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Knowledge, Attitude and Practices Study on Contraceptive and Safe Abortion Services Among Health Providers and Women of Reproductive Age in Mathare Valley, Nairobi County

April 2014

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Foreword

The World Health Organization (WHO) estimates that more than 2,000 Kenyan women die from abortion complications each year and 700 abortions take place daily. Unintended pregnancies that commonly lead to unsafe abortion arise as a result of a myriad of factors including low access to family planning (FP)services, early sexual debut, harmful cultural practices such as early forced marriage, sexual violence and abuse including coerced sex, incest, defilement and rape. In addition many people especially young people lack relevant accurate information on sex, sexuality and reproductive health[1].

Unsafe abortion is highly preventable and a major public health concern in Kenya. Kenya Medical Association (KMA) plays a critical role as an advisor to the government on health matters in addressing this concern. *The Knowledge, Attitude And Practices Study On Contraceptive And Safe Abortion Services Among Health Providers And Women Of Reproductive Age In Mathare Valley, Nairobi County* report provides a picture on the current situation in terms of the knowledge and implementation of Constitutional provisions on access to reproductive healthcare.

The report clearly indicates knowledge and capacity gaps among healthcare providers on provision of contraceptive and safe abortion services. In addition it highlights the low levels of knowledge and lack of access to quality contraceptive and safe abortion services among women and girls of reproductive age. There is need to improve sexual and reproductive health and rights in order to ensure provision and access to quality and comprehensive sexual and reproductive health services in keeping with Kenya's Constitution including quality contraceptive and safe abortion services.

There is also an urgent need to improve Reproductive Health policies that will enable the provision of quality, comprehensive Reproductive and Sexual Health services including FP services and safe abortion services.

Dr. Elly Nyaim Opot
MBChB(UON), MMed (Surg)
Hon. National Chairman
KENYA MEDICAL ASSOCIATION

[1]Realizing Sexual and Reproductive Health and Rights in Kenya: A Myth or a Reality? (Kenya, Kenya National Commission on Human Rights 2012)

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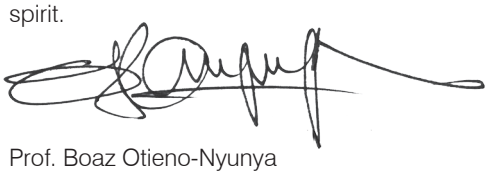
Finally, to all KMA staff who in one way or another supported this study, keep up with the good spirit.



Prof. Boaz Otieno-Nyunya
MBChB(UON), MMed(Obs-Gyn), Fell.CTR(USA); Fell. FAIMER(USA)
Principal Investigator
Focal Person / Reproductive Health and Rights Alliance Project
Convener, KMA Reproductive Health Committee

List of Abbreviations

APHRC	Africa Population and Health Research Center
ARO	African Regional Office
CAC	Comprehensive Abortion Care
COC	Combined Oral Contraceptive
CPR	Contraceptive Prevalence Rate
FGD	Focus Group Discussion
FP	Family Planning
HIV	Human Immunodeficiency Virus
IREC	Institutional Research Ethics Committee
IQR	Inter Quartile Range
IUCD	Intrauterine Contraceptive Device
KAP	Knowledge Attitude and Practices
KDHS	Kenya Demographic and Health Survey
KES	Kenya Shillings
KMA	Kenya Medical Association
KOGS	Kenya Obstetrical and Gynecological Society
MDG	Millennium Development Goal
MMR	Maternal Mortality Ratio
MOH	Ministry of Health
MS	Microsoft
MuST	Muungano Support Trust
MVA	Manual Vacuum Aspiration
NGO	Non-Governmental Organization
PMTCT	Prevention of Mother to Child Transmission
POC	Progestin only Contraceptive
PPFA	Planned Parenthood Federation of America
RH	Reproductive Health
RHRA	Reproductive Health and Rights Alliance
SA	Safe Abortion
SPSS	Statistical Package for Social Scientist
SRH	Sexual and Reproductive Health
STI	Sexually Transmissible Infections
TWG	Technical Working Group
WHO	World Health Organisation

Executive Summary

Background

Contraception is one of the major interventions to prevent maternal morbidity and mortality. Lack of access to contraceptives leads to unmet need for family planning whose main consequence is unintended pregnancies; a major contributor to unsafe abortion. Unsafe abortion has remained a leading cause of maternal morbidity and mortality in Kenya. In Kenya, it is estimated that 464,690 induced abortions and 266 deaths per 100,000 unsafe abortions occurred in 2012. This indicates high maternal mortality due to unsafe abortion, all of which are preventable deaths and most can be avoided through improved access to family planning.

Unsafe abortion has remained a leading cause of maternal morbidity and mortality in Kenya. According to the national study on the *Incidences and Complications of Unsafe Abortion in Kenya: Key Findings of a National Study* (MOH, 2013), an estimated 464,690 induced abortions occurred in Kenya in 2012. This corresponds to an induced abortion rate of 48 abortions per 1000 women of reproductive age (15-49 years), and an induced abortion ratio of 30 abortions per 100 births. In addition, Kenya's estimate of 266 deaths per 100,000 unsafe abortions indicates high maternal mortality due to unsafe abortion, all of which are preventable deaths and most can be avoided through improved access to family planning.

Methodology

A cross-sectional study was carried out between November 6 and 10, 2012 in Mathare Valley, Nairobi. A total of 78 and 347 women participated in focus group discussions (FGDs) and questionnaire survey respectively. Forty (40) healthcare providers participated in the questionnaire survey. An observation checklist was applied in the health care outlets which took note of equipment, supplies and only items actually observed were registered as available in the checklist.

Quantitative data were entered into a Microsoft Access database, exported to an SPSS version 16.0 for descriptive analysis using the broad domains of knowledge, attitude and practice. Qualitative data was transcribed from the tapes, assessed for accuracy and interpreted to English after which they were subjected to thematic analysis and the results presented as illustrative quotes under each theme.

Findings

Knowledge of contraception was high with over 80% of interviewed women aware that contraceptives can be used either to limit the family size or for child spacing. The same information was elicited from FGD participants. A participant said:

> *"I use these methods to help me space the gap between one child and the next and opportunity to nurture the child and bring them up"*

Of the three hundred and forty seven (347) women of reproductive age responding to whether they know of a facility within Mathare valley where they could access contraception services, 53.6% said yes while 45% said no or they don't know.

Majority of women interviewed had a positive attitude. Over 50% reported they would have support from their partner, friends and relatives on the use of contraception while church support was perceived to be the lowest 19.9%.

Among the 40 healthcare providers only 10% were ready to offer quality contraceptive services while 62.5% considered themselves to have adequate capacity to provide quality contraceptive services in their premises. Nonetheless, 92.5% agreed that access to quality contraception services was a citizen's right and a critical component of sexual and reproductive health.

Barriers to contraceptive use elicited through the questionnaire survey and FGDs included: fear of side effects of contraceptives, cultural and religious beliefs, affordability, male partner support and the health care outlet or provider's lack of adequate capacity.

On safe legal abortion only 47% of women respondents knew that safe legal abortion services could be accessed from qualified health professionals under clearly well-defined circumstances as per the Constitution. However, most of the women FGD participants said abortion is illegal no matter the circumstances but one participant said this about the constitution:

> *"Am not too sure but [Constitution] says abortion is a crime unless the mother's life is at risk. And the doctor has warned you that if you proceed with the pregnancy to full term your life, mothers life maybe in danger".*

Among the healthcare providers' respondents, only 50% had the correct knowledge on circumstances under which abortion is permitted under the Constitution and the providers legally allowed to provide the service

Only 11.2% of women respondents reported that they know of at least one facility where safe abortion services were provided and indeed only one facility managed by an NGO provided safe abortion services. This resonated well with responses obtained from FDGs where participants stated that there are places in Mathare Valley where one could obtain abortion but most were unsafe. Some respondents said:

> *"Yes, we have places where abortion is done though unsafe. This is because; we don't have experts to perform these operations". There are many places in which one can abort all over Mathare, could be in the clinics on the streets and midwifes can also help one to abort".*

The cost for safe abortion was reported to be high by 59.1% of respondents hence the reason why most women seeking abortion services opted for the unsafe abortions due to cost barriers.

Information on uptake of safe abortion services was also elicited from the 40 healthcare providers and only 17.5% reported they are providing safe abortion in their premises. About 42.5% said they could be assisted to improve access to safe abortion services through training, provision of equipment, supplies and support in upgrading the premises.

Conclusion

Barriers to contraception and safe abortion uptake as elicited from the respondents both women and service providers are mainly structural and systemic and need to be addressed through systems strengthening.

Recommendations

The study made recommendations in three broad areas namely: demand side, supply side and policy level.

Demand side - it is recommended that community awareness be created on: the legal framework for provision of contraception and safe abortion services, availability of quality contraception and safe abortion services within and outside Mathare Valley, the right to adequate information on all methods of contraception and safe abortion procedure including relevant counselling for informed decision making and the need to advocate for provision of quality safe abortion services for those who need them. In addition, efforts should be made to enhance social support for improved uptake and continued use of contraception and; support for women in need of safe abortion services.

