoid early sexual onset, to others it prompted them into engaging in early sexual activities. The youths noted that sexual education made them knowledgeable on sexual matters thereby awakening their desire to experiment. Some of the respondents confirmed that they engaged in sexual activities while in school and are still sexually active. This explains the high numbers of teenage pregnancies and teenage motherhood that is rampant across the country.

The study findings showed that sex education equipped learners with the necessary psycho-social skills to realize the importance of good reproductive health. The youths noted that the LSE curriculum imparted the students with knowledge on HIV and AIDS prevention and transmission of STDs such as HIV and AIDS.

Analysis shows that students have other sources of information on SRH besides the LSE curriculum. From the findings, majority of the respondents indicated that peers are the main source of information for adolescents in schools (mean=4.6827). The respondents indicated that places of worship contributed highly as a source of information on sexual education among adolescents (mean=4.4676). LSE Curriculum and social media was showers to contribute highly in informing adolescents on SRH (mean=4.5567) and (mean=4.4255) respectively. The respondents cited that most of them watch television, therefore, some adolescents get information on SRH from it (mean=4.2766) others were; relatives (mean=4.0648), parents (mean=3.8085), the radio (mean=3.7234), and others (mean=3.8213).

The above quantitative findings were corroborated by qualitative findings on the sources of information on SRH among the adolescents. The LSE teachers also confirmed the plethora of sources of information that have the potential of shaping the youths' sexual behaviour. Some noted that the internet must be checked because It is a commonly abused source.

Almost all students indicated that SRH education taught in schools informed them about unintended pregnancy, HIV and AIDS and STIs, which implies that some students recognize the multiple benefits of sexuality education in addressing various issues that they perceive as prevalent in their lives. These youths' experiences regarding SRH education was positive because they reported that it had been useful in their personal lives. While a major aim of sexuality education is to impart the practical skills and knowledge needed for adolescents to safely navigate their sexual reproductive lives, comprehensive sexuality education programmes should seek to teach adolescents to exercise their sexual and reproductive rights safely and responsibly by recognizing the perils of sexual activity at their normative age.

This is in line with what Moletsane (2014) found while looking at the need for quality SRH education in addressing barriers to adolescent girls' educational outcomes in South Africa. Her study focused on what schools can do differently in order to provide effective

SRH education to mitigate the problem of unplanned pregnancies among adolescent girls. To address early pregnancy as a barrier to girls' education, SRH programmes should integrate gender in its programmes. There was also a need to teach both genders critical thinking and interpersonal skills. According to Moletsane (2014) the SRH curricula currently provided in South African schools has resulted in negative health outcomes for adolescent girls, including unplanned pregnancies, early marriages and HIV/STIs, that have a negative impact on girls' success in school.

These findings also corroborate those of Hidin & Fatusi (2010) in looking at trends and interventions of adolescent SRH in developing countries. They noted that the environment in which youths make SRH decisions is rapidly evolving. The rates of sexual initiations among adolescents is rising, childbearing and marriages are progressively unlinked, multiple sexual partners and HIV and AIDS prevalence add to risks associated with early sexual activities.

Conclusion

The study revealed the inadequacies of the Kenyan LSE curriculum such as the teaching approach and the content that leaves out some of the critical areas necessary for sexual education. The students were found to be inadequately exposed to an organized school-based sex education. Indeed, the curriculum was found to stress on abstinence and HIV and AIDS and STIs prevention and transmission which served to improve sexual behaviours among most adolescents although not comprehensive enough to attend to all the information needs of the students. The students got the bulk of sex information from other sources away from the school. Peers and media were identified as the most popular sources of information.

Study findings also indicate that the curriculum appears to have deficiencies in a number of areas such as the exclusion of key topics such as practical aspects of reproduction, abortion, information on access to condoms and sexual health services. Other omitted social and contextual aspects are sexual harassment and parental monitoring. Majority of key informants agreed that the sexuality education offered in secondary schools was not comprehensive.

Moreover, the results revealed that the curriculum has limited information on gender and human rights topics such as the rights of people living with HIV and AIDS, forced sex, GBV and intimate partner violence. These findings show that the information provided to students about SRH was not sufficient to help in reducing the risk of unintended pregnancies. The SRH education is not adequate in helping the adolescents know their sexual rights and be able to detect sexual violence of any nature. While the study established that learners preferred active participation during LSE lessons, it was also found that SRH education in LSE is mostly not taught as per the official time table since LSE teachers prefer to teach other examinable subjects.

Students have a positive attitude towards the learning of LSE although majority indicated that it did not sufficiently meet their needs. They embraced LSE as evidenced

by their participation through asking questions and discussions during the teaching of LSE in class. The cumulative evidence revealed that most schools are not yet prepared to implement the LSE programmes. The study further concludes that conventional methods of teaching sex education cannot exclusively meet the needs of the students. There is need for continuous rethinking on more innovative, proactive and participatory methods that meet the current needs of students. A multi-sectoral approach to the teaching of sex education is required and this should account for the views of students as well.

Policy Recommendations

In view of the findings, the study makes a number of recommendations. First, the MoE should come up with a comprehensive and age-appropriate SRH education which is characterized by a positive approach to sexuality that accepts sexual feelings, desire and pleasure as essential components of young people's sexuality. Second, the KICD needs to conduct regular in-service training to equip teachers with relevant skills on SRH and LSE curriculum in light of the ever-changing face of SRH education. Third, the MoE needs to compel school principals to ensure SRH education and LSE are taught as per the allocated time in the national curriculum. There should be a clear framework that outlines an implementation and monitoring plan. Another recommendation is that the MoE, MoH and the Ministry of Social Protection fund organize groups and local organizations to creatively encourage students and teachers about SRH education and LSE in order to improve their attitude towards the same. Finally, the study recommends that county governments support the implementation of LSE.

Areas of further research

This study recommends research on the experiences of teachers towards the teaching of sex education in secondary schools. Such a study would shed light on their views on how to tackle youth sexuality issues since they are very instrumental in the actual implementation of the curriculum at the classroom level.

References

Bearinger, L., Sieving, R., Ferguson, J., & Sharma, V. (2007). Global perspectives on the sexual and reproductive health of adolescents: patterns, prevention, and potential. *The Lancet,* 369(9568), pp. 1220-1231.

Bulletin of the WHO, (2008). Recent news from WHO. 86(5), pp. 331-331.

Clark, D., Yankah E., & Aggleton P. (2015). Life skills based HIV education: Some virtues and errors. *Sex Education* 15 (6): 597–612.

Darroch J., Woog V., Bankole A., Ashford LS. (2016). Adding it up: *Costs and benefits of meeting the contraceptive needs of adolescents.* New York: Guttmacher Institute.

De Romero, S., & Ray, S. (2007). Reproductive health and new technologies in Africa: Horizon scanning for new technologies. *African Journal of Reproductive Health, 11*(1), p.7.

Haberland, N., & Rogow, D. (2015). Sexuality education: Emerging trends in evidence and practice. *Journal of Adolescent Health, 56*(1), pp.S15-S21.

Hindin, M., & Fatusi, O. A. (2009). Adolescent sexual and reproductive health in developing countries: An overview of trends and interventions. *International Perspectives on Sexual and Reproductive Health, 35*(02), pp.058-062.

K.I.E. (2002). LSE for the Youth: KIE; Kenya.

Kalanda, B. F. (2010). Life skills and reproductive health education changes behaviour in students and teachers: Evidence from Malawi. *Educational Research and Reviews*, 5(4), 166-171.

Kalanda, B. F. (2010). Repositioning family planning through community-based distribution agents in Malawi. *Malawi Medical Journal, 22*(3).

Kenya Institute of Education, (2006). Proposal for funding on up scaling mainstreaming of Life Skills Education into the school curriculum; Nairobi.

KNBS and ILO/IPEC, Kenyan National Integrated Household Survey (2005/2006): Child Labour Analytical Report (2008)

Keogh, S., Stillman, M., Awusabo-Asare, K., Sidze, E., Monzón, A., Motta, A., & Leong, E. (2018). Challenges to implementing national comprehensive sexuality education curricula in LIMIC: Case studies of Ghana, Kenya, Peru and Guatemala. *PLOS ONE*, 13(7), p.e0200513.

Keogh, S., Stillman, M., Awusabo-Asare, K., Sidze, E., Monzón, A., Motta, A., & Leong, E. (2018). Challenges to implementing national comprehensive sexuality education curricula in LIMIC: Case studies of Ghana, Kenya, Peru and Guatemala. *PLOS ONE,* 13(7), p.e0200513.

Kirby, D., (2001). Emerging answers: Research findings on programs to reduce teen pregnancy (Summary). *American Journal of Health Education, 32*(6), pp.348-355.

Maticka-Tyndale, E., Gallant, M., Brouillard-Coyle, C., Holland, D., Metcalfe, K., Wildish, J., & Gichuru, M. (2005). The sexual scripts of Kenyan young people and HIV prevention. *Culture, Health & Sexuality, 7*(1), pp.27-41.

Ministerial Commitment on comprehensive sexuality education and sexual and reproductive health services for adolescents and young people in Eastern and Southern Africa, (2013), https://hivhealthclearinghouse.unesco.org/sites/default/files/resources/ESACommitmentFINALAffirmedon7thDecember.pdf

Republic of Kenya, (2003) Adolescent Reproductive Health and Development Policy, Nairobi, Kenya: National Council for Population and Development, Ministry of Planning and National Development, and Division of Reproductive Health, MoH.

Rogow, D., & Haberland, N. (2005). Sexuality and relationships education: Toward a social studies approach. *Sex Education,* 5(4), pp.333-344.

Sidze, E. M., Stillman, M., Keogh, S., Mulupi, S., Egesa, C. P., Leong, E., & Izugbara, C. O. (2017). From paper to practice: Sexuality education policies and their implementation in Kenya. New York, Guttmacher Institute.

UNFPA (2015). *Girlhood, not motherhood: Preventing adolescent pregnancy.* New York: UNFPA.

UNFPA(2017). *Kenya Annual Report* (2017) https://kenya.unfpa.org/sites/default/files/pub-pdf/KCO%20Annual%20Report%202017.pdf

UNICEF (2000). *Skills-Based Health Education to Prevent HIV and AIDS.* New York: UN

United Nations International Conference on Population and Development, Cairo, 5–13 September, (1994). Programme of Action. UN, New York (1995).

UN. Commission on Population and Development Resolution 2009/1 (para 7) E/CN.9/2009/5. Available at: http://www.un.org/en/development/desa/population/commission/pdf/42/CPD42_Res2009-1.pdf. Accessed February 22, 2014.

UN. Commission on Population and Development Resolution 2012/1 Adolescents and youth. E/CN.9/2012/8. Available at http://www.un.org/en/development/desa/population/pdf/commission/2012/country/Agenda%20item%208/Decisions%20and%20resolution/Resolution%202012_1_Adolescents%20and%20Youth.pdf

Tables and Figures

Table - T18: *Topics covered in LSE*

Topics	Objectives
• Self-awareness • Self-esteem • Coping with emotions • Coping with stress • Friendship formation and maintenance • Assertiveness • Empathy • Effective communication • Negotiation skills • Decision making • Non-violent conflict resolution • Effective decision-making skills • Self-understanding	• To equip the adolescent with values and develop skills that will enable him/her to function effectively. • To appreciate the importance of life skills in everyday life • To enable the students appreciate self as a unique human being and develop self-esteem. • To develop and demonstrate ability to cope with stress and emotions in everyday life. • To enable the student appreciate the need for peaceful coexistence and demonstrate ability to apply the acquired skills to relate and coexist peacefully with other people. • To enable the learner develop skills that enable him/her to make informed and appropriate decisions in life. • To enable the learner demonstrate to apply the relevant life skills in dealing with emerging issues and other challenges effectively. • To enable the learner develop and apply life skills that enhance performance in education.

Source: Life Skills Education Curriculum Policy (2017)

Determinants of Access to Sexual and Reproductive Health Services among Female Adolescent Refugees in Nairobi City County

Patricia Waigwe[1] and Dalmas Omia[2]
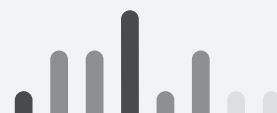
Abstract

SRH is a significant aspect of adolescents' growth but remains difficult to access for those who have been displaced by emergency and conflict situations. They are not located in a specific geographic area but are spread across urban areas. Populations, who end up living in displaced situations for a long time, face acute health challenges, with women and adolescent girls being more vulnerable to GBV exclusion, marginalization and exploitation.

This study set out to establish the socio-economic and facility-based determinants of access to SRH services among female refugees aged 10 to 19. It is a cross-sectional qualitative study conducted through in-depth interviews, FGDs and key informants. Purposive sampling was used to select the 30 participants for the in-depth interviews.

The results revealed a low access of SRH services among adolescent refugees. About 60 per cent of the respondents stated that parents and guardians provided them with the initial information on SRH, but it was mostly limited to menstruation and menstrual hygiene. About 47 per cent of the respondents preferred were social media and internet as their preferred source of information while friends or peers was at 23 per cent.

The study recommends interventions to enhance the knowledge of SRH issues, especially for the out of school adolescent refugees who are unable to access the information from a school. There is also need to broaden the SRH content beyond abstinence to include contraceptives and other STIs apart from HIV and AIDS. It is also essential to build the capacity of teachers, parents and guardians so that they are able to speak freely about SRH matters to this critical population.

Key words: access, adolescent, refugee, SRH

---

1   Patricia Waigwe is a Gender and GBV caseworker at HIAS Refugee Trust of Kenya.
2   Dalmas Omia is a Research Fellow, IAGAS.

Introduction and statement of the problem

Adolescence is a period that encompasses biological, physical, behavioural, psychosocial and cognitive changes. Due to this, adolescents have particular SRH needs (Kalyanpur et al., 2018; UNFPA & Save the Children USA, 2009). It is defined as the period between 10 and 19 years of age, a time of transition from childhood to adulthood (Population Division of the Department of Economic and Social Affairs, 2012). In this period, adolescents usually depend on the guidance of trusted adults whom they look up to, social norms and structures, and community groups, most of which are often disrupted when people are displaced (Kerner et al., 2012). (Kerner et al., 2012) continue to state that when there is a breakdown in the community and social structures adolescents are left without access to SRH information and services at a time when they are vulnerable.

UNHCR estimates that globally, there were approximately 79.5 million forcibly displaced people by the end of 2019 with around 26 million of these being refugees and half of those refugees being children under the age of 18 (UNHCR, 2020). These populations, who often end up living in displaced situations for a long time, face acute health challenges with women and adolescent girls being more vulnerable to exclusion, marginalization and exploitation, and at a higher risk of GBV (WHO, 2015).

Approximately 80 per cent of refugees are hosted in developing countries (mostly in SSA and Asia) and primarily by neighbouring countries, with a majority of them living in urban areas in anticipation of good living conditions and services (Guterres & Spiegel, 2012). Access to healthcare and other services is not guaranteed for urban refugees in developing countries as they are sometimes excluded from enjoying healthcare as the nationals of the host country. This is due to scarcity of resources, lack of protection and barriers due to language and cultural differences (Amara & Aljunid, 2014).

Kenya is host to close to half a million refugees with a majority of them being encamped (UNHCR, 2020). As of June 2020, there were around 8,000 registered urban refugees and asylum seekers. Of these, 7.5 per cent were females between 12 and 17 years (UNHCR, 2020). Kalyanpur et al. (2018) continue to state that adolescents who live in crisis settings especially girls, are highly vulnerable to being coerced into sex (defilement), being exploited and violated and may engage in risky sexual behaviours for survival. Among displacement-affected populations, adolescent girls are an overlooked group and their SRH needs remain largely unmet (Ivanova et al., 2018). Consequently, the use and knowledge of SRH services in refugee settlement or urban areas remains low and access to such services remains a challenge.

Adolescents have a right to SRH services that are offered impartially, are accessible, affordable, acceptable, appropriate for their age and effective to the needs they present. However, evidence shows that in developing countries, they face systemic, socio-cultural and policy barriers in obtaining SRH information and services (Woog & Kågesten, 2017). Knowledge and access to SRH care and education is important for adolescents in crisis and emergency situations. Although, research on the SRH of populations affected by

conflict and disaster is getting more to the forefront, there is still a dearth of information on the needs and experiences of young refugees, in humanitarian settings, who are likely to be at grave risk of negative SRH outcomes (Ivanova et al., 2018).

Harvard Center for Health and Human Rights (2017) estimates that over 60 per cent of the world's 21.3 million refugees live in urban areas, with over half of them being children. Adolescent refugees around the world, facing years of protracted displacement, are increasingly moving to cities in search of safety and opportunities (Donger et al., 2017). Despite this trend, the global system of humanitarian response to refugees is traditionally built around the encampment model to simplify service delivery to people in consolidated camps that were meant to be temporary (Harvard FXB & UNHCR, 2017). It is therefore important to use these new trends and direct new investigations by increasing research among refugees living outside of encampments.

The study sought to provide an in-depth understanding of the determinants of access to SRH services among female adolescent refugees in Nairobi in terms of the socio-economic and facility-based determinants of access among female refugees aged between 10 to 19.

Review of related literature

Access to SRH is particularly difficult in emergency and conflict situations hence posing greater challenge when adolescents are not located in a specific camp or geographic area but are spread across urban areas (UNFPA, 2016). It is usually difficult to reach less advantaged populations like migrants, adolescents and ethnic minorities with the health infrastructure that is already in place since there exists several barriers (legally, socially and culturally) that hinder them from accessing SRH services (Gausman & Malarcher, 2011).

Access to SRH services is not merely an issue of physical distance or geographical location, but one that involves other dimensions such as economic, administrative, cognitive and psychosocial (Measure Evaluation, 2019). Inequalities in access to resources often lead to a cycle of exclusion at the individual level which is evidenced by the disadvantaged groups being more vulnerable to exposure, less likely to access healthcare, and having adverse health outcomes (Gausman & Malarcher, 2011). Adolescent access and utilisation of SRH services is related to the availability, quality and cost of services, as well as to the socio-economic structure and personal characteristics of the users (Shabani et al., 2018).

Adolescents lack adequate access to suitable, age-appropriate SRH information and services which contributes to unprotected sexual activities, leading to negative SRH outcomes (Mbeba, et al., 2012). Adolescents suffer unequally from negative SRH outcomes, that result to early and unintended pregnancy, unsafe abortion, and STIs, including HIV and AIDS (Pathfinder International, 2009). Though a number of adolescents deliberately get pregnant, a number of pregnancies occur due to human rights violations such as child marriage, sexual exploitation and abuse (MoH GoK, 2015).

These pregnancies are as a result of the unmet needs for contraception (Pandey et al., 2019). Pandey et al. (2019) estimate that 21 million girls between 15–19 and two million girls under the age of 15 become pregnant each year. Pregnancy and childbirth at this age is a huge risk and may cause health complications, which constitute the highest cause of death for adolescents aged 15-19 in developing countries. (WHO, 2020)

The access and use of SRH services by female refugee adolescents is hampered by socio-cultural norms and taboos, judgmental attitude and negative perceptions by parents, the community and health practitioners towards adolescents seeking SRH services, the absence of confidentiality and privacy, and inhibiting service fees (Ayehu et al., 2016). Adolescents can theoretically access all health services through health facilities. However, policies that do not support adolescent sexual and reproductive independence and agency hamper their rights to gain access to these much needed services (Tanabe et al., 2013; Woog & Kågesten, 2017). Access and uptake of SRH services is determined by both socio- economic and facility-based factors like; few outlets that provide SRH information and services, healthcare professional bias, family, religious or societal beliefs and pressures around sexual initiation (Tanabe et al., 2013).

Socio-economic determinants of access to SRH Services

Since adolescent girls have limited social and economic power, their parents and guardians are the main influences towards SRH decisions such as the age of first sex or early marriage (Pulerwitz et al., 2019). Adolescents are also more likely to access SRH services if they have support from their parents, guardians and peers (Muhwezi et al., 2015). For most adolescents, the belief that their peers are engaging in risky sexual behaviour acts as a motivator for them to do the same (Widman et al., 2016).

The SRH practices and access to services by female refugees is greatly affected by socio-cultural factors. These include social norms that restrict access to SRH services through stigma and negative social pressure (Odo et al., 2018). Adolescents may fear and feel embarrassed of accessing SRH services if they think that they might be seen by adults from their communities or if this information is made known to other people (Shabani et al., 2018). Social pressure and cultural norms around early child-bearing and contraceptive use imposed by partners, family, religious communities and the larger society often limit a young person's desire and ability to access and utilize SRH services (Zaw et al., 2012).

Attitudes towards sexuality and reproductive healthcare aspects such as romantic relationships, sex, marriage, pregnancy, child bearing, abortion and contraception are moulded by dedication to a particular religion's, beliefs and practices (Hall, Moreau, & Trussell, 2012). Initially, it was believed that religion acted as a gatekeeper to protect adolescents from negative SRH outcomes like unplanned pregnancy but this view is continuously being debunked and shown to be inconsistent in many places around the world (Moreau et al., 2013). Evidence shows that adolescents who practised their religion regularly were more likely to delay sexual debut but that those who were

Determinants of Access to Sexual and Reproductive Health Services
among Female Adolescent Refugees in Nairobi City County

137

already sexually active were less likely to use contraception (Arousell & Carlbom, 2016). Numerous religious beliefs and values related to gender and sexuality obscure effort to improve SRH since they are at most times overtly or covertly opposed to the idea of sexual rights for all (Cense et al., 2018). Adolescents have been made to believe that seeking SRH services and information implies that they are engaging in sexual activity. Religious beliefs and practices act as a barrier against adolescents seeking healthcare services despite contraceptive needs and risky sexual behaviour (Hall et al., 2012).

Young people are the largest consumers of mobile technology globally, which in part is due to the declining costs of mobile phones and increased reliance on mobile phones as essential commodities (Ippoliti & L'Engle, 2017). Mass media and popular culture tend to portray sex as fun and risk free. Exposure to sexual content through television, movies, music and magazines contributes to involvement of adolescents in sexual activities (Odo et al., 2018). Though these paint a bleak picture of media and its effects on SRH among adolescents, there has been an increase in the use of technology to pass on health information. Electronic mass media is the prime source of reproductive health information since parents and teachers shy away from having discussions about SRH with teachers skipping over chapters that covered SRH (Nkam, 2012). In addition, the privacy and convenience afforded by mobile phones make them appealing to adolescents (Ippoliti & L'Engle, 2017). These conventional non-formal SRH information sources like peers and mass media, may prove unreliable since there is a scope of subjective misinterpretation (Tanabe et al., 2013). However, when their use is well guided, mobile phones provide cost-effective, efficient, and a highly suitable communication channel for reaching and engaging the youth around SRH issues, especially those living in resource-poor settings (Ippoliti & L'Engle, 2017).

There is an intimate relationship between the economic status and SRH, with economic deprivation being both a cause and a consequence of poor SRH outcomes (Woog & Kågesten, 2017). A study in Kenya showed that 58 per cent of refugees are unemployed and a third of the refugee population deprived or likely to be deprived of education, health and comfortable living standards (UNHCR, 2020). Woog et al. (2017) continue to state that poverty is linked to school dropouts, early or child marriage, early childbearing, reduced prospects of labour force participation and a lower ability to contribute to household income. Female adolescents who come from the top three wealthiest quintiles have shown a reduction in pregnancy rates while those from the lower three who are economically deprived have shown a marked increase in pregnancy rate. (M. Denno et al., 2015).

Facility based determinants

The facility-based determinants of access to SRH services relate to the availability, accessibility, acceptability and equity of health services (WHO, 2012). Availability refers to whether the service that an adolescent needs is present at the health facility they visit or not. These services include; accurate SRH information, a range of safe

and affordable contraceptive methods, counselling, obstetric and ANC services as well as the prevention and management of STIs including HIV and AIDS (UNFPA, 2014). WHO (2019) classifies accessibility into three categories; physical, economic or affordability and information accessibility. Physical accessibility refers to availability of health services within a reasonable geographical area and with favourable opening hours, availability of a working appointment system and other features that allow adolescents to get the services they need. WHO (2019) continues to state that economic accessibility or affordability is a measure of whether an adolescent or her family are able to pay for services without financial hardship. This takes into account both the direct cost of the health services and the indirect opportunity costs. Lastly, information accessibility comprises the right to pursue, obtain and convey information and ideas concerning SRH issues (WHO, 2019).

Though services may be both available and accessible, adolescents may still shy away from using them if they are not acceptable. Non-acceptability of a service may be due to the long waiting times in areas where the adolescent may be recognized by someone they know. Additionally, adolescents are limited from accessing SRH information and services in health facilities by the healthcare providers' own moral and belief background which determines when adolescents are old enough to access SRH services (Pandey, et al., 2019). Adolescents may also fear that health workers could reprimand them, ask them personal questions, put them through unpleasant procedures and fear that they will not maintain confidentiality (WHO, 2012). Pandey et al. (2019) state that there is need to increase the capacity of healthcare workers to separate their own beliefs and socially approved moral background when serving in adolescent SRH so as to be able to offer services devoid of judgement.

Even with the global promotion of availability of SRH services, they still remain inaccessible to adolescents especially those who live in areas with limited resources (Thin Zaw, et al., 2012). Equity in SRH services means there is no discrimination on the basis of economic, marital or migrant status. Thin Zaw et al. (2012) continue to state that the inequality of access to SRH services between those of different economic status, and those living in urban versus rural areas are a global equity challenge which should be addressed with high priority. Inequalities in access to resources often leads to a cycle of exclusion at the individual level which is evidenced by the disadvantaged people groups being more vulnerable to exposure, less likely to access healthcare and having adverse health outcomes (Gausman & Malarcher, 2011).

Materials and methods

This study was carried out in Nairobi County. It was chosen as the area of study since it hosts a majority of the urban refugees (UNHCR, 2019). Nairobi is the capital city of Kenya where the UNHCR and RAS have offices. There are a number of UNHCR implementing partners serving urban refugees. The asylum-seeking and refugee population is managed jointly by the Government through RAS and also by UNHCR. Refugee work in Kenya is

governed by the Refugees Act No. 13 of 2006 and the 2009 Refugees Regulation as well as other international laws on refugees. A majority of refugees and asylum seekers in urban areas such as Nairobi, are engaged in the informal sector as casual labourers, small business holders and semi-skilled workers, while a smaller percentage of them runs medium-sized enterprises or are employed in the formal sector (UNHCR, 2019).

This study employed a cross-sectional design using qualitative approaches of data collection, specifically in-depth interviews, FGDs and KIIs, interview guides, FGD guides and KII guides were used as the tools to collect data. The instruments were piloted and necessary changes and adjustments were made before data was collected. The respondents were drawn from South Sudan, Somalia, DRC, Ethiopia, Burundi, Rwanda and Eritrea. The in-depth interviews involved thirty female adolescent refugees interviewed separately. The FGDs comprised female adolescent girls purposively selected from participants in the in-depth interviews then grouped according to their ages.

