QUALITY OF LIFE AND PREVALENCE OF INTIMATE PARTNER VIOLENCE IN WOMEN WITH INFERTILITY VERSUS WELL WOMEN AT KENYATTA NATIONAL HOSPITAL: A COMPARATIVE CROSS-SECTIONAL STUDY 2020

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2022

DECLARATION

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

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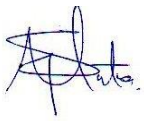
Signature:  **Date: 10/07/2022**

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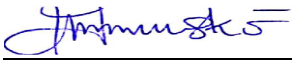
Signature:  **Date:** 12/07/2022

CERTIFICATE OF AUTHENTICITY

This thesis is the original work of Dr. Sarah Mwikali Mutua under the guidance of Dr. Anne Kihara, Dr. Wanyoike Gichuhi, and Dr. George Gwako, and has not been presented in any other university for award of a degree or diploma. All referenced works have been cited.

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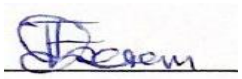
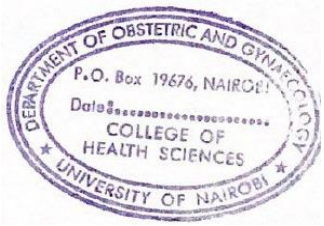
Signature:  **Date: 12/07/2022**



DEDICATION

I dedicate this book to my family and faculty for the emotional support accorded during its conception.

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I would like to acknowledge my supervisors and staff of the Department of Obstetrics and Gynecology of the University of Nairobi, and my colleagues. I would also like to acknowledge my family and colleagues for the support accorded during development of this thesis.

LIST OF ABBREVIATIONS

HIV: Human Immunodeficiency Virus

IPV: Intimate Partner Violence

KNH: Kenyatta National Hospital

MOH: Ministry of Health

WHO: World Health Organization

QOL: Quality of Life

SPSS: Statistical Package for Social Scientists

OPERATIONAL DEFINITIONS

Infertility: a disease of the male or female reproductive system depicting lack of achievement of a successful pregnancy following regular unprotected sexual intercourse for 12 months (1).

Primary infertility: inability of a woman to ever bear a child or carry a pregnancy to live birth (1).

Secondary infertility: inability of a woman to bear a child or inability to carry a pregnancy to live birth following a previous pregnancy or live delivery (1).

Intimate Partner Violence: any behavior within an intimate relationship that causes physical, psychological, or sexual harm to those in the relationship.

Quality of Life: Individuals' perceptions of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards, and concerns (2).

Well Woman: A healthy female not suffering from chronic illness who attends a health service clinic for preventive monitoring, health education and advice.

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ABSTRACT

Background: The prevalence of infertility in Kenya is one of the highest in Africa; it is an important aspect of reproductive health. At Kenyatta National Hospital (KNH), over 30% of gynecological consultations are related to infertility, which attests to its burden in the country. However, the effect of infertility on the quality of life (QoL) of women and the prevalence of intimate partner violence (IPV) are poorly documented.

Objective: To evaluate the QoL and prevalence of IPV among women with infertility versus well women attending clinic at KNH.

Methods: A comparative cross sectional study of women seeking treatment for infertility and well women attending clinic at KNH was conducted in 2020. One hundred and twenty two (122) infertile and 122 well women were recruited from infertility, gynecological outpatient clinics, and well woman clinic (clinic 66) and a structured questionnaire was used to collect primary data. The questionnaire was in three sections. The first recorded the socio demographic characteristics of infertile and well women while the second and third section consisted of a World Health Organization Quality of Life Instrument, Short Form (WHOQOL-BREF) questionnaire for evaluating the quality of life and WAST Screen for Intimate Partner Violence. Questionnaires were administered via telephone interviews, in a secluded area of KNH, scored following the directions of World Health Organization and analyzed using statistical package for social scientists (SPSS) version 24. Summary statistics of independent variables were computed and visualized in tables. Mann-Whitney test was used to compare QoL scores and Chi-square test to compare prevalence of intimate partner violence. P value <0.05 was significant.

Results: Two hundred and forty four patients (50% infertile and 50% well women) qualified. Infertile women were older (35.02±6.71 years) than well women (32.90±5.94 years) had fewer viable pregnancies (mean=0.58±0.80) compared to well women (mean=2.10±.94), P=0.000, and had significantly more miscarriages (mean=0.66±1.08) than well women (mean=0.12±0.60) (P=0.000). The differences in education level, religion, employment, employment of spouses, the main financier, and the monthly income of infertile compared to well women were not statistically significant.. The mean quality of life scores for infertile women compared to well women were statistically significantly lower in physical domain (10.69±3.21 versus 16.18±4.02), psychological domain (8.61±3.85 versus 15.67±4.54), and social domain (8.65±4.11 versus 15.53±4.59). The mean scores for the environmental domain was lower among infertile women (9.41±3.43) compared to well women (11.28±5.02) but the difference was not statistically significant (P<0.11). The prevalence of intimate partner violence was 27.5%, and 3.516 fold (95% CI=1.94-6.30) statistically significantly higher among infertile women compared to well women (P<0.01).

Conclusion: Infertility was associated with lower scores for physical, psychological and social quality of life domain scores. Intimate partner violence was predominant in infertile women.

CHAPTER ONE

1 INTRODUCTION

1.1 Background

Healthy couples engaging in unprotected sex with the intention of having a baby have an 85-90% chance of getting pregnant within a year (12 months) of cohabitation (3) and over 90% by the second year (24 months) (4). However, infertility, which the World Health Organization (WHO) has defined as the inability of a couple to conceive within a year of engaging in unprotected sex, afflicts over 48 million men and women of reproductive age. Globally, the prevalence of infertility varies widely between countries in the developed world (3.5-16.7%) and the developing world (5.8-44%) because of population-specific variances such as the relationship status of couples, socio-economic level, and the health-seeking behavior of at-risk men and women (4–6). In Britain, Datta *et al*. (2016) reported a prevalence of 12.5% with its occurrence being highest in women than men, and more so in elderly women. In Iran, Namdar and others (2017) reported a prevalence of 15%, while the prevalence in China and Africa are among the highest at 13.6-25% (3,9). The data indicates that the prevalence of infertility remains high globally and should be treated as a public health problem for women and men.

The prevalence of infertility in Sub Saharan Africa (SSA) has been reported to be higher than in most regions. In a review of 1264 gynaecological cases by Panti and Sununu (10), the prevalence of infertility in Nigeria was reported to be 15.7%, which was significantly higher than global estimates. In Ouagadougou, Burkina Faso, infertility is estimated to afflict 9.3% of men and 10.4% of women (11), while the combined clinical infertility estimate of the North African region is estimated to be 17.2% (12), with the incidence of primary and secondary infertility reported to vary widely between the North and South of Africa. In Nigeria, primary infertility constitutes 32.8% of cases and secondary infertility 67.2% (10). However, in Central African Republic and Togo, secondary infertility for women age range 20-44 is about 23.0% and 5% (13). The high poverty rate in Africa has been cited as key barrier for uptake of Assisted Reproductive Technologies (ART) such as In vitro Fertilization (IVF), which has been reported to improve clinical pregnancy rates by 50.74% (14) . Women also discontinue treatment due to lack of finances and seek the help of traditional healers who exacerbate their fertility problems.

Infertility in Kenya is a long-standing gynaecological issue that influences the lives of couples negatively. In 1989, a review of the Demographic Health Survey found a prevalence of 2.6%. In 1999, the prevalence was 2.8%. The prevalence has increased ever since, with two in 10 women of a reproductive age found to be infertile in 2018 (15). According to Oketch, illegal abortions procured under unsafe conditions interfere with reproductive organs of girls making conception harder once they are of a reproductive age (15). Even though recent estimates of the prevalence and pattern of infertility in Kenya are lacking, it is estimated that around 30% of gynaecological consultations in referral hospitals such as a KNH are related to infertility, while 27% provincial hospital, 15% district hospital, 4% health centre and 2% dispensary consultations are due to infertility (16). This ranks it high among the major public health issues that should addressed.

The negative impact that infertility has on the Quality of Life (QoL) of women is recognized worldwide. Defined as "an individuals' perception of their position in life in the context of the culture, value systems, goals, expectations, standards, and concerns," the QoL defines how salient matters such as infertility influence the psychological, physical, and social health of men and women and their beliefs (17). In China (18), Iran (19), and Spain (20), the symptoms of anxiety have been described in 83.8%, 86.6%, and 67% of women with infertility. In Africans, children not only secure conjugal ties of couples but also their social status and security and emotional needs (21). Therefore, infertility has negative social repercussions such as stigma and or exclusion (22,23). The deleterious effects that infertility has on the sexual health and the family unit in general has also been demonstrated, especially among women diagnosed with primary infertility (24,25). Unfortunately, even though infertility in Kenya is estimated to be among the highest in Africa (30%), few studies have established the "true" effect of infertility on the QoL of women. Such information is vital for the development and implementation of health policies that can improve the QoL and therefore well-being of such at-risk groups.

Intimate Partner Violence (IPV) – a major human rights violation of men and women – is a major public health problem and human rights violation worldwide, with pooled estimates of 81 countries indicating a prevalence of 30%. Sub Saharan Africa (SAA) contributes the highest to the global prevalence of IPV with the prevalence in Kenya estimated to be around 47% (26). Literature portrays IPV as a complex phenomenon that emanates from several socio-cultural

factors. Triggers such as low economic status and a low level of education have been widely cited (27) . Drug and substance abuse and relationship triggers such as transgressing gender norms, infidelity, and childlessness have also been cited (28). In Nigeria, for instance, the incidence of IPV was higher among infertile than fertile women (62.5% versus 54.2%), with emotional violence identified as the commonest subclass (29). In another prevalence study, 74.3% of women were victims of partner violence (30). In Nigeria, culprits of IPV are often female in-laws (32.0%) and husbands (48.5%) (31). Data from other African countries is limited. In Kenya, the extent to which infertility influences IPV and the link between IPV QoL of infertile couples is poorly described in Kenya.

CHAPTER TWO

2 LITERATURE REVIEW

2.1 Burden of infertility

2.1.1 Prevalence

Infertility is a critical element of health, which has been widely studied. Literature estimates that around 48.5 million coupes are infertile (13) with the prevalence estimates of infertility found to vary marginally in populations with varying demographics such as age or marital status and the disparities in socio economics of different populations. In a population survey of 15,162, 16-74 year old women in the United Kingdom (UK) between 2010 and 2012, Datta et al (7) found the prevalence of infertility to be approximately 12.5% (1 in 7 women) through computer assisted self-interviews and personal interview. A few socio economic predictors for infertility were also identified with a high socio economic status, old age, and cohabitation with partners linked with a higher incidence of infertility. Similar results have been reported in a population-based cross-sectional studies of women actively seeking pregnancy, with the prevalence of infertility found to be 13.6-15.5% (3,9). Estimates of infertility are slightly higher in Africa 15.7% (10) with the female and male dimensions linked with 39.6% and 28.2% of cases over a median duration of 5±4 years (32). In such settings, infertility has adverse outcomes that influence quality of life.
A survey done by Murage et al. in 2011 found that gynecological consultations for subfertility was at 26.1%, with tubal factor and male factor contributing 50% and 15% respectively (33).