Supply side, should be strengthened as follows: capacity building of the services providers in public and private facilities on provision of comprehensive abortion care (CAC); contraceptives and youth friendly SRH services to facilitate expansion and provision of quality contraception; safe abortion and youth friendly SRH services, sensitization of service providers on relevant safe abortion policies, standards and guidelines through disseminations or other forums, targeting owners of drug stores for training on provision of quality SRH services relevant for level of care and referral for services not relevant for the level of care. In addition they should also be oriented on the legal framework for providing contraception, safe abortion and youth friendly SRH services.

Policy level, it is recommended that: policies, standards and guidelines for provision of safe abortion services be developed, the role of workers of drug stores and pharmacies in providing contraception and safe abortion services such as in dispensing abortificients including Misoprostol needs to be examined and streamlined; healthcare providers be supported to obtain essential equipment and supplies for the provision of long term contraceptives such as intrauterine contraceptive device (IUCD) and implants and safe abortion services; dissemination of relevant MOH policies, standards and guideline on contraception and safe abortion services be undertaken; KMA to participate in national and county level mechanisms that provide technical support to MOH in formulating health related policies including those that guide provision of contraceptives and safe abortion services.

1.0 INTRODUCTION

1.1. Background

Kenya is among the countries listed as unlikely to achieve the Millennium Development Goal (MDG) number 5. The MDG 5 is about improving maternal health and has two indicators stated as: to reduce maternal mortality by three quarters and achieve universal access to reproductive health by 2015. Maternal mortality in Kenya has remained unacceptably high. According to the Kenya Demographic and Health Survey (KDHS), 2008/09, the maternal mortality ratio (MMR) is estimated as 488 maternal deaths per 100,000 live births against a target of 147 maternal deaths per 100,000 live births by 2015 [1]. The major causes of maternal morbidity and mortality in Kenya are preventable and they include bleeding, infection, high blood pressure, unsafe abortion and obstructed labor.

1.1.1 Contraception

Contraception is one of the major interventions to prevent maternal mortality and morbidity. All women of reproductive age including adolescents should therefore have access to family planning (FP) to prevent the unwarranted maternal mortality and morbidity. First, family planning can lead to a reduction in the number of births and, since every pregnancy is associated with some risk, this in itself helps reduce maternal deaths. Second, family planning can help reduce mistimed pregnancies. Although any pregnancy carries a risk, some are more risky than others - for example, those among very young women, women of high parity and those to older women. Third, family planning can help to reduce the number of unintended pregnancies. Unintended pregnancy is always a threat to the woman's health, either because she may resort to unsafe abortion with all its attendant risks or because she is less likely to take care of herself than if the pregnancy was wanted [2]. Contraception also enables women who wish to limit the size of their families to do so. In Kenya, one of the principles that will guide the implementation of the population and development policy -Sessional Paper No.3, 2012, is affirmation of the basic rights of all couples and individuals to decide freely and responsibly the number and spacing of their children, to have the information and education needed in order to make informed choices, and to have access to the means to act on their decisions [3].

According to the KDHS, 2008/09, only 46% of currently married women are currently using some method of contraception (modern methods -39%, traditional methods-6%). The same survey has also shown that 26% of married women had an unmet need for family planning which is defined by World Health Organization (WHO) as women who are fecund and sexually active but are not using any method of contraception, and report not wanting any more children or wanting to delay the next child. This can lead to unintended pregnancies, which pose risks for women, their families, and societies [4]. The 2008–09 KDHS showed that 43% of married women in Kenya reported their current pregnancies were unintended – that is either unwanted or mistimed (wanted later).

1.1.2. Unsafe Abortion

Unsafe abortion is defined by the World Health Organization (WHO) as a procedure for terminating pregnancy, carried out either by persons lacking the necessary skills or in an environment that does not conform to minimal medical standards or both. Worldwide, unsafe abortion persists as a serious and continuing public health challenge [5, 6]. It accounts for 13% of global maternal deaths and remains the principal cause of a range of short-and long-term health complications in women [7]. Currently, about 8.5 million women globally suffer from complications of unsafe abortion annually. Three million of these women go without treatment [8]. The largest proportion and highest rate of unsafe abortion currently occurs in Africa, where most countries have restrictive abortion laws, limited access to reproductive health services and high unmet need for family planning services [9, 10].

Unsafe abortion has remained a leading cause of maternal morbidity and mortality in Kenya. A study released in 2013 which was conducted by the Ministry of Health in collaboration with APHRC, Ipas and Guttmacher Institute reported that an estimated 464,690 induced abortions occurred in Kenya in 2012, corresponding to an induced abortion rate of 48 abortions per 1000 women of reproductive age (15-49 years), and an induced abortion ratio of 30 abortions per 100 births in 2012[11]. In addition, Kenya's estimate of 266 deaths per 100,000 unsafe abortions indicates high maternal mortality due to unsafe abortion, all of which are preventable deaths [11]. It is also important to note that unintended pregnancy which can be avoided through improved access to family planning is a major contributor to unsafe abortion in Kenya and in most of Africa [11]. Unsafely induced abortion have been shown to account for as much as 35 percent of maternal mortality and at least 50 percent of hospitals' gynecological admissions in Kenya [12]

Access to safe abortion services in Kenya has been restricted by prohibitive abortion laws. The promulgation of the Kenyan Constitution (2010) with widened Bill of Rights specifying the right to health, quality health care, emergency medical care and the circumstances under which pregnancy can be terminated [13] has presented new opportunities for wider access to improved reproductive health care including safe abortion services.

1.1.3. Urbanization and Access to Reproductive Healthcare

Kenya is rapidly experiencing an urbanization process that is among the highest in the world. From 1948 to 2009, the estimated percent of urban population to total population increased from 5.3% to 30% [14, 15]. In the 2009 Kenya National Population and Housing census, it is estimated that 30% (11,545,571) of Kenya's total population of 38,610,097) lived in urban areas compared to 4.8% (285,000) out of a total population of 5,407, 599 in 1948 [14, 15].

Urban population is highest in Nairobi County which is also the capital city of Kenya. Out of the reported 11,545, 571 urban populations, 3,138,369 lived in Nairobi with 60% living in the slums which are characterized by poor access to health care services including reproductive health [16, 17, and 18]. Majority of women living in the slums are also of low socioeconomic status which further compounds their access to available health care services. For example according to a survey conducted by the Kenya Urban Reproductive Health Initiative (KURHI), 27.5% of women in Nairobi categorized as 'rich' on wealth ranking had unmet need for contraceptives as did 27.7% of women categorized as 'poor'[18].

1.2. Statement of the Problem

Women of reproductive age (15-49 years) residing in Mathare Valley, an informal settlement in Nairobi County also the capital city of Kenya have a low uptake of and poor access to contraception and safe abortions services. This is as a result of low level of knowledge on the legal framework as provided in the Kenyan Constitution by women of reproductive age and healthcare providers.

1.3. Objectives

The objectives of the study are as follows:

1. Assess the knowledge, attitude and practices on contraceptive and safe abortion services by women and girls aged between 15 – 49 years in Mathare Valley, Nairobi.
2. Assess the knowledge attitude and practices on contraceptive and safe abortion services by health service providers in Mathare Valley, Nairobi
3. Estimate the uptake of contraceptive and safe abortion services by women between 15 – 49 years in Mathare Valley, Nairobi.
4. Assess the capacity of health providers in Mathare Valley, Nairobi to provide quality contraceptive, safe abortion to women between 15 – 49 years.
5. Identify the barriers to provision and uptake of contraceptive and safe abortion services to women and girls aged between 15 – 49 years in Mathare Valley, Nairobi

1.4. Justification

The promulgation of the Constitution of Kenya (2010) was a major milestone towards the improvement of health standards. Chapter four (4) of the Constitution on the Bill of Rights emphasizes that every citizen has the right to life, right to the highest attainable standard of health including reproductive health of which contraception and safe abortion is a component; and emergency treatment. Under the right to life, the Constitution states that abortion is permitted if in the opinion of a trained health professional, there is need for emergency treatment, or the life or health of the mother is in danger, or if permitted by any other written law.

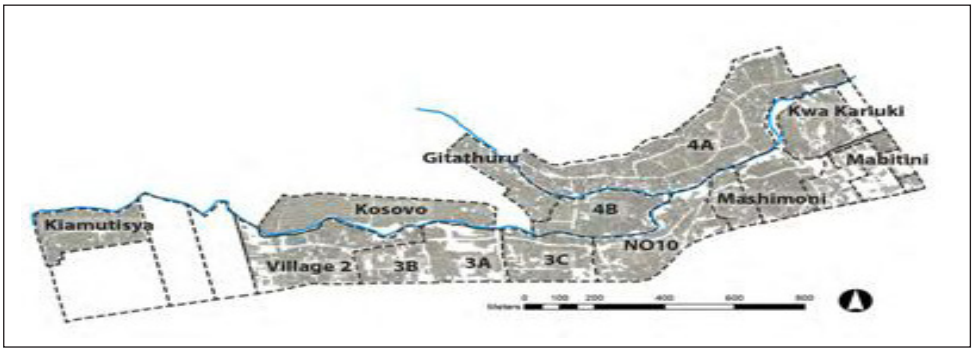
The requirement for achievement of the right to health and in the case of this study the right to contraceptive and safe abortion services dictates that the supply side of the health system including relevant policies, planning and allocation of resources for quality provision and availability of contraceptives and safe abortion services be addressed. On the demand side, for clients/patients to utilize the services, they need to be aware of their rights; have adequate information about methods of contraception; and improved access to readily available quality contraceptive and safe abortion services.