The study relied on secondary sources of data obtained from periodicals, peer-reviewed journal articles, books, reports and other relevant sources. Key to the research was secondary information from UNHCR, WHO, WRC and UNICEF reports with particular focus on SRH issues.

The study was conducted in English, Kiswahili, Somali and Kinyamulenge by three field workers who were proficient in these languages. During the interviews, notes were taken. Field assistants checked the notes to ensure accuracy of the records. The interviews were written down and some were recorded with voice recorders then transcribed. The interview transcripts were translated into English where applicable. The data was coded using primary deductive coding. The data was reviewed then codebook and themes generated based on the literature and thereafter a thematic content analysis was done.

Findings and Discussion

Demographic characteristics of the respondents

The study interviewed 30 adolescent girls all aged 10 to 19. Of the participants in the study, 23 per cent were very young adolescents (aged 10-14) while 77 per cent were older adolescents (aged 15-19). Consent was sought from all the participants over 18 years of age and from all the parents of participants under the age of 18. For the participants under the age of 18 assent was sought after the parents gave consent. The reason for the lower number of younger adolescents was because their parents/guardians were apprehensive about the study and thought that their children would be exposed to issues and discussions that were inappropriate for their age. For the 7 younger adolescents that took part in the study, care was taken not to ask them questions on contraception use and cervical screening and dwelt more on access to information on menstruation and menstrual hygiene and HIV and AIDS. In the study, 57 per cent of the respondents were in school while 43 per cent were out of school.

Of those who were out of school, six had never been to school. Cross tabulation of the education level attained versus information on various SRH aspects showed that respondents who were at a higher level of education had more information on certain SRH aspects than those at lower levels of education. Religion plays a key part in influencing decisions and behaviour towards accessing health. It is recorded that 33 per cent of the respondents were protestants, 30 per cent Muslims, 23 per cent catholic, 7 per cent Orthodox and 7 per cent Seventh Day Adventists. The participants were drawn from 7 nationalities with refugees from South Sudan forming the bulk of the majority at 33 per cent and refugees from Burundi, Eritrea and Rwanda making the minority at 3 per cent.

Sources of information on SRH topics

The findings showed that adolescents found it easier to get SRH information when they were in school since they would be taught as opposed to those who did not go to school. The LSE programme taught in the school curriculum incorporates aspects of SRH. However, teaching about SRH and especially matters sexuality is left to the discretion of the teacher and students only get the information that the teacher is comfortable enough to share. The study established that 60 per cent of the respondents got SRH from parents and guardians provided them with the initial information on SRH but it was mostly limited to menstruation and menstrual hygiene. Forty seven per cent of the respondents stated that their most preferred source of information was social media and the internet while friends or peers was at 23 per cent.

Socio-cultural determinants of access to SRH

The study findings show that 90 per cent of the respondents' primary caregivers to the were engaged in the informal sector as casual labourers and semi-skilled workers. Most of them worked in more than one job or switched trades seasonally. Some of the older adolescents worked to supplement their parents/guardians income or were themselves looking after younger siblings and other relatives. The lack of long-term jobs and a steady income for the parents was stated as a reason for dropping out of school. Some of the older adolescents were themselves the primary guardians to their younger siblings and relatives and had to work to sustain their families. This kept them away from school. Pressing needs were prioritised over SRH concerns. Respondents delayed going to hospital for SRH issues in order to deal with other more pressing needs:

"I was told that there was an NGO that was teaching people about sexual and reproductive health matters. However, if I went, I would miss a day of work and they would replace me with someone else. I like my current job and it was not easy to get it. I had to make a choice between having money to meet my bills or having information. I chose money because I cannot eat information." 18-year-old respondent.

Finances determine whether an adolescent seeks SRH services or information. Forty-seven per cent of the respondents stated that they would have wanted to get SRH services from a health facility but imagined that this would be unaffordable to them.

Seventeen per cent of the respondents who were in dire need of SRH services but chose other alternatives due to lack of finances:

> "There was a time that I needed to go to the hospital because I was having heavy bleeding. I did not want to go to the big hospital in this area because I knew I could not afford it. I asked around for ways that I could get help and I was told that there was a doctor who gives free services to refugees in my area once a week. I went there and though there were many people waiting to see the doctor, I waited and was able to be attended to." 15-year-old respondent.

At 67 per cent, parental support and control was noted as the major socio-economic determinant of whether female adolescent refugees would access SRH services. The study findings showed that 60 per cent of the respondents received initial information on SRH from their parents, guardians or older siblings. This information was mostly on menstruation and menstrual hygiene. The information they received was very basic and most adolescents were not comfortable enough to ask more questions.

> "Staying indoors all day and not being allowed to move freely makes me not able to easily access SRH information and services. I do not go to school and I also do not have a mobile phone to look up those things on the internet. My parents do not talk about those things to me. They tell me I will find out when I get married," 15-year-old respondent.

> "My mother is very traditional and I could never ask her questions about sex or pregnancy. I was afraid that she would think that I want to have sex and that would have gotten me into trouble. When I started getting my period she told me about menstruation. It was very brief and that was the only time she has ever told me about anything to do with sexual and reproductive health." 12-year-old respondent.

Only 10 per cent of adolescents reported to have initiated questions about SRH. This was because most parents and guardians shy away from talking about SRH matters with their children. Parents prefer that their children learn from external sources like teachers or other relatives like aunts.

The study findings show that peers were the second most preferred source of SRH information at 23 per cent. Due to age and shared life experiences, adolescents intimated that they find it easy to ask their peers for SRH information. When parents or guardians treat SRH matters with a lot of secrecy, adolescents also learn to treat it like a taboo. Adolescents end up asking their peers who do not always have the right information and usually give it based on their previous limited experiences. This often leads to the wrong information being passed on from adolescent to adolescent.

Socio-cultural norms and availability of SRH services/facilities were the second major determinant of female refugee adolescents access to SRH services and information at 20 per cent. The respondents blamed the cultural beliefs that did not allow girls to receive SRH information. There were a few variants between nationalities on how these norms influence access to SRH information, but most of them acted as barriers towards accessing SRH information.

"In our culture, when a girl starts her periods, she is married off. However, since we are in Kenya, some of these things have changed. However, our parents still do not want us to get the information." FGD participant.

"Most of the community practices do not favour our reproductive health rights as girls. In my community, if a girl is raped and she knows who raped her, the culture dictates that she should get married to that man. If a man likes you and you turn down his advances, he might come and rape you so that you can become his wife." FGD participant.

The study findings show that religion did not encourage access to SRH services or information. For 70 per cent of the adolescents, religion stressed abstinence as they were encouraged to wait to get married first before having sex.

The study observed that the media made adolescents misconstrue that everyone was having sex and that getting STIs or getting pregnant was not a major problem. Having a boyfriend or being in a relationship was made to seem like a mandatory thing.

The internet was the most preferred source of information on SRH topics at 47 per cent. This was because adolescents the internet offered privacy and they could search for any topic they wanted. The increase in the use of technology like mobile phones to pass on health information made the net more accessible and attractive.

"I have a phone that I bought for myself. My guardian does not check it and I feel that I can go on the internet and check for any questions I have. It would have been very hard to get information if I did not have the mobile phone. The internet does not ask you why you are asking those questions and I can even search the same question many times. I think that is convenient for me." 18-year-old respondent.

TV and radio were not featured as a main or preferred source of SRH information. Adolescents thought that they had no control over what programmes aired. Most of them watched TV for entertainment.

Facility-based determinants

The study found that SRH services are available at the local health facilities. The services offered are however not adolescent-specific. Adolescents are treated the same way as adults. The study also noted that the health facilities were not adequately staffed and that adolescents had to wait for a long time to consult the few available medical staff. The adolescents were asked to buy medicines from external pharmacies as the local health centres did not have the medicines they needed.

"I had an infection once and when I told my brother, he took me to the hospital around this area. We went there early in the morning so that we would be among the first to be served. I told the doctor what my symptoms were. He seemed in a hurry to just prescribe medicine. He did not describe what was making me sick but just gave us a prescription and told us to go and buy those medicines." 15-year-old respondent.

Accessibility was measured by whether an adolescent could reach the services at the time of opening, waiting period and appointment systems. Secondly, whether the service was affordable to an adolescent, including indirect costs like transport. Lastly, whether adolescents had information that the service existed.

A majority of refugees do not have the national health insurance and therefore bear the cost of healthcare themselves. Those with the NHIF card were forced to pay for some services that were not covered through it.

> *"I had a complicated pregnancy and was told that I needed a scan. I had not been in the city for a long time and I was relying on the help of friends and even getting to the first health centre was a problem. I had asked my friends to help me with the money to get to the health centre. When I was told to get a scan at a hospital that was even further away, I lost all hope. I could not afford the fare there leave alone the money for the scan. It was a very frustrating time." FGD participant.*

> *"My siblings and I are mostly struggling to survive. I was raped during flight and as a result, I have very heavy bleeding. I went to the hospital once but the medicine they gave me did not help much. I did not want to go back because that would mean that I spend money that can be used for other things." 16-year-old respondent.*

Acceptability was measured by whether a there was privacy and confidentiality in the service offered. Secondly, whether a service was offered free of stigma and discrimination based on the age and migration status of the adolescent and also the characteristics of healthcare providers. Adolescents shied away from accessing services in a health facility because of fear of discrimination. This was based on a person's previous experience or from the narrative they heard many times in their communities.

> *"I feel that the people working at the hospital do not understand refugees. One health service provider kept shouting at me because I could not understand Kiswahili. I felt very frustrated and left." FGD participant.*

> *"In the refugee community, people tend to know each other because we are not very many. My community does not know my status and I have worked hard to keep it that way. I decided to be getting my medication from a health centre in another area where people do not know me. This is because the waiting area can have many people and I am afraid that someone may spot me if I go to the health centre that is near where I live. Going to a health centre that is far away is costly for me and when I do not have money, I miss out on taking medicine." 8-year-old respondent.*

Conclusion

Access to SRH has been key to this study because it represents the ability of adolescent refugee girls to exercise their right to have control over and decide freely and responsibly on matters related to their sexuality, reproductive health processes, function and systems. Exercising this right is key in the prevention of negative SRH outcomes that have lasting effects long past the adolescent years.

In the study, adolescents appreciated the need for SRH information and services that were specifically suited for people their age. However, most of them are not able to access this information or services due to socio-cultural barriers that view most SRH aspects as taboo topics and therefore prevent adolescents from gaining access to such. Due to this perception, adolescents are also shy and afraid to approach grown-ups that they can trust like parents, guardians, older siblings and teachers to ask them for SRH information. Adolescents also shy away from accessing SRH services from a health facility due to lack of information about the existence of the services, cultural perceptions of SRH services, the imagined cost of accessing such services and the perceived negative attitude from health service providers. The internet was rated as the most preferred source of SRH information, since it afforded them privacy and that they could ask any questions that they had without fear and judgement.

To ensure proper access to SRH services and information by female adolescent refugees, the existing socio-cultural norms that prevent adolescents from accessing vital SRH information and services need to be challenged. Additionally, refugee adolescent girls need to be sensitized on their SRH rights. This has a double effect on countering barriers to the access of SRH services and information.

Policy Relevance of the Work

The results revealed a low access to SRH services among adolescent refugees. Sixty per cent of the respondents stated that parents and guardians provided them with the initial information on SRH but it was mostly limited to menstruation and menstrual hygiene. Forty-seven per cent (47%) of the respondents stated that their most preferred source of information were social media and internet while friends or peers was at 23 per cent. Forty-three per cent (43%) of respondents stated that school was their main source of SRH information. Access to SRH services from a health service facility was low at 23 per cent.

Policy Recommendations

Given the importance of knowledge on SRH issues during adolescence and the implications of negative SRH outcomes which can be life-altering, there is need to increase the number of interventions to enhance the knowledge on SRH issues. Out-of-school adolescent refugees who would not be able to access the information from a school also need direct attention.

There is need to expand and enrich SRH programmes to include educational activities that encourage in-school adolescent girls to keep schooling and facilitate those who would want to go back to school. It should also include aspects of economic empowerment and wealth creation so as to address a broad range of adolescent girls' needs which have the added advantage of contributing to access of SRH information and services.

Social media is a key source of SRH information. However, such media is not always reliable as adolescents may go to sites that do not have verified information and get misleading information. It is therefore key to sensitize adolescents on sites that are legitimate where they could get the information they need. These could be paired with toll-free information centres where adolescents can call in for information anonymously.

The experiences adolescents have at a health centre play a major role in diminishing or increasing the probability of future return visits. Key to this is the attitude of the service provider and whether there is privacy when the adolescent is being attended to. It is therefore important that SRH services offered at the health facilities are adolescent friendly. Further, there should be more sensitization about the different services available for adolescents at health centres to encourage more adolescents to seek the services.

There is a need to sensitise religious leaders on the importance of all adolescents gaining SRH information. Religious institutions had good systems put in place for married people compared to those who are not. Those who get children out of wedlock were stigmatised and isolated.

Areas of further research

There is more research looking into adolescent girls as a population more than there is on adolescent boys. The researcher recommends a similar study into the SRH needs and barriers to accessing SRH information and services among adolescent boys and also specifically among male adolescent refugees. Though there has been extensive research on HIV and AIDS, there exists opportunities to study on challenges faced by HIV and AIDS positive adolescent and youth refugees. This is due to the additional challenges they face as migrants and diminished social support caused by the breakdown of family structure resulting from displacement and migration.

References

Amara, A. H., & Aljunid, S. M. (2014). Noncommunicable diseases among urban refugees and asylum-seekers in developing countries: A neglected healthcare need. *Globolization and Health.*

Arousell, J., & Carlbom, A. (2016). Culture and religious beliefs in relation to reproductive health. *Best Practice & Research Clinical Obstetrics and Gynaecology,* pp. 77-87.

Cense, M., de Neef, M., & Vissche, W. (2018). *Culture, religion and sexual and reproductive health & rights, Utrecht*: Rutgers.

Gausman, J., & Malarcher, S. (2011). Social determinants of sexual and reproductive health: A global overview. Entre Nous: *The European Magazine for Sexual And Reproductive Health,* pp. 4-7.

Guterres, A. & Spiegel, P. (2012). The state of the world's refugees: Adapting health responses to urban environments. *Jama Network,* pp. 673-674.

Harvard FXB & UNHCR.(2017). *Studies on refugee youth with UNHCR.* [Online] Available at: https://fxb.harvard.edu/studies-on-refugee-youth-with-unhcr/

Ippoliti, N. B., & L'Engle, K. (2017). Meet us on the phone: Mobile phone programs for adolescent sexual and reproductive health in LIMIC. *Reproductive Health Journal,* 17 January, Issue 14, pp. 1-8.

Kalyanpur, A., Tanabe, M., & Rich, S. (2018). Adolescent sexual and reproductive health. In: (2018) *Inter-agency field manual on reproductive health in humanitarian settings*. s.l.:IAWG, pp. 107-125.

Kerner, B., Manohar, S., Mazzacurati, C., & Tanabe, M. (2012). Adolescent sexual and reproductive health in humanitarian settings. *Forced Migration Review,* August, pp. 21-22.

Mbeba, R. M., Mkuye, M. S., Magembe, G. E., Yotham, W. L., obeidy Mellah, A., & Mkuwa, S. B. (2012). Barriers to sexual reproductive health services and rights among young people in Mtwara district, Tanzania: A qualitative study. *The Pan African Medical Journal,* Volume 13.

Measure Evaluation, (2019). Access to sexual and reproductive health services. [Online] Available at: https://www.measureevaluation.org/prh/rh_indicators/service-delivery/access

MoH GoK, (2015). The National adolescent sexual and reproductive health policy, Nairobi: GoK, MoH.

Muhwezi, W. W., Katahoire, A. R., Banura, C., Mugooda, H., Kwesiga, D., Bastien, S., & Klepp, K. I. (2015). Perceptions and experiences of adolescents, parents and school administrators regarding adolescent-parent communication on sexual and reproductive health issues in urban and rural Uganda. *Reproductive Health*, pp. 16-32.

Nkam, T. E. (2012). *Socio-cultural determinants of pregnancy and the spread of sexually transmitted infections among adolescent residents of Kakuma refugee camp, northern Kenya*. [Online] Available at: https://ir-library.ku.ac.ke/handle/123456789/2666

Pandey, P. L., Seale, H., & Razee, H. (2019). Exploring the factors impacting on access and acceptance of sexual and reproductive health services provided by adolescent-friendly health services in Nepal. *PLoS One*, 8 August.pp. 1-19.

Pathfinder International, (2009). *Protecting the sexual and reproductive health of adolescents and youth: An urgent programmatic and policy priority for the Global Health Initiative.* [Online] Available at: http://www2.pathfinder.org/site/DocServer/Protecting_the_Sexual_and_Reproductive_Health_of_Adolesc.pdf;docID=18281

Population Division of the Department of Economic and Social Affairs, (2012). *World Population Monitoring Adolescents and Youth, New York*: UN.

Pulerwitz, J., Blum, R., Cislaghi, B., Costenbader, E., Harper, C., Heise, L., & Lundgren, R. (2019). Proposing a conceptual framework to address social norms that influence adolescent sexual and reproductive health. *Journal of Adolescent Health,* pp. S7-S9.

Thin Zaw, P. P., Liabsuetrakul, T., Htay, T. T., & McNeil, E. (2012). Equity of access to reproductive health services among youths in resource-limited suburban communities of Mandalay City, Myanmar. *BMC Health Services Research.*

UNFPA, (2014). *Adolescent sexual and reproductive health, New York:* UNFPA.

UNFPA, (2016). *Adolescent girls in disaster & conflict: Interventions for improving access to sexual and reproductive health services,* New York: United Nations Population Fund.

UNHCR, (2018). *Global displacement: Figures at a glance.* [Online]

Available at: https://www.unhcr.org/ph/figures-at-a-glance

UNHCR, (2019). *Kenya statistics package*. [Online] Available at: https://reliefweb.int/report/kenya/refugees-and-asylum-seekers-kenya-statistical-summary-28-february-2019

UNHCR, (2019). *UNHCR Kenya: Urban areas.* [Online] Available at: https://www.unhcr.org/ke/urban-areas

UNHCR, (2019). *UNHCR Kenya: Livelihoods. [*Online] Available at: https://www.unhcr.org/ke/livelihoods

UNHCR, (2020). *Figures at a glance.* [Online] Available at: https://www.unhcr.org/figures-at-a-glance.html

UNHCR, (2020). *Figures at a glance.* [Online] Available at: https://www.unhcr.org/ke/figures-at-a-glance

UNHCR, (2020). *UNHCR: Kenya statistics package.* [Online] Available at: https://www.unhcr.org/ke/wp-content/uploads/sites/2/2020/07/Kenya-Statistics-Package-30-June-2020.pdf

UNHCR, (2018). *Kenya registered refugees and asylum seekers*. [Online] Available at: https://www.unhcr.org/ke/wp-content/uploads/sites/2/2018/06/Kenya-Infographics_May-2018.pdf

WHO, (2012). *Making health services adolescent friendly: Developing national quality standards for adolescent friendly health services,* Geneva: WHO Department of Maternal, Newborn, Child and Adolescent Health.

WHO, (2019). *Gender, equity and human rights:* Accessibility. [Online] Available at: https://www.who.int/gender-equity-rights/understanding/accessibility-definition/en/

Women's Refugee Consortium, (2014). *Very young adolescents in humanitarian settings: Examining the sexual and reproductive health needs and risks of girls and boys aged 10-14 in Ethiopia, Lebanon and Thailand, New York*: CDC.

Woog, V., & Kågesten, A., (2017). *The Sexual and reproductive health needs of very young adolescents aged 10–14 in developing countries: What Does the Evidence Show?,* New York: Guttmacher Institute.

World Health Organisation, (2015). *Every woman, every child: The global strategy for women's, children's and adolescents' health* (2016-2030), Italy: Every Woman Every Child.

Factors Influencing Uptake of Maternal Health Services among Pregnant Women in Kenya

Beatrice Otindu[1] and Samuel Wakibi[2]

Abstract

The MMR declined from 342 deaths per 100,000 live births in 2000 to 211 in 2017 globally. Most maternal deaths in high maternal mortality regions, including SSA, have been associated with low uptake of maternal healthcare. In Kenya, 2014 KDHS, found that only 18 per cent of women received ANC in their first trimester and had at least four visits to a health facility during pregnancy. 66 per cent delivered in a health facility and 55 per cent received PNC.

To accomplish the SDG goal of 70 maternal deaths per 100,000 live births by 2030, the basic services for maternal healthcare should be easily accessible and fully utilized.

The aim of this study was to determine factors associated with uptake of ANC, health facility delivery and PNC services.

The study used data from the 2014 KDHS to estimate multivariate logistic regression models.

Education, household wealth, health insurance and parity were found to determine uptake of ANC, facility-based delivery and postnatal services in Kenya. Women with higher education, in the rich wealth quintile, covered by health insurance and with low parity had significantly higher odds for adequate ANC, facility delivery and PNC.

Based on the findings, educational interventions and health promotion should be provided to women in regions with low literacy levels. Poverty alleviation programmes and health insurance that include maternal healthcare are also recommended.

Key words: maternal health, services, uptake

---

1   Beatrice Otindu is an Msc Graduate, UON.
2   Samuel Wakibi is a Lecturer, PSRI, UON.

Introduction

Maternal health entails the health of women during pregnancy, childbirth and in the postpartum period. It includes aspects of contraception, before conception, antenatal and post-delivery care in ensuring a fulfilling and positive experience during pregnancy while reducing maternal illness and death (Maternal health, 2020). WHO defines maternal mortality as death of a woman while pregnant or within 42 days after the end of pregnancy, due to pregnancy-related reasons irrespective of the place and period of pregnancy (WHO, 2020).

The MMR declined from 342 deaths in the year 2000 to 211 deaths in 2017 globally (Nikiema, Beninguisse & Haggerty, 2009). To accomplish SDG goal 3.1 of 70 maternal deaths per 100,000 live births, a 6.4 per cent annual rate of reduction is required. Globally, we are at 2.9 per cent average annual rate of reduction which is half of what is required for the SDG. Compared to high-income countries, developing countries have 14 times higher MMRs. These countries account for almost all maternal deaths (99 per cent), with SSA and South Asia accounting for 88 per cent of the deaths globally. The SSA has the highest MMRs (547 deaths per 100,000 live births) globally followed by South Asia with 182 per 100,000 live births (Alkema et al., 2016).

Some causes of higher maternal deaths in SSA include inaccessibility to ANC services, poor nutrition for women, higher fertility rates, higher prevalence of HIV infection and high poverty rates (Kerber et al., 2007). The significance of receiving adequate and quality ANC services from a skilled health worker, especially for pregnant adolescents, is to detect and manage any complications and prevent deaths during pregnancy (Kerber et al., 2007). WHO recommends uptake of basic maternal health services that include ANC, facility/assisted delivery and PNC.

In Kenya, MMR and neonatal mortality remain high at 362 deaths per 100,000 and 22 deaths per 1,000 live births respectively despite major health reforms in the health sector (Gitobu, Gichangi & Mwanda, 2018). Furthermore, disparities in maternal mortality persist within counties ranging from 189 deaths per 100,000 live births in Elgeyo-Marakwet to over 1000 deaths per 100,000 live births in Mandera, Wajir, Marsabit and Turkana counties (KNBS, 2014). For Kenya to achieve SDG 3 of reducing maternal deaths to less than 70 deaths per 100,000 live births and neonatal mortality to 12 per 1,000 live births by 2030, there is need to ensure all women access maternal healthcare services. Many pregnancy-related deaths in Kenya are linked to delivery without a skilled birth attendant as only 61.2 per cent of the deliveries are in a health facility (KNBS, 2014).

The WHO advocates for pregnant women without complications to have at least four ANC visits; one visit after every three months of gestation and a final visit to a health facility before giving birth. These guidelines have since changed to eight which is a greater challenge since most women did not make the four visits recommended in the earlier guidelines (Hagey, Rulisa & Pérez-Escamilla, 2014).

From 2003 KDHS, slightly more than half (52.3 per cent) of pregnant women made four or more antenatal visits to a health facility. Only 11 per cent of women obtained ANC in the first trimester of pregnancy. Comparing the trends since the 2003 KDHS, there is a continuing decline in the proportion of women who make four or more antenatal visits from 52 per cent in 2003 to 47 per cent in 2008-2009 (KNBS, 2009). In 2009, only 15 per cent of women obtained ANC in the first trimester of pregnancy. In 2014 there was an 11 per cent increase in the number of pregnant women who made four or more ANC visits (58 per cent) and 20 per cent of women went for their first ANC visit during the first trimester (KNBS, 2014).

There have been some changes since 2003 in the proportion of births occurring at home. Births at home declined from 59 per cent in 2003 to 56 per cent in 2008-09 and 34 per cent in the 2014 survey. Births by older women and births of higher order are more likely to occur at home. Similarly, children in the rural areas are twice more likely to be born at home than those in the urban areas. The proportion of children born at home decreased with increased education and wealth quintile of the mother.

Comparing the trends since the 2003 KDHS, the analysis shows a continuing decrease in the proportion of women who did not receive PNC from 81 per cent in 2003 to 53 per cent in 2008-09 to 43 per cent in the 2014 survey. Only 10 per cent attend PNC within two days of delivery, while 2 per cent get care three to six days after delivery and 7 per cent go for a check up seven to 41 days after delivery (KNBS, 2003). In the 2008-09 KDHS, slightly more than one quarter (28 per cent) of women received PNC within four hours of delivery, while 7 per cent received care between 4 and 23 hours after delivery, and 7 per cent received a check-up within two days of delivery. The 2014 KDHS found that 53 per cent of women received PNC within the critical two-day period following delivery. 38 per cent of women received PNC within four hours after delivery, 9 per cent received care within 4-23 hours, and 6 per cent were seen 1-2 days following delivery.

While use of maternal healthcare services in Kenya has increased over time, the rates remain low. It is against this backdrop that this study analysed factors associated with use of maternal healthcare services. The study determined factors associated with utilization of ANC, health facility delivery and PNC.

Review of related literature

This study was guided by the Andersen and Newman Framework of Health Services Utilization (Andersen & Newman, 2005). According to this model, healthcare service utilization is determined by three sets of factors: predisposing, enabling and need factors. The predisposing factors refer to socio-cultural attributes which include; culture, ethnicity, education, occupation, age, gender, knowledge of healthcare systems, values and attitudes. While enabling factors are those that facilitate a woman to seek healthcare services, such as income, health insurance and accessibility of health facilities. Need factors refer to the perceived need by the patient to seek healthcare services based on how useful they feel the services will be.