2.1.2 Psychological Effects

Infertility has many negative effects on couples with psychological deficits such as anxiety and depression found to be pronounced in infertile men and women. While evaluating the effect of infertility on the relationship of spouses in a specialist institution in Ghana, Nyarko and Amu (34), found emotional aspects such as frustration to be pronounced when an attitude of support was lacking. Moreover, even though infertility did not influence suicidal thoughts significantly, infertility was attached to psychological trauma, which called for regular counseling of infertile couples. In 2014, Hasanpoor-Azghdy *et al* (35) reported similar results in a qualitative content analysis of 25 women with secondary or primary infertility. Psychological turmoil reduced self-

esteem, while emotional affective reactions such as anxiety, fear, and depression were high and detrimental on the well-being of infertile Iranian women. Thus, instead of treating infertility as a purely biomedical issue, Hasanpoor-Azghdy and others recommended an evaluation of the social and mental-emotional status of infertile couples, as they indicate quality of life (QoL).

2.1.3 Conjugal Effects

The effect that infertility has on marital relationships has been described. The dissociation of sex with pleasure, for instance, not only worsens marital problems but has also been reported to contribute to gestational failure indirectly. In Ghana, infertility has been reported to affect the sexual life of couples negatively with infertile couples engaging in sex solely for reproduction and not for mutual satisfaction, or finding sex unfulfilling (34). The feelings are pronounced in women than men and contribute directly and or indirectly to quarrels and therefore instability of families (36). Thus, while managing infertility, teams that counsel patients must have a broad knowledge of alterations that compromise marital relationships to improve care and outcomes.

2.1.4 Social Effects

Multivariate modelling has revealed that infertility affects many aspects of women, key among them their social well-being. Like neural stressors such as anxiety and depression that are pronounced among infertile women, literature suggests a decrease in the social well-being of women. In a case control study by Bakhtiyar *et al* (37) on the effects of infertility on Women's quality of life the odds of having poor quality of life was 1.487 among infertile women after adjusting for confounding. The elevated stress and anxiety levels that such women struggle with not only lead to self-imposed isolation/exclusion, but also social alienation from the community or their circle of friends or relatives (38). However, when access to social support is optimal, the social well-being of infertile women is comparable to those of fertile women. In a comparative study on the QOL of fertile and infertile women, Paranian *et al* (39) found no significant difference in the social domain scores, with factors such as acceptance of infertility and access to social support thought to improve outcomes. In regions where women have access to social services and have strong familial and personal support systems, they might have a comparable score for social well-being and the overall quality of life to that or fertile women (40).

2.2 Intimate Partner Violence

Intimate Partner Violence (IPV) has numerous health and emotional consequences in couples. Originally thought stem from inequalities between intimate male and female partners, several predictors has been identified; with couple infertility attracting global debate. In Uganda, multivariate and bivariate analysis found a strong correlation between the sexual, environment, physical, and emotional forms of IPV and infertility, especially in the case of primary infertility. According to Mawusi *et al*, children secure the conjugal ties of most couples in Africa; the lack of one therefore compromises the emotional status of women and is a recipe for violence (21). Social repercussions such as exclusion weaken familial ties further, especially in childless marriages (22,23). However, Solanke and others (41) reported contrary results in a retrospective review of the 2013 and 2008 Nigeria Demographic and Health Surveys (NDHS). The likelihood of being a victim of spousal violence was lower among infertile (or childless) women. In addition, the causes of IPV cut across community, family, and individual characteristics, but did not influence the likelihood of having a violent partner. Thus, to develop sound policies for stemming IPV, such population-specific data is necessary, but unfortunately, limited in Kenya.

2.3 Infertility and Quality of Life

Infertility is considered a "stain" that affects various aspects of the quality of life of women. In a case-control research study by Bakhtiyar et al. (37), multivariate modeling shown that infertility negatively affects the quality of heath of women. In the study, women had significantly lower scores for environmental, physical, mental QoL subscales, but scored higher on the social factor than fertile women. Contradictory findings were reported by Namdar *et al.* (8) in a population of 146 infertile women in Southern Iran. Even though negative specific scores were reported for all sub-scales of QoL (up to 47.9% for psychology), total scores for QoL subscales were positive, and correlated with the GHQ anxiety scores and the economic status of women. Gender difference in QoL has been demonstrated with infertility favoring men. In an analytical descriptive study of 324 infertile couples by Marizeh *et al.* (42), men had a high and statistically significant general QoL score than women, but were influenced by the duration of treatment and educational status of participants. When subscales of QoL were analyzed individually, only the mental and physical

aspects of QoL were higher in men than in women; the environmental and the social subscales of QoL were comparable by gender. Such data is limited in Kenya.

2.4 Conceptual Framework

2.4.1 Narrative

From our review of literature, it was evident that several demographic characteristics predispose women to infertility, IPV, and low quality of life. Adults, for instance, are more likely to be infertile than youths, especially if they are married, while women with a high education level and socio economic status are less likely to be victim of IPV. From our review of literature, it has also been hypothesized that infertility seems to influence the incidence of IPV and quality of infertile women, even though data from Africa – specifically Kenya - is limited. Infertility has been reported to increase the risk of psychological deficits such as anxiety and depression, which can lead to self-isolation and poor health in the end. The risk of developing physical problems is also pronounced when women are infertile than fertile, even though it is unclear if in infertility is a predictor for IPV and quality of life. By controlling the influence of such covariates and confounders on the incidence of IPV and quality of life, we were be able to elucidate the true effect of infertility on IPV and QoL, which can influence policy formulation.

2.4.2 Schematic

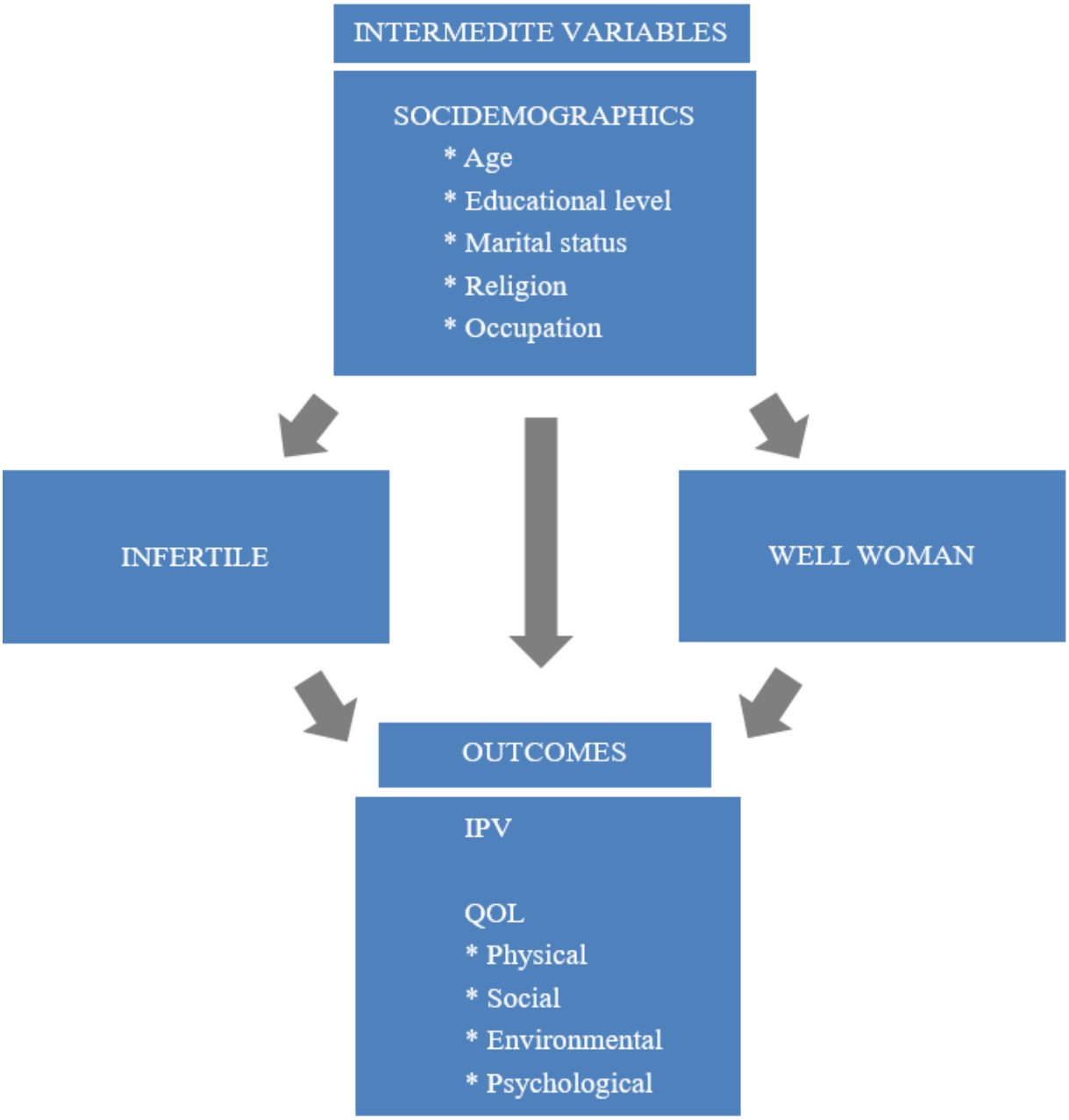

Figure 1. Conceptual framework showing the relationship between infertility, IPV, and QOL of infertile women

2.5 Statement of the problem

Infertility is a public health issue in Kenya that merits scientific interest. Though physiological, physical, and social health complications have been reported in at risk groups, the situation in Kenya is poorly understood. The available data on infertility are from cross-sectional epidemiological studies on the causes and types of infertility (43) and the factors that influence the copping strategies of individuals with infertility (16). Most of such research studies are not only susceptible to selection bias, but have also failed to demonstrate the true effect of infertility on the QoL of Kenyan women in the context of their physical, psychological, social, and environmental health. Moreover, the impact of infertility on patients QoL and the prevalence of intimate partner violence (IPV) in infertile households is under-reported, even though it forms an important segment of public health, which has attracted a lot of attention all over the world.

2.6 Justification

Infertility afflicts 30% of Kenyans and is hypothesized to lower their social, physical, and psychological wellness, although formal scientific data is limited. The level to which infertility influences the quality of life of Kenyan women and exposure to intimate partner violence has not been evaluated, which limits proper management in centers of health. From the results of our study, the prevalence of IPV and its patterns among women with infertility and well women was established. Such information will be helpful in the development of support systems for women at risk of IPV and poor QoL and improve well-being. We also demonstrated the association between infertility, IPV, and QoL of Kenyan women – data that will be critical for public health planning by centers of health such as the Kenyatta National Hospital. Such data will also aid in the development of sensitization campaigns for at-risk women and their partners.

2.7 Research question

- How does the physical, psychological, social, and environmental QoL compare among women with infertility versus well women attending clinic at the Kenyatta National Hospital?

- How does the prevalence of IPV compare between women with infertility compared to well women attending clinic at the Kenyatta National Hospital?

2.8 Null hypothesis

- There is no difference in QoL and prevalence of IPV in women with infertility compared to well women.

2.9 Objectives

2.9.1 Broad Objective

- To determine the QoL and prevalence of IPV among women with infertility versus well women at KNH.

2.9.2 Specific Objective

- To describe socio-demographic characteristics of women with infertility compared to well women attending Infertility, Gynecological and Well woman clinic at Kenyatta National Hospital.
- To evaluate the physical, psychological, social, and environmental QoL in women with infertility versus well women attending clinic at Kenyatta National Hospital.
- To determine the prevalence of intimate partner violence in women with infertility compared to well women attending clinic at Kenyatta National Hospital.