The findings of this study will inform policy and advocacy initiatives and it is envisioned that as a result policies that enhance uptake of contraceptive and safe abortion services by women of reproductive age in Mathare Valley and indeed the whole country will be formulated and implemented in all counties.

2.0 STUDY AREA AND POPULATION

The study was carried out in Mathare Valley in Nairobi County. It is an informal settlement consisting of 13 villages: Mashimoni, Village 10, Mabatini, Village 2, Kosovo, 3A, 3B, 3C, 4A, 4B, Gitathuru, Kiamutisya, and KwaKariuki. For logistical reasons in this study Mashimoni and Village 10 were treated as one. The villages are located within the valleys of the Mathare and Gitathuru Rivers (Figure 1).

Figure 1: Mathare Valley Villages. Source: Mathare Zonal Plan 15, Nairobi, Kenya



According to the 2009 Kenya Population and Housing Census, it is estimated that in Mathare Valley there are 27,812 households and a population of 80,309 of whom 36, 620 were women. The Mathare Zonal Plan estimated the population of Mathare Valley at 188,183 [19]. This was based on household enumeration data conducted by the team supporting the development of the Mathare Zonal Plan and other data such as voter registration numbers for the same area for the 2010 Constitutional referendum. Despite the noted discrepancies in the estimated population of Mathare Valley, this study just like the team that was supporting the development of the zonal plan, decided to use the official 2009 Kenyan Census counts for Mathare. The study assumed that women between 15-49 years constituted 50% of the female population in the study area.

Access to nearly all social amenities such as safe water, sanitation and health services is considered extremely low and poor with only 1 public health facility in Mathare Valley.

2.1. Study Design

A cross-sectional study using mixed methods including questionnaire surveys for both women of reproductive age (15-49 years) and healthcare service provider participants, direct observation checklist of provider premises and equipment, and focus group discussions with women was adopted.

2.2. Sample Size and Sampling Procedure

This knowledge attitude and practices (KAP) study contained two basic components; contraceptive and safe abortion services and in each component there were two dimensions; users i.e. women aged 15-49 years and healthcare providers. Users were women aged between 15 and 49 years while providers consisted of any provider of health services including drug store workers.

For women, the study used the Fisher's formula (n =z2*p*q / d2) and choosing a point estimate precision of 5%, a sample size for the women was 384 (n=1.96*1.96*0.5*0.5/ 0.05*0.05 = 384). However, based on this sample size determination, 347 women (15-49 years) were surveyed using the questionnaire to compensate for any non-responses (Table 2). The sample for women aged 15-49 was obtained from the 13 villages comprising Mathare Valley proportionately allocated to the eligible population of women in each village. The sample size allocated to each village was purposively acquired by the research assistants allocated to the village and included women aged 15 to 20 years, 21 to 30 years and 31 to 49 years.

Table 1: Estimated Target Population and the Sample Size by Village

Village	Female Population	Estimated Population of Females 14 -49	Proportion of the Sample Size	Sample Size Estimate/ Village	Sample (n=395)
3A	1896	948	0.05	20	20
3B	3256	1618	0.09	36	36
3C	2530	615	0.03	12	15
4A	8565	4263	0.24	92	96
4B	2496	1248	0.07	27	27
Gitathuru	1645	823	0.05	20	20
Kiamutisya	2845	1423	0.08	31	29
Kosovo	3642	1821	0.1	39	41
Kwa Kariuki	2353	1156	0.07	27	28
Mabatini	553	276	0.02	8	9
Mashimoni	1931	916	0.05	20	36
Village 10	1350	675	0.04	16	
Village 2	3650	1825	0.1	39	38
Total		**17607**			**395**

Source: Adapted from Mathare Zonal Plan, Nairobi, Kenya. Muungano Support Trust Slum Dwellers International (SDI) [19]

For healthcare service provision, only 76 healthcare outlets accessed by the residents of Mathare Valley were identified including some not in the environs of Mathare Valley as well as drug stores which are important for self-medication. The study targeted all of them and categorized them as shown in the table 2 below.

Table 2: Health Facilities in Mathare Valley and its Environs

Category	Total Number	Sampled
Private clinics	28	14
Private drug stores	28	16
Private clinic / drug stores	12	5
Public hospital / dispensaries	3	1
Private health centres / hospitals	5	2
Mission health facility	-	2*
	76	40

**Sampled from the Mathare Valley environs, none within Mathare Valley.*

2.3. Eligibility Criteria

Women respondents had to be between 15 and 49 years and to participate had to give informed consent. For healthcare providers to participate, they were required to be practicing in Mathare Valley or its environs and provide informed consent.

2.4. Community Entry and Training of Research Assistants

With Mathare Valley being an informal settlement, challenges pertaining to community entry, rapport building, community engagement and personal security were anticipated. To avoid these anticipated challenges, the research team:

- Engaged members of a non-governmental organization (NGO) called Muungano Support Trust (MuST) as research assistants. Members of this NGO work in Mathare Valley and know the layout of the land and key gatekeepers into the community. It is important to note that due to the research assistants' contextual grasp of Mathare Valley social environment, their engagement was an added advantage to the undertaking of the study.
- Held a one- day engagement forum with community gatekeepers and other community members to sensitize the community and to build a general acceptance of the study at Kiboro Primary School, Mathare Valley. Through this forum, the gatekeepers and other community members were briefed on the study, questions and answers sessions held and a group consent given by the gatekeepers.

A one-day training of the research assistants on the study process and data collection tools was done after the engagement forum with the community gatekeepers which included role play and field testing of the tools. Comments from the exercises were incorporated in the final study tools.

2.5. Methods of Data Collection

Focus group discussions (FGD) and questionnaire surveys were conducted among women aged 15-49 years. FGDs were conducted to elicit information on broader issues of interest within the major domains of contraception and safe abortion for example, barriers to use. A discussion guide was used for the FGDs with 26 women in each age group: 15 – 20 years, 21 – 30 years and 31 – 49 years which were moderated by the consultant and lasted approximately 45 minutes. There was also an assistant who was responsible for keeping time and taping of the discussion. The questionnaire survey to elicit information on knowledge, attitude, practice and barriers in accessing contraceptive and safe abortion services was conducted by trained research assistants at household level and lasted approximately 30 minutes. Verbal informed consent was sought from the participants before conducting the questionnaire survey or the FGDs. A total of 78 and 347 women participated in FGDs and questionnaire survey respectively. Women who participated in FGDs did not participate in the questionnaire component of the study.

Among the healthcare providers, a questionnaire survey and an observation checklist were used to collect data on capacity and constraints to provision of quality contraceptive and safe abortion services. The questionnaire survey conducted at the healthcare outlet lasted about 45 minutes and addressed issues such as barriers and enabling factors to quality service provision while the observation checklist took note of equipment, supplies and only items actually observed were registered as available in the checklist. Data collection was done by trained nurse research assistants from MuST and where permitted, photographs of the facilities and equipment were taken.

The research team adopted two operational definitions for capacity: capacity to offer FP and / or safe abortion services or capacity to provide the services. Offering services meant carrying out any activities directed at the said care including counselling and referral while providing services meant supplying the complete service package within the said premise.

Relevant documents including the Constitution, national reproductive health policies, guidelines and strategic plans in the health sector were collected and reviewed to give an understanding of reproductive health legal framework and priority setting.

2.6. Data Management and Analysis

Questionnaire data elicited from women were entered into Microsoft Office Access and imported into SPSS 16 for descriptive analysis using the broad domains of knowledge, attitude and practice.

Qualitative data from the FGDs were transcribed from the tapes, translated into English where necessary and cross-checked for accuracy. Data were then coded into main domain themes of knowledge, attitudes and barriers to use of contraceptive and safe abortion services and scrutinized for content within these themes. Barriers and enablers to uptake of contraceptive

and safe abortion services were derived from the data and presented as illustrative quotes under each broad theme.

For the health providers, this process was augmented with the direct observation data which was also subjected to descriptive analysis indicating proportion of facilities that have the requisite capacity to offer or provide contraceptive and safe abortion care services. A few open ended questions from the provider questionnaire were also analyzed qualitatively as explained above to provide in depth understanding of the practice environment.

2.7. Ethical Considerations

The study proposal was approved by the Moi Teaching and Referral Hospital and Moi University Institutional Research and Ethics Committee (IREC). All participants were asked to give informed consent to participate. Adolescent girls aged 15 -17 years were to be enrolled and interviewed only upon obtaining parental knowledge and individual assent. Where the girls under 18 years were the heads of household, they were treated as mature minors and consented as adults.

Due to the need to maintain confidentially and to allay fears of perceived potential legal repercussions especially on matters of abortion, authorization to use verbal consent was obtained from IREC. In addition, no identifiers were used in any of the data collection instruments. Study numbers were used on the questionnaire survey and for FGDs the first name was used during taped conversations. Nonetheless, participants were made to understand that they could withdraw their consent at any stage of interview or FGD if they no longer wanted to participate. They were also assured that tapes would be destroyed immediately the transcription work was completed and verified since voice could be used as a potential identifier.