Collins et al. (1996) found that introducing user fees in Kenya led to reduced utilization of healthcare more so among the poor. In Uganda, a study on abolition of user fees in health facilities found a rising use of health services (Burnham et al., 2004). Interventions in Kenya to address financial access to maternal health include introduction of Free Maternity Care programme to enable pregnant women have free health facility delivery. The programme increases access and raises use of maternal services with the aim of reducing maternal deaths (Beatrice & Mukaka, 2017).

Cost of maternal health services is another impediment to its accessibility. Poor women cannot afford to pay for maternal health services irrespective of the distance to the health facilities (Buor, 2004). This is similar to a study in Tanzania which reported high maternal deaths among unemployed women compared to employed women (Gwamaka, 2012).

There is an inverse relationship between accessibility and use of healthcare services (Peters et al., 2008). Geographical accessibility includes components such as user's location, health facility location (distance between the two), quality of communication systems and roads. It is inextricably linked to financial accessibility. For example, a low-income household woman who is closer to a private facility geographically may be forced to travel further for more affordable services (Shihaji et al., 2011). Letamo and Rakgoasi, (2003) found high odds of access to maternity care among urban residents than among rural residents. Poor road infrastructure and inadequate transportation to healthcare amenities explain why there is low use of maternal healthcare in remote areas of Western Kenya (Letamo & Rakgoasi, 2003). Women living close to health facilities and urban residents have greater probability of health facility delivery than those who don't (Letamo & Rakgoasi, 2003).

The level of education enables women to make informed decisions. Educated women are likely to have information and knowledge to recognize specific complications and modern medical treatment methods. In contrast, females with low levels of education have low use of maternal health services (Cheptum et al., 2014). Though education is a strong independent aspect in the usage of maternal healthcare services, (Gage & Guirlène Calixte, 2006) claim this strong association is diluted when habitation and socio-economic setting are not controlled.

A cross-sectional survey by Antai et al. (2012) to assess the role of gender inequalities on women's access to maternal healthcare services in Namibia, Kenya, Nepal and India found that those in early marriages do not adequately use maternal healthcare amenities. The reason for this was lack of knowledge on their significance and that decisions concerning their health are made by someone else (Grown, Gupta & Pande, 2005).

Study on factors affecting the utilization of ANC in developing countries (Simkhada et al., 2008) found that married women were more likely to attend antenatal clinics than the unmarried ones. This is because they receive support from their partners and enjoy social acceptability of the pregnancy compared to the adolescents and unmarried younger women who hid their pregnancy to avoid social criticism.

Various studies have used age to determine maternal health utilization. A study in Bangladesh found that younger women had lower rates of maternal health facility use compared to older women (Chakraborty, 2003). In Tanzania, there is an inverse relationship between the age of the woman and delivery assisted by a skilled health attendant (Mpembeni et al., 2007). These findings are similar to studies in Kenya, Jordan and China among other countries (Ikamari, 2005; Short & Zhang, 2004; Obermeyer & Potter, 1991).

Culture has restricted decision-making abilities of women in developing countries. This is a consequence of diverse gender roles and social hierarchy (Ashraf, 2009). Tsegay et al. (2013) found that husbands and mothers-in-law make decisions pertaining to women's maternal health utilization. However, Fotso et al. (2008), showed women's decision-making as a weak determinant of maternal health utilization among women in Nairobi.

Certain beliefs/religions reject modern medicine so that their followers do not seek healthcare services (Cheptum et al., 2014). People are expected to behave in a certain manner in different communities. A literature review of 28 papers established that cultural beliefs on pregnancy affected the use of ANC (Simkhada et al., 2008).

Health insurance is related to ANC attendance and may possibly raise health facility deliveries attended by skilled health workers (Feijen-de Jong et al., 2012). Studies carried out in Tanzania showed low coverage of health insurance was linked to low use of maternal services such as adequate ANC visits, including deliveries by expert attendants (Kibusi et al., 2018).

More women seek maternal healthcare for first births compared to mothers with more than four children (Kaupova et al., 1998). Women with high parity start their first ANC visit after three months and have lesser probability of delivering with the help of skilled health professionals, because they feel knowledgeable and experienced from previous experiences (Ochako et al., 2011).

Women who receive ANC services have better likelihood of delivering in a health facility. Additionally, women who receive ANC services and have health facility births have higher chances of receiving timely post-delivery services. An essential component for quality ANC is counselling on the importance of health facility delivery. Note that ANC and health facility delivery also offer chances for additional health concerns to be identified hence may serve as proxies for medical diagnosis (Mbugua & MacQuarrie, 2018).

See the summary of the model in Figure - F4.

Materials and methods

To investigate the determinants of use of ANC, health facility delivery and PNC, this study estimated an unadjusted and adjusted logistic regression model. Logistic regression is the appropriate regression analysis to conduct when the dependent variable is dichotomous (binary). In this study we have three dependent variables: utilization of ANC services, health facility delivery and use of PNC services. They are all measured as

binary variables. The independent variables were predisposing factors (maternal age, education, marital status and religion), enabling factors (wealth, residence, employment status and health insurance), and need factors (parity, final say on health).

This is an additive model for the three outcomes. For example, birth in a health facility model includes measurement of adequate PNC and the model of timely postpartum care services includes the measurement of adequate PNC services and delivering in a health facility. We can assess the contribution of experience with the preceding stages of use of healthcare—which is also a need factor variable—but also to indirectly evaluate the magnitude to which consequences have similar sets of socio-demographic determinants or extent to which those factors act indirectly through their effect on prior steps of care seeking.

The logistic model is specified as:

$$P(Y{=}1|X) = \frac{e^{(\beta_o + \beta_1 X + ...)}}{1 + e^{(\beta_o + \beta_1 X + ...)}}$$

Where Y is the outcome variable and X is a vector of independent variables as seen in Table - T19.

Data Source

This study utilized data from 2014 KDHS. This study selected 14,949 women aged 15-49 whose live births were of five years earlier to the study.

Findings and Discussion

From Table - T19, more than half (52 per cent) of the respondents are between 20-29 years and more than three-quarters (81.4 per cent) have attained at least primary level of education. Majority of the women are married (82.5 per cent) and are protestants (63.4 per cent). More than half of the respondents reside in rural areas (65.5 per cent) and half of them are in the poor wealth quintile (50.6 per cent). Slightly more than half of the women are employed (61 per cent) and do not have health insurance (85.8 per cent). Over three-quarters (84.4 per cent) of the respondents have more than one child. Majority of the women (64.9 per cent) are involved in making choices concerning their health.

Bivariate analysis of factors associated with ANC usage, health facility delivery and PNC

Only 18 per cent of the women received ANC services in the first trimester and made at least four visits to a healthcare facility during pregnancy. For predisposing characteristics, females aged between 20-29, females with secondary and higher education, females who were married and those who belonged to the Roman Catholic Church had the highest ANC usage. Regarding enabling factors, women in the urban areas, and those in the rich wealth quintile had high rates of ANC usage. Employed

women and those having health insurance also used ANC services more. According to need factors, women with less than two births and those whose health decision was made by someone else had high proportions of using ANC services.

According to 2014 KDHS, 66 per cent of the women gave birth in a health facility. The lowest rate of delivering in a health facility was among women older than 40 years (48 per cent). More than three-quarters (86 per cent) of women with secondary school level of education and above delivered in a health facility. Women who have never been married had the highest rates (69.3 per cent) of health facility delivery compared to married, widowed or separated women. Women in to the Roman Catholic and protestant Christian sects had higher rates of facility delivery (69.7 per cent and 67.6 per cent respectively) compared to other religions.

A higher percentage of women in urban areas (84.3 per cent) delivered in a health facility in comparison to those in rural areas. This is similar to those in the rich wealth quintile where 93 per cent had health facility delivery. Women who are employed (60.9 per cent) and are covered by a health insurance (86.2 per cent) had higher rates of facility deliveries. Women with low parity (84 per cent) and women who obtain adequate ANC (80 per cent) delivered in a hospital in comparison to others.

The percentage of women who received timely PNC was 55 per cent. Among the predisposing factors, the ages between 15-19 and 20-29 had higher proportions of women (57 per cent) who received PNC services within 48 hours after delivery, compared to women aged 40-49 (42 per cent). Women with secondary school education and above (71 per cent), married women (82 per cent) and women who were Christian protestants (57 per cent) received timely PNC.

Women in urban areas (67 per cent) and those in the rich wealth quintile (74 per cent) received timely PNC. Employed women had higher (41.1 per cent) usage of PNC than unemployed women. Those covered by a health insurance had higher use of PNC (76 per cent) too. Women with less than two children (62 per cent), women who receive adequate PNC services (64 per cent) and those who gave birth in a hospital (74 per cent) received timely PNC.

Multivariate logistic regression analysis (adjusted) for ANC, health facility delivery and PNC

After adjusting for other factors, education level, wealth quintile, health insurance and parity remain statistically significantly associated with adequate use of ANC.

Women with secondary school level of education and above were 1.5 times more likely to receive adequate PNC (AOR 1.5, 1.1-2.0) compared to women who had no education. Women with primary school education level and those with no education had no significance differences in uptake of adequate ANC. Women in rich households were twice as likely to receive adequate ANC services (AOR 2.1, 1.7-2.8) compared to those in the poor wealth quintile. There is a similarity between middle class women (AOR 1.1,

CI 0.9-1.4) and those in the poor wealth quintile. Women covered by a health insurance were more than twice likely (AOR 2.3, CI 2-2.7) to utilize ANC services compared to women with no health insurance. Women with one child received adequate ANC (AOR 1.3, CI 1.1-1.5), compared to those with more than two children. Maternal age, marital status, religion, residence, employment status and final decision-making on health were not statistically significant.

Women with primary school level of education (AOR 2.3, CI 1.9-2.9) and women with higher than secondary school level of education (AOR 4, CI 3.1-5.1) had 2 and 4 times higher odds of health facility delivery respectively, compared to women with no education. There is a positive association between living in an urban area and health facility delivery (AOR 1.6, CI 1.7-2.2). Increasing levels of household wealth also increases with the odds of health facility delivery systematically. Women in the rich households had 8.3 odds of health facility delivery (AOR 8.3, CI 4.4-8.8) compared to unemployed women. Employed women were 5.7 more likely to have health facility births (AOR 5.7, CI 1.4-1.7) while women covered by health insurance were six times more likely to give birth in a health facility (AOR 6.9, CI 4.7-8.5) compared to those with no insurance cover. Women with one child (AOR 2.1, CI 1.4-1.8) and women who received adequate PNC services (AOR 1.9, CI 1.7-2.2) had higher odds of health facility delivery compared to women with more than one child and women who made less than four antenatal visits, respectively.

Increase in education level increases the chances of receiving PNC within 48 hours after delivery. Women with primary (AOR 1.9, CI 1.6-2.6) and secondary school education level (AOR 2.9, CI 2.2-3.8) had higher chances of receiving timely PNC compared to women with no education. Women in towns (AOR 1.2, CI 2-1.4) had higher odds of timely PNC, compared to those living in rural areas. Women in rich wealth quintile had 3.7 greater odds (AOR 3.7, CI 3.0-4.6) of timely PNC compared to those in the poor wealth quintile. Employed women were two times more likely to get PNC services within 2 days after birth (AOR 2.4, CI 1.9-3.5) compared to unemployed women. Women with only one child had 1.5 greater odds of timely PNC (AOR 1.5, CI 1.3-1.9) compared to high parity women. Women who delivered in hospital had the highest chances (AOR 10.9, CI 8.9-12.6) of timely PNC compared to those who gave birth elsewhere. After controlling for other variables, maternal age, marital status and religion were not associated with timely PNC.

Discussion

Education level was found to be a significant determinant of adequate ANC use, health facility delivery and PNC use. Women with more than secondary school education were more likely to use maternal healthcare services. Through education, women understand and follow maternal healthcare recommendations (Hearld, Anderson & Budhwani, 2018).

This study found that marital status is significant for health facility delivery. This finding is consistent with the findings of Adedokun & Uthman (2019) where marital status had a significant relationship with maternal health service use. Unmarried women had

higher probability of not using maternal health services while giving birth, compared to married women. Lack of spousal support may be linked to the low usage of maternal health services among unmarried women.

Religion was not found to be a significant factor in utilization of maternal healthcare. Al-Mujtaba et al. (2016) study on evaluating religious influence on the utilization of maternal health services among Muslim and Christian women in north-central Nigeria, did not find any significant role for Christian or Islamic religious beliefs in influencing maternal healthcare service uptake.

Among the enabling factors, urban residents were positively linked to delivery in a health facility. Adedokun & Uthman, (2019) found that rural residents do not use health facilities during childbirth. Women who live in the rural areas have few or inadequate health facilities unlike those in metropolitan areas. The healthcare amenities found in rural areas may not have the required health personnel or equipment for safe delivery. An additional challenge with rural residents is the traditional birth attendants who offer affordable and readily available services but lack the required expertise in delivery care. The distance between the health facility and where the woman lives can be a challenge especially in healthcare delivery. For instance, when the facility is far from the women, the challenge of transport is unavoidable due to inaccessibility of the facility. A number of women may end up giving birth at home in the process of looking for means of transport to the nearby hospital.

In this study, wealth index is a consistent and strong factor affecting the use of adequate ANC services, delivery in the health facility and timely PNC. Omollo (2016) mentions transportation cost, distance and cost of medicine as challenges to health facility visits. Women in rich households had higher chances of maternal healthcare utilization compared to those in poor households. An argument by Nuamah et al. (2019) opines that women from poor families have difficulties in paying for healthcare services compared to women from rich families who have better exposure to receiving maternal health information and the means to afford healthcare services.

Employment status of the mothers is a significant factor in adequate use of ANC services, health facility delivery and timely PNC. Working mothers are exposed to information on health at their workplaces. They are likely to make use of their financial resources for their healthcare needs. However, sometimes the employed mothers face challenges that reduce their opportunities of receiving ANC (Furuta & Salway, 2006).

In this study, health insurance was significant for ANC uptake, facility delivery and timely PNC. Women need a health cover throughout their lifespan to be able to access all the healthcare services. Women who lack health insurance are likely to delay or forgo PNC in their first trimester. Inadequate PNC is associated with higher rates of maternal mortality. (Nationalpartnership.org, 2019).

A negative association exists between parity and utilization of maternal healthcare services. Few older women utilize maternal health services. This could be because they

have gained experience and confidence from past pregnancies (Rurangirwa et al., 2017). Other studies have argued that unless the pregnancy has complications, the woman prioritizes the competing needs with the available resources, leading to less maternal healthcare usage (Mungai & Oleche, 2016).

This study did not find final health decision-making as a significant factor to receiving maternal healthcare. Bouyou-Akotet, Mawili-Mboumba & Kombila (2013) had similar findings and concluded that women can have reproductive health services without any significant change in their household positions.

A direct determinant of health facility delivery is adequate ANC. Most women who attend ANC are advised on the importance of giving birth in a health facility. Moreover, a direct element of timely PNC is health facility delivery. According to the 2014 Ghana Demographic and Health Survey, 40 per cent of the women received PNC services after 72 hours of delivery. Women who give birth in the absence of a skilled birth attendant are advised to go for check up within 24 hours after birth but most of them miss out on these services (as well as those who had health facility births) (Nuamah et al., 2019).

Summary and conclusion

Maternal health is crucial for the mother and the new-born's survival. However, in Kenya, the use of maternal health services is still low. This study used the 2014 KDHS data to analyse factors that affect use of ANC, health delivery services and timely PNC. The factors were classified as predisposing, enabling and need factors. Women's level of education is the common predisposing factor. Wealth and residence are the enabling factors and parity is the need factor. Additionally, there is a direct link between ANC use and delivery in a health facility which is also linked to timely PNC. To be able to improve maternal health significantly, the government and other key players should invest in the aforementioned areas.

Policy Relevance

Maternal health services promote health of women thereby reducing maternal morbidity and mortality. To promote uptake of maternal healthcare services, the GoK introduced free maternity services in public hospitals in 2013. To further promote uptake of maternal health services, the government and other key players should invest in programmes that will improve women's socio-economic status, especially education. The education of women is an important determinant of utilization of ANC, health facility delivery and timely PNC services. More women should be encouraged and supported to attain higher levels of education beyond the secondary school level to enhance their empowerment and control over their health.

Poverty is also a deterrent to the use of maternal healthcare services. There is need to empower women from poor households through education and alternative means of livelihood to improve their welfare. This will facilitate healthcare utilization, including maternal healthcare services. The government should also improve accessibility to

health by strengthening and effectively resourcing the NHIF, thereby encouraging more people to enrol. This will reduce the financial burden since it was a key indicator for non-use of maternal healthcare services.

Finally, expectant women should be encouraged to effectively utilize maternal healthcare services. Maternal healthcare provides an avenue to discuss and educate women on proper child care and development including breastfeeding, sleeping under treated mosquito nets, among other ways of keeping a healthy home environment (WHO, 2019). Indubitably, maternal healthcare helps to curb these intolerable large numbers of preventable child deaths.

Areas of further research

There is need for ethnographic and qualitative studies to understand how culture affects maternal health utilization. Further research is recommended to help understand the underlying mechanisms and contexts in which the identified factors flourish.

References

Adedokun, S. T., & Uthman, O. A. (2019) 'Women who have not utilized health Service for Delivery in Nigeria': *Who are they and where do they live?, BMC Pregnancy and Childbirth, 19*(1), p. 93. doi: 10.1186/s12884-019-2242-6.

Alkema, L., Chou, D., Hogan, D., Zhang, S., Moller, A. B., Gemmill, A., & Inter, U. N. M. M. E. (2016). Global, regional, and national levels and trends in maternal mortality between 1990 and 2015, with scenario-based projections to 2030: *A systematic analysis by the UN Maternal Mortality Estimation Inter-Agency Group. The Lancet,* 387(10017), 462-474.

Al-Mujtaba, M., Cornelius, L., Galadanci, H., Erekaha, S., Okundaye, J., Adeyemi, O., & Sam-Agudu, N. (2016). Evaluating religious influences on the utilization of maternal health services among Muslim and Christian women in North-Central Nigeria. *Biomed Research International,* 2016, 1-8. doi: 10.1155/2016/3645415

Andersen, R., & Newman, J. (2005). Societal and individual determinants of medical care utilization in the United States. *Milbank Quarterly*, 83(4), p.Online-only-Online-only.

Ashraf, N. (2009). 'Spousal control and intra-household decision making': An experimental study in the Philippines, *American Economic Review*, 99(4), pp. 1245–1277. doi: 10.1257/aer.99.4.1245

Beatrice, M., & Mukaka, V. (2017). Effects of the free maternity care program on client satisfaction at a county referral hospital in Kenya. *International Journal of Advanced Research,* 5(10), pp.62-69.

Bouyou-Akotet, M. K., Mawili-Mboumba, D. P., & Kombila, M. (2013) 'Antenatal care visit attendance, intermittent preventive treatment and bed net use during pregnancy in Gabon'. *BMC Pregnancy and Childbirth, 13*(1), p. 52. doi: 10.1186/1471-2393-13-52.

Buor, D. (2004). 'Determinants of utilisation of health services by women in rural and urban areas in Ghana', p. 15.

Burnham, G. M., Pariyo, G., Galiwango, E., & Wabwire-Mangen, F. (2004). Discontinuation of cost sharing in Uganda. *Bulletin of the WHO,* 82, 187-195.

Chakraborty, N. (2003). 'Determinants of the use of maternal health services in rural Bangladesh', *Health Promotion International,* 18(4), pp. 327–337. doi: 10.1093/heapro/dag414

Cheptum, J. J., Gitonga, M. M., Mutua, E. M., Mukui, S. J., Ndambuki, J. M., & Koima, W. J. (2014). Barriers to access and utilization of maternal and infant health services in Migori, Kenya.

Collins, D., Quick, J. D., Musau, S. N., Kraushaar, D., & Hussein, I. M. (1996). The fall and rise of cost sharing in Kenya: The impact of phased implementation. *Health policy and planning,* 11(1), 52-63. doi: 10.1093/heapol/11.1.52.doi: 10.1093/heapol/11.1.52

En.wikipedia.org. (2020). Maternal Health. [online] Available at: <https://en.wikipedia.org/wiki/Maternal_health> [Accessed 23 September 2020].

Feijen-de Jong, E. I., Jansen, D. E., Baarveld, F., van der Schans, C. P., Schellevis, F. G., & Reijneveld, S. A. (2012). Determinants of late and/or inadequate use of prenatal healthcare in high-income countries: A systematic review. *The European Journal of Public Health, 22*(6), 904-913.

Fotso, J., Ezeh, A., Madise, N., Ziraba, A., & Ogollah, R. (2008). What does access to maternal care mean among the urban poor? *Factors associated with use of appropriate maternal health services in the slum settlements of Nairobi, Kenya. Maternal and child Health Journal, 13*(1), 130-137. doi: 10.1007/s10995-008-0326-4

Furuta, M., & Salway, S. (2006). 'Women's position within the household as a determinant of maternal healthcare use in Nepal', *International Family* Planning Perspectives, 32(01), pp. 017–027. doi: 10.1363/3201706.

Gage, A. J., & Guirlène Calixte, M. (2006). 'Effects of the physical accessibility of maternal health services on their use in rural Haiti'. *Population Studies*, 60(3), pp. 271–288. doi: 10.1080/00324720600895934.

Gitobu, C. M., Gichangi, P. B., & Mwanda, W. O. (2018). 'Satisfaction with delivery services offered under the free maternal healthcare policy in Kenyan public health facilities'. *Journal of Environmental and Public Health,* 2018, pp. 1–9. doi: 10.1155/2018/4902864.

Grown, C., Gupta, G. R. & Pande, R. (2005). 'Taking action to improve women's health through gender equality and women's empowerment', 365, p. 3.

Gwamaka, S. (n.d.). Utilization and factors affecting delivery in health Facility among recent delivered women in Nkasi District. [online] Available at: https://core.ac.uk/download/pdf/16666712.pdf [Accessed 3 Dec. 2019].

Hagey, J., Rulisa, S., & Pérez-Escamilla, R. (2014). Barriers and solutions for timely initiation of antenatal care in Kigali, Rwanda: Health facility professionals' perspective. Midwifery, 30(1), pp.96-102.

Hearld, K. R., Anderson, J. L., & Budhwani, H. (2018). 'Examining the relationship between individual characteristics, community-level traits, Multidimensional empowerment, and maternal healthcare utilization in the Islamic Republic of Pakistan'. *Maternal and Child Health Journal, 22*(9), pp. 1319–1326. doi: 10.1007/s10995-018-2512-3.

Ikamari, L. (2005). Maternal healthcare utilisation in Teso District. *African Journal of Health Sciences,* 11(1).

Kaupova, N., Nukusheva, S., Biktasheva, H., Goyaux, N., & Thonneau, P. (1998). Trends and causes of maternal mortality in Kazakhstan. *International Journal of Gynecology & Obstetrics, 63*(2), pp.175-181.

KNBS and ICF Macro. KDHS report, (2013–2014). Kenya: *Ministry of Health;* 2015. https://dhsprogram.com/pubs/pdf/fr308/fr308.pdf.

Kerber, K. J. (2007). De Graft–Johnson JE, Bhutta ZA, Okong P, Starrs A, Lawn JE. Continuum of care for maternal, newborn, and child health: *From slogan to services delivery.* Lancent, 370(9595), 1358-69. doi: 10.1016/S0140-6736(07)61578-5

Kibusi, S. M., Sunguya, B. F., Kimunai, E., & Hines, C. S. (2018). Health insurance is important in improving maternal health service utilization in Tanzania—analysis of the 2011/2012 Tanzania HIV and AIDS and malaria indicator survey. *BMC health services research,* 18(1), 1-10.DOI: 10

Letamo, G., & Rakgoasi, S. D. (2003). Factors associated with non-use of maternal health services in Botswana. *Journal of Health, Population and Nutrition,* 40-47..1186/s12913-018-2924-1.

Mbugua, S., & K. L. D. MacQuarrie. (2018). Maternal health indicators in high-priority counties of Kenya. *DHS Further Analysis Reports No. 110. Rockville, Maryland, USA: ICF.*

Mungai, S., & Odhiambo Oleche, M. (2016). The Determinants of Maternal Health Care Services in Kenya. *International Journal of Novel Research in Healthcare and Nursing, 3*(2), pp.162-172.

Mpembeni, R. N., Killewo, J. Z., Leshabari, M. T., Massawe, S. N., Jahn, A., Mushi, D., & Mwakipa, H. (2007). Use pattern of maternal health services and determinants of skilled care during delivery in Southern Tanzania: *Implications for achievement of MDG-5 targets. BMC pregnancy and childbirth,* 7(1), 1-7. doi: 10.1186/1471-2393-7-29.

Namasivayam, A., Osuorah, D. C., Syed, R., & Antai, D. (2012). The role of gender inequities in women's access to reproductive healthcare: A population-level study of Namibia, Kenya, Nepal, and India. *International journal of women's health, 4*, 351. doi: 10.2147/IJWH.S32569

Nationalpartnership.org. (2019). Black women's maternal health: [online] Available at: https://www.nationalpartnership.org/our-work/health/reports/black-womens-maternal-health.html (Accessed 3 Dec. 2019).

Nikiema, B., Beninguisse, G., & Haggerty, J. L. (2009). Providing information on pregnancy complications during antenatal visits: Unmet educational needs in sub-Saharan Africa. *Health Policy and Planning, 24*(5), pp. 367–376. doi: 10.1093/heapol/czp017.

Nuamah, G. B., Agyei-Baffour, P., Mensah, K. A., Boateng, D., Quansah, D. Y., Dobin, D., & Addai-Donkor, K. (2019). Access and utilization of maternal healthcare in a rural district in the forest belt of Ghana. *BMC pregnancy and childbirth, 19*(1), 1-11. doi: 10.1186/s12884-018-2159-5

Ochako, R., Fotso, J. C., Ikamari, L., & Khasakhala, A. (2011). Utilization of maternal health services among young women in Kenya: Insights from the KDHS, 2003. *BMC pregnancy and childbirth, 11*(1), 1-9. doi: 10.1186/1471-2393-11-1

Omollo, J. (2016). Factors and challenges influencing mothers' choice of birth attendance In Bunyala Sub-County, Kenya. International Journal of Scientific & Technology Research, 5(7), 101-105. *Retrieved from http://www.ijstr.org/final-print/july2016/Factors-And-Challenges-Influencing-Mothers-Choice-Of-Birth-Attendance-In-Bunyala-Sub-county-Kenya.pdf*

Peters, D. H., Garg, A., Bloom, G., Walker, D. G., Brieger, W. R., & Hafizur Rahman, M. (2008). Poverty and access to healthcare in developing countries. *Annals of the New York Academy of Sciences,* 1136(1), 161-171. doi: 10.1196/annals.1425.011

Rurangirwa, A. A., Mogren, I., Nyirazinyoye, L., Ntaganira, J., & Krantz, G. (2017). Determinants of poor utilization of antenatal care services among recently delivered women in Rwanda; a population based study. *BMC pregnancy and childbirth, 17*(1), 1-10.