CHAPTER THREE

3 METHODOLOGY

3.1 Study design

This was a hospital-based comparative cross sectional study on the Quality of life (QoL) and prevalence of Intimate Partner Violence (IPV) among women with infertility compared to well women in 2020 at KNH infertility, gynecological and well woman clinics.

3.2 Study site

The infertility clinic, gynecological outpatient clinics (GOPC), and the family planning/ well woman clinic (clinic 66) at the Kenyatta National Hospital (KNH) were the study sites. KNH is a referral hospital in Kenya, with a bed capacity of 1800. It is in the upper hill area of Nairobi - three kilometers from the city center, and serves as the main teaching hospital for the Kenya Medical Training College (KMTC) and the University of Nairobi (UoN) College of Health Sciences (CHS) (42). The infertility clinic is operational every Monday of the week and caters to 10-20 patients per week. The GOPC clinics are operational from Tuesday to Thursday and cater for approximately 60 patients per week while clinic 66 runs from Monday to Friday catering to approximately 80-100 patients every week. In total, the clinics cater to about 150- 200 women weekly and offer comprehensive medical services such as provision of contraceptives, diagnosis and management of infertility, maternal and child health care services, cancer screening services to name a few. The figures were obtained from the health information office of KNH along with the outpatient register books allocated in each of the mentioned clinics where all clients are recorded as they arrive for treatment or review. Registrars and consultant doctors are in charge of these clinics and are therefore responsible for day-to-day management of patients who are seeking reproductive health services at KNH.

3.3 Study population

Kenyan women of legal age of consent (18+ years) seeking sexual and or reproductive health (SRH) services at the infertility clinic, GOPC, and clinic 66 of KNH were targeted. In these

settings, about 600 women seek reproductive and health care services every month. Participants were drawn from this population once they satisfy the criteria for inclusion.

3.3.1 Inclusion criteria

a) Infertile women

- Of legal age of consent (18+ years old).
- Trying to conceive for the last year unsuccessfully despite regular unprotected coitus.

b) Well women

- Be of legal age of consent (18+ years old).

3.3.2 Exclusion criteria

a) Infertile women

- Suffering from any type of mental illness.
- Sickly with medical conditions such as Diabetes, HIV and Cardiac disease.

b) Well women

- Prior history of infertility.
- Currently on management for infertility.
- Suffering from any type of mental illness.
- Sickly with medical conditions such as Diabetes, HIV and Cardiac disease.

3.4 Sample size determination

The sample size was determined statistically using the formula by Rosnar (2011) (44) for two independent study groups with continuous outcomes (means). In Nigeria, a study by Aduloju et al. (2017) (45) reported the quality score for physical health as being 59.94±12.81 for fertile women and 64.54±16.06 for infertile women. We used these results as our study parameters to calculate a sample size that reflects a power 80% and an alpha of 5% using the ClinCalc sample size calculator available at https://clincalc.com/stats/samplesize.aspx

$$k = \frac{n_2}{n_1} = 1$$
$$n_1 = \frac{(\sigma_1^2 + \sigma_2^2/K)(z_{1-\alpha/2} + z_{1-\beta})^2}{\Delta^2}$$
$$n_1 = \frac{(12.81^2 + 12.81^2/1)(1.96 + 0.84)^2}{4.60000000000001^2}$$
$$n_1 = 122$$
$$n_2 = K * n_1 = 122$$

Where:

$\Delta = |\mu_2 - \mu_1|$ = absolute difference between two means
σ_1, σ_2 = variance of mean #1 and #2
n_1 = sample size for group #1
n_2 = sample size for group #2
α = probability of type I error (usually 0.05)
β = probability of type II error (usually 0.2)
z = critical Z value for a given α or β
k = ratio of sample size for group #2 to group #1

We will require 122 women with infertility and 122 well women for this study.

3.5 Sampling

Consecutive sampling was used to recruit 122 infertile women and 122 well women. Infertile women who were attended to at the gynecological clinic and well women who were attended to at clinic 66 at the Kenyatta National Hospital between 2019 and 2020 who satisfy the study's inclusion criteria were recruited through telephone interviews. After approval by the KNH administration, a research assistant perused the clinical registers and archived hospital files of

patients and contact information retrieved. Patients were contacted using the KNH official phone, informed about the study, and oral consent sought using the oral consent script in Appendix 2. The objectives, procedures, risks, and study benefits were elucidated in detail and patients who agreed to be included in the study recruited until the sample size was attained.

3.6 Variables

The main outcome variable was the quality of life of women, determined using the validated WHOQOL_BREF questionnaire. The tool does not measure symptoms or disease but rather the effect a particular disease or condition has on the quality of life of a patient. We evaluated the overall quality of life and the four domains of QOL - physical, psychological, social relationships, and environment. We also evaluated the prevalence of Intimate Partner Violence (IPV) as a secondary outcome. The independent variable was the presence or absence of infertility in the women. Equal number of well women and infertile women were recruited and QoL of participants compared across the two groups. Potential confounders such as the age, years or marriage, educational level, and employment status of women were evaluated and differences between the two groups controlled during analyses.

Table 1. Dependent, independent, and confounding variables

Variable	Category	Sub category
Dependent	Quality of life	Physical
		Psychological
		Social relationships
		Environment
	IPV	Prevalence of IPV
Independent	Study group	Infertile
		Well woman
	Age	18-25
		26-35
		36+
	Years married	<5 years
		≥5 years
	Education level	None
		Primary
		Secondary
		Tertiary
	Employment status	Employed
		Unemployed

3.6.1 Confounders

Chronic physical illness, diseases and disabilities are likely to increase the psychosocial burden and worsen quality of life. These were excluded from the study as per the exclusion criteria.

3.7 Data collection procedures

3.7.1 Tool

A questionnaire organized into three sections was used to collect data. The first section of the questionnaire captured the socio-demographic and reproductive characteristics of participants such as age, education, marital status, and employment status. The second part comprised the WHOQOL_BREF questionnaire from the World Health Organization (WHO) for assessing quality of life. The WHOQOL_BREF is a short, globally accepted version of the original WHOQOL-100 questionnaire, and is the gold standard for evaluating subjective aspects of quality of life across socio-economic and cultural domains. It consists of 26 closed-ended questions (with a Likert scale), which evaluate four dimensions of quality of life: psychological, physical, social relationships, and environment, and faucets of overall or general health (46). The psychometric properties of the WHOQOL-BREF tool was ascertained by Shahrum Vahedi in 2010 (47). All items in its four themes or scales had low to moderate discrimination and shown adequate representation of traits, which makes it a valid and reliable data collection tool for cross sectional studies. The third section entailed an eight-question women abuse screening tool (WAST) for evaluating Intimate Partner Violence (IPV). The WAST tool was developed in Mc Master University in Canada and is a well-known validated tool for assessing IPV. The eight-question tool starts by screening for tension in relationships then evaluates the presence or absence of specific types of violence, such as physical, emotional and sexual abuse.

3.7.2 Procedure

Trained research assistants recruited from within KNH and trained on how to administer phone interviews were engaged in data collection. After consent and recruitment, the questionnaire was read verbatim to patients and data recorded on physical forms. Data collection was moderated in English or Kiswahili by the research assistant.

3.8 Data analysis and management

Data was entered into a worksheet using version 24 of the Statistical Package for Social Scientists (SPSS) software and cleaned following the guidelines of Van den Broeck et al. (2005) (48). Briefly, data was screened for outliers and errors corrected or deleted. Data was also checked for completeness and cases with >20% missing data eliminated from the analysis. Following the guidelines of the WHO, the mean scores for each QoL domain was calculated, multiplied by four to be comparable with the WHOQOL_100 scoring, and analyzed as a scale variable. The WAST screen was analyzed following the guidelines of Iskader et al. (49). The responses of eight items were allotted a score of 1, 2, and 3 representing positive, neutral, and poor responses respectively. The scores summed an overall WAST score, and a cutoff of 13 (out of 24) used to identify IPV as a categorical variable. After cleaning, the Schapiro Wilks test was used to test normality of continuous outcomes and the t-test used to analyze normally distributed data and the Mann-Whitney U test nonparametric variables. Chi-square test was used to analyze categorical variables. Descriptive statistics was explored, the mean or median QOL scores between infertile and well women determined, and the prevalence of IPV compared between infertile and well women. The p-value was the measure of association, a $p<0.05$ reflecting a significant difference in QOL scores and IPV between the study groups at 95% CI.

3.9 Materials

Stationery, questionnaires, data storage files, password protected computers, hard drives and flash drives.

3.10 Data quality assurance

The following measures were taken for quality assurance through all the stages of the study.

a) Data was stored in password protected computers, hard drives and flash drives to ensure confidentiality and accessibility only by the principal investigator, supervisors and statistician.
b) Quiet rooms were used for the interviews.
c) Reliable and validated questionnaires, the WHOQOL_BREF and WAST was used to collect data. The PI also reviewed questionnaires for completeness before closing off the

telephone interview and clarifications sought for inconsistencies. This limited the occurrence of missing data and increase the quality of data collected.

d) Globally accepted statistics software was used for data handling and analysis by statistician. This lowered errors during data entry and analysis and improve the quality and reliability of results.

3.11 Ethical considerations

3.11.1 Ethical approval

Ethical approval was sought and obtained from the KNH/UoN Ethics Review Committee (ERC) (ERC ref number P26/01/2020). Administrative approval was sought and obtained from the KNH Obstetrics and Gynecology research and programs departments.

The following ethical issues that may arise have been considered.

- Patients found to have a low QOL were referred to a social worker and counselor.
- Any woman found to have history of exposure or at the time of the study found to be exposed to any form of intimate partner violence was referred to the KNH existing Gender Based Violence Center and clinic for counseling and further support.

3.11.2 Informed Consent

Informed consent was sought over the phone from all women after informing them of the study objectives and benefits. English and Kiswahili versions of consent forms were availed and designed to cover the objective of the study, procedures, and the potential risks and benefit of being a participant. Moreover, before recruitment, patients were allowed to ask questions and their concerns addressed satisfactorily before signing consent forms. The forms were read over the phone in either English or Kiswahili, depending on participants' preference and consent sought.

Failure to provide informed consent to participate in the study did not compromise the quality of care received and the respondents reserved the right not to answer uncomfortable questions. Participants seeking to withdraw from the study were allowed to do so without prejudice.

3.11.3 Confidentiality

We maintained the confidentiality of patients during recruitment and data collection.
Data collection tools did not record the personal identifiers of patients such as names and ID numbers. Clients were assigned codes. In addition, all the information collected was stored in cabinets under lock and key while the transcribed data was stored in password-protected computers and flash drives only accessible to the principal investigator and research assistants.

3.11.4 Risks

There was no medical intervention or invasive procedures carried out on the participants and therefore posed no physical risks to participants.
The notable risk was psychological sequel that may have been brought about by revisiting past emotional, physical experiences.

3.12 Study results dissemination plan

The findings will be accessible to and will be shared with the KNH/UON Obstetrics and Gynecology departments

3.13 Limitations

The data relied on the accounts of patients. To encourage truthfulness, we did not record personal identifiers in questionnaires. We also scheduled the telephone interviews in private rooms and guaranteed confidentiality. Second, used valid and reliable data collection tools, the WHOQOL_BREF and IPV questionnaire, which were easy to administer to participants. The PI was available to offer clarification if needed.