2.8. Dissemination of Results

Study findings will be disseminated to the Mathare Valley community and in scientific conferences organized by professional associations including Kenya Obstetrical and Gynecological Society and Kenya Medical Association. It will also be disseminated through publications in peer reviewed journals.

2.9. Study Limitations

A systematic sampling procedure had been proposed, but because of the haphazard spread of dwelling units in the informal settlement and the fact that not all the 13 villages were demographically mapped and dwellings allotted identifiable markers, this strategy was abandoned and purposive sampling adopted. This approach affects the reproducibility of the study.

Secondly, MuST was a critical partner in the data collection. While involving MuST may have, to some extent, safeguarded confidentiality of study participant information, it may also have introduced selection and social desirability biases into the study due its community presence and role in development of the informal settlement.

3.0 STUDY FINDINGS

This section begins with a description of the socio-demographic characteristics of the respondents (women and girls of reproductive age and health providers). Findings related to contraception are presented followed by those related to safe abortion services from both the women's and the service providers' perspectives.

3.1. Socio-Demographic Characteristics

Women of reproductive age (15-49 years)

The study interviewed 347 women aged 15 – 49 years from 13 villages that constitute the Mathare Valley Informal Settlement.

Table 3 below depicts the socio-demographic findings. The mean age of the 347 women respondents aged 15-49 years was 29.6 years. They had an average of 3.2 children and 61.7% were married. About 46.4% and 21.6% had completed primary and secondary education respectively while 10.7% had no education and only 3.7% had post-secondary education. On occupation, 41.5% reported either being in formal employment or being in business with a monthly income of below KES 10,000 for a household of 4-5 people, 23.6% were casual laborers with only 2.6% reported as students.

Table 3: Socio-Demographic Characteristics of Women Respondents

Variable	Mean	Median (IQR)
Age in years(N=347)	29.6	28 (21 – 37)
Children (N = 347)	3.2	3.0 (2 – 4)
	%	
Marital status (N= 347)		
Yes	61.7	
No	31.4	
Separated / Divorced	2.3	
Widow	2.6	
Education -highest level completed - (N=347)		
None	10.7	
Primary	46.4	
Secondary	21.6	
Post- Secondary	3.7	
Occupation (N= 347)		
Business	36.9	
Casual Labourer	23.6	
Formal employment	4.6	
Student	2.6	
None	25.4	

Monthly Income KES(N= 347)		
<10000	74.1	
10000 – 20000	6.9	
20001 -50000	1.4	
>50000	0.3	

Key message: *Women respondents were of low socioeconomic status with an average monthly income of below 10000KES for a household of 4 to 5 people.*

Seventy eight (78) women aged 15-49 years participated in FGDs. Three quarters of them were married while 33.2% were single. The women worked mostly in small businesses such as tailoring, saloon, beauty and shop keeping. A few worked as casual labourers; washing clothes in people's homes. Only about 10% of the women were formally employed as civil servants or community health workers. The socioeconomic findings are similar to findings of a similar study on contraceptive uptake in informal settlements in Kisumu, Mombasa and Nairobi [18].

Healthcare providers

Table 4 below depicts the socio-demographic findings of the 40 interviewed healthcare providers working in Mathare Valley and its environs. The respondents consisted of men and women comprising 49% and 51% respectively. They had a mean age of 33.5 years with 82.5% being married while 85% had children. 92% of the respondents and 7.3% were of the Christian and Islamic faith respectively

Table 4: Socio-Demographic Data of Service Providers

Variable (Number responding)	Mean or Proportion
Age in years(N=40)	
Mean	33.5
Median (interquartile range)	31 (28 – 35)
Children (N = 40)	
No	15.0
Yes	85.0
Marital status (N= 40)	
No	17.5
Yes	82.5
Religion(N=40)	
Christian	92.5
Muslim	7.5
Sex (N=40)	
Male	48.7
Female	51.3

3.2. Contraception

3.2.1. Knowledge of Contraception

Women of Reproductive Age (15-49 Years)

Reasons for use of contraception services were also elicited through focus group discussions (FGD). Participants gave various reasons for the use of the services which included: one should only have the number of children they can cater for, to avoid unwanted pregnancy, to space children, to have a gap between the children and not giving birth continuously. Some of the responses from the women were as follows:

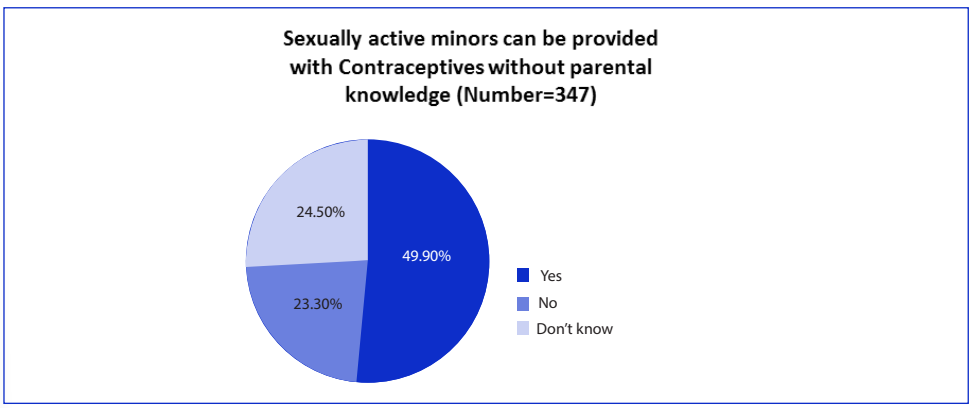
> *"I don't believe we will ever get to a point that family planning won't be essential, I believe it is essential to plan for your life and also your child's"*
>
> *"I use these methods to help me space the gap between one child and the next and opportunity to nurture the child and bring them up"*
>
> *"In order to reduce chances of bearing a child with HIV infection for those mothers that are HIV positive"*

Difficult economic times were also stated as a reason for using contraception services while use of condom was reported as being beneficial because it reduces infections.

The women were also asked whether they know a contraceptive method that protects against both pregnancy and sexually transmitted infections. Three hundred and forty seven (347) women responded to the question out of which 79.3% knew that condoms can protect against both pregnancy and sexually transmitted infections while 9.8% did not know or said no and 8.6% said that other methods of modern contraceptives can protect against both pregnancy and infections.

On whether sexually active minors can be provided with contraception services without parental knowledge; 49.9% of the 347 women who responded said yes; while 47.8% either did not know (24.5%) or said no (23.3%) as depicted in figure 2 below.

Figure 2: Pie Chart of Knowledge about Provision of Contraception to Teenagers



Information on whether sexually active minors should be provided with contraceptive services without parental knowledege was also elicited from FGD participants. Most of them stated that all women of reproductive age should use contraceptives if sexually active and a participant had this to say:

> *"I believe people should use {contraceptives} to avoid pregnancy since as a girl you could be in school and you have a boyfriend. If a situation occurs you could end up pregnant and he escapes. Also if you're married and you have two children at least you can be able to prevent yourself from getting another one".*

Participants of the FGDs seemed to be more open to sexually active minors using contraceptives without the knowledge of their parents to prevent pregnancy. Nonetheless there were those who felt that sexually active minors should not use certain methods such as the three months injectable method. The reason provided was that the three months injectable method if used by the minors could affect their fertility making it difficult for them to have children later in life. In addition there were those who felt that if minors were to use contraceptives, it would encourage 'promiscous' behaviour.

Information on known methods of contraception was elicited through the FGDs. Pills, three month injections, coil, implants and condoms were readily mentioned by all FGDs. There was also some knowledge on tubal ligation (TL), vasectomy and natural methods-safe days. On vasectomy , a participant had this to say:

> *"There is one known as vasectomy that men can use if they don't want to get any other children".*

Participants also stated that family planning is for both men and women as reported by a participant who said:

> *"I would also like to add to that, family planning involves both the man and woman. Also when you visit these centers you are advised to come with your husband to get more education on these methods and on how to plan your family well. The men also have a means that they use when they have the number of children they want. This method is known as vasectomy"*

There were also some misconceptions on use of contraceptives elicited through FGDs that need to be addressed. They include: 1) Family planning is only for those who have given birth 2) Family planning is only for those who are married and over 25 years 3) Only prostitutes should use family planning and 4) If given to young girls "less than 18 years" they might never give birth

On where the contraception services are provided, women respondents were asked whether they knew of a facility within Mathare valley where they could access contraception services. Of the 347 women respondents, 53.6% and 45% said yes they knew and no or they didn't know respectively.

3.2.2. Attitude to Contraception

Women of Reproductive Age (15-49 years)

Women respondents were asked a series of questions assessing their attitude to contraception and their perception of the social support they would have if they needed to use the same. Responses were captured as either disagree or agree and the percentages of those who disagreed or agreed are as shown in the table 5 below.