Shihaji, W., Gagnon, A., Merry, L., Irving, G., & Njeru, E. (2011). Access to maternal and early childhood healthcare for urban migrants in Eastleigh, Nairobi, Kenya. A pilot study. [online] Available at: http://kenya.iom.int/sites/default/files/2011_Access_to_maternal__early_childhood_health_care_for_urban_migrants.pdf [Accessed 7 Nov. 2019].

Simkhada, B., Teijlingen, E., Porter, M., &Simkhada, P. (2008). Factors affecting the utilization of antenatal care in developing countries: Systematic review of the literature. Journal of Advanced Nursing, *61*(3), 244-260. doi: 10.1111/j.1365-2648.2007.04532.x

Tsegay, Y., Gebrehiwot, T., Goicolea, I., Edin, K., Lemma, H., & San Sebastian, M. (2013). Determinants of antenatal and delivery care utilization in Tigray region, Ethiopia: A cross-sectional study. *International journal for equity in health, 12*(1), 1-10. p.30. doi: 10.1186/1475-9276-12-30.

Vision2030.go.ke. (2019). *County governments at the centre of achieving universal healthcare | Kenya Vision 2030.* [online] Available at: https://vision2030.go.ke/county-governments-at-the-centre-of-achieving-universal-health-care/ [Accessed 10 Jul. 2019].

WHO, UNICEF, UNFPA and The World Bank (2010). Trends in maternal mortality: 1990 to 2008. *Estimates developed by WHO, UNICEF, UNFPA and the World Bank. Geneva, Switzerland 2010.*

WHO.int. (2019). Maternal health. [online] Available at: https://www.who.int/health-topics/maternal-health#tab=tab_3 [Accessed 16 Dec. 2019].

WHO. (2019). WHO Recommendations on postnatal care of the mother and newborn. [online] Available at: https://www.who.int/maternal_child_adolescent/documents/postnatal-care-recommendations/en/ [Accessed 3 Jun. 2019].

Who.int. (2020). WHO | Maternal mortality ratio (Per 100 000 Live Births). [online] Available at: <https://www.who.int/healthinfo/statistics/indmaternalmortality/en/> (Accessed 23 September 2020).

Tables and figures

Table - T19: Variable measurement

Variable	Measurement
PNC use	Is assigned 1 if a woman received at least four ANC visits and the first visit occurred in the first trimester, 0 otherwise.
Health facility delivery	Assigned 1 if a woman delivered in a health facility, 0 otherwise.
Timely PNC	Assigned 1 if a woman received PNC check up within 48 hours after delivery, 0 otherwise.
Age	Measured as age categories 1=15-19; 2=20-29; 3=30-39; 4=40-49.
Type of residence	Assigned 1 if urban, 0 otherwise.
Education level	Measured by education level: 1= No education, 2= Primary, 3= Secondary+. A dummy variable was created for each category
Wealth Index	Measured as an index: 1= Poor, 2= Middle, 3= Rich
Health insurance	Variable assigned 1 if covered by health insurance, 0 otherwise.
Healthcare decision maker	Assigned 1=woman; 2=woman and partner; 3=woman and other person; 4=husband; 5=other. A dummy variable was created for each category.
Marital status	Assigned 1= Never married; 2= Married; 3=Living together; 4= Widowed; 5= Divorced; 6= Not living together. A dummy variable was created for each category.
Employment Status	Assigned 1 if employed, 0 otherwise
Parity	Assigned 1 if less than 2, 0 otherwise
Religion	Assigned 1= Catholic; 2= Protestant; 3= Other.

Figure - F4: Operational Framework
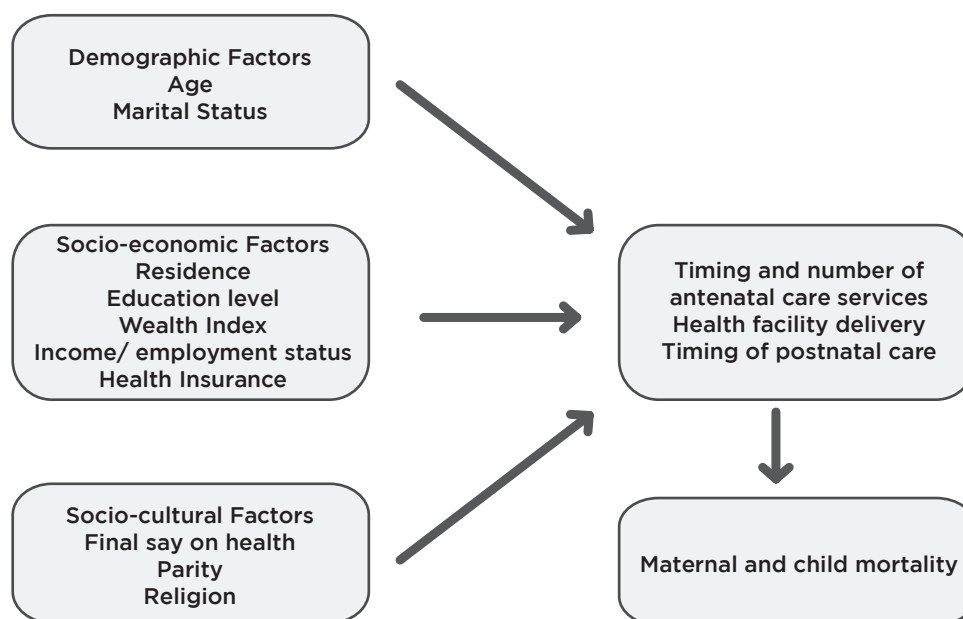
Inequality of Opportunity in Maternal Health among Adolescents in Kenya

Edward Owino[1] and Elizabeth Owiti[2]

Abstract

Adolescent maternal health remains a major public health and economic burden to Kenya, with maternal morbidity and mortality being highest among adolescent mothers. Although the GoK has adopted several policies to improve maternal health, demand for these services remains less than optimal. Studies show that circumstances beyond the adolescents' control, like stigma and discrimination, parental socio-economic status, among others, influence utilization of health services. The objective of this study was to estimate IOp in maternal health among the adolescents aged 15-19 in Kenya and to estimate the percentage contribution of each of these circumstances to IOp. Three waves of pooled KDHS data for 2003, 2008/09 and 2014 were used in the study. The Human Opportunity Index was used to examine the equality of opportunity in adolescent maternal health service in regard to ANC, facility delivery, PNC and ever pregnant. In addition, the Shapley decomposition method was used to capture the contribution of each circumstance to inequality of these opportunities. The percentage of adolescent girls who had ever been pregnant was 18 per cent. Those who sought ANC delivered in the healthcare facility and received PNC were 53 per cent, 71 per cent and 60 per cent, respectively. The inequality measured by dissimilarity index was lowest among adolescent facility delivery (11 per cent) and highest among ever pregnant (20 per cent). The opportunities for access to these services ranged from 14 per cent for ever pregnant to 62 per cent for facility delivery. Wealth Status, education and location were the major contributors to IOp. To ensure all women access their socio-economic rights, including reproductive health as stated in the Kenyan Constitution and achieve universal healthcare, the government needs to address the causes of IOp, including increased access to education, improved health services in rural areas and reduced poverty.

Key words: adolescent maternal health, demographic health survey, inequality of opportunity, Kenya

1 Edward Owino is a Regional Program Officer, Results for development(R4D), Global Health Department.
2   Dr Elizabeth Owiti is a Lecturer at the School of Economics UON.

Introduction

Maternal health is important for the mother, child and the economy. Reducing preventable mothers' deaths is a major global objective under SDG 3. Globally, MMR reduced by 38 per cent — from 342 maternal deaths per 100,000 live births in 2000 to 211 in 2017 (WHO, 2019). However, about 295,000 women die annually due to childbirth related complications. SSA and Southern Asian account for 86 per cent of these deaths. In addition, SSA accounts for more than two thirds of annual maternal deaths globally (WHO 2019). Maternal deaths vary by socio-economic status and adolescent mothers are at a higher risk of death. This is due to varying access to quality maternal healthcare services and age of the mothers. The MMR in low-income countries is 240 deaths per 100,000 live births compared to 16 deaths for high-income nations (WHO, 2014). Maternal mortality among adolescents (15-19 years) is 260 deaths per 100,000, compared to 190 among age 20 to 24 (Malle et al., 1993). Adolescent pregnancies occur among women aged 10 to 19 and increase the risk of maternal illness and death. Pregnancy complications are the second leading cause of deaths among young women aged 15 to 19 globally (WHO, 2014).

Adolescent health is a public health and socio-economic challenge in Kenya. The 2014 KDHS shows that the prevalence of teenage births ranges from 32 per cent for girls aged 15 to 40 per cent for those aged 19. This prevalence varies by region, ranging from 10 per cent in the Central region to 21 per cent in Rift Valley and the Coastal region and 22 per cent in Nyanza. The prevalence also varies by socio-economic status. About 33 per cent of adolescents aged 15 to 19 with no education get pregnant compared to 12 per cent of those with secondary school or higher education. In addition, 26 per cent of teenagers from the poorest households get pregnant compared to 10 per cent from the wealthiest households. Adolescent pregnancies are associated with low use of maternal and child healthcare services, leading to mothers' and children's disability and death. It also increases school dropout rates for most teenagers and increases poor health habits like transactional sex that increases risk of HIV and AIDS. The HIV and AIDS prevalence among teenagers (15-24 years) in Kenya is 2.61 per cent (NACC and NASCOP, 2018).

Kenya reduced MMR from 488 deaths per 100,000 lives in 2008/09 to 362 in 2014. However, this rate varies geographically, ranging from 187 in Elgeyo Marakwet County to 3,795 in Mandera County. The country failed to achieve the MDGs and is unlikely to achieve SDG 3 targeting reduced MMR to less than 70 deaths per 100,000 live births (KDHS, 2014). We analysed the extent of IOp in adolescents' maternal health in Kenya and identified the main circumstances beyond these adolescents affecting their health outcomes. We addressed the following research question: What are the chances that an adolescent girl will be pregnant and if pregnant, access adequate maternal healthcare irrespective of her circumstances at birth, including family wealth, place of birth and family background?

The idea is, imagine a 12-year-old girl, let's call her Mary, living in Kibra slums in Nairobi with her mother— a single mother, who is a primary school dropout and sells vegetables (small scale). Mary has five siblings. Then imagine 12-year-old Josephine, living in Kileleshwa—a high-income neighbourhood in Nairobi—with her mother who is a graduate working with the World Bank. What is the likelihood that Mary and Josephine will become pregnant during their teenage years? Assuming they both become pregnant, what are the chances that they will have access to quality maternal healthcare services like ANC, facility delivery, and PNC? IOp in adolescent maternal health analyses the challenges faced by girls like Mary due to circumstances beyond their control.

Inequality traps suggest that adolescent pregnancy and lack of maternal healthcare reduces the likelihood of girls schooling and acquiring knowledge and skills. As adults they become less productive and unlikely to earn competitive income in the labour market—increasing their economic dependence on men. This also reduces women's ability to participate in decision-making and take leadership positions. Inequality in adolescent health results in social and economic inequalities. The circumstances of poor adolescent mothers are likely to deny their own children an opportunity to achieve their full potential. As such, inequality traps may result in intergenerational IOp.

Consequences of Poor Adolescent Maternal Health

The effect of teenage pregnancy goes far beyond physical, mental pain and suffering. It reduces the woman's opportunity to learn and acquire skills and expertise. This reduces their competitiveness in the labour market, resulting in low income (WHO, 2014). In a cross-sectional study by Kirigia et al. (2006) MMR was found to have a negative impact on GDP. Maternal mortality of a single person was found to reduce per capita GDP by US$ 0.36 per year. Uncontrolled, this puts more pressure on the scarce public resources of a country (Conde-Agudelo, 2015). This demonstrates a strong positive link between equitable use of essential services in the early years of young adolescents and fiscal growth attributed to the human capital accumulation outcome (Galor & Zeira, 1993).

Adolescent mothers have higher pregnancy-related complications. They are more likely to deliver preterm and underweight babies with a higher risk of malnutrition, underdeveloped nervous system and death (Kurth et al., 2010). In low-income countries, an adolescent mother has a 50 per cent chance of dying or having a stillbirth, when compared to mothers above age 20 (WHO, 2014). Stigma, discrimination and low socio-economic status influence demand for maternal healthcare among adolescents (Hokororo et al., 2015). Societal rejection of pregnant teenagers often leads to complications such as suicide, mental illness, unsafe abortion and death which increases public health expenditure.

Furthermore, teenage pregnancy is positively associated with dependency and intergenerational poverty (WHO, 2014). Young mothers also lack adequate resources to access healthcare services and to provide for their children. This may ultimately lead to conflict among partners and families (Fischer et al., 2012).

Statement of the problem

Studies investigating the determinants of adolescents' use of maternal healthcare services in Kenya exist. However, there are virtually no studies examining IOp in adolescent maternal healthcare. IOp denies adolescents the chance to achieve their full potential in life, affects their social outlook, participation in political decisions and policy outcomes (Alesina & Angeletos, 2005). These dispositions may thus influence the degree of redistributive policies, actualized in the public eye and the level of investment and output yield created. Cohen (1989) argues that public projects cannot eliminate all inequalities. Notwithstanding, they should be designed in a manner that enables them to address inequalities associated with individual circumstances that are beyond the control of the populace. Compensation of disadvantaged groups resulting from economic inequalities due to circumstances beyond them should be considered (Peragine, 2004).

Kenya adopted several national policies and strategies aimed at increasing access to maternal health services and reducing the existing inequalities. However, IOp in adolescents' maternal health remains a persistent challenge. Some of the major national policies include the Constitution of Kenya 2010, the Health Act of 2017, and the UHC, which is one of the Big 4 Development Agendas (GoK 2010, 2017). Unequal access to maternal healthcare may result in women losing confidence in health facilities thereby leading to reduction in the use of maternal healthcare services. At the same time, in societies with high-level IOp, people are less likely to support the market economy and democracy, implying that expectant women facing IOp may choose not to visit healthcare facilities. No study in Kenya has assessed the extent to which circumstances beyond adolescents influences their use of maternal healthcare services nor estimated the contribution of each of these circumstances to inequality. To increase adolescents' use of maternal health service, the government needs to understand the factors that influence its use.

The magnitude of the determinants of utilisation of healthcare services in most LIMIC like Kenya remains largely understudied. There is need for adolescent-responsive healthcare services. The aim of this study was therefore to fill this gap and make policy recommendations on improving access to maternal healthcare services by adolescents in Kenya. IOp in adolescent pregnancy and maternal healthcare services was analysed. The main objectives of this study were:

i.   To estimate the coverage and utilization rate of maternal health among adolescents.
ii. To estimate IOp in utilization of maternal health services among adolescent in Kenya.
iii. To determine the contribution of the determinants of IOp in the use of maternal health services among the adolescents.

Review of related literature

LIMIC are especially known for their high levels of economic inequality and poverty (Thorbecke, 2013). However, the accuracy of the specific features of these inequalities remain largely unknown. Ferreira et al. (2014) convincingly argue that not all inequalities are the same and that the extent of inequality caused by differences at birth (such as location, ethnicity or parental background) or, more generally, by factors beyond the control of individuals may be related to low economic growth more than other effort-based inequalities.

The theoretical foundation of IOp is that sources of an individual's desirable outcomes like health and education can be examined as two factors: circumstance and effort (Roemer, 1998, 2002). Circumstance factors such as situations that one is born in, gender and the environment they live in, are exogenous and beyond an individual's control. Effort factors such as one's choice of attitude towards education or work are endogenous and partially influenced by an individual's choices. They may also be a function of one's circumstances for instance one's race, or family which no one can change. Inequality arising from circumstance factors is considered illegitimate, unfair and should be compensated. Inequality arising from an individual's efforts on the other hand is considered just and morally acceptable and should be rewarded, i.e., an individual should be held responsible for his or her choices. Unequal opportunity is generally viewed as intrinsically unfair and economically inefficient (Ferreira & Walton, 2005). However, unequal outcomes are not treated in the same way. Equality of opportunity may imply universal absence or presence of the outcome of interest. If equality of opportunity exists, an individual's outcome should only be a function of the person's choices, efforts, and talents, independent of their circumstance. The idea here is that the existence of inequality traps, which systematically excludes some groups of the population from participation in economic activities, is harmful to growth because it discourages effort and investment by individuals, provokes loss of productive potential and contributes to social and institutional instability (Brunori et al., 2010).

This study draws heavily from Roemer's (1998) theory that stresses the distinction between inequality of outcome and IOp. Inequality within an individual's responsibility is considered ethically satisfactory, while inequality arising from circumstances beyond an individual's control is unethical. Literature refers to this type of inequality as the IOp. The set of circumstances considered in accordance with empirical literature incorporate factors that regard the parental and family background, guardian's education, place of upbringing, and the proportion of parents' life-span. Therefore, the general effect of circumstances on the utilization of healthcare services is determined using the relative effort found by eliminating the impact of circumstances on effort (Trannoy et al., 2010). According to Kenya's Children Act 2007, adolescents below 18 years are classified as children. Roemers model assumes that children are incapable of making choices hence the need to exert appropriate effort to influence their outcomes. In this study, teenagers aged 19 are also considered children. We assume that all the differences in inequalities are attributed to circumstances beyond the adolescents' control.

To end preventable maternal deaths, all women should have equal opportunity to access and use essential maternal healthcare services before, during, and after delivery. Use of maternal healthcare services plays an important role in reducing maternal mortality and morbidity because complications will be detected early (Reynolds et al., 2006). Despite having access to maternal healthcare, the use of healthcare services among adolescents remains low. For instance, Rai et al. (2008) found out that only a third of adolescent mothers were receiving post-natal care in SSA. Magadi (2007) found that majority of adolescents reported late for their first visit for ANC (mostly in the second trimester and above) and only a quarter of adolescents received facility delivery services.

Corcoran et al. (2000) point out several factors beyond an individual's control that contribute to inequalities in the access and use of maternal healthcare opportunities—ranging from individual to societal level factors. For example, education is an important predictor of access to maternal healthcare, with women having at least secondary school education being more likely to access maternity services. Education equips women to make confident decisions about their health (Alemayehu, 2010). Women living in urban areas are more likely to access maternal healthcare compared to those in rural areas (Ochako et al., 2011). Women in rural areas are influenced by social norms, beliefs and attitudes, which affect access and use of maternal healthcare services (Banke-Thomas et al., 2017). In Zimbabwe, Chaibva et al. (2009) found that lack of finance was a barrier to accessing ANC services. Other factors known to contribute to inequality in utilisation of maternal healthcare services among adolescents include employment status (Ronen et al., 2017), low parity (Ronen et al., 2017, Ochako et al., 2003), and media exposure (Rai et al., 2017).

Materials and methods

This study used the HOI to estimate the extent of IOp in access and use of maternal healthcare services among adolescents. It is a discounted coverage rate that ranges from 0 per cent (very high inequality) to 100 per cent (universal access). This empirical methodology determines the extent and distribution of IOp across circumstance groups (Barros et al., 2010). It began by estimating a binary regression to find the association between the outcome variable and circumstances. Secondly, using the estimated coefficient from the regression, the predicted probability (p) of access to maternal health opportunity was used to determine the Dissimilarity index (D), coverage rate (C) and HOI. Finally, the Shapley value decomposition technique was used to estimate the relative contribution of each circumstance.

The formula for *HOI* is:

HOI = (1-D)×C

Where *HOI* is the Human Opportunity Index; *C* is the coverage rate and measures the percentage of adolescents who have access to the maternal health services; D is the dissimilarity index or the inequality in access to maternal health. It measures the disparity

in access to maternal healthcare among adolescents as defined by their circumstance groups. When *1-D=1*, there is no IOp because *C=HOI*.

Equality is achieved when HOI is close or equal to the coverage rate and vice versa. Therefore, in this study, HOI is the adjusted coverage rate in accessing maternal health services among adolescents (Barros et al., 2009).

Data Source

Three waves of pooled cross section data—the 2003, 2008/09 and 2014 KDHS data were used. The study sample was 9,334 adolescents aged between 15 and 19 at the time of the survey. The KNBS collected the data in collaboration with the USAID/ Kenya and ICF International staff who provided technical assistance.

The outcome variables measured adolescent maternal health opportunities of interest including being pregnant, use of ANC, health facility delivery, ever pregnant and use of PNC services.

The choice of circumstances variables was based on empirical literature and availability of data. Some of the factors found to influence adolescent maternal healthcare use include family religion, wealth status cluster, cluster parity, cluster average age of delivery, average distance to the health facility, household wealth status, women's education level and sex of the household head.

Findings and Discussion

Figure - F5 presents use of ANC, PNC and facility delivery services by adolescent mothers between 2003 and 2014. For instance, use of ANC services increased from 38.7 per cent in 2003 to 44.1 per cent in 2008/09 and finally decreased to 26.4 per cent in 2014. In 2003, 43.1 per cent of the adolescents reported delivering their last child in a healthcare facility, there was a slight increase to 55.9 per cent in 2008/09 and a sharp drop to 39.5 per cent in 2014. PNC increased from 18.2 per cent in 2003 to 34.1 per cent in 2014. KDHS 2008/09 did not capture PNC use.

Figure - F6 shows the variation in the utilisation rate of different maternal health services by level of education. The ANC utilisation rate varies from 46.0 per cent for those with no education to 22.1 per cent for those with higher education while PNC increases from 15.0 per cent for those with no education to 38.9 per cent for those with higher education.

Figure - F7 shows the contribution of the wealth quintile to the utilization of maternal healthcare services. The utilisation rate of ANC services is higher (34.8 per cent) in the lowest wealth quintiles compared to the richest wealth quintiles (26.8 per cent). This is similar to accessing PNC services where the utilisation rate decreases from 29.7 per cent in the poor quintile to 28.7 per cent in the richest wealth quintile. However, regarding facility delivery, the utilisation rate is highest at the richest wealth quintile (44.5 per cent) compared to the poorest wealth quintile (35.5 per cent).

As shown in Figure - F7 and Figure - F8 there was a higher adolescent facility delivery rate (42.2 per cent) in urban areas than in rural areas (39.8 per cent). In contrast, women in rural areas used more ANC services than those in urban areas (27.5 per cent compared to 33.0 per cent). On the other hand, women in rural areas used less of PNC services than those in urban areas (27.2 per cent compared to 30.3 per cent).

Coverage rate, human opportunity index and dissimilarity index

Table - T20 shows the average coverage rate, the IOp and HOI values for use of maternal health services among adolescents in Kenya. To interpret these results, we need to recall that HOI is the inequality adjusted coverage rate of each maternal health opportunity. In addition, inequality is measured between groups differentiated by both cluster and individual characteristics. The difference between coverage (C) and HOI for each of the interventions represents the penalty due to the inequality between groups.

The IOp is the share of total opportunities (e.g., use of ANC service) that would need to be redistributed from the circumstance group with a higher-than-average coverage to those with a lower-than-average coverage to achieve equal opportunity. This implies that as the overall coverage rate increases, the dissimilarity index decreases. The coverage for ever pregnant, ANC use, facility delivery and PNC use among adolescents are 17.5 per cent, 51.6 per cent, 70.6 per cent and 59.8 per cent, respectively. The inequality measured by dissimilarity index (DI) is lowest among adolescent facility delivery (11.1 per cent) and highest among ever pregnant (20.2 per cent). At the same time, opportunity for access to these maternal health services ranges from 14.0 per cent for ever pregnant to 62.4 per cent for facility delivery. Inequality of utilization of these services exists as shown by the dissimilarity.

Determinants of IOp in maternal health among adolescents

In this section, we present the contribution of circumstances that lead to IOp in access to maternal health services among adolescents in Kenya over the survey period.

Role of wealth status in determining IOp in ANC

Figure - F9 and Figure - F10, show that the major determinant of IOp in ANC use among adolescents between 2003 and 2014 was household wealth at 28 per cent.

Role of wealth status cluster in determining IOp in PNC

Figure - F11 and Figure - F12, show the IOp in use of PNC services. The education level of the respondent was the major determinant of inequality between 2003 and 2014, at a cumulative average of 39 per cent, irrespective of the wealth cluster index of the adolescent.

Role of wealth status clusters in determining IOp in facility delivery

As shown in Figure - F13 and Figure - F14, wealth status was the major contributor to inequality at a pooled cumulative average of 38 per cent, irrespective of the wealth status cluster of the adolescent.

Role of wealth status cluster in determining IOp in adolescent pregnancy

The Shapley value decomposition as shown in Figure - F15 *(Determinants of IOp in adolescent pregnancy in both poor and rich clusters)* revealed that for the opportunity variable of having ever been pregnant, the level of education was the most important contributor to inequality at a pooled average of 45%.

Discussion

This study postulates that allocation of maternal health services across populations should follow the egalitarian principle of ensuring that opportunities in access and use of health services is not correlated to individual, family and community background which are beyond one's control. This can be achieved by recognizing the predetermined inequalities that affect allocation of these services among the pregnant, delivering and postpartum adolescents (Rahman et al., 2010).

This study further provides the possible contributing factors to these disparities. These include education level, individual's wealth status, household wealth status, facility distance, religion, sex of the household head and location.

The study further provides literature on the risk that younger women are exposed to as a result of these inequalities. Nove et al. (2014) state that the MMR risk in adolescents aged 10 to 15 is one-third higher than that of women aged 20 to 24. Mbonye et al. (2015) further avers that adolescents are unlikely to recognize these risks and hence will continue to suffer under these circumstances.

Despite the public awareness of the potential impact of these risks, it is evident from the pooled HOI results that slightly more than one-half of the adolescent population do not have equal coverage and use of maternal opportunities. This signifies that these opportunities are unequally allocated across women of reproductive age. Hence, a majority of adolescents aged 15 to 19 are unable to access and use these health services because of predetermined circumstances that are beyond their control. It is, therefore, imperative for the government to mitigate against these health inequalities as they have an adverse economic impact at both the individual and the community level. These findings are consistent with those of other studies that show that adolescents use less antenatal and skilled delivery services (Atuyambe, 2015, Owolabi et al., 2017). Additionally, according to the 2015 United Nations report, the ANC utilization rate in SSA has remained low over the past two decades, with a small increase from 47 to 49 per cent of pregnant women receiving the recommended care.