3.14 Study closure procedure

A closeout meeting was scheduled at KNH, during which the following done:

- The research team was informed of the end of the study
- The ERC was informed of the ends of the study through a letter
- Study tools (questionnaires and consent forms) was prepared for storage

CHAPTER FOUR

4 RESULTS

4.1 Study flowchart

As shown in Figure 2, 382 patient files were extracted over the study period and reviewed.

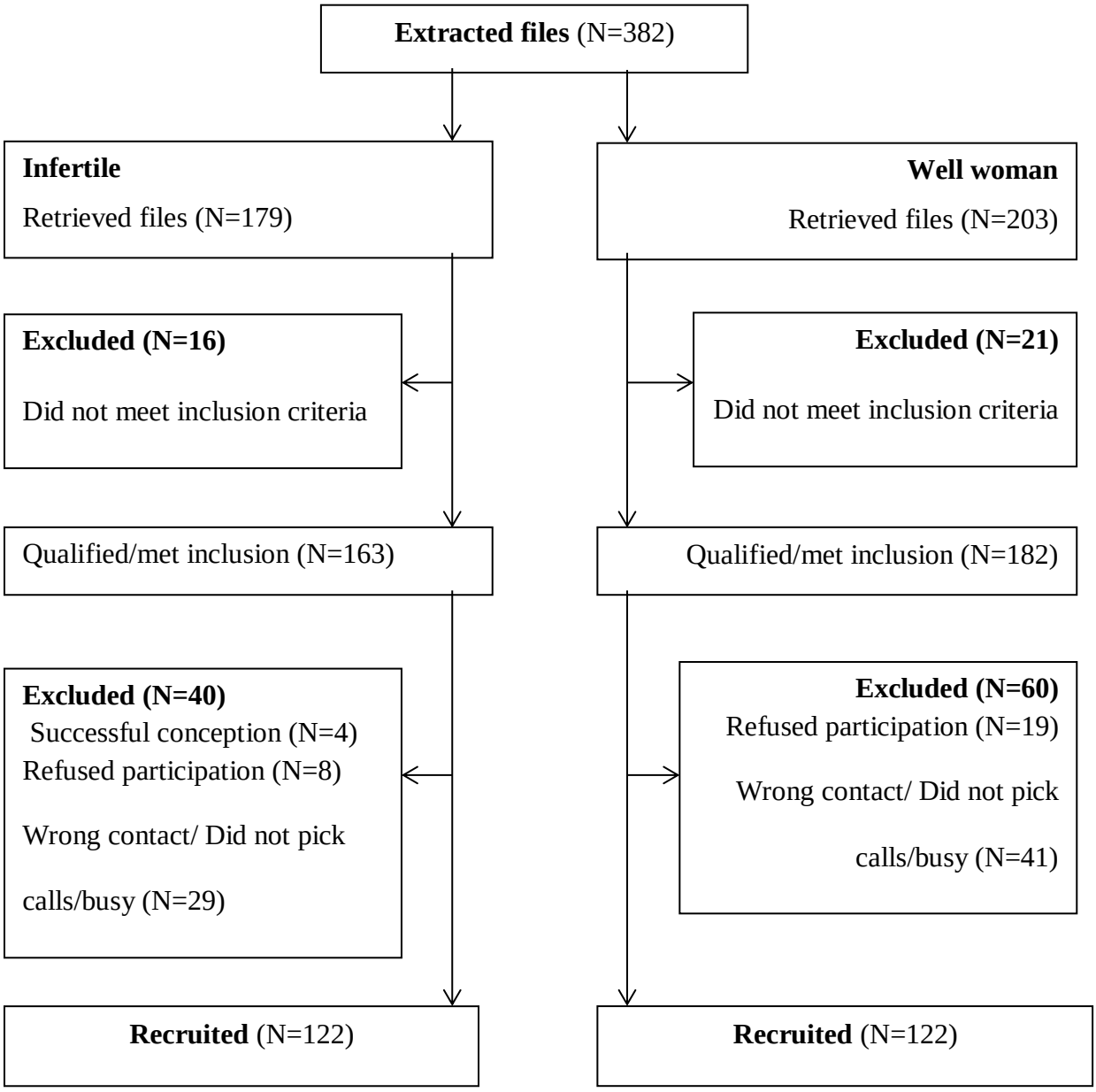

Figure 2. Study flow chart

Of the 382, 179 files were of infertile women. Of the 179, 16 were excluded for not meeting the study's inclusion criteria. Of the 162 who qualified, 40 were excluded for successful conception (4), refusing participation (8), or failing to pick up calls, being busy, wrong number (29). Thus, 122 infertile patients were recruited. A majority had secondary infertility for a mean duration of 6.92±4.61 years. The mean number of conceptions were 1.13±0.91 with 107 (87.7%) having undergone an intervention to diagnose the cause if infertility and attempt to treat it. A majority 92 (86.0%) also had undergone surgical interventions such as hysteroscopy and laparascopy, while a few had undergone tuboplasty. Two hundred and three files of well women were retrieved. Of the 203, 21 were excluded for failing to meet the inclusion criteria. Of the 182 who qualified, 60 were excluded for refusing participation (19) and failing to pick up phone calls, being busy or wrong number (41).In the end, 122 well women were recruited into the study.

4.2 Socio demographic and reproductive characteristics

Sociodemographic and reproductive characteristics of infertile women compared to well women are presented in Table 2. Infertile women were older (35.02±6.71) than well women (32.90±5.94), P=0.025. Infertile women had significantly fewer viable pregnancies (mean=0.58±0.80) compared to well women (mean=2.10±.94), P=0.010, and significantly more miscarriages (mean=0.66±1.08) than well women (mean=0.12±0.60) statistically (P=0.000). The education level, religion, employment, employment of spouses, the main financier, and the monthly income of infertile compared to well women was similar.

Table 2. Socio demographic and reproductive characteristics of infertile and well women attending clinic at KNH

		Infertile (122)	Well woman (122)	OR (95% CI)	P value
Age in years		35.02±6.71	32.90±5.94	OR (95% CI)	**0.025**
Education	None	3 (2.6)	0 (0.0)	-	0.058
	Primary	18 (15.4)	13 (11.0)	1.70 (0.75-3.78)	0.185
	Secondary	40 (34.2)	36 (30.5)	1.36 (0.78-2.39)	0.281
	Tertiary	56 (47.85)	69 (58.54)	Reference	
Marital status	Single	7 (5.7)	10 (8.2)	0.74 (0.28-2.01)	0.566
	Married	100 (82.0)	107 (87.7)	Reference	
	Separated	15 (12.3)	7 (4.1)	2.29 (0.89-5.86)	0.076
Religion	Christian	122 (100)	120 (98.4)	-	0.155
	Muslim	0 (0.0)	2 (1.6)	-	0.155
Employment	Formal	40 (32.8)	46 (37.7)	Reference	
	Business	52 (42.6)	43 (35.2)	0.71 (0.39-1.27)	0.269
	Unemployed	30 (24.6)	33 (27.0)	0.75 (0.39-1.41)	0.380
Employment (spouse)	Formal	56 (47.4)	61 (52.1)	Reference	
	Business	54 (45.8)	52 (44.4)	1.13 (0.65-1.89)	0.645
	Unemployed	8 (6.8)	4 (3.4)	2.17 (0.69-6.76)	0.214
		4	5		
Key financier	Husband	34 (29.1)	24 (20.3)	1.60 (0.86-2.93)	0.124
	Wife	9 (7.7)	10 (8.5)	1.02 (0.42-2.75)	0.964
	Both	74 (63.25)	84 (71.24)	Reference	
Monthly income	10,000-50,000	56 (49.1)	47 (40.9)	2.23 (0.83-5.66)	0.089
	50,001-100,000	50 (43.9)	53 (46.1)	1.76 (0.66-4.48)	0.231
	>100,000	8 (7.08)	15 (13.07)	Reference	
Viable pregnancies		0.58±0.80	2.10±0.94		**<0.01**

Miscarriages	0.66±1.08	0.12±0.60	**<0.01**

4.3 Quality of life

4.3.1 Physical domain

The mean domain score for physical QoL was statistically significantly lower among infertile women (10.69±3.21) compared to well women (16.18±4.02), P<0.01, (Figure 3).

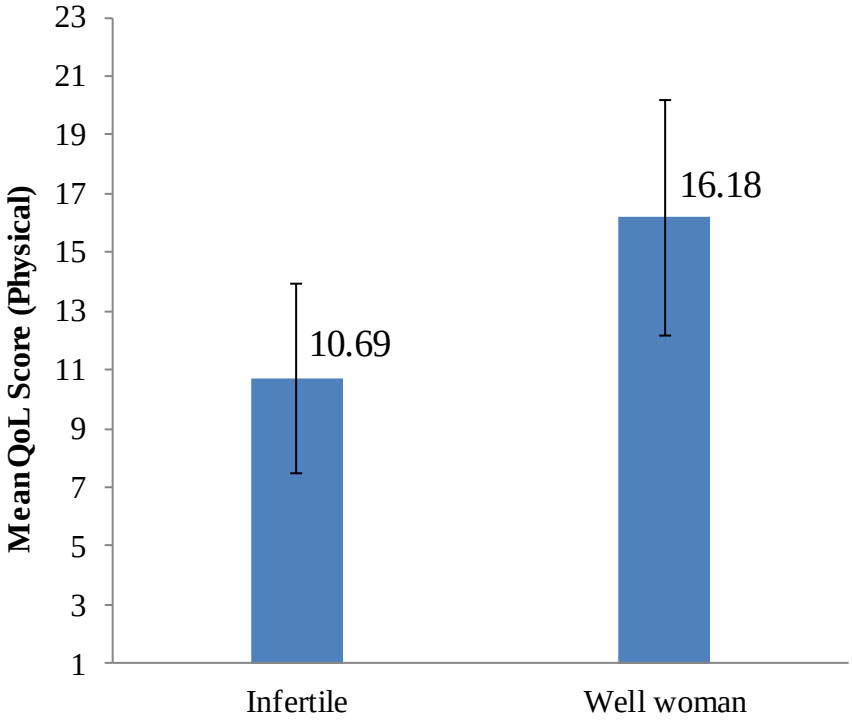

Figure 3. Physical QoL scores of infertile compared top well women seen at the Kenyatta national Hospital

4.3.2 Environmental domain

Mean score for environmental QoL was lower among infertile women (9.41±3.43) compared to well women (11.28±5.02) but the difference was not statistically significant (P=0.11) (Figure 4).