Table 5: Women Responses on Attitude and Support for Contraception

Statement (number responding)	Agree %	Disagree %
Attitude Never felt need for contraception (n=347)	23.9	73.5
Only loose women use contraception (n=347)	9.8	87.6
Married women should not use contraception (n=347)	11.0	86.5
Contraceptives not commonly available in MV (n=347)	36.0	57.9
For maximum privacy, I would not use FP facilities in MV(n=347)	30.0	64.8
Contraceptives services in Mathare Valley are too expensive(n=347) ***Social Support Perspective***	46.4	46.7
I would never use contraceptive services without my partner's permission (n=347)	34.9	60.8
My partner would support me in using contraceptives (n=347)	64.8	30.3
My friends would support me in using contraceptives (n=347)	65.1	28.0
My relatives would support me using contraceptives (n=347)	57.3	37.5
My church would support me using contraceptives (n=347)	19.9	76.9

Overall, the majority of respondents had a very positive attitude to contraceptive use as depicted in the table 5 above. Over 50% reported they would have support from their partner, friends and relatives on the use of contraception. Perceived support from the church on use of contraception was lowest with19.9% and 76.9% agreeing and disagreeing respectively that their church would support them in the use of contraception

Information on attitude and social support to contraceptive use was also elicited through FGDs. Participants said that all family planning methods should be free thus improving accessibility and should also be accompanied by information on how to use them. They reported that teenage girls are deterred from using contraception by lack of parental support and fear of the parents finding the contraceptives in their position. They also reported that a woman may not use a method of her choice because of lack of spousal support on the particular method. The three

months injectable method was singled out as one that causes the woman to become "cold" which could result to the spouse forcing the woman to switch to a different method. Lack of spousal support was also reported in situations where a woman was breastfeeding. Participants said that if a woman was breastfeeding, the husband would not expect her to use contraceptives and if she did, it was assumed by the spouse that she was having extramarital affairs.

Healthcare providers

Responses from healthcare providers are shown in table 6 below. Out of the forty (40) healthcare providers interviewed, 92.5% agreed that access to quality contraception services was a citizen's right and a critical component of sexual and reproductive health. However, only 62.5% considered themselves to have adequate capacity to provide quality contraceptive services in their premises and even fewer – 10%- were ready to offer quality contraceptive services. It is surprising why the providers considered themselves to have adequate capacity and yet not ready to provide the services in their premises calling for further investigations.

Table 6: Provider Attitude to Contraception Services

Statement (N=40)	Agree %	Disagree%
Adequate capacity to provide quality contraceptive services in my clinic or premises	62.5	37.5
Access to quality contraceptive services is a citizen's right	92.5	7.5
Quality contraceptive services is a critical component of SRH	92.5	7.5
Ready to provide quality contraceptive services	10.0	90.0

Key Message: *While 62.5% of providers agreed that they had adequate capacity to provide quality contraceptive services in their premises, only 10% agreed that they were ready to provide the services.*

3.2.3. Contraceptive Uptake

Women of reproductive age(15-49 years)

While 78.1% of women reported not wanting to get pregnant within the next one year, 67.7% and 30.8% were currently using a contraceptive method (modern and natural) or not using respectively as depicted in table 7 below.

Table 7: Women's Reproductive Health Intentions and Unmet Need For Contraception

Intention	Proportion (%)
Pregnancy within one year (N=347)	
No	78.1
yes	21.9
Contraceptive current use (N=347)	
No	30.8
Yes	67.7

Key message: *About 31% of women who do not plan on having a pregnancy within the year reported not using a contraceptive.*

Regarding the future fertility intentions, 63.1% of women respondents planned to use a contraceptive method in the next year. It is important to note that the study finding that some women respondents did not want to get pregnant within the next one year as well as the finding that there were women not currently using a contraceprtive method is an indication of an unmet need for family planning. However, information collected by this study does not allow the calculation of unmet need for family planning.

Information ellicited from FGD indicated that some women could only use contraception in consultation with their husbands while others were undecided due to fear of side effects of contraceptives and a perception of lack of male partner support. The younger women, especially those still in school, were uncertain about their intentions to use contraceptives since their sexual activity was irregular.

Healthcare providers

The providers' past experience with contraception at a personal level and their responses are depicted in table 8 below. About 68% of providers said they had ever used condoms while 60% had used them in the last year. On non-condom contraceptives, 60% had ever used and 50% had used in the last year.

Table 8: Service Provider's Own Contraceptive Use History

Variable (N=40)	%
Condom	
Ever Used	67.5
Used in the last year	60.0
Non-condom contraceptive	
Ever Used	60.0
Used in the last year	50.0

3.2.4. Barriers to Contraceptive Uptake

Women respondents identified several barriers to uptake of contraception as follows:

- **Fear of side effects of contraceptives:-** Participants in all the FGDs cited side effects of contraceptives as one of the barriers to uptake. One of the participants described side effect as:

  "Side effect is whereby contraceptive could affect you e.g. they could cause high blood pressure, make the heart beat fast and excessive bleeding"

Another side effect associated with use of contraception as put by husbands or partners is that the women become "cold" i.e., the woman loses the desire to engage in sexual intercourse. A participant had the following to say about her husband and the myth of becoming "cold" as a result of using contraception:

"My husband used to say that at times my body would be cold and I would also lose the urge of engaging in intercourse. Therefore to avoid issues within the home I would either change the method am using or just result to not using any contraceptives".

Other perceived side effects of contraceptives included infertility and delayed conception especially if one starts using the methods at a young age and as one participant said before you are married. The three months injectable contraceptive method was singled out for side effects by the participants. These views portray inadequate information on the methods that leads to misconceptions.

- **Cultural and religious beliefs:-** This was cited as another barrier to the use of some or all contraceptive methods. A FGD participant said:

  "I can say culture. That is, some people are opposed to the family planning methods because of one's religion and faith. They believe that God created them to fill the earth. Therefore they would not use these methods"

This is consistent with the finding that only 19.9% of women expected their church to support the use of contraceptives.

- **Affordability:-** Although not all women respondents agreed that affordability of contraception is an issue some thought it was. Asked why women may not use contraceptive services, a respondent said:

  "It's because of financial status within the family"

There were participants who did not think cost is an issue. In response to a participant who had said affordability is not an issue because after all you only require KES 20; another respondent said:

"I oppose your point because there are women who struggle to access the money. If you are using the injectable method and you go to a hospital for the injection and you do not have money or the little money you have is for buying food for your children you may not get the contraception on schedule. It's at times hard to access contraceptives especially for women who do not have money".

The respondents who said affordability is not an issue mainly referred to condoms and pills that are even distributed for free by the community health workers (CHWs). Affordability as a barrier therefore was dependent on the method of contraception and women respondents were split almost 50:50 on the cost of contraceptives in Mathare Valley. 46.4% and 46.7% of women respondents agreed and disagreed respectively that contraceptives service in Mathare Valley are too expensive.

- **Contraceptive stock-out:-** Was mentioned as another barrier to continued use of contraception. On stock-outs a responded had the following to say:

  "So you see service provision has a problem because you get there [clinic] and you are told to go back and check later because [FP] drugs or medicine has not been brought…"

This is a finding that underscores weakness in the logistics management system. Although the 2010 Kenya Service Provision Assessment reported most contraceptives being available in over 90% of facilities surveyed in most regions, the 10% that were found not have contraceptives impact access to family planning negatively. Stock outs in Mathare Valley as a barrier to contraceptive use was a significant observation by women respondents.

- **Male partner Support:-** Women identified views of their male partner as being a significant determinant of whether they started or continued with contraception; even if it meant using contraceptives secretly. It even affected the choice of contraceptive. Women reported adopting use of methods that are less likely to be visible to their partners. A respondent said:

  "She can't use implants so that her partner doesn't find out she is using to avoid being injured by him".

On whether they would use a contraceptive method in the next one year a respondent said:

"Yes I would use but after consulting with my husband and we both agree to use a contraceptive method. But in case he opposes I could do it in secret so as not to cause tension within the house. As we know not all men would agree to use of contraceptives and to avoid being beaten, I will do it secretly".

Another one said:

"The thing is most men only think about how to get children. And thus if you mention it to him he could even beat you, the only option a woman has is to use contraception in secret and because of this you could use methods like pills or injectable (in private hospitals) so that the man doesn't find out"

These views are consistent with the finding in table 5 above that 60.8% of women disagreed with the statement that they would never use contraceptive services without their partner's permission.

- **Healthcare outlet/Provider capacity:-** From the service provision aspect, observation of the provider premises revealed that most of the clinics had easy to dispense contraceptives such as condoms, COCs, POCs and injectable contraceptives. IUCDs and implants were observed being available in only 23.7% of the premises and were in satisfactory supplies in 15.8% and 10.5% of premises respectively. This was further compounded by the fact that 82.2% and 76.3% of the premises did not have an IUCD or an implant insertion kit

respectively. This limited method mix could pose a barrier specifically because women seeking for long acting methods would likely be faced with access issues.