The Shapley value of decomposition reveals that an individual's wealth status remains a major obstacle in accessing maternal health services among the adolescents even though these services are either subsidized or offered free of charge. For instance, the GoK provides free maternity services, yet circumstances beyond adolescents limit their use of these services. In addition to free maternal health services, the government should develop policies to address the inequalities e.g., inequality in access to quality education, inequality in access to employment opportunities and gender inequalities.

Well-educated and wealthier women are more likely to use modern healthcare systems as they are more informed and have greater confidence in dealing with the system's bottlenecks. They are thus able to get quality services unlike poor and uneducated women (Nahar & Costello, 1998).

The study also finds high inequality associated with the opportunity variable of ever pregnant and delivery within a health facility. The high inequality in delivery may be due to inadequate facilities, poor transport infrastructure and distance to the facility (Bourbonnais, 2013). These are the main barriers to maternal healthcare in Kenya. The decline in delivering in a health facility may also be due to the inequality between the poor and the rich (Falkingham, 2003). The education level was also a major contributor of inequality across all the opportunity variables. This IOp can be attributed to the fact that education is strongly linked to the current and future reproductive health practices of an adolescent. As such, implementation of programmes outside the health system that focus on educational achievement is critical in reducing maternal health inequalities (Global Daily, 2016).

Conclusion

The ultimate goal of the sustainable development agenda is to leave no one behind, through ensuring inclusive and equitable access to opportunities. Equality of opportunity is based on the idea of giving people equal opportunities early in life, whatever their socio-economic background, so that everyone has the same opportunity of becoming successful. This study attempted to explain the extent of the dissimilarity in accessing and using maternal healthcare services by adolescents as a result of background circumstances.

The GoK has made efforts to ensure that there is fairness in the allocation of maternal healthcare services through the introduction of the free maternity programme in 2013. However, disparities remain among adolescents accessing maternal care because of circumstances beyond their control. The central rule is that in a world of equal opportunities, socio-economic or socio-cultural background of an individual should not determine their future opportunities.

Policy Recommendations

This study provides valuable insights to policy makers on areas of improvement for the government-funded free maternity policy, to ensure that adolescents have equal opportunity in accessing and using healthcare services. This study puts forward several policy recommendations. First, there is need for the government to invest in comprehensive sex education that provides information and services that are medically accurate, complete, inclusive and age appropriate. Second, the Reproductive Health Bill 2019 which supports adolescents' access to the full range of SRH services, including contraception, should be passed to enable them make reproductive decisions. Advocating for laws and policies that uphold adolescent maternal health rights is paramount to reducing the current unequal opportunities. These policies should be extended to guardians and family members who are often the primary decision makers. Third, there is need for the government to invest in providing sufficient quality healthcare access points to address the gaps in facility delivery, especially in the rural areas.

Areas for further research

There is need to conduct further research to determine the specific IOp per county that influences adolescents' access and utilization of maternal health services so as to understand the magnitude of the problem. Furthermore, a study using panel data instead of cross-sectional data will provide more information and variability on the extent to which IOp is associated with access and utilization of maternal health services among adolescents.

References

Alemayehu, T., Haidar J., & Habte D. (2010). Utilization of antenatal care services among teenagers in Ethiopia: A cross sectional study. Ethiop J Heal Dev.24(3),121.

Alesina, A., & George-Marios A. (2005). Fairness and redistribution. *American Economic Review*, 95(4), 960–980.

Atuyambe, L., Mirembe, F., Johansson, A., Kirumira, E., & Faxelid, E. (2005). Experiences of pregnant adolescents-voices from Wakiso district, Uganda. *African health sciences, 5*(4), 304-309.

Banke-Thomas A., Banke-Thomas O., Kivuvani M, Ameh C. (2017). Maternal health services utilisation by Kenyan adolescent mothers: Analysis of the demographic health survey 2014. *Sexual Reproduction Healthcare*. 12:37–46

Bourbonnais, N. (2013). Implementing free maternity care in Kenya. Challenges, strategies and recommendation–KNCHR.

Brunori, N., Palmisano, F., & Peragine, V. (2013). Implementing free maternity care in Kenya. Challenges, strategies and recommendation–KNCHR.

Chaibva CN., Roos JH., & Ehlers VJ. (2009). Adolescent mothers' non-utilisation of antenatal care services in Bulawayo, Zimbabwe. Curationis,32(3),14–21.

Cohen, G. A. (1989). On the currency of egalitarian justice. *Ethics*, 99(4), 906-944.

Chandra-Mouli, V., McCarraher, R., Phillips, J, Williamson, E., & Hainsworth, G, (2014).Contraception for adolescents in LIMIC: Needs, barriers, and access. *Reproductive health*, *11*(1), 1-8.

Conde-Agudelo, A., Belizán, J. M., & Lammers, C. (2005). Maternal-perinatal morbidity and mortality associated with adolescent pregnancy in Latin America: Cross-sectional study. *American journal of obstetrics and gynaecology,* 192(2), 342-349.

Corcoran J., Franklin C., & Bennett P. (2000) Ecological factors associated with adolescent pregnancy and parenting. Soc Work Res.;24(1):29–39.

Das Gupta, M, (1990). Death clustering, mothers' education and the determinants of child mortality in rural Punjab, India. *Population Studies. 44*(3), 489-505.

Ettarh, R., & Kimani, J. (2012). Determinants of under-five mortality in rural and urban Kenya. Rural & Remote Health, 12(1), 1-9.

Falkingham, J. (2003). Inequality and changes in women's use of maternal health-care services in Tajikistan. Stud Fam Plan, 34, 32-43.

Fisher, J., Mello, M. C. D., Patel, V., Rahman, A., Tran, T., Holton, S., & Holmes, W. (2012). Prevalence and determinants of common perinatal mental disorders in women in low-and lower-middle-income countries: A systematic review. *Bulletin of the WHO*, 90, 139-149.

Galor, O. & Zeira, J. (1993). Income Distribution and Macroeconomics. The Review of Economics Studies, 60(1)1, 35-52.

Global Daily (2016). The International Community Must Prioritize Young Women's Contraceptive Needs.

Guttmacher Institute. (2012). Abortion and unintended pregnancy in Kenya.

Hill, J., Hoyt, J., van Eijk, A. M., D'Mello-Guyett, L., Ter Kuile, F. O., Steketee, R., & Webster, J. (2013). Factors affecting the delivery, access, and use of interventions to prevent malaria in pregnancy in sub-Saharan Africa: A systematic review and meta-analysis. *PLoS Med*, 10(7), e1001488.

Hokororo A., Kihunrwa A., Kalluvya S., Changalucha J., Fitzgerald D, Downs. J. (2015). Barriers to access reproductive healthcare for pregnant adolescent girls: A qualitative study in Tanzania. *Acta Paediatrica*.104(12):1291–7.

KNBS, MoH [Kenya], & ICF International. (2015). KDHS 2014.

Kirigia, J. M., Oluwole, D., Mwabo, G. M., Gatwiri, D., & Kainyu, L. H. (2006). Effects of maternal mortality on gross domestic product (GDP) in the WHO African region. *African journal of health sciences*, *13*(1), 86-95.

Kurth, F., Belard, S., Mombo-Ngoma, G., Schuster, K., Adegnika, A. A., Bouyou-Akotet, M. K., & Ramharter, M. (2010). Adolescence as risk factor for adverse pregnancy outcome in Central Africa–a cross-sectional study. *PloS one*, 5(12), e14367.

Magadi MA., Agwanda AO., & Obare FO. (2007). A comparative analysis of the use of maternal health services between teenagers and older mothers in sub-Saharan Africa: Evidence from demographic and health surveys (DHS). Soc Sci Med. 2007;64(6):1311–25.

Mallé, D., Ross, D. A., Campbell, O. M., & Huttly, S. R. A. (1994). Institutional maternal mortality in Mali. *International Journal of gynecology & obstetrics*, *46*(1), 19-26.

Mbonye, K., Neema, S., & Magnussen, P. (2006). Malaria in pregnancy, risk perceptions and care-seeking practices among adolescents in Mukono district Uganda. *International journal of adolescent medicine and health, 18*(4), 561-574.

Morris JL., & Rushwan H. (2015) Adolescent sexual and reproductive health:The global challenges. Int J Gynaecol Obstet.131(Suppl 1): S40–2

NACC & NASCOP, (2018). Kenya HIV Estimates. Nairobi, Kenya

Nahar, S., & A Costello, A. (1998). The hidden cost of 'free' maternity care in Dhaka, Bangladesh. *Health Policy Plan*, *13*, 417-422.

Norris, S. A., Osmond, C., Gigante, D., Kuzawa, C. W., Ramakrishnan, L., Lee, N. R... & COHORTS group. (2012). Size at birth, weight gain in infancy and childhood, and adult diabetes risk in five low-or middle-income country birth cohorts. *Diabetes care*, *35*(1), 72-79.

Nove, A., Matthews, Z., Neal, S., & Camacho, V. (2014) Maternal mortality in adolescents compared with women of other ages: Evidence from 144 countries. The Lancet Global Health, *2*(3), pg 155-164.

Ochako R., Fotso J-C., Ikamari L., & Khasakhala A. (2003).Utilization of maternal health services among young women in Kenya: Insights from the KDHS. *BMC Pregnancy Childbirth,11*(1),1.

Odejimi, O., Fuller, P., & Bellingham-Young, D. (2011). Determinants of teenage pregnancy in Africa: Implication for public health policy and practice. *American Economic Journal: Applied Economics;* 3:1–34

Owolabi, O. O., Wong, K. L., Dennis, M. L., Radovich, E., Cavallaro, F. L., Lynch, C. A... & Benova, L. (2017). Comparing the use and content of antenatal care in adolescent and older first-time mothers in 13 countries of west Africa: A cross-sectional analysis of Demographic and Health Surveys. *The Lancet Child & Adolescent Health*, 1(3), 203-212.

Pandit, N., Trivedi, A., & Das, B., (2011). A study of maternal and child health issues among migratory construction workers. *Healthline*, *2*(2), 1–16.

Peragine, V. (2004). Ranking income distributions according to equality of opportunity. *Journal of economic equality 2*(1): 11-30

Population Division, United Nations (UN) Department of Economic and Social Affairs. (2013). World Population Prospects: The 2012 Revision, New York,NY: UN.

Rahman, M., Haque, S. E., Mostofa, M. G., Tarivonda, L., & Shuaib, M. (2011). Wealth inequality and utilization of reproductive health services in the Republic of Vanuatu: Insights from the multiple indicator cluster survey, 2007. *International Journal for Equity in Health*, *10*(1), 1-10.

Rai R., Singh P., & Singh L. (2008). Utilization of maternal healthcare services among married adolescent women: Insights from the Nigeria demographic and health survey. Womens' Health Issues. 2012;22(4): e407–1

Reynolds, HW., Wong EL., & Tucker H. (2006). Adolescents' use of maternal and child health services in developing countries. *Int Fam Plan Perspect,* 32(1),6–16

Roemer, J. (1998). Equality of Opportunity. Harvard University Press.

Ronen, K., McGrath, C. J., Langat, A. C., Kinuthia, J., Omolo, D., Singa, B., & John-Stewart, G. (2017). Gaps in adolescent engagement in antenatal care and prevention of mother-to-child HIV transmission services in Kenya. *Journal of acquired immune deficiency syndromes,74*(1), 30.

Thorbecke, E. (2013). The interrelationship linking growth, inequality and poverty in Sub-Saharan Africa. *Journal of African Economies, 22*(suppl 1), i15-i48.

Trannoy A., Tubeuf S., Jusot F., & Devaux M.(2010). Inequality of opportunities in health in France: A first pass. Health economics, 19(8), 921-938.

UNFPA. (2013). Adolescent pregnancy a review of the evidence. New York,NY.

World fertility patterns (2008). New York, NY, United Nations Population Division, 2009.

WHO. (2014). Health for the World's Adolescents, Geneva.

WHO. (2015). UN Population Division. Trends in maternal mortality: 1990 to 2015. Geneva.

WHO. (2017). Adolescents: Health Risks and Solutions. Geneva.

WHO, UNICEF, United Nations Population Fund & The World Bank, (2019). Trends in Maternal Mortality: 2000 to 2017 WHO, Geneva.

Tables and figures

Table - T20: Human opportunity index, coverage rate and dissimilarity index

Opportunities	Coverage (C) (%)	Dissimilarity (D) (%)	HOI (%)
Ever Pregnant			
15 – 19 years	17.51	20.24	13.96
20 – 49 years	89.09	4.24	85.31
ANC			
15 – 19 years	51.58	12.21	45.28
20 – 49 years	58.58	8.79	53.43
Facility Delivery			
15 – 19 years	70.56	11.08	62.74
20 – 49 years	65.98	15.65	55.66
PNC			
15 – 19 years	59.82	11.45	52.97
20 – 49 years	60.12	12.81	52.42

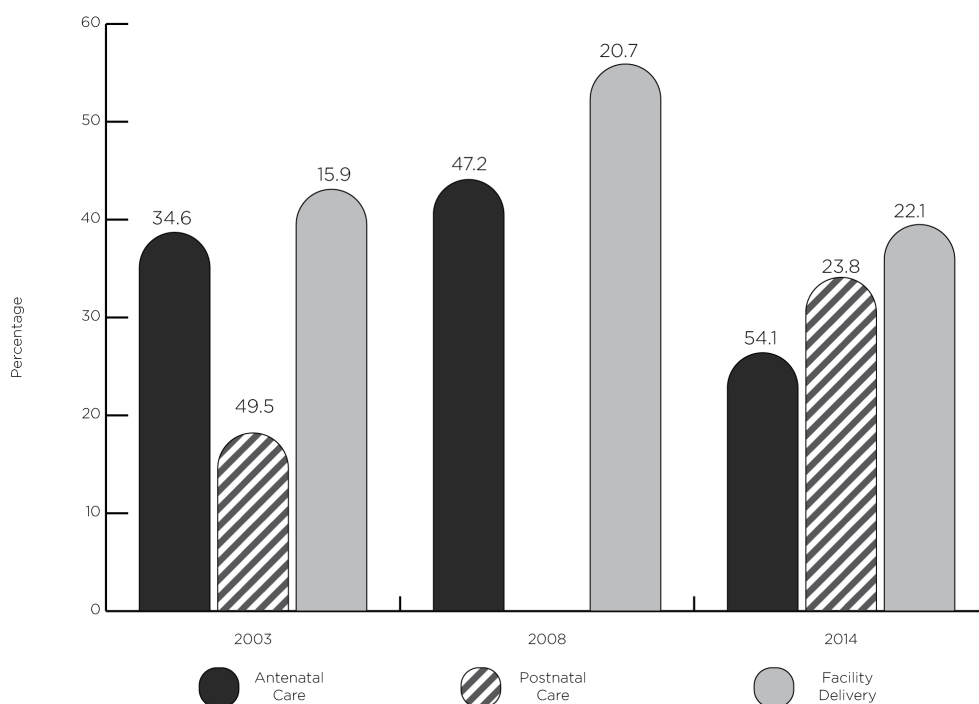*Figure -* F5*: Maternal health services utilisation rate among adolescents by survey period (2003-2004)*

Gender Statistics for Evidence-Based Policies:
Women's economic empowerment, health and gender-based violence

Figure - F6: *Percentage use of maternal health service among adolescents by level of women's education*

Figure F6 — grouped bar chart. Y-axis: Percentage (0–50). Categories by level of women's education:

- **None:** Antenatal Care 46.0; Postnatal Care 15.0; Facility Delivery 39.0
- **Primary:** Antenatal Care 32.3; Postnatal Care 27.6; Facility Delivery 40.1
- **Secondary:** Antenatal Care 25.8; Postnatal Care 32.9; Facility Delivery 41.3
- **Higher:** Antenatal Care 22.1; Postnatal Care 38.9; Facility Delivery 38.9

Legend: Antenatal Care, Postnatal Care, Facility Delivery

Figure - F7: *Maternal health service utilization rate among adolescents by household wealth status*

Figure F7 — grouped bar chart. Y-axis: Percentage (0–50). Categories by household wealth status:

- **Poorest:** Antenatal Care 34.8; Postnatal Care 29.7; Facility Delivery 35.5
- **Poorer:** Antenatal Care 34.3; Postnatal Care 26.6; Facility Delivery 39.1
- **Middle:** Antenatal Care 30.4; Postnatal Care 30.1; Facility Delivery 39.5
- **Richer:** Antenatal Care 30.4; Postnatal Care 26.7; Facility Delivery 42.8
- **Richest:** Antenatal Care 26.8; Postnatal Care 26.7; Facility Delivery 44.5

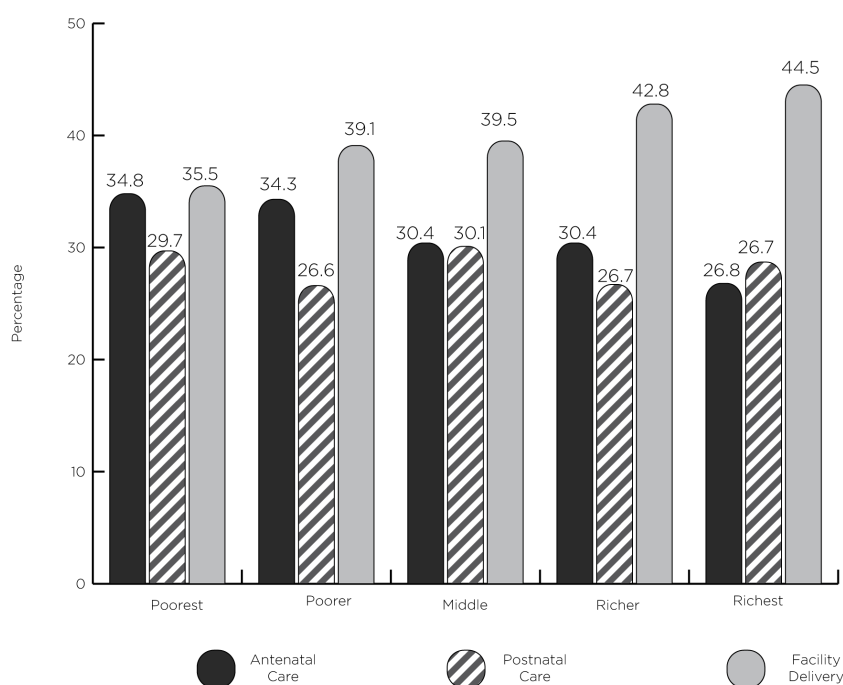Legend: Antenatal Care, Postnatal Care, Facility Delivery

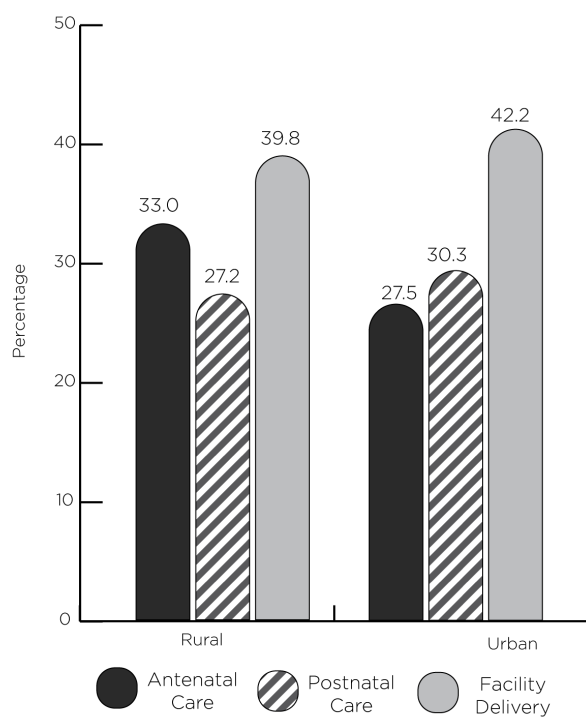**Figure - F8:** *Maternal health service utilization rate among adolescents by area of residence.*

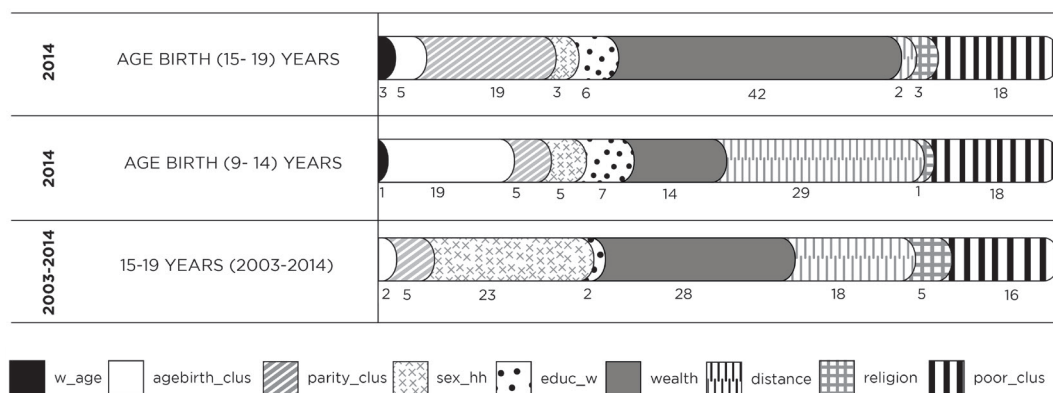**Figure - F9:** *Determinants of IOp in ANC use in poor clusters (%)*

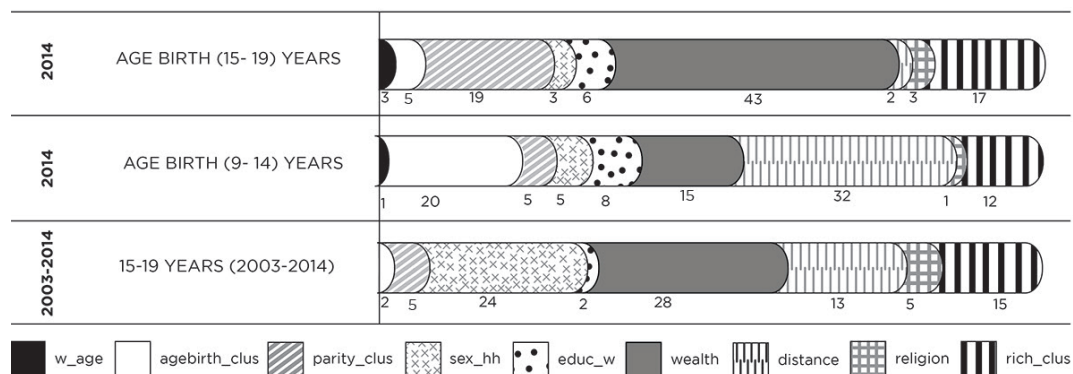**Figure - F10**: *Determinants of IOp in ANC use in rich clusters (%)*

Legend: w_age, agebirth_clus, parity_clus, sex_hh, educ_w, wealth, distance, religion, rich_clus

Figure - F11: *Determinants of IOp in PNC in poor clusters (%)*

Legend: w_age, agebirth_clus, parity_clus, sex_hh, educ_w, wealth, distance, religion, poor_clus
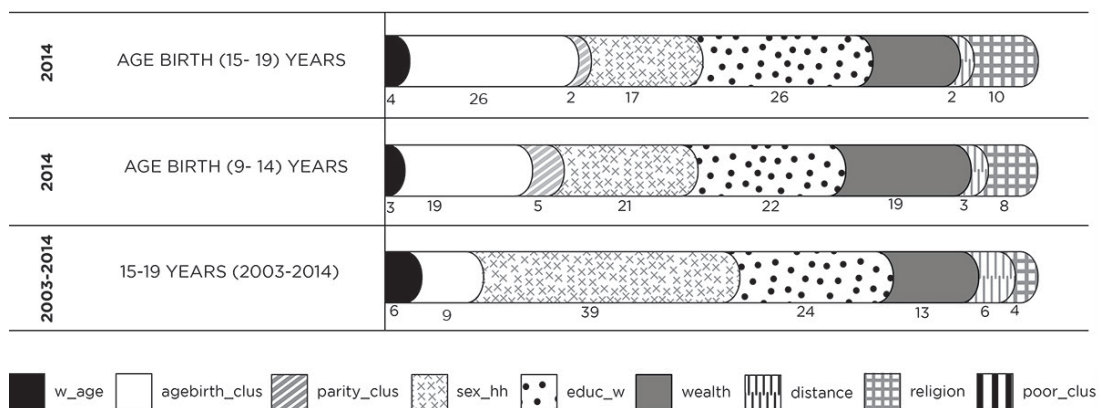
Figure - F12: *Determinants of IOp in PNC in rich clusters (%)*

Legend: w_age, agebirth_clus, parity_clus, sex_hh, educ_w, wealth, distance, religion, rich_clus
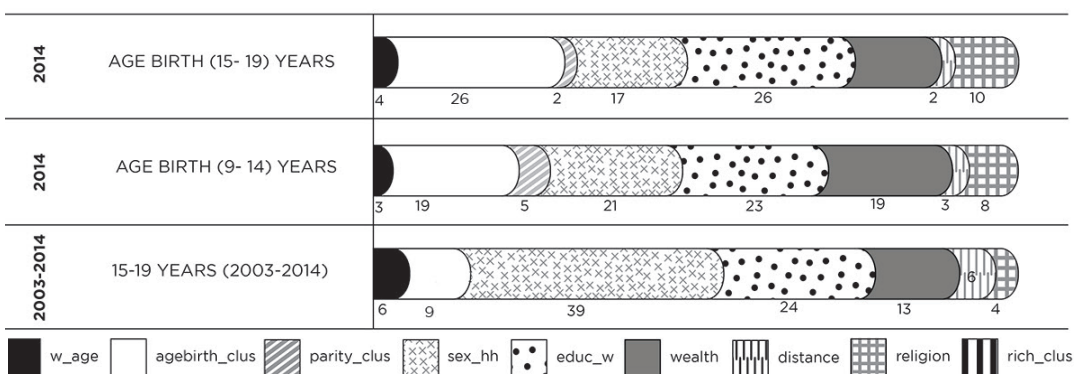
Figure - F13*: Determinants of IOp in facility delivery in poor clusters (%)*