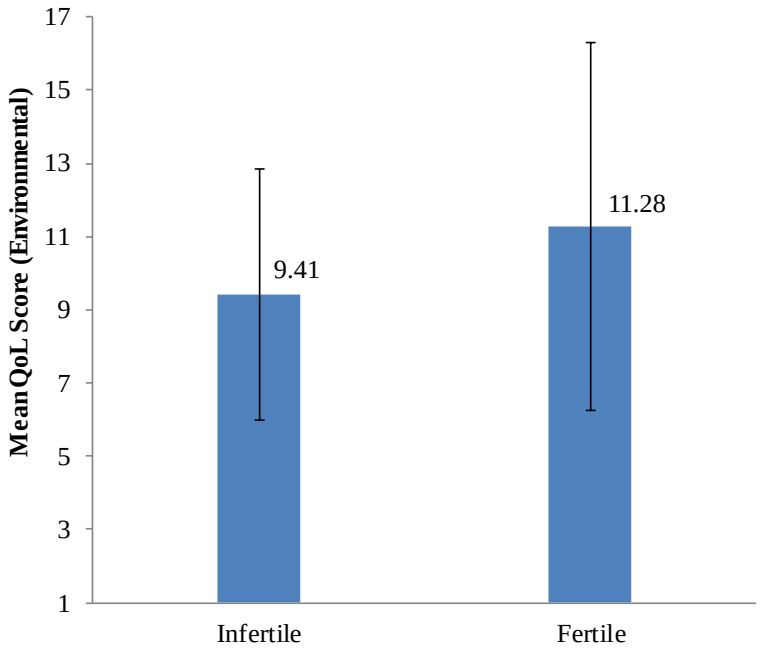

Figure 4. Environmental QoL scores of infertile compared to well women seen at the Kenyatta National Hospital

4.3.3 Psychological Domain

The mean domain score for psychological QoL was statistically significantly lower among infertile women (8.61±3.85) compared to well women (15.67±4.54), P<0.01, (Figure 5).

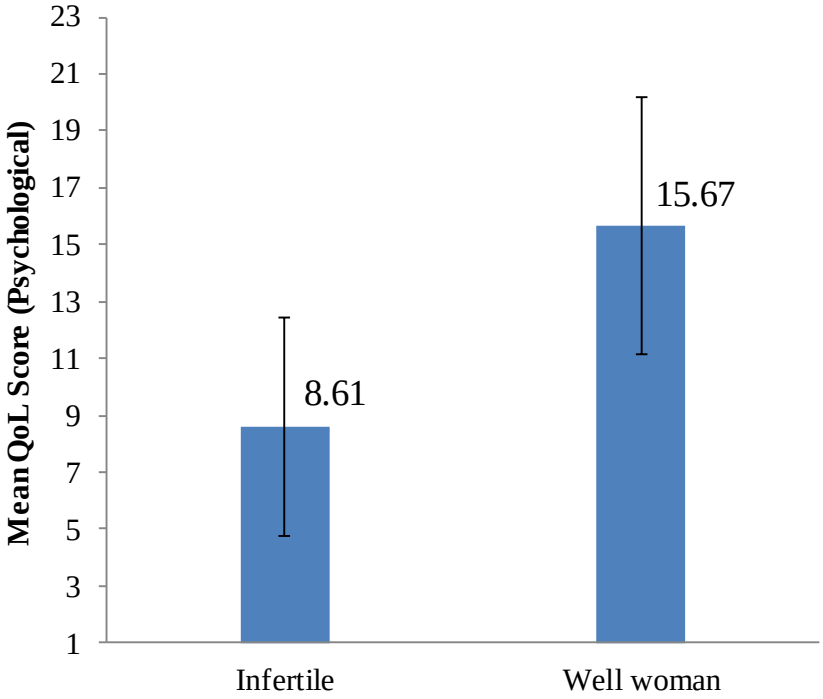

Figure 5. Environmental QoL scores of infertile compared to well women seen at KNH

4.3.4 Social domain

The mean domain score for social QoL was statistically significantly lower among infertile women (8.65±4.11) compared to well women (15.53±4.59), P<0.01, (Figure 6).

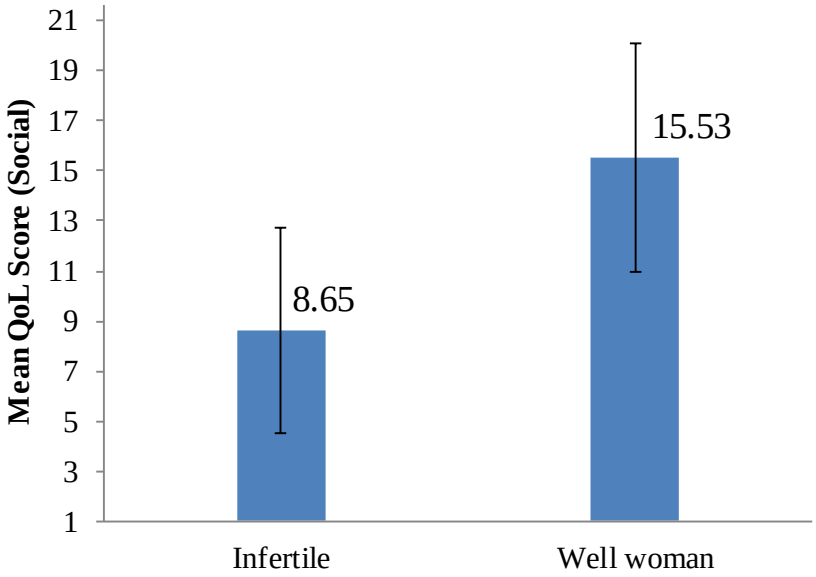

Figure 6. Social QoL scores of infertile compared to well women seen at KNH

4.3.5 Overall Quality of Life

The mean domain scores for general quality of life were significantly lower among infertile women (8.32±4.22) compared to well women (15.24±4.63), P<0.01, (Figure 7).

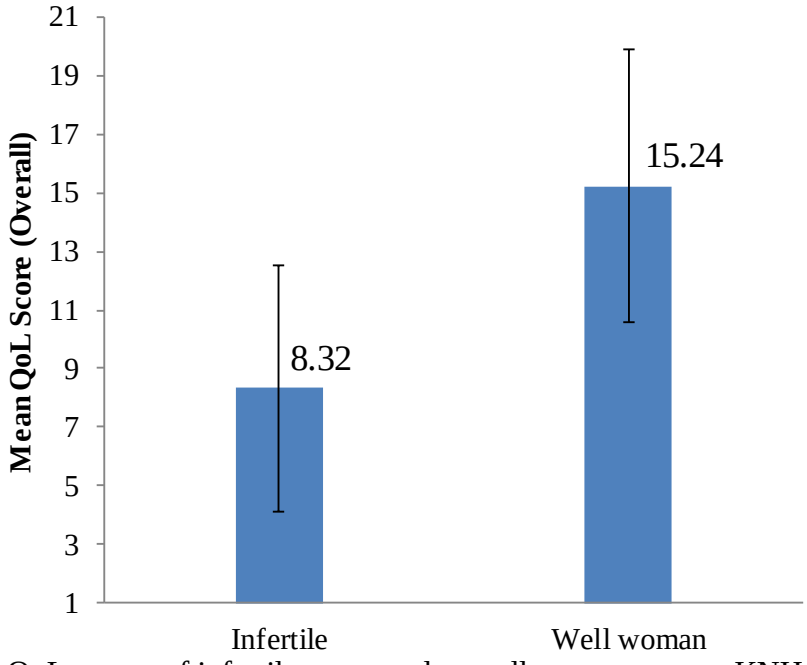

Figure 7. Overall QoL scores of infertile compared to well women seen at KNH

Seventy-four (60.7%) infertile women and 21 (17.2%) well women reported poor to neither poor nor good overall QoL scores, that is a score of 2 or 3 respectively. Overall, the odds of reporting poor QoL scores was 7.415 fold (95% CI= 4.074-13.51) higher among infertile compared to well women (P<0.01) (Figure 8)

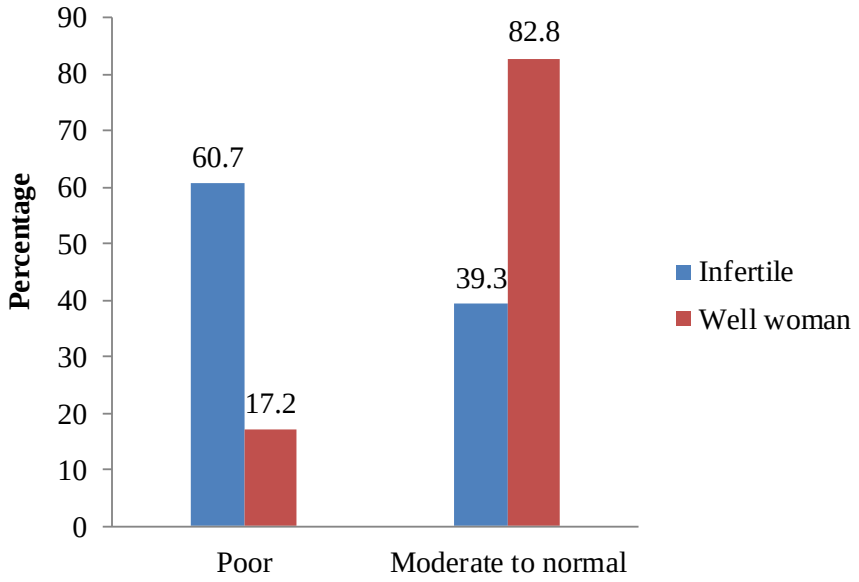

Figure 8. Overall QoL scores of infertile and well women seen at Kenyatta National Hospital

By fertility type, women with primary infertility reported lower overall QoL scores (7.67±3.35) compared to women with secondary (8.77±4.72) but not significantly (P=0.370) (Figure 9).

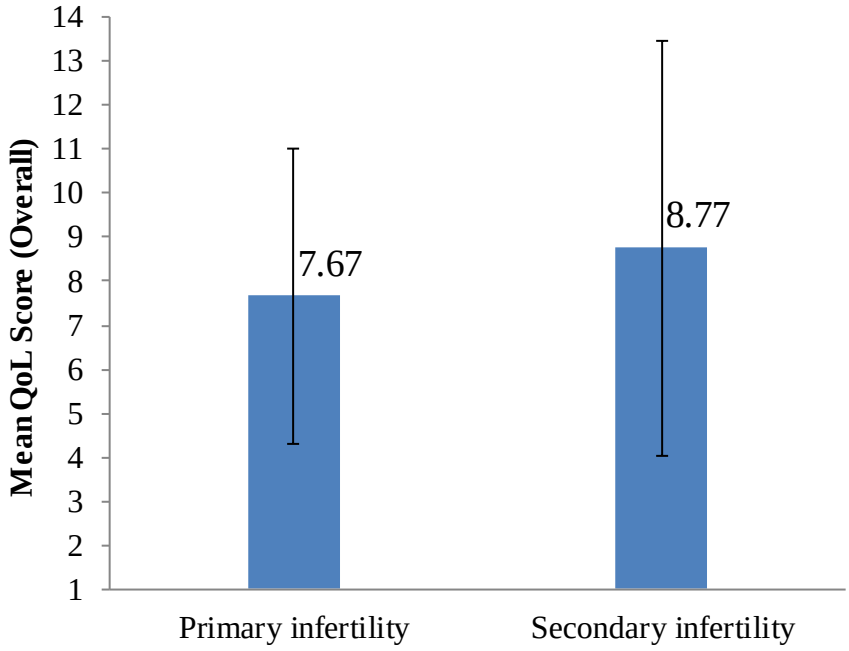

Figure 9. Overall QoL scores by fertility type of infertile women at the Kenyatta National Hospital

4.3.6 Health satisfaction

The mean scores for health perception were statistically significantly lower among infertile women (8.3±4.23) compared to well women (15.34±4.67), P<0.01, (Figure 10).