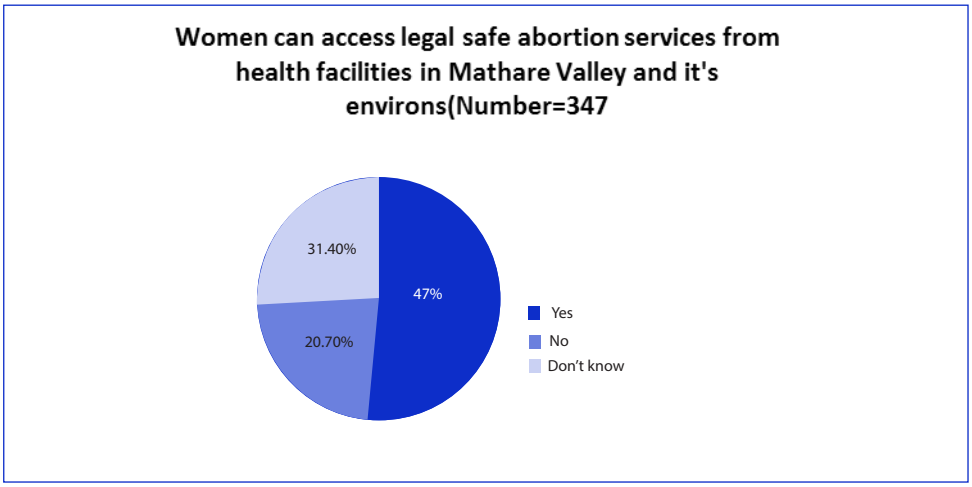
3.3. Safe Abortion Services

3.3.1. Knowledge of Safe Abortion

Women of Reproductive age (15-49 years)

Women respondents were asked if they knew they could access legal safe abortion services, from qualified health professional under clearly well-defined circumstances. Out of the 347 women who responded, 47% knew that safe legal abortion services could be accessed, 52.1% reported that such services could not be accessed or did not know as depicted in figure 4 below.

Figure 3: Pie Chart of Knowledge About Access of Legal Safe Abortion Services



Information on whether women knew they could access legal safe abortion services, from qualified health professionals under clearly well-defined circumstances as per the Constitution was also elicited through FGDs. Most of the women said abortion is illegal no matter the circumstances but one participant said this about the Constitution:

> *"Am not too sure but it says abortion is a crime unless the mother's life is at risk. And the doctor has warned you that if you proceed with the pregnancy to full term your life, mothers life maybe in danger".*

On whether the women respondent knew at least one facility where safe legal abortion services are provided in Mathare Valley, out of the 347 who responded, only 11.2% said they know while 53.6% said they did not know. This resonated well with responses obtained from FDGs where participants stated that there are places in Mathare Valley where one could obtain abortion services but most were unsafe. A respondent said:

"Yes, we have places where abortion is done though they are unsafe. This is because; we don't have experts to perform these operations". There are many places from which one can terminate a pregnancy all over Mathare-could be in the clinics on the streets and midwifes can also help one to abort.

The participants could only name one facility managed by an NGO where legal safe abortion services are said to be provided.

The women respondents also reported that the choice between safe or unsafe abortion services was dependent on one's social economic status. The cost for safe abortion was reported to be high by 59.1% of respondents. The reason why most women seeking abortion services resorted to unsafe abortions was that the price was negotiable and there was no consultation fee. Providers of unsafe abortion as reported included local clinics, quacks, and self/relative. Methods used to procure unsafe abortion included: Pills (not specific), home cleaning detergents, pipes, herbs or tea leaves that have been slightly diluted. A respondent reported a case as follows:

"We have a case in Mathare, of a doctor, who only specializes in abortion. A lady went to see him and was told the [pregnancy] was too big to be [terminated] using pills therefore; the doctor inserted a pipe inside her. He said since it takes a while she should go home and the [pregnancy] will eventually come out after a while when she tries to remove [the pipe]. The lady forgot and stayed with the pipe for long hours, so the [foetus} died and resulted to the lady being in a lot of pain. A friend called me and told me what was happening. When I saw the woman I just went back to my house, took my gloves to be able to remove the pipe from inside her. When I was done, we noticed that the pipe was hard. We put the foetus in a polythene bag and threw it in the garbage for fear of being caught and arrested. We never reported the case; we helped the lady recover at home. Because of this I find [unsafe abortion] very risky.

Healthcare providers

Healthcare providers were assessed on knowledge of circumstances under which abortion is permitted under the Kenyan Constitution and correct knowledge on which providers were legally allowed to provide the services. Out of the 40 healthcare providers respondents, about 50% had the correct knowledge on circumstances under which abortion is permitted under the constitution and the providers legally allowed to provide the service.

3.3.2. Attitude and Social Support to Safe Abortion Services

Women of Reproductive Age (15-49years)

Women respondents were asked a series of questions assessing their attitude to safe abortion services and their perception of the social support they would have if they needed to access safe abortion services. Responses were captured as either disagree or agree and the percentages of those who disagreed or agreed are as shown in table 10 below.

Table 9: Women Responses on Attitude and Support for Safe Legal Abortion Service

Statement (number responding)	Agree %	Disagree %
Attitude		
If I had an unplanned pregnancy I would seek abortion services	55.3	40.1
I have never felt the need for safe abortion services	29.7	66.6
Only loose women use abortion services	18.2	79.3
Married women should not use abortion services	33.7	63.7
Safe abortion services are commonly available in Mathare Valley	67.1	21.6
If I needed abortion services, I would use facilities in Mathare Valley	63.1	30.8
Safe abortion services in Mathare Valley are too expensive	59.1	24.8
If my sister or daughter gets pregnant I would assist her to access safe abortion services	48.1	49.0
All abortion is evil even if pregnancy is a result of rape or incest	51.3	42.9
Social Support Perspective	47.3	46.4
I would never use safe abortion services without my partner's permission	47.3	45.8
My partner would support me in using safe abortion services	49.0	46.1
My friends would support me in using safe abortion services	29.1	67.4
My relatives would support me using safe abortion services	6.3	91.9
My church would support me using safe abortion services		

Key Message: *66.6% of respondents reported having felt a need for abortion services in the past.*

Overall, women had positive attitudes to abortion services with over 55.3% reporting they would seek abortion services if they had an unplanned pregnancy. The percentage of women who would seek abortion services if they had an unplanned pregnancy is higher than the percentage of women (47%) who knew they can access safe legal abortion services as reported above. This is an indication that women with unplanned pregnancies seeking abortion services would go for them whether legal or not. The study also found that 48.1% of women respondents would assist their sister or daughter to access safe abortion services if they got pregnant while another 51.3% reported that abortion was evil even if pregnancy is as a result of rape or incest.

Social support for safe abortion services was noted to be lower than 50% in all cases with support from the church lowest at only 6.3.

Women participating in the FGDs were also asked whether they would use safe abortion services, if made available in Mathare Valley, or elsewhere. Some responded with a straight no and said they would prefer carrying the pregnancy to term while others considered abortion as killing a fetus. There were those who recommended complete legalization of abortion and also mentioned they would terminate a pregnancy if advised by a doctor, they had many children, were in bad financial status and for young unmarried women, in case of unsupportive parents.

Sixty seven percent (67%) of interviewed women reported that safe abortion services are commonly available in Mathare Valley as depicted in table 9 above. However, FGD participants reported that abortion services were offered in many facilities but were mainly unsafe. Only one health facility managed by an NGO was reported to be providing safe abortion services.

Therefore, caution needs to be exercised when interpreting the finding that 67.1% of women respondents reported that safe abortion services were commonly available in Mathare Valley. This is because; it is likely that they meant abortion services both safe and unsafe and not safe abortion per se.

Health Care Service Provider

Responses of health care service provider attitudes to safe abortion service provision are depicted in table 11 below. Of the forty (40) health care providers interviewed, 67.5% and 65% considered access a citizen's right and the service a critical component of SRH respectively. While about 30% of service providers interviewed reported having been trained in provision of safe abortion in the two (2) year period prior to the time of the study, only 20% and 25% believed they had adequate capacity to offer safe abortion services and ready to provide the service in their premises respectively. Capacity to provide safe abortion services as reported by the service providers interviewed was however negated by, information elicited through the observation checklist which showed that only 18% had evidence of comprehensive abortion service provision training and only about 5.3% had serviceable MVA kits while 23.6% had Misoprostol. Assuming that those who had serviceable MVA kits had also been trained, one can therefore conclude only 5.3% had capacity to provide safe abortion services. Interestingly, 67.5% indicated that they respected their colleagues who were willing and able to provide safe abortion services.

Table 10: Provider Attitude to Safe Legal Abortion Services

Statement (N=40)	Agree %	Disagree %
Have adequate capacity to provide safe abortion services in my clinic or premises*	20.0	80.0
Access to safe abortion services is a citizen's right	67.5	32.5
Safe abortion services is a critical component of SRH services	65.0	35.0
Ready to provide safe legal abortion services	25.0	75.0
Respect my colleagues who are willing and able to provide safe abortion services	67.5	32.5

Key Message: *While 65% of providers recognized that safe abortion services are a critical component of SRH services only 20% reported that they had adequate capacity to provide the services in their clinics or premises and 25% felt ready to provide safe abortion services.*

3.3.3. Uptake of Safe Abortion Services

Women of Reproductive Age (15-49 years)

Only 22.4% of women respondents reported that they had ever used safe abortion services in Mathare or elsewhere. Of those who reported ever using safe abortion services, 12.7% and 11% said they had very bad satisfactory experience respectively while 13% said they would use the services again. 63.1% of women respondents reported that if they need safe abortion services

they would use facilities in Mathare Valley. However, 59.1% reported that safe abortion services are too expensive in Mathare Valley implying cost could hamper service uptake.