2014 — AGE BIRTH (15- 19) YEARS
6 5 16 2 14 32 8 3 14

2014 — AGE BIRTH (9- 14) YEARS
1 4 13 2 16 36 12 1 15

2003-2014 — 15-19 YEARS (2003-2014)
1 3 7 2 33 38 5 2 9

Legend: ■ w_age □ agebirth_clus ▨ parity_clus ▥ sex_hh • educ_w ▦ wealth ▥ distance ▦ religion ▥ poor_clus
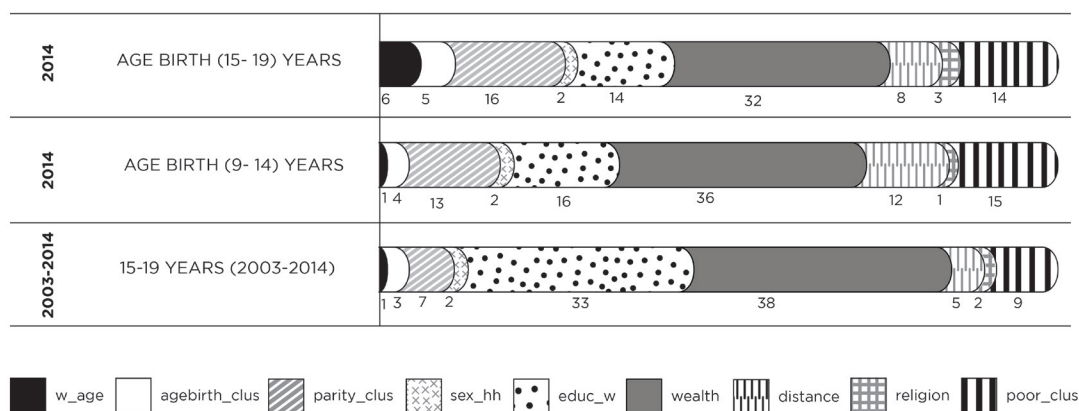
Figure - F14*: Determinants of IOp in facility delivery in rich clusters (%)*
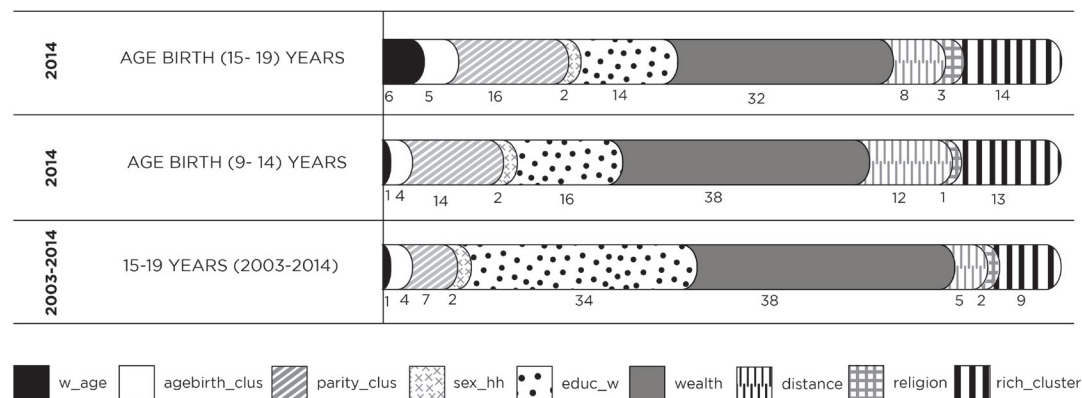
2014 — AGE BIRTH (15- 19) YEARS
6 5 16 2 14 32 8 3 14

2014 — AGE BIRTH (9- 14) YEARS
1 4 14 2 16 38 12 1 13

2003-2014 — 15-19 YEARS (2003-2014)
1 4 7 2 34 38 5 2 9

Legend: ■ w_age □ agebirth_clus ▨ parity_clus ▥ sex_hh • educ_w ▦ wealth ▥ distance ▦ religion ▥ rich_cluster

Figure - F15*: Determinants of IOp in adolescent pregnancy in both poor and rich clusters (%)*

2003-2014 — AGE (15- 19) YEARS
38 14 4 25 13 1 0 4

2003-2014 — AGE (15- 19) YEARS
8 5 9 45 20 5 1 6 0

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

Legend: ■ agebirth_clus □ parity_clus ▨ sex_hh ▥ educ_w • wealth ▦ distance ▥ religion ▦ poor_clus ▥ rich_clus
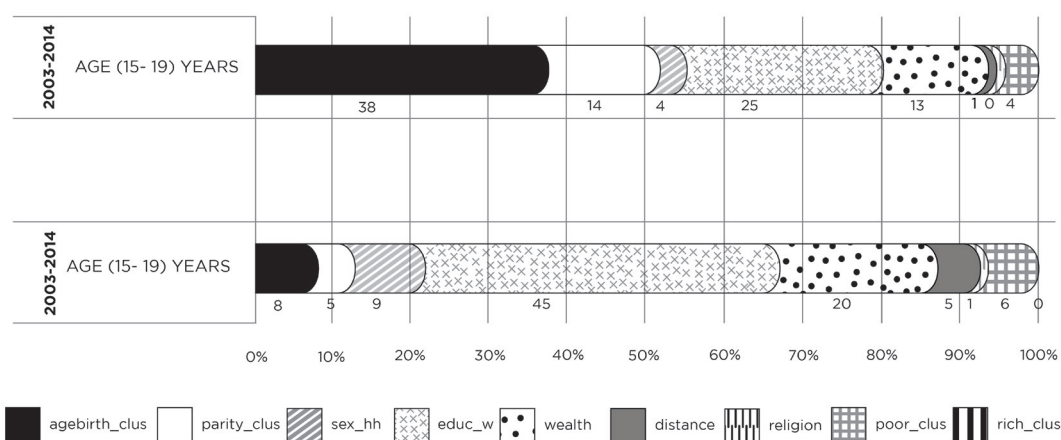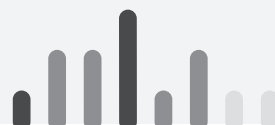
SECTION 3:
GENDER-BASED VIOLENCE

Introduction

Mary Njeri[1]

"Even before the pandemic, violence against women was one of the most widespread violations of human rights. Since lockdown restrictions of 2020, domestic violence has multiplied, spreading across the world as a shadow pandemic. This is a critical time for action, from prioritizing essential services like shelter and support for women survivors, to providing the economic support and stimulus packages needed for broader recovery." Phumzile Mlambo-Ngcuka, Executive Director of UN Women

Though present and often pervasive in most societies and cultures, GBV, including sexual violence and femicide, is sensitive and often unreported. Sexual violence is defined as any sexual act, attempt to obtain a sexual act, unwanted sexual comments or advances, or otherwise directed, against a person's sexuality using coercion, by any person regardless of their relationship to the victim, in any setting, including but not limited to home and workplace.

There are two critical issues that pertain to GBV: Reporting of such cases by victims for appropriate legal action and how the media and society handle such reported cases of GBV. Depending on how these issues are managed, there is the possibility of exacerbating the incidences of GBV while impacting negatively on such cases ever being reported.

Insufficient data has been one of the challenges in addressing GBV. In most cases, the media, and lately social media, is left to decide, manage, opine and disseminate information on this sensitive subject. Investing in the necessary research and data collection, therefore, is key in ensuring that interventions are evidence-based and enable informed models and projections in decision-making processes. Even then, the media still remains relevant and of essence in addressing sexual violence and femicide cases.

The studies in this chapter linger predominantly on these two critical issues with a view to exposing the underlying causes and impacts and proposing policy recommendations.

Media reporting on GBV and other forms of violation facilitates advocacy with decision makers and communities, amplifies the voices of survivors, raises awareness on GBV, advocates for necessary changes in legislation and practices, holds government accountable for the protection of people from violence and breaking social taboos

---

[1]

and stigma. GBV is any harmful act that is perpetrated against a person's will, based on socially ascribed (i.e., gender) differences between males and females. It is an important indicator for measuring progress towards shifting social and cultural norms that reinforce or challenge the place of GBV in the society. However, when media reporting on GBV fails to consider basic ethical and safety principles, the survivors, their families and those supporting them are put at risk.

At the global level, GBV reporting by international media has been viewed as sensational perpetuation of myths and misrepresentations. Reporting of rape and sexual violence cases has sensational apportioning headlines and images, victim-blaming language and trivialization of the crime through the use of words like '*sex scandal*'[2]. The imagery used in many cases reinforces the shame and victimization of survivors (Pasricha, 2020)[3], depicting them as cowering in fear or shame while surrounded by bloodied hands reaching out of darkness. Colours such as black and red are used to accentuate a stereotypical representation of a weaker sex.

While responsible journalism may provide an avenue for survivors' stories to be heard, it may also become part of the problem if not well managed. The media must improve on how it covers GBV. For example, Njuki (2018) highlights a Kenyan media reporting on GBV, *After a man raped a female student, one newspaper reported the rape as 'stranger than fiction' because two other girls that had been assaulted did not scream or raise an alarm.*[4]

Mainstream media reporting on sexual violence against female survivors tends to use event-based reporting or '*episodic framing*', which focuses on incidents or events located at specific places and times. This eludes more towards individualistic rather than societal attributions of responsibility. For example, some paint a picture of an action the survivor performed, warranting a violent reaction from the perpetrator. On a live television interview in Kenya, a journalist asked a woman who had been robbed and raped *whether she had provoked the rapists by saying something, doing something or by what she was wearing.*[5] The prevalence of sexual violence reporting is low, as 90 per cent of all sexual assaults are committed by acquaintances or intimate partners, in private spaces such as home, and are far less likely to include use of weapons. [6] Physical violence leading to fatal events and sex war crimes are more frequently reported than other forms of GBV. [7]

---

2   Ismat Ara, First post. 2020 Media's use of imagery in reporting gender-based violence needs to change and a feminist database has alternatives. https://www.firstpost.com/living/medias-use-of-imagery-in-reporting-gender-based-violence-needs-to-change-and-a-feminist-database-has-alternatives-8128561.html accessed 25th Sept 2020
3   Japleen Pasricha is founder and Director of Feminism in India,
4   All Africa, Jemimah Njuki, The Aspen Institute(Washington DC). 2018 'The Media must improve how it covers Gender Based Violence (https://allafrica.com/stories/201808290319.html accessed 23rd Sept 2020)
5   All Africa, Jemimah Njuki, The Aspen Institute (Washington DC). 2018 'The Media must improve how it covers Gender Based Violence (https://allafrica.com/stories/201808290319.html accessed 20th Sept 2020)
6   Oxford Research Encyclopedias, Tanya Serisier. 2017 'Sex crimes and the Media' http://oxfordre.com/criminology/view/10.1093 accessed 25th Sept 2020
7   Dr. Georgina, Mr Mc Cor Marck, Prof. Pirkis and Easteal, Dr, Kate and Cathy: Anrows. 2015 'Media Representation of violence against women and their children https://www.anrows.org.au/publication/media-representations-of-violence-against-women-and-their-children accessed 24th Sept 2020

This section comprises three chapters on issues of sexual violence reporting, femicide and access to SRH services among refugee adolescents in Kenya. The first chapter focuses on the reporting of sexual violence among female survivors in Kenya. The study argues that sexual violence has been on the rise over the years, with women being the most affected. In 2014, the KNBS reported that 21 per cent of all the women in Kenya had experienced sexual violence, yet one in every three women are not able to access justice. The frequency of reporting sexual violence by survivors is still low. The study sought to establish the prevalence of reporting cases of sexual violence and to analyse the relationship between perpetrators and female survivors of sexual violence in Kenya, with a view of examining the factors affecting the ability to report the occurrence of sexual violence by female victims. Some of the reasons highlighted by the participants, during the study as causes of failure to report included; fear of repercussions, shame, stigma and the feeling of helplessness. For some, it was premised on the religion of a victim which determines whether or not they report the occurrence of sexual violence. Structural factors which include access and proximity to legal systems, resources in the law enforcement centres and availability of sufficient or conclusive evidence were also of concern. Further, attitudes of the police and investigators, the judiciary, stereotyping and access to information were said to have a great bearing on whether or not a victim would proceed to report.

The study further revealed that most of the victims of sexual violence in Kenya sought help from informal channels, with 76 per cent of them turning to their family members. Another 10 per cent disclosed the occurrence of sexual violence but did not seek help, while 53 per cent of them neither sought help nor told anyone about it.

The study formed an opinion that less educated women are less likely to make decisions by themselves about reporting the incidents. For this reason, they may not speak up about sexual violence against them. On the other hand, educated women are likely to hold certain positions in the society, including top positions at their work places, have high social status and political positions all helping them to shield from sexual violence thus increasing the likelihood of reporting any form of sexual violence against them. The other silent but salient factor was that the religion of a person also informed their beliefs, hence their decisions on whether or not they would report.

The study made a further finding that older women, more educated women, those who did not subscribe to any religion and those that had a high economic status were more likely to report the occurrence of sexual violence. The study recommended and proposed policy guidelines that would enhance reporting, including:

i. Improvement of the level of education for women in Kenya, for example by establishing schools and educational centres including those for adult learners closer to communities.

ii. Provision of shelters/halfway homes and safe spaces for survivors of sexual violence. This can further be followed up with a legislation requiring every County Government to set up equipped safe shelters for survivors of sexual violence.

The second chapter in this section focuses on mainstream print media framing of intimate partner femicide. The study established that classification of homicide cases in Kenya dims the light on femicide as a crime of its own merit. In examining the characteristics of the victims and perpetrators of the offence of homicide as is with the current criminal justice, system gaps were noticed in the policy and legislative documents which have been highlighted as differentiating femicide from general homicide. The study noted that human rights lobby groups and NGOs have taken a lead role in bringing the once invisible crime to the limelight and have advanced their informed concerns to relevant policy makers and the legislative arm of government.

This invisibility of femicide statistics at a national policy level has resulted in the public's reliance on media reports on the issue. Mainstream Kenyan media is still very patriarchal in nature and can be characterised as '*an elderly man*' chastising '*errant women*' by implying that their murder is a just consequence of their perceived wayward behaviour. Given victim-blaming, there is need for training of reporters and news presenters in gender sensitive angling of news, interpretation of police investigations and file records to avoid casting the victim in poor light and '*excusing*' the perpetrators of the criminal acts.

This research therefore observes that femicide is still largely invisible from institutional records and memory. This stems from two issues: First, the socio-cultural issue of what and who is considered important in society and whose story is deemed worthy of memorialization. Second, the priorities of a largely male-dominated government, both in terms of representation and psychology. The study notes that classification and documentation of crime statistics provide no room for interrogation of important factors such as victim-perpetrator relationships or criminal history and pathology, which could be taken into consideration when designing legal instruments that would be useful for interventions when dealing with the same.

The study states that disaggregation of data on homicide cases is a glaring gap that needs urgent attention in order to solidify the fight against femicide and crimes against women in general. A major prerequisite for this data disaggregation is for there to be a comprehensive definition of femicide in the contemporary socio-cultural Kenyan context. The study recommends two key approaches in addressing this malevolence.

i. An extensive research on the prevalence of femicide and GBV outside of demographic surveys that are few and far between.
ii. Provision of affordable and accessible legal aid options for families of victims of domestic violence and femicide. Envisaged support should include the cost, time and proximity to legal instruments and supporting institutions.

The third chapter sets out to establish the socio-economic and facility-based determinants of access to SRH services among female refugees aged between 10 and 19. The results revealed a low access to SRH services among adolescent refugees. Sixty per cent of the respondents stated that parents and guardians provided them with the

initial information on SRH, but it was mostly limited to menstruation and menstrual hygiene. Forty-seven per cent of the respondents stated that their most preferred source of information were social media and the internet while friends or peers was at 23 per cent. The study further established that, though adolescents have a right to SRH services that are impartial, accessible, acceptable, appropriate and effective, it was clear that this is far from being realized.

> *"Staying indoors all day and not being allowed to move freely makes me unable to easily access SRH information and services. I do not go to school and I also do not have a mobile phone to look up those things on the internet. My parents do not talk about those things to me. They tell me I will find out when I get married," 15-year-old respondent.*

It was further established that it is usually difficult to reach the less advantaged populations like migrants, adolescents, and ethnic minorities due to existing legal, social and cultural barriers that hinder access to SRH services. The study further established that other determinants of access included:

i.   High deterrent costs with about 47 per cent of the respondents stating that they were deterred from getting services from a health facility due to very high costs attached to it. This included some 17 per cent of the respondents who, even though they were in dire need of SRH services, they could not access.

ii.   Parental support and control with about 60 per cent of the respondents indicating that they received initial information on SRH from their parents.

iii. Socio-cultural norms were the second major determinant. "Most of the community practices do not favour our reproductive health rights as girls…''

iv.   Religious beliefs have been extremely conservative on SRH and do not recognise the right of females to take charge of their sexual and reproductive health.

Given the above premise, the study established that there is need for policy relevance towards enhancing access to SRH services among adolescent girls:

i.   To have an increase of interventions to enhance knowledge of SRH especially around information and services for out-of-school adolescent girls.

ii.   To expand and improve existing SRH programmes. Such programmes to include economic empowerment and wealth creation which would deal with costs deterrence issues.

iii. Enabling reliability and authenticity of social media as a key source of SRH information.

iv.   Having an enabling environment within the SRH service providers centres which will act as a driver in pulling in adolescents to seek the services.

Framing of Intimate Partner Femicide in Mainstream Print Media in Kenya

Nicole Wasuna[1] and Lanoi Maloy[2]

Abstract

Violence against women is found in every socio-economic group, ideology, class, race, and ethnic grouping. Domestic violence victims are often targeted based on their sex. Therefore, violence is used as a tool for structural domination and subjugation. There is a recognition that news media in Kenya is a dominant force when it comes to shaping societal perceptions and attitudes. Notwithstanding, little research attention has been paid on the role of the media in the fight against femicide in Kenya. Given this paucity of research, the purpose of this study is to analyse and establish the ways in which mainstream print media in Kenya frames the reporting of intimate partner femicide, with particular attention to language, context, selection of information sources, use of linguistic tropes, and the implications of these frames and language on societal perception of femicide. Findings from this study indicate that the Kenyan print media is largely androcentric in its reporting. A significant burden is placed on victims to prevent GBV. While Kenya's print media seems to have some understanding as to the structural and institutional nature of intimate partner femicide and domestic violence in general, the reaction to it is less about systemic interventions and more about women accepting the weight of the problem and adjusting their lives around it. The mainstream print media also seems to have more sympathy for the perpetrators, often men, who are often granted ample opportunity to explain their actions in a quasi-redemptive arc that seems to justify or downplay it. Finally, with the democratisation of news reporting through social media and other digital platforms, there is a symbiotic relationship between mainstream print media and social media content creators in shaping perceptions and influencing news narratives which should be explored in further academic media and feminist studies.

Key words: femicide, intimate partner femicide, gender-based violence, violence against women

---

1   Nicole Wasuna is a Feminist Scholar and Alumnus of the AWSC UON, working at the intersections of technology, media and social change.
2   Dr. Lanoi Maloiy is a Lecturer at the AWSC, UON.

Introduction and statement of the problem

There have been few studies on the socio-cultural aspects of femicide globally. Majority of these have been surveillance studies that analyse data from law enforcement records, demographic surveys and auxiliary homicide reports (Ferrara, Caporale, Cutrona et al., 2015; Abrahams, Mathews, Martin, Lombard & Jewkes, 2013; Russel, 2008). The primary objective of these studies has been to establish the prevalence of intimate partner femicide, rather than to explore the cultural aspects and factors that contribute to its prevalence.

Additionally, the studies that have been done on the media framing of femicide have been undertaken in other countries such as North America, Jordan and Mexico. In Africa, majority of the research on femicide has been done primarily in South Africa and Ghana (Sela-Shayovitz, 2018; Choquette, 2012; Richards, Gillespie & Smith, 2011; Mathews, 2010). At the time of writing this article, there was hardly any scholarly work on femicide in Kenya. This study focuses on media and domestic violence in Kenya. Upon analysis, Kenyan print media and femicide focuses on media framing from a journalistic perspective, rather than a cultural and feminist perspective (Mwai, 2016; Koga, 2014). This insufficiently analyses femicide and domestic violence in terms of who the dominant story tellers are, including gender dynamics of the newsroom and its influence on the framing of the phenomena.

Intimate partner femicide often as discussed in Kenyan print media has been placed under the rubric of domestic violence, intimate partner violence and mental health (Auchter, 2017; King'ori & Bitrus-Ojiambo, 2017; Koga, 2011). Considering the tragic consequence of domestic and intimate partner violence, the limited research on femicide is of concern. It is, therefore, imperative to examine and discuss the influence of this media interest on societal perception. Despite significant coverage of femicide in the country's mainstream media over the past two years, the framing of these news stories and media discourses is yet to be discussed in scholarly literature. It is against these gaps in literature that this study aims to address the ways in which mainstream print media in Kenya frames cases of women killed by men with whom they are or were in an intimate relationship.

Review of related literature

The UN defines violence against women as 'any act of GBV that results in, or is likely to result in, physical, sexual, or mental harm or suffering to women, including threats of such acts, coercion or arbitrary deprivation of liberty, whether occurring in public or in private life.' (United Nations. Declaration on the elimination of violence against women. New York : UN, 1993.). GBV is an umbrella term for any harmful act that is perpetrated against a person's will and that is based on socially ascribed (i.e., gender) differences between males and females. It includes acts that inflict physical, sexual or mental harm or suffering, threats of such acts, coercion, and other deprivations of liberty. These acts can occur in public or in private (Inter-Agency Standing Committee, IASC 2015).

There are multiple lenses through which socio-cultural problems can be viewed. This implies that there are divergent contributory factors and corresponding mitigations for these identified problems (Miller, 2018; Kitsuse, 2000). The media as an influential institution for propagation and suppression of views forms an integral part of this framing process. The media can choose which cases, perpetrators and victims, to amplify, to downplay or even disregard. This filtering is often done on the basis of who is considered important and how they are valued in the society. Furthermore, the mainstream media also builds various interpretive frameworks for social change and re-engineering that prefers some solutions to others (Erickson, 1991).

With the increasing dialogue and campaigns on prevention of violence against women, it is important to scrutinise media attention in Kenya, especially on how reported violence is presented and in a broader sense, the ways in which this violence is understood by the society. It is the outcome of this scrutiny that can heavily influence the provision of funding and resources in the SRH service centres.

Prevalence of femicide

The UNODC (2018) ranks Kenya as having one of the highest cases of femicide in the world. According to the report, 87,000 women were murdered in 2017 globally, a near 100 per cent increase from the 2012 statistics of 48,000. Of this figure, 19,000 were killed in Africa.

It is difficult to narrow down these statistics to Kenya because homicides are generally not tracked based on the sex of the victims. Therefore, most statistics on femicide are drawn from reports on domestic violence.

The killing of women by intimate partners is seldom a random event (Adam, 2007). Therefore, the factors preceding these killings, as well as the characteristics of and the relationship between the victim and the perpetrator often provide key insights into the crime. Research also indicates that intimate partner homicide is more prevalent in younger demographics, with the female victims tending to be younger than their assailants DeJong et al. (2011) largely due to traditional relationship dynamics in which women ordinarily partner with men who are older than them (Adebowale, 2018; Izugbara, 2018). The larger the age discrepancy between the couple, the higher the risk of intimate partner violence. This was especially true where the male partner was at least fifteen years older than the female partner (Garcia et al., 2007).

With respect to cause and effect, the primary risk factor for femicide is intimate partner violence (Pengpid, Peltzer, Laosee & Suthisukon, 2018). This is further exacerbated by factors such as access to weapons – especially firearms – as well as the use of illicit drugs and alcohol. Women are nine times more likely to be killed when they leave or even try to leave an abusive relationship (Campbell, Webster, Koziol-McLain et al., 2003).

Framing of news coverage on femicide

Stories of crime and violence dominate both the news reporting and fictional television due to their popularity with viewing audiences. This is because violence evokes the basic human instincts of fear and curiosity (Chermak, 1995). Unfortunately, media coverage of crime and violence is not always necessarily accurate and is sometimes sensationalised and exaggerated for ratings. This then distorts society's perceptions, not just of the individually reported crimes, but also of violence in general (Surette, 2007). The media reinforces dominant social structures of race, gender and class in their reporting, often with members of dominant group(s) being portrayed as more empathetic and relatable than members of the less dominant group(s).

This study aims to fill these gaps by analysing the framing of media coverage of femicide as influenced by both traditional and contemporary cultural lenses against a feminist theoretical framework.

Materials and methods

The researcher used an exploratory design to conduct the study. An exploratory design is used in cases where there are limited or no prior research studies for reference (Shields & Rangarajan, 2013). It aims at gathering insights and creating a well-grounded picture of an issue or phenomenon for further investigation. This is because it assists in gaining background information on a specific topic and can be used to address various research questions which explore what, how and why of a phenomenon. An exploratory design can be used by other researchers to generate formal hypotheses and research problems for further studies by helping to establish research priorities.

Purposive sampling

This study employed a purposive sampling approach by undertaking a content analysis of newspaper articles for the period dating January 2018 to May 2019. The period registered a significantly high number of reports on femicide when the three mainstream newspapers (*The Daily Nation, The Standard and The Star*) began to conduct an inventory of the same. Purposive sampling is a non-probability method in which the researcher exercises personal judgment to select a representative population based on predefined characteristics and the study objectives (Tongco, 2007). It is also known as subjective, judgmental or selective sampling (Tongco, 2007).

Kenya was selected as the site for the study due to a paucity of research on Kenya's media framing of femicide. A total of thirty-six cases across seventy-eight articles were analysed primarily from three daily newspapers; The Daily Nation, The Standard and The Star as well as four weekly newspapers; The Saturday Nation, The Sunday Nation, The Saturday Standard and The Sunday Standard, which are Kenya's most read newspapers (Kenya Audience Research Foundation, KARF, 2019). All the selected newspapers are published in English, which is one of the two official languages in Kenya.

Descriptive Statistics

Descriptive statistics were used in this research to inform the qualitative part of the study. They helped to comprehend frequency and the breadth of issues pertaining to femicide. A total of 1,564 newspapers of the selected print publications were issued by the selected media houses during the study period. The newspapers were published daily except on 26th December 2019 (Boxing Day) when there was no newspaper publication. The total number of news articles selected was seventy-eight while the total number of unique cases reported on was thirty-six. See Table - T21.

Qualitative Techniques

Qualitative techniques were used to analyse the media frames that were utilised in the selected media reports. This method was selected because the researchers sought to explore the attitudes, views and beliefs that were conveyed in analysed news stories.

Qualitative work aims at exploring experiences and content of the news stories rather than obtaining a representative quantitative sample of articles. A series of coding artefacts were used in the analysis of the reports.

Since the main aim of the study was to explore the framing of media news stories, the main focus was qualitative.

Article selection criteria

The selection process prioritised stories which were covered in multiple newspapers in order to ensure the significance of the story. Articles were selected in chronological order and were first reviewed independently to establish the framing constructs that were employed for each story. The researcher then eliminated non-news articles, that is; opinion pieces, editorials, features and inserts. These were eliminated because they were not reporting specific cases, rather they addressed and discussed the general topic of femicide. A total of thirty-six news cases were sampled across the three daily newspapers and four weekly newspapers. Factoring in cases that were reported in more than one media house, a total of seventy-eight articles were analysed for the period of the study.