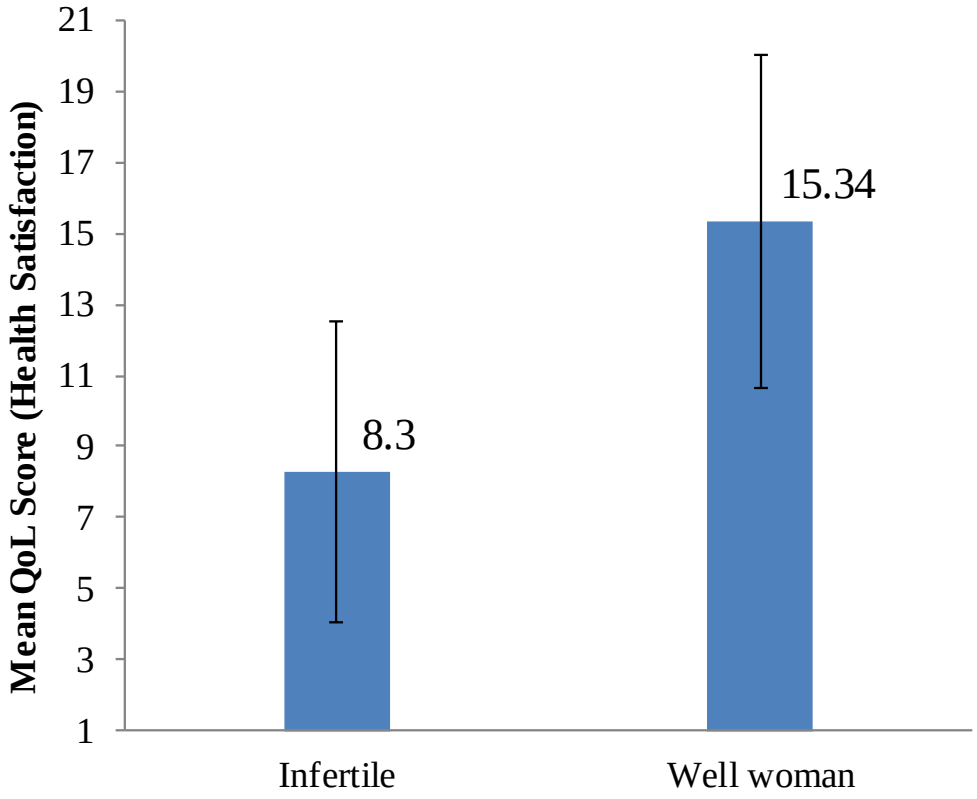

Figure 10. Health satisfaction QoL scores of infertile compared to well women seen at Kenyatta National Hospital

By fertility type, women with primary infertility reported lower overall QoL scores (7.67±3.35) compared to women with secondary (8.77±4.73) but not significantly (P=0.370) (Figure 11).

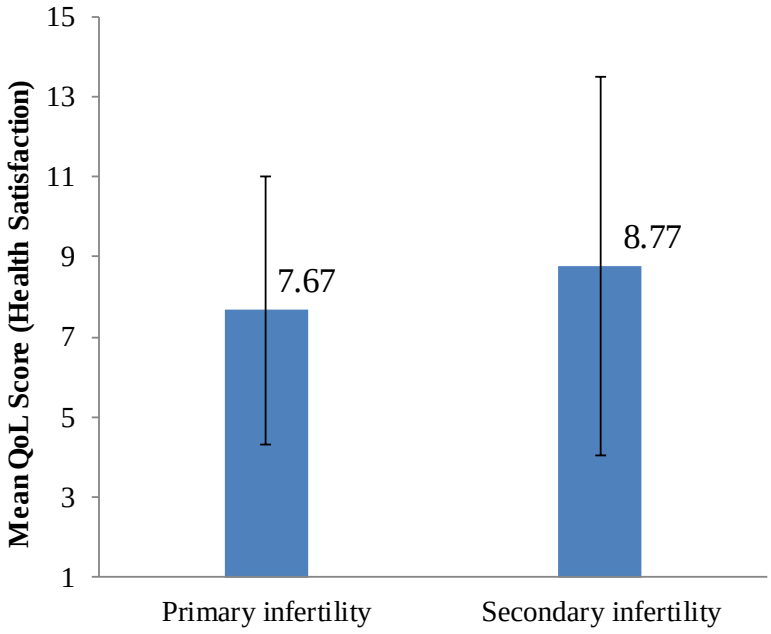

Figure 11. Health satisfaction QoL scores by fertility type of infertile women at the Kenyatta National Hospital

4.4 Prevalence of intimate partner violence

The prevalence of IPV was 27.5%. 48 infertile women were found to have a higher prevalence of IPV (39.3%) than well women (15.6%), Figure 1. Overall, the odds of IPV was 3.516 fold (95% CI=1.94-6.30) higher among infertile women compared to well women (P<0.01).

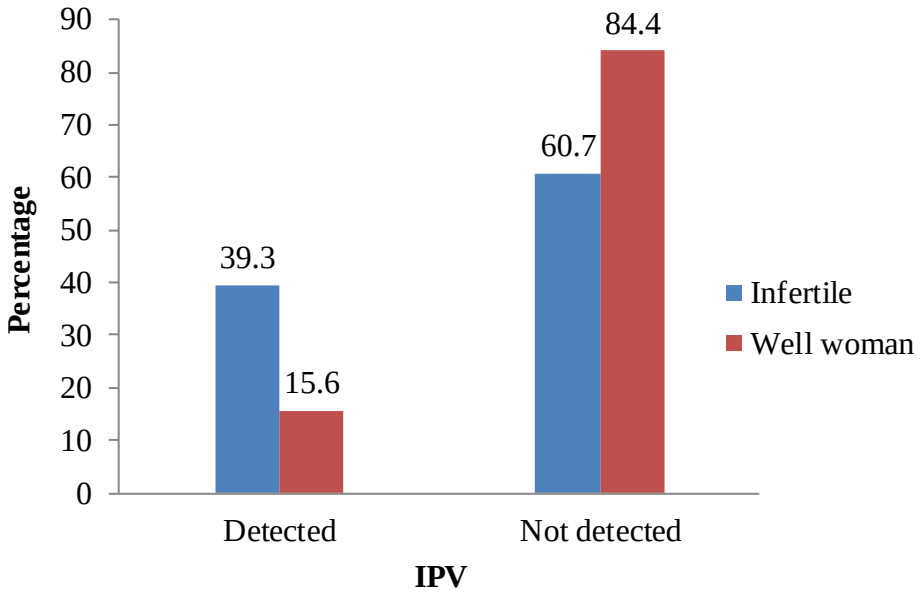

Figure 12. Prevalence of intimate partner violence among of infertile and well women attending clinic at Kenyatta National Hospital

By fertility type, prevalence of IPV was higher among women with primary infertility (53.1%) compared to secondary infertility (30.6%). Overall, the odds of IPV was 2.569 fold (95% CI=1.24-5.51) higher among women with primary infertility compared to secondary (OR=0.01)

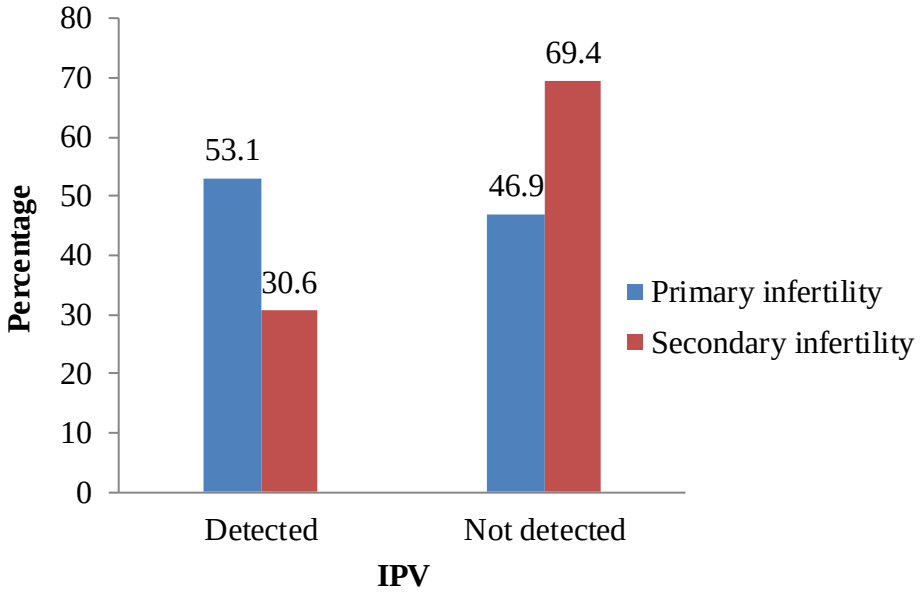

Figure 13. Prevalence of intimate partner violence among of infertile women with primary and secondary infertility at Kenyatta National Hospital

CHAPTER FIVE

5 DISCUSSION, CONCLUSIONS, AND RECOMMENDATIONS

5.1 Discussion

Our study found that infertility was associated with a reduction of physical, psychological, social and environmental wellness scores with infertile women being more likely to have a poor quality of life. The overall QoL and health satisfaction were also significantly lower among infertile women than well women were. The overall scores for infertile women with primary infertility and women with secondary infertility were similar. The prevalence of IPV was high at slightly more than a third of the population studied with infertile women bearing the greatest risk of intimate partner violence. Moreover, women with primary infertility seemed to bear a higher risk of IPV than secondary.

From the data, infertility had a negative statistically significant association with physical health. The QoL scores for infertile women compared to well women were lower, showing a dip in quality of life. These findings were similar to a study done by Bakhtiyar *et al*. (2019) (37) which reported a lower and statistically significant difference in physical health scores for infertile women compared to fertile women in Iran. The findings were also comparable to the findings of Namdar *et al*. (2017) (8) where infertile women compared to fertile women were more likely to report a degree of physical health disorder. A possible explanation for the finding is that infertility is traditionally thought to induce adverse symptoms that lower physical health. The feeling of helplessness, for instance, has been shown to be higher among infertile women. Confounded with low self-esteem and psychological deficits such as depression and anxiety it compromises the functionality of victims, denting their physical health in the end (50).

However, our findings were different from the findings of Direkvand-Moghadam *et al*. (2014) (51) where the mean scores for all QoL domains were comparable among infertile and fertile women. Even though the design was comparable to this study, patients were drawn from public and private facilities, unlike in this study where patients were drawn from one public facility. Even though demographic characteristics differed, confounders were not controlled. Patients attending public and private facilities might have divergent socio-economic status.

Our study found a negative association between infertility and psychological health of women seeking reproductive health services. Infertile women reported significantly lower QoL scores for the psychological domain, which seems to be a common finding. Amiri *et al*., (2017) (52) reported higher mental scores among fertile women compared to infertile women in a study in comparative study in Iran. Nandar et al. (2017) (8) found a correlation between infertility and a poor psychological state, but Direkvand-Moghadan et al. (2014) (51) reported deviant results. According to Hasanpoor-Azghdy et al. (35), infertility has a negative psychological impact on women because cases tend to develop affective reactions such as anxiety and depression at a higher rate than well women do. Moreover, emotional aspects such as frustration are thought to increase with the lack of a child, particularly in the absence of a strong support system (34).

Our study found a negative statistically significant association between infertility and social wellness. Infertile women reported significantly lower scores for social health, a finding that mirrors the results of other author published in journals. In a study by Bakhtiyar *et al.* (37) social health was lower among infertile women compared to well women. Moreover, from the findings of Paranian *et al.* (39), this association exists, but might be dependent on access to and the type of social support systems that infertile women have. In the 2007 study, social wellness was lower among infertile women compared to well women after bivariate analysis. However, after controlling for social support, the difference in social health scores of infertile and fertile women was no longer statistically significant. From these findings, poor social health status seems to be associated with infertility, but might be dependent on familial and personal support systems. Women who struggle with social neglect often feel low and withdrawn (self-imposed isolation), increasing the risk of depression. However, whenever they accept their situation and receive social support from their friends and family, they have comparable social wellness.