Information on uptake of safe abortion services was also elicited from women participating in FGDs. Most women gave experiences of other women rather than self as reported under the section on knowledge of safe abortion services. Most said they would not terminate a pregnancy unless under certain circumstances such as, if they had many children and financially constrained or in case of young unmarried women, unsupportive parents. This not withstanding; FGD participants reported that abortion would not be necessary if women used contraceptives to avoid unplanned pregnancies which they said were cheaper and safer than abortions. A respondent said:

> *"It's better to use family planning methods and the government should make them free and available to all people. This will reduce unwanted pregnancies and thus reduce cases of abortion and deaths due to use of unsafe methods"*

Contraception as a means of preventing unwanted pregnancies which may result in abortion was re-emphasized by a participant who responding to whether women would opt to terminate a pregnancy or use the family planning methods if government made abortion safe, said:

> *"I think they would still use contraceptives because it is cheaper and safer other than getting an abortion. Knowledge here is key and instead of getting pregnant and aborting I think one should just utilise these methods"*

Health Care Service Poviders

Information on uptake of safe abortion services was also elicited from the service providers. Out of 40 service providers interviewed, only 17.5% reported that they were providing safe abortion in their premises. These findings confirmed responses from FGD women participants who reported that most places in Mathare Valley provide unsafe abortion. Probed on how they can be assisted to improve access to safe abortion services, 42.5% said through training, provision of equipments, supplies and support in upgrading the health facilities.

3.3.4. Barriers to Provision of and Access to Quality Safe Abortion Services in Mathare Valley

- **Fear of litigation:-** Women respondents in FGDs reported that because of fear of being arrested for procuring abortion services, they may prefer to seek services from quacks. A respondent said:

  "Some fear they would be arrested because of their actions, therefore to avoid this they would go to private hospitals or to other non -qualified people"

- **Complications:-** Complications that may arise as a result of procuring abortion services was cited as one of the barriers to seek abortion services. Infertility and death were mentioned as some of the complications that could follow as a result of unsafe abortion. A respondent gave an example as follows:

"A friend of mine got pregnant after clearing college and she died because of unsafe abortion. Her mother gave her pills to terminate the pregnancy and she later fell ill for like two months. When we saw her she was very weak and when taken to hospital, the doctors said she had terminated a pregnancy and because she had not been cleaned, her uterus had rotten. She later died and it's her mother who had done it {unsafe abortion}."

- **Affordability or Cost of safe abortion services:-** Most respondents reported that safe abortion services are provided in only one health facility and are expensive. The cost ranges from KES 1,500 in local clinics to KES 8,000 in hospitals. A respondent had this to say about cost of abortion:

  "It's expensive but also depends on where one goes, could be safe or unsafe. As such many women seeking abortion services prefer local clinics including quacks thus endangering their lives".

- **Lack of Social Support and Stigma:-** Perceived social support for women seeking abortion services elicited through the questionnaire survey was below 50% in all cases as depicted in table 9 above. Church support was lowest at 6.3%. Stigma is a result of low social support hence women seeking abortion services would rather go to health facilities not within Mathare Valley to hide the fact that they had procured an abortion. Younger women in school and fully dependent on their parents reported that, if they became pregnant, they would seek unsafe abortion services. This is because safe abortion was considered expensive and for fear of rejection by their parents, they would not ask them for money to go for safe abortion services.

- **Lack of awareness on the legal and policy framework on abortion:-** Most of the FGD respondents were not aware of the provisions in the Kenya Constitution that relate to access to safe legal abortion. Most of them said abortion was 'illegal' regardless of circumstance. Those who said they could terminate a pregnancy if they had unplanned pregnancy based their reasons on their financial status and for young unmarried women, fear of their unsupportive parents.

- **Healthcare outlet/Provider inadequate capacity:-** Findings from both service provider questionnaire survey and the observation checklist have elicited capacity gaps among the services providers and the healthcare outlets to provide safe abortion services. Inadequate training in provision of safe abortion, inadequate space and lack of equipment and supplies were cited by service providers and elicited through the observation checklist as barriers to access of safe abortion services. From the women's perspective, an FGD participant reported that:

  "Yes, we have places where abortion is [performed] though unsafe. This is because; we don't have experts to perform these operations".

This ties with the findings elicited above from the service providers and observation of the facilities.

4.0 DISCUSSION

4.1. Contraception

The study found that a high percentage of women of reproductive age (80.9%) were aware that contraceptives can be used either to limit the family size or for child spacing. FGD participants also stated that contraceptives are used to avoid pregnancies and to space children. Similar findings were recorded in a study in Kenyan urban slums [18]. This finding correlates with the finding that 67.7% of the women of reproductive age interviewed were using a method of family planning (modern and natural) and can be concluded that high levels of knowledge have translated to use of contraception.

Women of reproductive age interviewed in this study also recognize the need for contraception to reduce sexually transmitted infections (STIs) including HIV. Condoms were singled out as one method that protect against pregnancy and STI by 79.3% of women respondents while FGD participants stated that contraception is used in order to reduce chances of bearing a child with HIV for those mothers living with HIV; a strategy referred to as prong two in prevention of mother to child transmission (PMTCT). This finding indicates a community already aware of contraception not only as a method of preventing pregnancies but also for prevention of STIs/HIV. This presents an opportunity in Mathare Valley to promote condom as a dual method and to encourage women living with HIV to use contraception to avoid unwanted pregnancies. Efforts should be made to institute information and education programs at both health facility and community level on dual protection of condoms and the importance of contraception in PMTCT to reach all women of reproductive age in Mathare Valley.

There is a huge knowledge gap on whether sexually active minors can be provided with contraception services without parental knowledge with 47.8% reporting that they shouldn't be provided with the service or don't know compared to 49.9% who said they should be provided with the services. Myths and misconceptions e.g. the girls in their teens fertility will be affected by the contraceptives especially the use of the injectable method making it difficult for them to have children later in life or with the use of contraceptives they will become promiscuous were the main reasons as to why the sexually active minors should not be provided with contraceptive services. However, FGD participants stated that all sexually active women regardless of age should use contraceptives. This notwithstanding the knowledge gap, the myths and misconception such as family planning methods are for those who have given birth, for married women over 25 years and only for prostitutes elicited through the questionnaire survey and FGDs respectively needs to be addressed. It calls for dissemination of national policies and guidelines on reproductive health including adolescent reproductive health and development policy. It also calls for development of programs that will effectively reach all women and other members of the community with correct information pertaining to provision of RH services to all including adolescents at both community and health facility level.

A knowledge gap on whether the sexually active minors can be provided with contraceptives was also identified among the service providers. They should therefore be targeted with training and dissemination of policies on adolescent reproductive health thus enhancing their capacity to provide quality youth friendly reproductive health to adolescents including contraceptive services.

On attitude and social support on use of contraception, most women respondents had very positive attitude and had social support. The exception was support from the church where only 19.9 % of respondents reported that the church would support them. Parental support for teenagers and in some instances spousal support, was also reported to be lacking or wanting. Partner support or approval has been documented as critical determinant of uptake and consistent use of contraception. Dissemination of reproductive health policies, guidelines and the Constitutional provisions on right to health including reproductive health should address some of the gaps identified. In addition, men will need to be targeted with programs geared towards enlisting their support for contraception.

As for the service providers' attitude to contraceptive services, the finding of the study was unique. While over 60% of them stated they had a capacity to provide quality contraceptives services; less than 10% were ready to provide. This could be due to the fact that some of the healthcare outlets targeted by the study were drug stores which perhaps lack the required standard for them to be accredited as service delivery points.

Barriers to contraceptive uptake as elicited from the respondents included: fear of side effects, cultural and religious beliefs, affordability, contraceptives stock outs, male partner support, and healthcare outlet/provide. These barriers are structural and systemic and need to be addressed through health systems strengthening. This can be achieved through ensuring FP commodity security to avoid stock outs, building the capacity of the healthcare providers in counseling to enable them address fears of side effects. This should include making available required equipment and supplies for provision of quality contraceptive services. Religious leaders and other community leaders should be sensitization on the importance of contraceptives. In addition there is need to design male targeted programs to foster male involvement in family planning.

4.2. Safe Abortion Services

The Bill of Rights in chapter four of the Kenyan Constitution states *'that abortion is not permitted unless, in the opinion of a trained health professional, there is need for emergency treatment, or the life or health of the mother is in danger, or if permitted by any other written law'*. Less than 50% of women respondents knew abortion services were legal whereas most of the FGD women respondents said abortion is illegal no matter the circumstances. As for the service providers 50% of respondents had the correct knowledge on circumstances under which abortion is permitted under the Constitution and the providers legally allowed to provide the service. At the time of undertaking this study, it was two years since the promulgation and this finding is an indication of slow dissemination and implementation of the Constitution thus denying women the right to access safe legal abortion services when necessary. This calls for formulation of policies to operationalize the Constitutional abortion provisions and awareness creation among the women of reproductive age on the same as stipulated in the said Constitution.