Article coding

In coding, information regarding the victim, the perpetrator and the crime was sought, with particular attention to information that is included or omitted. Omissions and inclusions are significant in the reporting frames, including erasure and silencing techniques. The study used three broad categories in the article analysis; the characteristics of femicide-suicides in media coverage, the framing of femicide coverage and the characterisation of victims and perpetrators.

This study employed the coding and elimination guidelines as defined in the seminal work by Russell (1992). These guidelines were chosen based on the lead researcher's observation of their comprehensive delineation of media framing and characterisation

of femicide stories. A range of key terms was used in order to identify the respective news stories: *Femicide, Murder, Homicide, Intimate partner violence, Intimate partner homicide, Domestic Violence, Woman killed, Man kills woman, Husband murders wife, Woman found murdered, Killing, Slaying, and Slay queen.*

The lead researcher examined the articles to determine whether or not they were reporting on non-intimate partner femicide, intimate partner femicide or domestic homicide. Careful deliberation was made in the article selection and elimination. The articles that did not fall under the category of intimate partner femicide were then eliminated from the research sample. Any article which clearly outlined a motive that was not aligned to gender-related killing was also excluded. This included articles such as *'Son kills mother in row over maize harvest'.*

Findings and Discussion

Following the increased reports of women murdered by men in Kenya in 2018, mainstream media began to do an inventory of these cases in an attempt to highlight what was emerging as a worrisome trend across the country. Between 1st January 2019 and 30th July 2019 alone, over fifty-one cases of femicide were reported. Out of these, thirty-seven were women killed by husbands or intimate partners.

The monthly distribution of articles was deemed important to the study. An analysis of the reporting trends was analysed and it was found that no cases of intimate femicide from the selected sample made it to the newspaper in August, November and December (Figure - F16) while the months of February and May had the highest number of femicide articles. On the other hand, the period from February to May had the highest number of related articles.

In addition, there were a total of fifteen articles written by female reporters (40.5 per cent) and twenty articles by male reporters (54.1 per cent). One article was written by both a male and a female reporter, while one was attributed to an unidentified editorial team. *The Standard Newspaper* had the highest number of female reporters, with nine articles (25 per cent) written by females, followed by *The Daily Nation* with four articles (11 per cent) written by female reporters. The Media Council of Kenya (2015) estimates the percentage of male to female journalists at approximately 63 per cent to 47 per cent.

Table - T22 illustrates the ways in which the media reports on intimate partner femicide. These media accounts draw a picture of predominantly young, educated and upwardly mobile women with a majority of them between ages of 20 to 29.

Of the thirty-six cases that were analysed, over half of the victims (54.1 per cent) were killed by their husbands (current or estranged). This is in line with the KDHS statistics on domestic violence where a majority of the victims experienced violence in the hands of their husbands. This was followed closely by women who were murdered by their current or former boyfriends. In the case of former boyfriends, a pattern emerged of the

women being killed for leaving or attempting to leave their partners. There was also a recurring theme of jealous former boyfriends who resorted to violence in cases where the women (19.4 per cent) may have been or were perceived to be in a relationship with a new partner. Five of the victims (13.5 per cent) were killed by lovers who were not their primary partners.

Media Frames Used in the Stories

Table - T23 illustrates the framing of stories in media coverage. The headlines of the articles were examined to determine whether they made the story apparent to readers as a femicide case or even an intimate partner violence case, or whether it was reported as an ambiguous crime. Only 19.2 per cent of the stories had ambiguous headlines that simply reported a woman had been killed. In most cases (80.8 per cent), the headline was clear as to what had occurred. However, of the 78 articles sampled, none of them had the title '*femicide*' and only four articles mentioned the word in the body of the article. Some 39.7 per cent of the headlines used sensational language in their reporting. This included phrases such as *'A man, his dead wife, and a daring mistress.'* (Wambui & Wainaina, 2019, p.8).

Most of the headlines simply summarised the crime using variations of the phrase *'male perpetrator kills female victim'* or *'female victim killed by male perpetrator.'* On the other hand, the coverage of the stories mostly bordered on the dramatic, especially in the case of younger (below age thirty) victims. In a similar fashion, the articles about the younger victims, especially university students and women from urban areas tended to be longer and had more details about the lives of the victims. The articles with victims over 30 years and those from rural areas tended to contain little details beyond a summary of the crime, with details about the alleged perpetrator and the motive, while giving little to or no detail about the lives of the victims. The articles were also accompanied by a picture of the victim 46.2 per cent of the time. It was noted that the picture of the victim was more likely to be included in cases of victims below age thirty.

The use of dramatic reporting was noted in 50 per cent of the articles, that mostly covered victims in their 20s. The cases of episodic reporting (32.1 per cent) were mostly observed in articles about married women in rural areas. There were few cases (17.9 per cent) of thematic reporting. However, the researcher noticed a rise in thematic reporting in the articles from April 2019.

Almost all the cases (97.4 per cent) used family, friends and neighbours as the primary source of information. However, over half of the articles (55.1 per cent) quoted the police as a primary source of information and used statements from family, friends and neighbours for additional witness accounts. In nine of the news stories, the perpetrators were also interviewed.

The researcher noted that the police frequently underplayed instances of domestic violence as quarrels, disagreements or squabbles.

'He was on patrol, but he went back to the house and picked a quarrel with the wife. It was about midnight and there was a power outage in the area," said Mr Bitok (Rutto, 2019, p.8)

News reports that only conveyed the facts of the case accounted for 14 per cent of the analysed articles as shown in Figure - F17.

The newspapers were more likely (34.62 per cent) to report on the behaviour of the victim in cases where she was below 30 years old and living in an urban area or town such as Nairobi, Kisii and Eldoret. There was an intersection between this frame and the contextualisation of the case within the pattern of GBV. However, rather than decry the situation, these crimes were reported as consequences of the victim's perceived poor behaviour or a breakdown in the urban society's moral fabric.

In some instances, although the newspaper article framed the crime as resulting from domestic violence, the language used either by the writers or the information sources seemed to downplay the event or present it as a fight of equals. For example:

Government Pathologist Peter Ndegwa said that M.s Ouma, who died after a domestic brawl with her husband last week, suffered head injuries as well. (Kimuyu, 2019, p.5)

Prior to 2018, cases of women being killed or murdered were reported either in episodic fashion or within the context of domestic/intimate partner violence. Even then, the initial reporting on femicide focused on victim characterisation in a negative light, suggesting that the victims somehow brought the violence upon themselves. There was a propensity to use sensationalised headlines such as *'A 24-year-old beauty queen prison warder found murdered with several stab wounds'* (Gachane, 2019, p.12). This kind of sensationalised and dramatic reporting only serves to draw the audience's attention away from the important details of the crime and focuses on the victim's behaviour.

There are various narratives that have been pushed by the media in framing femicide as a consequence of the social and economic breakdown of the society. The three narratives that stand out most are: First, women eschewing their '*natural*' role of motherhood and care-giving, second, economic hardships that render men unable to fulfil their role as providers and therefore taking it out on women; lastly men's mental health issues which lead them to violent acts and outbursts.

The first narrative is represented in language such as *'beauty queen who loved partying'* (Gachane, 2019, p.12). It sexualises the victim and frames her as a hedonistic rebel and contrasts women who spend all their time partying against the homemakers whose lives revolve around caring for their families. The implication here is that '*bad*' things happen to '*bad*' girls, while respectable women remain untouched by such calamity (Maloiy, 2016). The main problem with this narrative is that it perpetuates the myth that women with '*bad*' reputation often provoke their attackers into killing them (Meyers, 1994) and places an unnecessary burden on

other women to change their behaviour in an attempt to prevent violence. It also creates the perception that femicide is a personal problem for specific women with certain personalities and/or preferences (Richards, Gillespie & Smith 2011).

The second and third narrative shifts blame from the specific actors to external factors. These two frames do the work of shifting accountability of the perpetrator's actions from them to factors that are seemingly beyond their control. The former also works to reinforce the narrative of poor men as inherently more violent than their wealthy counterparts (Berns, 2004).

The news reports continuously diminish intimate partner violence (and the resultant killing of the women) as spousal arguments and petty squabbles:

> *Sibilo Assistant Chief [redacted] stated that they suspect the attack was occasioned by an unresolved domestic squabble. (Kangogo, 2019, p.4)*

In some cases, the news reports even indicate familial or community interventions to reconcile victims with the perpetrators.

> *[Redacted] brother [redacted] indicated the couple had wed in a colourful ceremony in October 2017. Their troubles, however, began early 2018... 'We sat them down last year and talked and they reconciled,' (Kimuyu, 2019, p.5)*

Violence against women has evolved as a part of a system of gender relations. Male supremacy and dominance over females is often reflected in societies, with domestic violence and femicide being considered private matters. As such, mediation by community elders and family members is a common and expected intervention for domestic violence.

More often than not, the media reports on the age of the victim, the perpetrator's motive and their weapon of choice. Whilst these aspects of the report may seem unrelated, they are quite significant from a feminist criminology perspective. Young women of reproductive age are most likely to be killed by stabbing and other close contact methods such as strangulation. Mize et al. (2011) also noted that younger men tended to be more violent than older men. They were more likely to use weapons that were easily accessible to them such as kitchen tools and farming equipment. Furthermore, the researchers theorised that this degree of violence is largely driven by jealousy that is borne of their desire for reproductive control. These men resort to violence to minimise the chances of infidelity by their female partners. This ties back to early research from Daly & Wilson (1998) that found the probability of women being killed when they leave or decide to leave a partner higher than that of men, thus undermining their partner's control. This narrative is most commonly framed in cases of women's infidelity (the bad woman) or used as a stress factor where the perpetrator's mental health is called into question. From this, it can be observed that root causes of violence against women include gender inequality (especially of the financial kind), abuse of power by men in positions of authority as well as a general lack of respect for women's rights, which form a part of human rights (Khatri, 2013).

Although the news reporting on femicide is largely male-centred, the conversations on interventions and preventions of the same are then relegated to pink silos (women's problems to be solved by women). There is a need for the media to avoid blaming the victim and stop treating femicide as a female problem.

Characterisation of victims and perpetrators

Table - T24 summarizes the characterisation of victims and perpetrators of femicide as domestic violence.

There was a significant difference in the profiling and characterisation of the victims and perpetrators as illustrated in Table - T24. The victims were characterised as good only 35.9 per cent of the time, while the perpetrators were characterised as good 47.4 per cent of the time. Additionally, there were fewer occurrences of problematic characterisation of the perpetrators (21.8 per cent) as compared to the victims (43.6 per cent). There was also a noticeable use of victim blaming language (64.1 per cent) especially in stories featuring younger victims. These victims are seen as opportunists who get into relationships with men for material benefits. Their deaths are then presented as a learning moment for their peers.

Locals used the platform to advise students against getting into relationships that later turn violent, insisting that they should use their time well to pursue studies (Koskei, 2019).

The media seemed to question the socio-economic class of victims whose standard of living was not immediately attributable to familial or generational wealth, with vague and veiled references to debatable sources of wealth that then presented them as an '*at-risk*' target who may have invited violence into their lives based on their questionable behaviour. Meanwhile, the same characteristics were used to seemingly humanise the perpetrators, with their wealth and background used as a mitigating factor as to why they would not easily resort to crime.

> *It also emerged that [redacted] had never worked at the Kenyan Embassy in Juba as claimed by her family and that her suspected murderer, Irungu is a pastor's child just like her. Why a preacher's son is suspected to have killed a preacher's daughter who like him had a high-flying lifestyle is a question that no one has an answer to, yet. (Achuka & Ombati, p.3).*

Some of the articles also fall back on the issue of mental health by drawing parallels between the rising reports of mental health, especially among young men and their increasing proclivity to violence. In the case of victims and perpetrators aged 30 and above, the recurring theme that precipitates the violence has been an economic strife, as well as separation and or divorce, with the former being more prevalent among those between the age of 34-40 and the latter being most prevalent among those over the age of 40, especially regarding marital property.

Conclusion

The media in Kenya wields significant power and influence in capturing the attention of its audience and determining the issues that are considered important to the society. This study validates Surette (2017) who describes the authority of the media as both an opportunity and a barrier to social change. Mainstream Kenyan media is still very patriarchal in nature and can be characterised as '*an elderly man*' chastising '*errant women*' by implying that their murder is a just consequence of their perceived wayward behaviour. This kind of reporting is misplaced as it downplays the magnitude of taking a life which is a serious crime regardless of the victim's actions or behaviour prior to the crime. Furthermore, justice should be upheld within the constitutionally recognised legal system and not in a '*Kangaroo*' court of public opinion as propagated by the media.

Given the victim-blaming reporting there is a need for gender-sensitive media and training on reporting to avoid casting the victim in poor light and '*excusing*' perpetrators for criminal acts.

Policy relevance of the work

Femicide is still largely invisible from institutional record and memory. This stems from two things:

i.   The socio-cultural issue of what and who is considered important in society and whose story is deemed worthy of memorialisation and
ii. The priorities of a largely male dominated government both in terms of representation and psychology (Muthuki, 2006).

The classification and documentation of crime statistics does not provide room for interrogation of important factors such as victim-perpetrator relationships or criminal history and pathology, which could be taken into consideration when designing legal instruments that would be useful for intervening solutions to the phenomenon.

The classification of homicide cases in Kenya makes it difficult to determine characteristics of the victims and perpetrators from public legal documentation. This stratification of crime and homicide statistics makes it impossible to determine specific cases of femicide because they do not factor in the characteristics that are analysed in this study, which differentiate femicide from general homicide. This renders the crime 'invisible' to policy makers, despite the work of activist bodies and NGOs to rally them around the phenomenon. This invisibility of femicide statistics at a national policy level has resulted in the public's reliance on the media reports on femicide. This is less than ideal because privately owned media firms have their own agenda in news reporting which may not necessarily prioritise public welfare.

The disaggregation of data on homicide cases is an urgent gap in national reporting that must be immediately resolved in order to solidify the fight against femicide. A

major prerequisite for this data disaggregation is a comprehensive definition of femicide in the contemporary socio-cultural Kenyan context.

There needs to be a concerted effort by the government and the civil society groups to undertake extensive research on the prevalence of femicide and violence against women outside the demographic surveys that are few and far between and paint an inaccurate picture of the situation on the ground. This should be coupled with widespread sensitisation and the implementation of proper recourse structures for victims of violence and femicide.

Finally, there should be affordable and accessible legal aid options for families of victims of domestic violence and femicide. This includes the cost, time and proximity to legal instruments and institutions. It also includes emotional and psychological care to ensure that they are not further victimised and/or traumatised in their quest for justice.

References

Abrahams, N., Mathews, S., Martin, L. J., Lombard, C., & Jewkes, R. (2013). Intimate partner femicide in South Africa in 1999 and 2009. PLoS Med, 10(4), p.e1001412.

Adam, N. M.,& Schewe, P. A. (2007). A multilevel framework exploring domestic violence against immigrant Indian and Pakistani women in the United States. *Journal of Muslim mental health, 2*(1), pp.5-20.

Adebowale, Ayo. (2018). Spousal age difference and associated predictors of intimate partner violence in Nigeria. *BMC Public Health*. *18*. 10.1186/s12889-018-5118-1.

Achuka, V., & Ombati, C. (2018). TV star [redacted] held as police lineup charges in [redacted] murder case. *The Standard*, p. p.3.

Auchter, J. (2017). Forced male circumcision: *Gender-based violence in Kenya. International Affairs,* 93(6), pp.1339-1356.

Berns, N. (2004). Framing the victim: Domestic violence, media, and social problems. Transaction Publishers.

Campbell, J. C., Webster, D., Koziol-McLain, J., Block, C., Campbell, D., Curry, M. A., Gary, F., Glass, N., McFarlane, J., Sachs, C.,& Sharps, P. (2003). Risk factors for femicide in abusive relationships: Results from a multisite case control study. *American journal of public health, 93*(7), pp.1089-1097.

Chermak, S. M. (1995). Victims in the news: *Crime and the American news media.* Boulder, CO: Westview Press.

Chiricos, T., & Eschholz, S. (2002). The racial and ethnic typification of crime and the criminal typification of race and ethnicity in local television news. *Journal of research in crime and delinquency, 39*(4), pp.400-420.

Choquette, J. L. (2012). The media framing of the Juarez femicide: A dramatistic analysis.

Daly, M., & Wilson, M. (1998). The evolutionary social psychology of family violence. *Handbook of evolutionary psychology: Ideas, issues, and applications,* pp.431-456.

DeJong, C., Burgess-Proctor, A., & Elis, L. (2008). Police officer perceptions of intimate partner violence: *An analysis of observational data. Violence and victims,* 23(6), pp.683-696.

Dixon, T. L., & Linz, D. (2000). Overrepresentation and underrepresentation of African Americans and Latinos as lawbreakers on television news. *Journal of communication*, *50*(2), pp.131-154.

Erickson, R. V. (1991). Mass media, crime, law, and justice: An institutional approach. *The British Journal of Criminology, 31*(3), pp.219-249.

Ferrara, P., Caporale, O., Cutrona, C., Sbordone, A., Amato, M., Spina, G., Ianniello, F., Fabrizio, G.C., Guadagno, C., Basile, M.C., & Miconi, F. (2015). Femicide and murdered women's children: Which future for these children orphans of a living parent? *Italian journal of pediatrics, 41*(1), pp.1-6.

Gachane (2019), Kenya: 'Beauty Queen' Prison Warder Found Murdered in Murang'a' https://allafrica.com/stories/201905150434.html. p.12

Izugbara, C. (2018). Spousal age differences and violence against women in Nigeria and Tanzania. *Healthcare for women international, 39*(8), pp.872-887.

Kangogo, J. (2018). 'Baringo man hacks wife to death in domestic row'. The Star, p. p.4.

Khatri, Resham. (2013). Causes of Violence against Women: A Qualitative Study at Bardiya District. Health Prospect. 12. 10.3126/hprospect.v12i1.8721.

Kimuyu, H. (2019). 'Beryl Ouma was strangled, post-mortem report shows'. *The Daily Nation,* p. p.5.

King'ori, M. E., & Bitrus-Ojiambo, U.A. (2017). Newspaper framing of gender-based (domestic) violence of women–on-men from Nyeri County, Kenya. *African Multidisciplinary Journal of Research*, *1*(1).

Koga, V. R. (2014). *Media framing of sexual and gender-based violence in Kenya: Reporting of justice for Liz* (Doctoral dissertation, UON).

Maloiy, L. (2016). The impact of crucible events on the development of female political leaders in Kenya. *Unpublished thesis. University of South Australia. School of Education.*

Mathews, S. (2010). Understanding intimate femicide in South Africa (Doctoral dissertation, University of the Witwatersrand).

Mathur, K. (2004). Countering gender violence: Initiatives towards collective action in Rajasthan. Sage.

Media Council of Kenya. (2015). The Gender agenda: *Assessing the gender Issues in the Kenyan media. Nairobi.*

Meyers, M. (1994). News of battering. *Journal of Communication, 44*(2), pp.47-63.

Mize, K. D., Shackelford, T. K., & Weekes-Shackelford, V. A. (2011). Younger women incur excess risk of uxoricide by stabbing and other hands-on killing methods. *Personality and individual Differences,* 50(7), pp.1120-1125.

Miller, E. (2018). Reclaiming gender and power in sexual violence prevention in adolescence. *Violence against women, 24*(15), pp.1785-1793.

Moracco, K. E., Runyan, C.W., & Butts, J. D. (1998). Femicide in North Carolina, 1991-1993: A statewide study of patterns and precursors. *Homicide Studies, 2*(4), pp.422-446.

Muehlenhard, C. L., & Kimes, L. A. (1999). The social construction of violence: The case of sexual and domestic violence. *Personality and Social Psychology Review, 3*(3), pp.234-245.

Muthuki, J. (2006). Challenging patriarchal structures: Wangari Maathai and the Green Belt movement in Kenya. *Agenda*, *20*(69), pp.83-91.

Mwai, M. W. (2016). The Framing of Gender-based Violence in the Print Media in Kenya: *A Discourse Analysis* (Doctoral dissertation, UON).

Pengpid, S., Peltzer, K., Laosee, O., & Suthisukon, K. (2018). Intimate partner sexual violence and risk for femicide, suicidality and substance use among women

in antenatal care and general out-patients in Thailand. *BMC women's health,* 18(1), p.37.

Richards, T. N., Kirkland Gillespie, L., & Dwayne Smith, M. (2011). Exploring news coverage of femicide: Does reporting the news add insult to injury? *Feminist Criminology*, 6(3), pp.178-202.

Rosenfeld, R. (1997). Changing relationships between men and women: A note on the decline in intimate partner homicide. Homicide Studies, 1(1), pp.72-83.

Russell, D. E. (2008). Femicide: Politicizing the killing of females. *Strengthening Understanding of Femicide,* 27.

Sela-Shayovitz, R. (2018). "She knew he would murder her": The role of the media in the reconstruction of intimate femicide. *Journal of Comparative Social Work, 13*(1).

Shields, P. M., & Rangarajan, N. (2013). A playbook for research methods: Integrating conceptual frameworks and project management. *New Forums Press.*

Stöckl H., Devries K., Rotstein A., Abrahams N., Campbell J., Watts C., & Moreno C. G. (2013). The global prevalence of intimate partner homicide: A systematic review. *The Lancet.* Sep 7;382(9895):859-65.

Surette, R. (2007). Media, crime, and criminal justice: Images, realities, and policies (3rd ed.). Belmont, CA: Thomson Wadsworth

Tongco, M. D. C. (2007). Purposive sampling as a tool for informant selection. *Ethnobotany Research and applications*, *5*, pp.147-158.

Wainaina, E. (2019). Mary Wambui murder: Judy Wangui, car dealer takes plea Monday. *The Daily Nation.* [online] Available at: https://www.nation.co.ke/news/Mary-Wambui-murder-plea-deferred/1056-5000468-l1lawfz/index.html [Accessed 5 Apr. 2019].

Tables and Figures

Table - T21: Selection of Newspaper Articles

Newspaper	Total Publications	Femicide	Intimate Partner Femicide	News	Non-News
Daily Nation	412.00	64	38	25	13
Standard	412.00	53	33	25	8
Star	412.00	29	21	18	3
Saturday Nation	82.00	17	11	4	7
Sunday Nation	82.00	11	3	1	2
Saturday Standard	82.00	18	13	3	10
Standard on Sunday	82.00	10	2	2	0
	1564.00	202	121	78	43

Table - T22: Characteristics of the crime

Variable	Values	Percentage	N=36
Femicide followed by suicide by the perpetrator	Yes	33.33%	12
	No	66.67%	25
Method	Gunshot	16.67%	6
	Stabbing	36.11%	13
	Strangulation	13.89%	5
	Physical force	11.11%	4
	Poison	5.56%	2
	Slit throat	8.33%	3
	Unclear	8.33%	3
Relationship Status	Boyfriend	33.33%	12
	Husband	52.78%	19
	Lover	13.89%	5
Motive/Reason	Separation	16.67%	6
	Infidelity (actual or perceived)	19.44%	7
	Unknown Argument	41.67%	15
	Rejection	5.56%	2
	Unknown	16.67%	6
History of domestic violence	Yes	41.67%	15
	No	58.33%	21
Victim's Age	15-19	2.78%	1
	20-24	11.11%	4
	25-29	36.11%	13
	30-34	5.56%	2
	34-39	8.33%	3
	40+	5.56%	2
	Undetermined	30.56%	11
Perpetrator's Age	15-19	2.78%	1
	20-24	5.56%	2
	25-29	5.56%	2
	30-34	16.67%	6
	34-39	11.11%	4
	40+	13.89%	5
	Undetermined	44.44%	16

Table - T23: Framing of Femicide Coverage

Variable	Values	Percentage	N=78
Reporter	Male	64.10%	50
	Female	26.92%	21
	Unknown	6.41%	5
	Both	2.56%	2
Descriptive Title	Ambiguous to the crime	19.23%	15
	Described as femicide	80.77%	63
Sensational Headline	Yes	39.74%	31
	No	60.26%	47
Type of Coverage	Dramatic	50.00%	39
	Episodic	32.05%	25
	Thematic	17.95%	14
Picture of Victim	Yes	46.15%	36
	No	53.85%	42
Sources of Information	Family/Friends/Neighbours	97.44%	76
	Police	55.13%	43
	Perpetrator of the violence	11.54%	9

Table - T24: Characterisation of Victims and Perpetrators

Variable	Values	Percentage	N=78
Victim Blaming	Yes	64.10%	50
	No	35.90%	28
Victim Characterisation	No	35.90%	28
	Good	20.51%	16
	Problematic	43.59%	34
Perpetrator Characterisation	No	30.77%	24
	Good	47.44%	37
	Problematic	21.79%	17

Figure - F16: *Media Frames Used in News Reporting of Femicide*
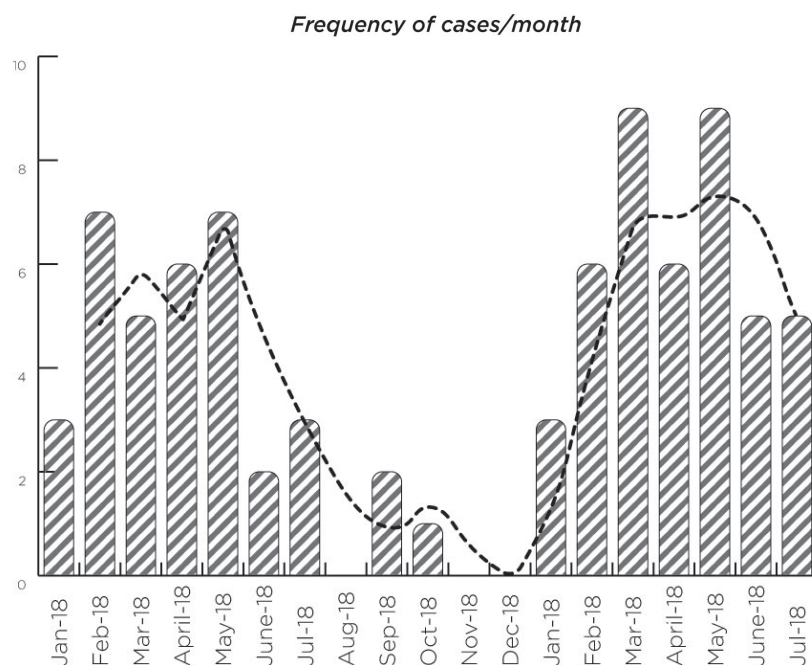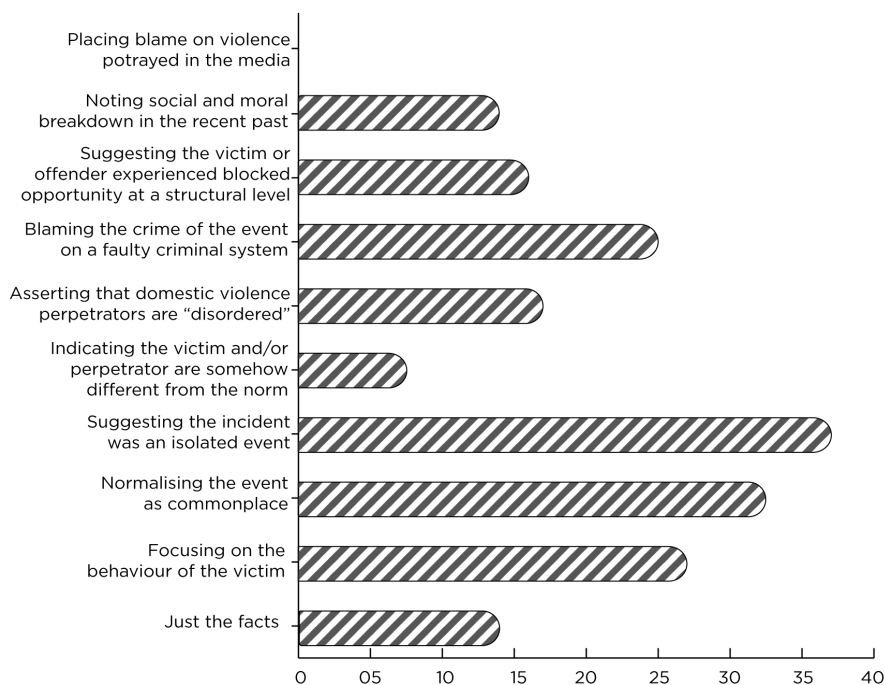
Frequency of cases/month

Figure - F17: *Frequency of cases per month from January 2018 to July 2019*

An Analysis of Reporting on Sexual Violence among Female Survivors in Kenya

Noel Wanjia[1] and Grace Nyamongo[2]

Abstract

Sexual violence against women has been on the rise over the years. In 2014, the KNBS reported that 21 per cent of all the women in Kenya had experienced sexual violence, yet one in every three of these women were not able to access justice. The frequency of reporting on sexual violence by survivors is still low. Furthermore, there is a belief by the general public that sexual violence has to be committed by someone unknown to the victim or survivor and in a location strange to them. This study sought to establish the prevalence of reporting of cases on sexual violence, analyse the relationship between perpetrators and the survivors of sexual violence in Kenya and examine the factors affecting the ability to report the occurrence of sexual violence. The study was guided by the radical feminist theory. It used secondary data collected by the KNBS through the KDHS (2014). It used the collation and analysis research design where data collected was analysed using descriptive statistics to answer the research questions.