The data demonstrated a negative but statistically insignificant association between infertility and environmental health of women. From the findings, infertile women reported lower scores for environmental wellness compared to well women but the different was not significant. Bakhtiyar *et al.* (37) reported contrary findings in a comparative study in 2019. Multivariate modeling demonstrated lower physical, mental, and environmental health scores among infertile women compared to well women. Xioli *et al*. (53) also had inconsistent findings in 2016 in China, while

Direkvand-Moghadam *et al*. (2014) (51) reported similar findings. Interventions that could improve environmental wellness are warranted though inconsistent results reported.

IPV was a common occurrence in the population with infertile women found to have a higher odds of violence compared to well women. Analysis of cumulative WAST scores demonstrated IPV was higher of the responses, with infertile women having a 3.516 fold increase in the odds of IPV from our data - a common finding. In Uganda, infertility was correlated with emotional, physical, environment, and sexual forms of IPV (21). According to Mawusi et al. (21), children tend to secure the conjugal rights of women in relations – particularly in Africa. Therefore, the lack of a child can cause tension in the home, which is a recipe for violence.

5.2 Conclusions

- Our study reiterates the association between infertility with poor QoL in the physical, psychological, and social domains.
- The prevalence of IPV was higher among infertile women compared to well women

5.3 Recommendations

- There is need for policy to have routine screening for QOL and IPV and counseling to run concurrently with management of patients with infertility.
- In practice special attention should be given for infertile patients with history of primary infertility and miscarriages.
- Patients seeking treatment for infertility should be screened quality of life and intimate partner violence and appropriate management implemented to enable holistic treatment and better improve their lives.

5.4 Study strengths and limitations

5.4.1 Strength

No similar study has been done in Kenya that has linked infertility to quality of life and intimate partner violence.

5.4.2 Limitations

Study took longer duration as we had to ensure confidentiality of participants. Thus, some calls had to be rescheduled to when participant was comfortable and in private area.

There was difficulty in tracing some participants due to wrong contact information given or shared contacts with husband or relative.

5.5 Study timelines

Activity	**Year**						
	2019	**2020**					
	Dec	**Feb**	**March**	**July**	**Sept**	**Oct**	**Nov**
Presentation							
Ethics Review							
Data Collection							
Data Analysis & Report Writing							
Results Presentation							

5.6 Study budget

Activity		Kshs
Proposal	Printing copies of proposal	6,000
Data Collection	Two research assistant @1000 per day x 30days	60,000
	Questionnaires +consent printing 10 pages @10 Ksh/ page	100
	Questionnaires + consent photocopy 300 copies @5Ksh/page	1500
Data Analysis	Statistician	40,000
Thesis writing	Printing of theses	6,000
	Contingency fund (10% of total budget)	11,200
	TOTAL	**124,800**

5.7 Funding

The study was self-sponsored

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APPENDICES

Appendix Ia: Questionnaire (English)

QUALITY OF LIFE AND PREVALENCE OF INTIMATE PARTNER VIOLENCE IN WOMEN WITH INFERTILITY VERSUS WELL WOMEN ATTENDING CLINIC AT KNH: A COMPARATIVE CROSS SECTIONAL STUDY 2020

Study number…… Date……..

To be filled by participant

SECTION ONE: DEMOGRAPHIC CHARACTERISTICS

1.Age in years……..

2.Parity ……

3.Education level:

☐None

☐Primary

☐Secondary

☐Tertiary

4.Marital status

☐Single

☐Married

☐Divorced/ Separated

☐Widowed

5.Reason for divorce/ separation: …….

☐Related to infertility diagnosis

☐Related to partner violence

Other:……..

6.Number of previous marriages: ……

7.Religion:

☐Christian

☐Muslim

☐Other……

8.Employment status:

☐None

☐Formal employment

☐Business

☐Unemployed

9.Spouse employment status

☐None

☐Formal employment

☐Business

☐Unemployed

10.Who is responsible for family financial needs

☐Husband

☐Wife

☐Both

11.Household income:

☐10,000-50,000 p/m

☐50,000-100,000p/m

☐> 100,000p/m

12.Duration of infertility in years …….

13.Type of infertility:

☐No prior history of conception or delivery

☐Prior history of conception or delivery

14.If yes, number of previous conceptions or deliveries: ……..

15.Number of infertility interventions……

16.Type of intervention:

☐Surgery

☐IVF

☐Medical

☐Other…….

SECTION TWO: WHOQOL_BREF

The following questions ask how you feel about your quality of life, health, or other area of your life. Please choose the answer that appears approriate. If you are unsure about which response to give to a question, the first response you think is often the best one.

		Very poor	Poor	Neither poor nor good	Good	Very good

1(G1)	How would you rate your quality of life?	1	2	3	4	5
		Very dissatisfied	Dissatisfied	Neither satisfied nor dissatisfied	Satisfied	Very satisfied
2 (G4)	How satisfied are you with your health?	1	2	3	4	5
The following questions ask about how much you have experienced certain things in the last two weeks.						
		Not at all	A little	A moderate amount	Very much	An extreme amount
3 (F1.4)	To what extent do you feel that physical pain prevents you from doing what you need to do?	1	2	3	4	5
4(F11.3)	How much do you need any medical treatment to function in your daily life?	1	2	3	4	5
5(F4.1)	How much do you enjoy life?	1	2	3	4	5
6(F24.2)	To what extent do you feel your life to be meaningful?	1	2	3	4	5

		Not at all	A little	A moderate amount	Very much	Exteremly
7(F5.3)	How well are you able to concentrate?	1	2	3	4	5
8 (F16.1)	How safe do you feel in your daily life?	1	2	3	4	5

9 (F22.1)	How healthy is your physical environment?	1	2	3	4	5

The following questions ask about how completely you experience or were able to do certain things in the last two weeks.

		Not at all	A little	Moderately	Mostly	Completely
10 (F2.1)	Do you have enough energy for everyday life?	1	2	3	4	5
11 (F7.1)	Are you able to accept your bodily appearance?	1	2	3	4	5
12 (F18.1)	Have you enough money to meet your needs?	1	2	3	4	5
13 (F20.1)	How available to you is the information that you need in your day-to-day life?	1	2	3	4	5
14 (F21.1)	To what extent do you have the opportunity for leisure activities?	1	2	3	4	5

		Very poor	Poor	Neither poor nor good	Good	Very good
15 (F9.1	How well are you able to get around?	1	2	3	4	5

The following questions ask you to say how good or satisfied you have felt about various aspects of your life over the last two weeks

		Very dissatisfied	Dissatisfied	Neither satisfied nor dissatisfied	Satisfied	Very satisfied
16 (F3.3)	How satisfied are you with your sleep?	1	2	3	4	5

17 (F10.3)	How satisfied are you with your ability to perform your daily living activities?	1	2	3	4	5
18(F12.4)	How satisfied are you with your capacity for work?	1	2	3	4	5
19 (F6.3)	How satisfied are you with yourself?	1	2	3	4	5
20(F13.3)	How satisfied are you with your personal relationships?	1	2	3	4	5
21(F15.3)	How satisfied are you with your sex life?	1	2	3	4	5
22(F14.4)	How satisfied are you with the support you get from your friends?	1	2	3	4	5
23(F17.3)	How satisfied are you with the conditions of your living place?	1	2	3	4	5
24(F19.3)	How satisfied are you with your access to health services?	1	2	3	4	5
25(F23.3)	How satisfied are you with your transport?	1	2	3	4	5

The following question refers to how often you have felt or experienced certain things in the last two weeks.

		Never	Seldom	Quite often	Very often	Always
26 (F8.1)	How often do you have negative feelings such as sadness, despair, anxiety, depression?	1	2	3	4	5

Did someone help you to fill out this from?.....
How long did it take you to fill this form out? …….

Do you have any comments about the assessment?

.....

.....

THANK YOU FOR YOUR HELP

SECTION THREE: WAST QUESTIONNAIRE

Women Abuse Screening Tool (WAST)

1. In general, how would you describe your relationship?
   - ☐A lot of tension
   - ☐Same tension
   - ☐No tension
2. Do you and your partner work out arguments with?
   - ☐Great difficulty
   - ☐Some difficulty
   - ☐No difficulty
3. Do arguments ever result in you feeling down or bad about yourself?
   - ☐Often
   - ☐Sometimes
   - ☐Never
4. Do arguments ever result in hitting, kicking, or posihing?
   - ☐Often
   - ☐Sometimes
   - ☐Never
5. Do you ever feel frightened by what your partner says or does?
   - ☐Often
   - ☐Sometimes
   - ☐Never
6. Has your partnert ever abused you physically?
   - ☐Often
   - ☐Sometimes
   - ☐Never
7. Has your partner ever abused you emotionally?
   - ☐Often
   - ☐Sometimes
   - ☐Never
8. Has your partner ever abuse you sexually?
   - ☐Often
   - ☐Sometimes
   - ☐Never

Appendix Ib: Questionnaire (Kiswahili)

QUALITY OF LIFE AND PREVALENCE OF INTIMATE PARTNER VIOLENCE IN WOMEN WITH INFERTILITY VERSUS WELL WOMEN ATTENDING CLINIC AT KNH: A COMPARATIVE CROSS SECTIONAL STUDY

Nambari ya masomo …… Tarehe …… .. ..

Kujazwa na mshiriki

SEHEMU YA PILI: DEMOGRAPHIC CHARACTERISTICS
1.Miaka …… ..

2.Uarifu ……

3. Kiwango cha masomo:
- ☐Hakuna
- ☐Somo la kwanza
- ☐Secondary
- ☐Taarifa

4.Marital status
- ☐Kapera
- ☐Nimeolewa
- ☐Ilijitenga / Imetenganishwa
- ☐Mjane

5.Sheria ya talaka / kujitenga: …….
- ☐Ilijulikana kwa utambuzi wa utasa
- ☐Ilioundwa na jeuri ya mshirika

Nyingine: …… ..

6. Njia ya ndoa za zamani: ……

7. Dini:
- ☐Kristo
- ☐Muslim
- ☐Oko ……

8. Hali ya Kazi:
- ☐ Hakuna
- ☐ Ajira rasmi
- ☐ Biashara
- ☐ Ukosefu wa ajira

9.Spouse hadhi ya ajira

☐ Hakuna
☐ Ajira rasmi
☐ Biashara
☐ Ukosefu wa ajira

10. Ni nani anayehusika na mahitaji ya kifedha ya familia

☐Mume
☐Mke
☐Wote

11. Mapato ya nyumba:

☐10,000-50,000 p / m
☐50,000-100,000p / m
☐> 100,000p / m

12.Urefu wa utasa kwa miaka …….

13. Aina ya utasa:

☐Sina historia ya utasa
☐Nina historia ya utasa

14.Ikama ndio, idadi ya maoni ya zamani au kujifungua: …… ..

15. Njia ya uingiliaji wa utasa ……

16. Aina ya uingiliaji:

☐Ushawishi
☐IVF
☐Medical
☐Nyingine…….

SEHEMU YA PILI: WHOQOL-BREF (Kiswahili)

Tathmini hii inauliza unajisikiaje juu ya ubora wa maisha, afya, au maeneo mengine ya maisha yako. Tafadhali jibu maswali yote. Ikiwa hauna hakika juu ya jibu la swali, tafadhali chagua ile inayokaribia zaidi. Hii inaweza kuwa majibu yako ya kwanza.