There are many places in Mathare Valley where one can obtain abortion services but as reported by the respondents, most are unsafe. Despite the law on abortion, hardly any health facilities are providing safe legal abortions services and only one facility managed by an NGO was reported as a provider of safe abortion services. This finding was not surprising because there has not been a conducive environment for provision of abortion services and clearly little or nothing has changed since the promulgation of the Kenya constitution in 2010.

Safe abortion services were reported to be expensive in Mathare valley at about a high of KES 8,000 and considering that most households reported an average monthly income of less than KES 10,000 it is indeed unaffordable. As a result, many women seeking abortion services end up in places that provide unsafe abortion services. This is because they are many and provide the service at a cost as low as KES 1,500 but could also result in complications including death. To address the access gap the government could develop a criteria for accrediting health facilities as providers of safe legal abortion at a minimal fee.

Women respondents generally had positive attitudes to abortion services. For example, 55.3% reported they would seek abortion services if they had an unplanned pregnancy which was higher than the percentage (47%) who said they knew they can access legal safe abortion. The implication demonstrated by this discrepancy is that women with unplanned pregnancies seeking abortion services would go for them whether legal or not. Policy makers need to take note that abortion services continue to be sought and provided albeit unsafely. Action in regard to policies that will increase access to safe abortion services is needed to curb the complications including death that result from unsafe abortion.

Stigma associated with abortion is high. Social support for safe abortion services as reported by women respondents was in all cases lower than 50% with support from the church lowest at only 6.3 %. FGD respondents said they would not use abortion services with some stating that abortion is 'killing a baby'. No woman would like to be labelled a 'murderer' and as a result secrecy surrounds seeking abortion services and only comes to the fore when there are complications. Community mobilization to support safe legal abortion services is required and there is also a need for awareness creation on the abortion related provisions in the Kenya Constitution

In regard to attitudes to safe abortion service provision only 20% of the healthcare providers believed they had adequate capacity to offer safe abortion services in their premises. In spite of this, findings elicited from the observation checklist showed 18% had evidence of comprehensive abortion service provision training and only about 5.3% had serviceable MVA kits. Assuming that those who had serviceable MVA kits had also been trained, one can therefore conclude that only 5.3% had capacity to provide safe abortion services. This notwithstanding, the fact that over 60% of service providers expressed positive attitudes to safe abortion services, provides an opportunity to improve their capacity to provide safe legal abortion services through training, provision of equipment, supplies and support in upgrading the facilities. For this to be effected, there is need to sensitize policy makers on the need to ensure there is an enabling environment for provision of safe legal abortion services.

About 68% of service providers' respondents also indicated that they respected their colleagues who were willing and able to provide safe legal abortion services. This self-reported respect for colleagues is a manifestation of a non-judgmental attitude implying that healthcare providers not in a position to provide safe abortion services are likely to refer clients seeking for abortion services to their colleagues providing the service.

In regard to uptake of safe abortion services, the study found that 22.4% of women respondents had previously used safe abortion services in Mathare valley or elsewhere with 13% of them reporting they would use the services again. This finding is an indication for need to improve access to safe abortion services.

Cost for safe abortion services and bad experiences after accessing abortion services could hamper uptake of safe abortion services. Because of the perceived high cost of safe abortion, women seek unsafe abortion services that could result in life threatening complications. Women who knew a woman who had a bad experience said they would not terminate a pregnancy since it could jeopardize their health or life. This however does not mean that women needing abortion services will not seek them and it is therefore critical to ensure abortion services are provided by qualified health professional as stipulated in the Kenya constitution. This notwithstanding; a FGD participant stated that:

> *"Abortion would not be necessary if women used contraceptives to avoid unplanned pregnancies which they said were cheaper and safer than abortion".*

This holds true for unplanned pregnancies that could result in abortion which often times are as a consequence of low uptake of effective modern contraception [11]

From the healthcare providers' aspect, only 17.5% reported providing safe abortion in their premises confirming responses from FGD women participants who reported that most facilities in Mathare Valley provide unsafe abortion. Reasons for not providing safe abortion services included lack of training, lack of equipment and supplies, lack of adequate space and low level of knowledge on the legal and policy framework on abortion. It is therefore necessary to target the providers for training, dissemination of relevant policies and guidelines, link them to partners who could support provision of equipment and facility upgrading. Policy makers should also be targeted for formulation of policies to enable provision of safe legal abortion services not only in Mathare Valley but the whole country.

Barriers to safe abortion services uptake as elicited from the respondents included: fear of litigation, complications, affordability or cost of safe abortion services, lack of social support or stigma, lack of awareness on legal framework on abortion and health care providers inadequate capacity. These barriers just like the barriers for contraception use are structural and systemic and need to be addressed through health systems strengthening. This can be achieved through building the capacity of the healthcare providers in provision of quality legal safe abortion including availing required equipment and supplies for provision of quality safe abortion service. Creating awareness at both facility and community level on the existing policies and guidelines on provision of safe abortion services need to be supported to improve access and address issues of stigma. Support to improve space for service provision should also be provided. Religious leaders and other community leaders should be sensitization on the importance of safe legal abortion services to garner their support for women who need the services. Where no policies and guidelines exist they need to be developed to facilitate provision of safe abortion services as stipulated in the constitution of Kenya.

5.0 CONCLUSIONS

5.1. Contraception

There is high level of knowledge on contraception that has translated to high current use of contraceptives. However, unmet need for contraception still exists among women of reproductive age in Mathare Valley that needs to be addressed. Contraception myths and misconceptions still existed in general but there are also those that were specific to sexually active adolescents calling for information and education programs; including proper counselling on side effects to avoid method-use discontinuation.

Social support for use of contraceptives was high with the exemption of the church. However, it is important to note that women respondents said they would use contraceptives with or without spousal or partner support calling for male involvement in matters of contraception to prevent potential intimate partner gender based violence.

5. 2. Safe Abortion

There is need for safe legal abortion services in Mathare Valley as elicited from the respondents. The cost of safe abortion services is high with only one facility managed by an NGO providing safe abortion services.

Knowledge levels of the legal framework for provision of safe legal abortion services was found to be low calling for awareness creation among residents of Mathare Valley as well as formulation and dissemination of policies and guidelines relevant to provision of safe abortion services.

While attitude to abortion by the women respondents was good, perceived social support was generally low signifying the stigma that is associated with abortion. To address the issues of stigma, community mobilization to render support to those that require safe legal abortion services need to be undertaken.

Capacity to provide safe abortion services among the service providers and the facilities was found to be inadequate. This calls for capacity building for service providers and institutional strengthening in addition to ensuring an enabling environment for provision of safe abortion services.

6.0 RECOMMENDATIONS

Recommendations are organized in three broad categories: demand side, supply sides and at policy level.

6.1. Demand Side

1. County/sub-county health officials need to partner with community structures and stakeholders to raise awareness at the community level on:
    a. The legal and policy framework for provision of contraceptive and safe legal abortion services.
    b. Availability of quality contraceptive and safe legal abortion services within and outside Mathare Valley.
    c. The right to adequate information on all methods of contraception and safe legal abortion procedure including relevant counselling for informed decision making.
    d. Advocating for provision of quality safe legal abortion services within the law for those who need them
2. Efforts should be made to enhance social support for improved uptake and continued use of contraceptives and; support for women in need of safe legal abortion services. Programs geared towards male involvement in matters of contraception and safe legal abortion would enhance support for women in need of the services.

6.2. Supply Side

Supply side needs to be strengthened as follows:

a. Capacity building of the services providers in public and private facilities on CAC, contraceptive and youth friendly services is critical for expansion and provision of quality SRH services. The capacity building should include sessions on the legal framework for provision of such services and mentorship on technical skills should be instituted. Support supervision should also be undertaken to both public and private health facilities providing contraceptives, safe abortion and youth friendly SRH services to ensure adherence to service provision guidelines and enhanced public private partnership (PPP)

b. Service providers should be sensitized on relevant family planning, safe abortion and youth friendly SRH policies and guidelines through disseminations or other forums.

c. Drug stores workers should be targeted for training on provision of quality SRH services relevant for level of care and referral for services not available.

6.3. Policy Level

a. There is need to develop and disseminate policies and guidelines for provision of safe abortion services.

b. The role of drug stores workers and pharmacies in providing contraceptive and safe legal abortion services such as in dispensing abortificients including Misoprostol needs to be examined and streamlined.

c. Mechanisms for supporting health providers to obtain essential equipment and supplies for the provision of long term contraceptives such as IUCD and implants and safe legal abortion services should be identified and anchored in policy.

d. KMA in collaboration with other professional associations should ensure dissemination to their members of relevant MOH policies, standards, guideline on contraceptive and safe legal abortion services.

e. KMA should endeavour to participate in national and county level mechanisms that provide technical support to MOH and County Health Teams in formulating health related policies including those that guide provision of contraceptive and safe legal abortion services.

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Contacts:
Kenya Medical Association
4th Floor KMA Centre, Mara Road, Upper-Hill, Nairobi.
P.O Box 48502-00100, Nairobi, Kenya
Tel: +254 722 275 695
Email: nec@kma.co.ke | Website: www.kma.co.ke