The study revealed that 33.9 per cent of survivors of sexual violence report and that the most common channels of reporting were informal. The study also established that most of the perpetrators of sexual violence were known to their survivors. It was also found that older women, those with basic level of education, a high economic status and those who are not religious were more likely to report the occurrence of sexual violence. Based on the findings, the study recommends that organizations conducting surveys on sexual violence should have provisions for qualitative surveys to explain the data gathered. There is need to expedite the establishment of shelters for survivors of sexual violence to enable them receive temporary shelter, basic healthcare, psychological support, education and sensitization to improve the rate of reporting of sexual violence. Further studies should be carried out on other forms of sexual violence besides intimate partner violence and rape. Additional in-depth studies should be conducted on factors that prevent the reporting of sexual violence by survivors of sexual violence in Kenya.

Key words: female survivors, intimate partner, Kenya National Bureau Statistics, reporting, sexual violence

1   Noel Hazel Wanjia, is a marketing, communications and PR specialist.
2   Grace Nyamongo is a Lecturer, AWSC, UON.

Introduction and statement of the problem

Sexual violence can affect anyone across the globe regardless of their sex, age, race, sexual orientation, religion or political preference. Whereas it can affect both men and women, the incidences are higher among the female population. The occurrence of sexual violence against women globally rose to 35 per cent in 2016 from 30 per cent in 2013 (WHO, 2017). This increase in the occurrence of sexual violence has happened despite the existence of international, regional and national legal instruments such as the Convention on Elimination of All Forms of Discrimination Against Women (CEFDAW), The Protocol to the African Charter on Human and People's Rights (ACHPR) on the Rights of Women in Africa and the Sexual Offences Act (2006) in the Constitution of Kenya (2010). The Constitution condemns sexual violence against women.

While there is slow progress towards the eradication of sexual violence across the globe, there have been a few positive strides made in different parts of the world on the topic. In the USA, for example, there are very strict laws in place such as the Violence Against Women Act (1994), that gave rise to the Office of Violence Against Women in the Department of Justice (Killough, 2019). This law, among others, was developed to protect women against domestic violence under which sexual violence lies. It has ensured that officers and those working with women recovering from violence have been trained on how to handle survivors (Office on Violence Against Women, 2016). The Violence Against Women Act (1994), has enhanced collaboration among stakeholder institutions across the USA which in turn has reduced victimization of survivors and provided a platform for open discussion (Aday, 2015).

In Kenya, issues around sex are not openly discussed due to traditional beliefs and taboos (Boh, 2016). While there were punishments put in place in traditional societies for perpetrators of sexual violence, they were mostly administered quietly and were extremely lenient compared to the crime committed (Boh, 2016). Additionally, in many communities, the survivors of sexual violence were forbidden from talking about it since it was considered an abomination to the community. For this reason, most women did not report sexual violence (UNICEF, 2014). However, given the introduction of various legal frameworks and sensitization programmes which focus on the issue, the situation is changing. The Kenya Constitution 2010, article 28; and Universal Declaration of Human Rights, articles 1 and 2, which Kenya has accepted as law, condemns all forms of slavery as well as SGBV.

Sexual violence has been an area of global concern with a 5 per cent increase from 2013 to 2016 (WHO, 2017). In Kenya, there have been numerous incidences of sexual violence covered almost daily by mainstream media. Despite this, there is a low frequency in the reporting of occurrences of sexual violence. Furthermore, there is a stereotypical belief among most of the public that for an incidence to be classified as sexual violence, it has to be committed by someone not known to the survivor and in a place strange to them (Kung'u, 2011). Additionally, research has not established whether there are specific factors that affect the ability of a survivor to report sexual violence hence

contributing to the low frequency of reporting among survivors. This study sought to establish the prevalence in reporting sexual violence, the relationship of the perpetrator to the survivor and the factors that affect the reporting of cases of sexual violence.

Review of related literature

Over the years, there have been several studies conducted on sexual violence, factors that affect the reporting of the occurrences of sexual violence and it's perpetrators. A study conducted by Das (2019) on the support-seeking behaviour of survivors of sexual violence in the Indian American population revealed that 25 per cent of the survivors admitted to never having sought help after experiencing sexual violence, explaining the low frequency of reporting sexual violence. Additionally, UNICEF (2017) conducted a study to determine the difference in disclosure, reporting and help-seeking behaviours among women across the world. The study found that girls between 13 and 17 years were less likely to seek help after experiencing sexual violence as opposed to older women between 18 and 24 years. Some of the reasons highlighted by the participants as factors contributing to the fear of reporting of sexual violence included fear of repercussions, shame, stigma and the feeling of helplessness. The study further revealed that the reporting of sexual violence could be categorized into formal and informal reporting. Formal reporting included disclosure through institutions such as police stations or hospitals while informal reporting includes disclosure to family and friends (UN ESCWA; Lebanese American University; UN Women, 2017).

On the other hand, Jespersen, Lalumière & Seto, (2009) as cited by Greathouse et al. (2015) found that most adult perpetrators of sexual violence are more likely to have experienced sexual and/ or physical violence as children. The same authors point out that when compared to adult sexual offenders, child molesters turned out to have experienced sexual violence when they were children. The increase in the threat of sexual violence being perpetrated by men could be attributed to certain factors as revealed by a study conducted by WHO (2003). The factors may be individual such as drug abuse, by association such as relationships with sexually aggressive peers, communal such as lack of employment opportunities and poverty or societal like customs that encourage and condone sexual violence. However, studies have shown that different perpetrators use different tactics to attack their victims. For instance, stranger perpetrators use surprise tactics such as kidnap while acquaintance perpetrators use opportunistic means such as preying on drunk, drugged or sleeping victims (Woods & Porter, 2008).

At the same time, Katiti, Sigalla, Rogathi & Mushi (2016) found that in Moshi, Tanzania, most of the women who experienced sexual violence had attained up to primary school level. The study further revealed that most survivors who reported having experienced sexual violence were financially independent while those who did not report the occurrence of sexual violence depended on their families, husband or their husband's family. In addition to this, Chitashvili et al. (2010) revealed that 78 per cent of the women who participated in the survey believed that domestic violence should

be sorted out within the home, 52 per cent thought that the outside world should not interfere with it while 31 per cent thought the law should not focus on domestic violence perpetrated against women by their husbands. Moreover, 16 per cent of these women believe it is the duty of a wife to have sexual relations with her husband even when she is not in the mood for sex. These beliefs were attributed to the influence of culture and tradition on the way women view sex in the society.

Furthermore, Seguino (2011) argues that religion has a negative correlation with impartial attitudes about gender. The religion of a survivor may determine whether or not they report the occurrence of sexual violence. Sojourner and IMA World Health (2014) conducted a study in Washington D.C. to analyse the perception of pastors on sexual and domestic violence. It was found that majority of pastors did not consider sexual violence crucial compared to general religious themes such as a peaceful society and pursuing godliness. This impacts on the way survivors from such religions view sexual violence and its impact on their lives.

Besides age, level of education, economic status, culture and religion of a survivor, there are other factors that may affect the ability of a survivor to report the occurrence of sexual violence. These are structural factors which include access and proximity to legal systems, resources in law enforcement centres, availability of sufficient or conclusive evidence, attitudes of the police and investigators, judicial attitude, stereotyping and access to information. There are, however, gaps in existing literature that this study sought to fill. Studies and surveys in the past have mostly concentrated on younger women, slum areas in Nairobi, intimate partner violence and external factors that affect the ability of a survivor to report the occurrence of sexual violence.

Materials and methods

This study utilized the KDHS report published in 2014. Data was collected through questionnaires that were based on pre-existing KDHS questionnaires and the national data needs in Kenya.

The retrieved data was analysed using several methods. This involved a brief illustration of variables identified from the KDHS (2014) full woman questionnaire. The variables identified include the reporting of sexual violence, age of the survivor, level of education, cultural background, religion and economic status of survivors. The dependent variable was analysed against the independent variables to show whether there is any relationship between them. The qualitative data was then analysed descriptively and presented thematically while quantitative data was presented through frequencies and percentages based on the objectives of the study.

Findings and discussion

The KDHS indicated that only 34 per cent of women who had experienced sexual violence disclosed and sought help after the violence. The study further revealed that none of the survivors sought help from the police. It shows 8 per cent sought help

from medical personnel, 3 per cent from their religious leaders, while most sought help from informal channels, with 76 per cent turning to their family members. On the other hand, 10 per cent of the survivors disclosed the occurrence of sexual violence but did not seek help while 53 per cent of those who had experienced sexual violence neither sought help nor told anyone about their experience. These findings concur with other findings from several studies and surveys including studies by Das (2019) and Katiti et al. (2016) which found that there was a low level of reporting sexual violence. The low levels of reporting of sexual violence could be attributed to several reasons including fear of repercussions, lack of finances, lack of information on where to report and fear of stigma from the community upon revealing the incident.

The study by Katiti et al. (2016) also revealed that married women or those living with their partners listed their current husbands/partners as the most common agents of sexual violence, followed by their former husbands/partners. This is commonly referred to as marital rape. It also revealed that survivors who had never been married nor lived with their partner listed strangers as the most common assailants. Notably, 44 per cent of sexual violence among single women is attributed to strangers and 44 per cent to people known to the survivors. This is consistent with findings from a study conducted where 69 per cent of the perpetrators of sexual violence were known to their survivors (Stermac, Mont & Dunn 1998). The study further shows that perpetrators of sexual violence interact with their survivors long enough to know and target them.

While most of the survivors first experienced sexual violence between ages 15 and 22, older survivors of sexual violence sought help more as opposed to younger survivors. Survivors in the age group of 40 to 49 recorded the highest percentage (49 per cent) of survivors who sought help. They were closely followed by those in the age group of 30 to 39 and 25 to 29 where 48 per cent and 45 per cent respectively, of the survivors of sexual violence sought help. Evidently, survivors in the age group 15 to 19 recorded the highest percentage (50 per cent) of those who seek help and did not tell anyone. These were findings by UNICEF (2017) on disclosure, reporting and help-seeking among child survivors of sexual violence. According to UNICEF, the younger survivors were less likely to report on sexual violence compared to older women. Survivors aged between 15 and 19 were least likely to seek help while those between 40 and 49 years old were most likely to seek help. This could be attributed to access to information that was enjoyed by the older survivors as opposed to the younger ones.

It was also revealed that women with no education were less likely to report the occurrence of sexual violence while those with a higher level of education were more likely to report. Only 34 per cent of non-educated women reported the occurrence of sexual violence while 49 per cent of those who completed primary school education reported the occurrence of sexual violence. This indicates that basic education is crucial as it empowers a woman. This is because the highest percentage of survivors who reported the occurrence of sexual violence had basic level of education which is primary school education. However, the study further reveals that only 39 per cent of women

with more than secondary school education reported the occurrence of sexual violence. This could be attributed to the positions they hold in the society and the fear of being judged by the society.

According to some surveys (Katiti, et al., 2016 Raya 2012; Kimani 2007 WHO, 2002); women who are less educated are less likely to experience sexual violence and that such women may hardly report the occurrence of sexual violence. This is evident in the current study. It could be argued that less educated women are less likely to make decisions by themselves about reporting the incidents. For this reason, they may not speak up about sexual violence against them (Das, 2019). Instead, they let other people, especially men in their lives, take charge of decision-making to report on their behalf. Unfortunately, such men may not understand the magnitude of sexual violence against women, especially involving husbands/ partners as the perpetrators.

Interestingly, some earlier studies show that educated women are more likely to experience sexual violence (WHO, 2002). This could be attributed to the fact that they do not strictly adhere to the patriarchal norms set by the society causing men to use sexual violence as a means to put them in the place society has cut out for them. While it would be expected that more educated women would report the occurrence of sexual violence, the findings above show that this is not the case. It is assumed that due to their high level of education, educated women are likely to hold certain positions in the society including top positions at their work places, have high social status and political positions, among others. Such positions may make them reluctant to speak out their experiences with sexual violence for fear of embarrassment, upsetting the status and affluent familial pressures.

Some regions in Kenya are marginalized, hence may not have resources available to other regions. The regions with the highest percentages of survivors who sought help were Eastern at 54 per cent, Central at 53 per cent followed by Western region at 52 per cent. These regions had an average poverty level of 10.24 per cent, 5.14 per cent and 13.2 per cent and an average education level of 76 per cent, 87 per cent and 86 per cent respectively(KNBS, 2010). On the other hand, the regions with the highest percentages of survivors who did not seek help were North Eastern 57 per cent, Rift Valley at 47 per cent and Nyanza at 46 per cent. The poverty levels for these regions were 24.4 per cent, 15.23 per cent and 8.95 per cent and average education levels of 36 per cent, 74 per cent and 89 per cent, respectively. This is evident that the region of the survivor affects their ability to report the occurrence of sexual violence (KNBS, 2010). This may be accredited to the poverty levels of the region, access to education by the survivors and culture of the members of the communities within this region, and all the factors that may prevent the survivor from reporting the occurrence of sexual violence.

The education level in a community plays a role in breaking down patriarchal cultural practices passed down through tradition (Mazonde, 1995). Some of these practices include wife inheritance and wife beating, mostly practised in Western and Nyanza in Kenya. Beliefs that a man is always right such as in the Luhya community and women being put second to men have traditionally been practised (Gachohi, 2012). Therefore,

women from regions with lower levels of education are more ignorant about their rights hence are less likely to report the occurrences of sexual violence as opposed to regions with high levels of education (Africa Renewal, 2019). Such women adhere to traditional practices where matters of domestic violence, including sexual violence, are personal and should not be discussed in the open. In urban areas, these conversations are held in public due to the high levels of education, exposure and the existence of support groups for survivors.

According to the KDHS (2014), the highest percentage of survivors of sexual violence who sought help was of those who stated to have no religion. Of these survivors, 66 per cent had sought help. This was followed by protestants and other Christians (44 per cent), the Roman Catholics (43 per cent) and Muslims (39 per cent). On the other hand, only 25 per cent of survivors who stated that they had no religion did not report the occurrence of sexual violence. However, 41 per cent of the survivors who were protestants, 41 per cent Muslim survivors and 39 per cent of the Roman Catholic survivors did not report. The variance in reporting on the basis of religious affiliation of the participants may be determined by the degree of reporting.

The religion of a person also informs their beliefs and hence their decisions on whether or not to report (Mazonde, 1995). The teachings and beliefs inherent with religion and the stigma against survivors of sexual violence by members of a specific religion affect the decision of a survivor to report the occurrence of sexual violence. Religion in general, has put men in a superior position compared to women. According to Christian Universities Online (2019), the inability of staunch Muslim women to report the occurrence of sexual violence may be affected by the roles accorded to them as Muslims such as taking care of men and assisting them to achieve their goals. These roles make women instruments in the success of men and may prevent a survivor from disclosing her experiences. It may also be due to fear of judgement from the society.

Some studies have shown that women of high economic status are more likely to report the occurrence of sexual violence (Katiti and Sigalla, et al., 2016; Chitashvili, et al., 2010 & Seelinger, Silverberg & Mejja 2011). This does not seem to be the case when it comes to the wealth quintile in the current study. Although higher percentages of survivors that neither sought help nor told anyone are found in the lowest and second wealth quintiles, the percentages of those who sought help is the same in all wealth quintiles. From this study, the highest proportion of those who sought help was recorded among survivors who were employed but not for cash where 48 per cent reported the occurrence of sexual violence. This was followed by those employed for cash where 47 per cent reported while for unemployed survivors, only 34 per cent reported having experienced sexual violence. On the other hand, the percentage of those who neither sought help nor told anyone was higher in unemployed survivors at 48 per cent followed by those not employed for cash but paid in kind at 40 per cent and finally those employed for cash at 38 per cent.

These findings concur with previous studies conducted by Katiti and Sigalla, et al. (2016); Chitashvili, et al. (2010) and Seelinger; Silverberg & Mejja, (2011) which show

that survivors in the lower economic classes are less likely to report the incidence of sexual violence as opposed to those in higher economic classes. Survivors who were employed but not for cash may include volunteers and interns. They receive items such as food and other valuables including clothes. Such women may not have much to lose as compared to those employed for cash. For this reason, it may be easier for these survivors to come out and report the occurrence of sexual violence. When compared to unemployed survivors, those employed for cash may have a source of income and not depend on someone else economically. For this reason, they could easily report the occurrence of sexual violence without fear that their economic aid would be withdrawn.

Studies have shown that women are generally poorer than men in the society (KNBS, 2010). While some women may have recorded that they own certain property or assets, they may not be the sole owners of these properties hence may not be in control of the wealth (NGEC, 2016). When property or assets are co-owned, they may not be readily accessible to a survivor, which leaves them without readily available wealth. This may affect women's ability to report the occurrence of sexual violence especially where money may be required for this process. Survivors who depend on family or matrimonial wealth may also be reluctant to report the occurrence of sexual violence due to fear of being ostracized by relatives for bringing shame to the family. Furthermore, the positions wealthy women hold in society may place them at the centre of attention of the public. For this reason, women in the highest quintiles may not be willing to betray their images by reporting that they had experienced sexual violence. They may prefer to remain silent to save themselves from public humiliation or stereotyping and backlash from the society. In some instances, one might lose a political position due to stigma.

The level of education, geographical background, religion and economic status of a survivor shapes their beliefs, the information they have about sexual violence and the reporting of sexual violence. For this reason, these factors affect survivors of all ages, both minors and adults.

Conclusion

The study found that older women, those who were more educated, did not subscribe to any religion and had a high economic status, to be more likely to report the occurrence of sexual violence. Reporting of sexual violence and assisting female survivors to get help is the responsibility of individuals, the community and the government at large. It is important to effect existing policies that protect women from perpetrators. These policies should be made clear to the public and frequently communicated to ensure women know where to get help. It is also important to train women on where to get help in incidences related to sexual violence to ensure they are well informed and are able to seek the help they need.

Policy Relevance of the Study

The study revealed that women with basic level of education (primary school education) were more likely to report the occurrence of sexual violence. This shows that basic

education is crucial in the reporting of cases on sexual violence. Although affirmative action has improved women's education, more needs to be done since the level of education for most women in Kenya is still low compared to that of men. There is need for the government to continue improving access to education for women in Kenya. This could be done by establishing schools and education centres closer to villages and enhancing adult education programmes to ensure they access education especially in the regions where girls' education is still taken for granted. Additionally, the government could initiate programmes such as food provision for the family and small business set-ups for women to go to school and complete certain levels of education or courses. This would help them access information on sexual violence with the aim of improving the rate of reporting on sexual violence.

There is also an opportunity for the government, non-state actors, academic institutions and development partners to sensitize women on the importance and the process of reporting sexual violence. Apart from the mainstream media, there are other emerging channels that would reach a wider population at a lower cost, such as Facebook, Instagram and Twitter and the use of social media influencers to spread the message on platforms through which survivors of sexual violence can report. This will ensure that the reporting process is made clear and easier to encourage more survivors to come out and seek help.

Furthermore, there is need to expedite the provision of temporary shelters and safe spaces for survivors of sexual violence. This could be done by passing a bill that requires every County Government to set up at least ten equipped safe shelters for survivors of sexual violence who may be in danger from their perpetrators. This will promote discussions, healing and empowerment for survivors to enable them report violence openly without fear. In Kenya there are hardly any government run shelter houses which are equipped with the resources, including health facilities and staff to attend to survivors of sexual violence. Therefore, better equipped shelters should be established to contribute to the protection of survivors as well as provision of information and skills to prevent sexual violence. All these will work towards the eradication of sexual violence across the country.

Areas for further research

This study recommends further research on how personal factors of a survivor affect their ability to report sexual violence. Additionally, more research should be conducted on factors that prevent survivors from disclosing their experiences to various key players. There is also need to conduct further research on the prevalence of other forms of sexual violence other than intimate partner violence and rape. Such areas include incest, paedophilia, bestiality and defilement, among others. In regard to perpetrators of sexual violence, the study recommends further research into factors that contribute to perpetration of sexual violence. There is also need to establish whether perpetrators are repeat or first-time offenders so as to establish the circumstances that contribute to perpetration of sexual violence against women.

References

Aday, T. (2015). The Effectiveness of the Violence against Women Act (VAWA) in Creating System-Level Change. Michigan: Grand Valley State University.

Africa Renewal. (2019). From UN: https://www.un.org/africarenewal/news/violence-against-women-spike-during-heated-electioneering

Chitashvili, M., Javakhishvili, N., Arutiunov, L., & Tsuladze, L. (2010). National research on domestic violence against women in Georgia. Georgia: Ltd Foundation Georgia.

Das, B. (2019). Support seeking behavior for survivors of sexual violence in the Indian-American population. Pennsylvania: Pennsylvania State University

Greathouse, S. M., Saunders, J., Matthews, M., Keller, K. M., & Miller, L. L. (2015). A review of the literature on sexual assault perpetrator characteristics and behavior. Carlifonia: Rand Corporation.

Jespersen, A., Lalumiere, M., & Seto, M., (2009). Sexual abuse history among adult sex offenders and non-sex offenders: A meta-analysis. *National Library of Medicine*.

Katiti, V., Sigalla, G. N., Rogathi, J., & Mushi, R. M. (2016). Factors influencing disclosure among women experiencing intimate partner violence during pregnancy in Moshi Municipality, Tanzania. *BMC Public Health*, Article Number 715.

KNBS. (2014). Kenya demographic health survey. Nairobi: *KNBS.*

Killough, A. (2019). House passes reauthorization of violence against women Act. CNN. Retrieved from CNN: https://edition.cnn.com/2019/04/04/politics/house-passes-violence-against-women-act-reauthorization/index.html

Kimani, M. (2007). Taking on violence against women in Africa. *Africa Renewal,* 21.

KNBS. (2010). Kenya 2009 Population and Housing Census. Nairobi: KNBS.

Kung'u, C. W. (2011). Criminalization of marital rape in Kenya. Toronto.

Mazonde, I. N. (1995, January 1). Culture and Education in the Development of Africa. Retrieved May 23, 2019, from http://unpan1.un.org/intradoc/groups/public/documents/IDEP/UNPAN003347.pdf

National Gender and Equality Commission. (2016). Gender-based violence in Kenya: The economic burden on survivors. Nairobi: National Gender and Equality Commission.

Office on Violence Against Women. (2016). Twenty years of the violence against women act: *Dispatches from the field*. Washington D.C.: U.S. Department of Justice.

Raya, R. (2012). Education for everyone. Worldwide. Lifelong. Journal AED - *Adult Education and Development.*

Seelinger, K. T., Silverberg, H., & Mejia, R. (2011). The investigation and prosecution of sexual violence. California: Human Rights Center.

Seguino, S. (2011). Help or hindrance? Religion's impact on gender inequality in attitudes and outcomes. *World Development, Elsevier,* Vol 39, 1308 – 1321.

Simons, D., Wurtele, S. K., & Heil, P. (2002). Childhood victimization and lack of empathy as predictors of sexual offending against women and children. *Journal of Interpersonal Violence*, 17(12), 1291 – 1307.

Stermac, L., Mont, J. D., & Dunn, S. (1998). Violence in known-assailant sexual assaults. Journal of Interpersonal Violence, 1089 – 1189.

The Constitution of Kenya. (2010) The United Nations entity for gender equality and the empowerment of women. (2009). A *Practitioner's toolkit on women's Access to justice programming: Women in conflict with the Law.* New York: United Nations.

UN ESCWA; Lebanese American University; UN Women. (2017). *Status of Arab women report 2017: Violence against women; What is at stake?* Beirut: United Nations.

UNICEF. (2014). Hidden in Plain Sight: *A Statistical analysis of violence against children.* New York: UNICEF.

UNICEF. (2017). Disclosure, reporting and help seeking among child survivors of violence. New York: UNICEF *Office of Research*.

Woods, L., & Porter, L. (2008). Examining the relationship between sexual offenders and their victims: Interpersonal differences between stranger and non-stranger sexual offences. *Journal of Sexual Aggression,* 61 – 75.

WHO. (2002). World report on violence and health. *Geneva: WHO*.