Tafadhali kumbuka viwango vyako, matumaini, raha na wasiwasi. Tunaomba ufikirie juu ya maisha yako mwishowe wiki mbili. Kwa mfano, ukifikiria juu ya wiki mbili zilizopita, swali linaweza kuuliza:

Tafadhali soma kila swali, tathmini hisia zako, na uzungushe nambari kwa kila swali ambayo inatoa jibu bora kwako.

		Mbaya sana	Mbaya	Sio nzuri wala mbaya	Nzuri	Nzuri kabis
1 (G1)	Je! Uzuri wa maisha yako ikoje?	1	2	3	4	5

		Sijaridhika sana	Sijaridhika	Sio nzuri wala mbaya	Nimeridhika	Nimeridhika sana
2 (G4)	Umeridhika vipi na afya yako?	1	2	3	4	5

Maswali yafuatayo yanauliza ni kiasi gani umepata mambo kadhaa katika wiki mbili zilizopita.

		La	Kidogo	Sio nzuri wala mbaya	Sana	Iliyokithiri kiasi
3 (F1.4)	Je! Unahisi maumivu ya mwili wako yanakuzuia kufanya unachohitaji kufanya?	1	2	3	4	5
4(F11.3)	Je! unihitaji matibabu yoyote ili kufanya mambo yako ya kila siku?	1	2	3	4	5

5(F4.1)	Je! Unafurahiya maisha kiasi gani?	1	2	3	4	5
6(F24.2)	Unahisi maisha yako ni kwa kiwango gani kuwa na maana?	1	2	3	4	5

		La	Kidogo	Sio nzuri wala mbaya	Sana	Iliyokithiri kiasi
7(F5.3)	Je! Una makini?	1	2	3	4	5
8 (F16.1)	Je! Unajihisi vipi katika maisha yako ya kila siku?	1	2	3	4	5
9 (F22.1)	Je! Una hali nzuri ya kiafya?	1	2	3	4	5

		La	Kidogo	Sio nzuri wala mbaya	Sana	Iliyokithiri kiasi
10 (F2.1)	Je! Una nguvu ya kutosha kwa maisha ya kila siku?	1	2	3	4	5
11 (F7.1)	Je! umeridhika na muonekano wa mwili wako?	1	2	3	4	5
12 (F18.1)	Je! Una pesa ya kutosha kushughulikia maisha yako ya kila siku?	1	2	3	4	5
13 (F20.1)	Je! unapata habari unachohitaji kwa maisha yako?	1	2	3	4	5
14 (F21.1)	Je! una wakati wa kujivinjari?					

		Mbaya sana	Mbaya	Sio nzuri wala mbaya	Nzuri	Nzuri kabis

15 (F9.1)	Je! Una uwezo wa kutembea na kushughulika mambo yako?	1	2	3	4	5

		Sijaridhika sana	Sijaridhika	Sijaridhika wala kuridhika	Nimeridhika	Nimeridhika sana
16 (F3.3)	Umeridhika na usingizi wako?	1	2	3	4	5
17 (F10.3)	Umeridhika na uwezo wako kufanya shughuli zako za maisha ya kila siku?	1	2	3	4	5
18(F12.4)	Umeridhika na uwezo wako wa kufanya kazi?	1	2	3	4	5
19 (F6.3)	Umeridhika na wewe mwenyewe?	1	2	3	4	5
20(F13.3)	Umeridhika na mahusiano yako ya kibinafsi?	1	2	3	4	5
21(F15.3)	Umeridhika na	1	2	3	4	5

	mahusiano yako ya kimapenzi?					
22(F14.4)	Umeridhika vipi na msaada unaopata kutoka kwa marafiki wako?	1	2	3	4	5
23(F17.3)	Umeridhika na hali ya makazi yako?	1	2	3	4	5
24(F19.3)	Umeridhika na ukaribu wa huduma za afya?	1	2	3	4	5
25(F23.3)	Umeridhika na usafiri wako?	1	2	3	4	5

Swali lifuatalo linaangazia ni mara ngapi umehisi au uzoefu wa mambo kadhaa katika wiki mbili zilizopita.

		Kamwe	Mara chache	Mara kwa mara	Sana	Kila mara
26 (F8.1)	Je! Ni mara ngapi una hisia kama vile, kukata tamaa, wasiwasi, huzuni?	1	2	3	4	5

Ulihitaji usaidizi kujaza fomu? ….....

Ilikuchukua dakika ngapi kujaza fomu? ……....

Ukona maneno yoyote kuhusu mtihani huu?

……

……

ASANTE KWA USAIDIZI WAKO

SEHEMU YA TATU: WAST

1. Kwa ujumla, unaweza kuelezeaje uhusiano wako?
   - ☐mvutano mwingi
   - ☐mvutano fulani
   - ☐hakuna mvutano

2. Je! Wewe na mwenzi wako mnatoa hoja na
   - ☐ugumu mkubwa
   - ☐ugumu fulani
   - ☐hakuna ugumu

3. Je! Mabishano huwa yanasababisha kupiga, kupiga au kusukuma?
   - ☐mara nyingi
   - ☐mara nyingine
   - ☐kamwe

Je! Umewahi kuhisi hofu ya kile mwenzi wako anasema au anafanya?
   - ☐mara nyingi
   - ☐mara nyingine
   - ☐kamwe

6. Je! Mwenzi wako amewahi kukutendea vibaya?
   - ☐mara nyingi
   - ☐mara nyingine
   - ☐kamwe

7. Je mwenzi wako amewahi kukutukia kihemko?
   - ☐mara nyingi
   - ☐mara nyingine
   - ☐kamwe

8. Je! Mwenzi wako amewahi kukutendea ngono?
   - ☐mara nyingi
   - ☐mara nyingine
   - ☐kamwe

Appendix IIa: Oral consent script (English)

QUALITY OF LIFE AND PREVALENCE OF INTIMATE PARTNER VIOLENCE IN WOMEN WITH INFERTILITY VERSUS WELL WOMEN AT KENYATTA NATIONAL HOSPITAL: A COMPARATIVE CROSS SECTIONAL STUDY 2020

Oral consent script

This is to be read out to the potential participants at first contact prior to starting the telephone interview (A Kiswahili version is also available)

Hello, my name is _____and I am calling from Kenyatta National hospital (KNH). I am working with Dr Sarah Mutua a Masters student (registrar) at the University of Nairobi (UON /KNH) in the Obstetrics and Gynaecology department who is carrying out a study on quality of life and prevalence of intimate partner violence in women with infertility versus well women at KNH.

We are requesting you be a participant in this study.

I am investigating whether women who have been trying to conceive for at least one year have a lower or higher quality of life than women who are fertile or do not have fertility issues. We also want to know whether women who have problems bearing children are susceptible to violence from their spouses, boyfriends, or ex-husbands. Such information will help the government to formulae policies around infertility and help affected women to live better lives.

Participation in the study is voluntary and there are no consequences in case you opt out of participation.

The results will be confidential and will be available to you at the end of the study. However, your information will help the government to formulate policies around infertility and help affected women to live better lives, and where shared with the public or authorities, there will be no personal details disclosed.

Being a participant will not harm your health. However, some of the questions are personal in nature and do not hesitate to let the interviewer know of any questions you are not comfortable answering at any time.

In case you are found to be having any psychological health issues during this study you will be helped to seek the care needed. A family member or any other person you nominate may be involved in helping you seek care but only with your approval.

Before you agree to be one of our participants, here are other things that you should know:

You are not obliged to be a participant in this study. If you feel uncomfortable answering our questionnaire or being part of our study, you are free to decline.

Do you have any questions for me?

☐Yes

☐No

a) If yes, answer questions until the participant is satisfied
b) If no, proceed with consenting

Do you agree to be a participant in this study?

☐ Yes: Document oral consent

What is your name: ……..

☐ No: Thank the patient for cooperation and end the interview

Name of interviewer…… Date…… Signature…….

Appendix IIb. Nakala ya idhini ya mdomo

QUALITY OF LIFE AND PREVALENCE OF INTIMATE PARTNER VIOLENCE IN WOMEN WITH INFERTILITY VERSUS WELL WOMEN AT KENYATTA NATIONAL HOSPITAL: A COMPARATIVE CROSS SECTIONAL STUDY 2020

Fomu inapaswa kusomwa kwa washirika wa kwanza kabla ya kuanza mahojiano ya simu

Jambo, jina langu ni …….. Nafanya kazi na Dr. Sarah Mutua, mwanafunzi wa Shahada ya uzamili katika Chuo Kikuu cha Nairobi, katika idara ya Obstetrics na Gynecology, ambaye anafanya uchunguzi unaoangazia ubora wa maisha wa wanawake walio na utasa.

Tunakuomba uwe mshiriki katika utafiti huu.

Ninachunguza ikiwa wanawake ambao wamekuwa wakijaribu kupata mimba kwa angalau mwaka mmoja wana maisha ya chini au ya hali ya juu kuliko wanawake ambao ni wenye rutuba au hawana tashwishi ya uzazi. Tunataka pia kujua ikiwa wanawake ambao wana shida ya kuzaa watoto wanahusika na dhuluma kutoka kwa wepenzi wao au mabawana zao, wenzi wao wa kike, au wapenzi wao wa zamani. Habari kama hii itasaidia serikali kuunda sera kuhusu kanuni za utasa na kusaidia wanawake walioathirika kuishi maisha bora.

Ushiriki katika utafiti huu ni kwa hiari yako na hakuna uhasama yoyote ukayopitia ikiwa utachagua kushiriki. Matokeo yatakuwa ya siri. Uteapewa majobu mwisho wa masomo ukitaka. Habari yako itasaidia serikali kubuni sera kuhusu utasa na kusaidia wanawake walioathirika kuishi maisha bora, na pale itakaposhirikiwa na umma au mamlaka, hakutakuwa na maelezo ya kibinafsi yaliyofunuliwa.

Kuwa mshiriki haitaumiza afya yako. Walakini, maswali kadhaa ni ya kibinafsi na usisite kumwuliza mhojiwa maswali yoyote ambayo hauko vizuri kujibu wakati wowote.
Ikiwa utagunduliwa kuwa na maswala yoyote ya afya ya kisaikolojia wakati wa utafiti huu utasaidiwa kutafuta utunzaji unaohitajika. Jamaa wa familia au mtu mwingine yeyote ambaye umemteua anaweza kuhusika kukusaidia utunzaji lakini tu kwa idhini yako.

Kabla ya kukubali kuwa mmoja wa washiriki wetu, kuna mambo mengine ambayo unapaswa kujua:

Sio lazima uwe mshiriki wa utafiti huu. Ikiwa haujisikii kuwa mshiriki wa utafiti huu au kuna sehemu unataka kususia kujibu, uko huru kukataa kuwa mshiriki.

Je! Una maswali yoyote kwangu?

☐Ndiyo

☐La

a) Ikiwa ndiyo, jibu maswali hadi mshiriki aridhike

b) Ikiwa La, endelea na idhini

Je! Unakubali kushiriki katika utafiti huu?

☐ Ndio: Chukua idhini ya mdomo

Jina lako nani: ……..

☐ Hapana: Mshukuru mhusika kwa ushirikiano na umalizie mahojiano

Jina la mhojiaji…… Tarehe…… Sahihi…….