Empowering women and sensitizing men: Impact of a complex gender-transformative intervention on socio-economic, maternal and child health outcomes in the Eastern Democratic Republic of the Congo

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Wyvine Ansima Bapolisi

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Genehmigt von der Philosophisch-Naturwissenschaftlichen Fakultät auf Antrag von:

Erstbetreuer/in: Prof. Nicole Probst-Hensch, Dr. Sonja Merten

Zweitbetreuer/in: Prof. Jürg Utzinger

Externe/r Experte/in: Prof. Chinwe Ifejika Speranza

Basel, 21 February 2023

Prof. Dr. Marcel Mayor

Dekan der Philosophisch-Naturwissenschaftlichen Fakultät

Table of Contents

Table of Contents iii
List of tables v
List of Figures v
List of annexes v
Abbreviations vi
Acknowledgements viii
Summary xi
1 Introduction 1
1.1 Context of the study 5
1.1.1 CARE in DRC 6
1.1.2 *Mawe Tatu's* components 8
1.1.3 VSLA methodology 11
1.1.4 *Baraza Badirika* or a men's engagement component 13
2 Objectives, PhD project aim, and framework 16
2.1 PhD project aim 16
2.2 Objectives 16
2.3 Conceptual framework of the PhD project 17
3 Methods 18
3.1 Study component 1 - Quantitative 18
3.1.1 Study design and study population 18
3.1.2 Instruments 19
3.1.3 Sample size calculation/justification 22
3.1.4 Statistical analysis 25
3.2 Study Component 2: Qualitative 27
3.2.1 Study design 27
3.2.2 Instruments 27
3.2.3 Study population and sampling 28
3.2.4 Data collection 28
3.2.5 Data analysis 29
3.3 Quantitative and qualitative: Data triangulation 29
4 Gendered determinants of food insecurity in ongoing regional conflicts, North and South-Kivu, the Democratic Republic of the Congo 30
4.1 Background 31
4.2 Methods 33
4.2.1 Study setting 33
4.2.2 Study design and sampling 33
4.2.3 Instruments 33
4.2.4 Data collection 36
4.2.5 Data analysis 36
4.2.6 Ethical issues 37
4.3 Results 38
4.3.1 Respondent and respondent household socio-demographics 38
4.3.2 Food insecurity 40
4.4 Discussion 44
4.5 Conclusion 47
5 Impact of the intervention on different outcomes 49

5.1 Effect of combining women's economic empowerment through village savings and loans associations with men's involvement in gender equity on children's malnutrition in the Eastern Democratic Republic of the Congo 49
5.1.1 Background 50
5.1.2 Methods 52
5.1.3 Results 54
5.1.4 Discussion 59
5.1.5 Conclusion 61
5.2 Exploring the impact of associating women's empowerment through village savings and loans associations with men's sensitization on gender equity on socio-economic and maternal and children health outcomes 62
5.2.1 Background 63
5.2.2 Methods 65
5.2.3 Findings 67
5.2.4 Discussion 77
5.2.5 Conclusion 81
5.3 Engaging men in women's empowerment: Effectiveness of a complex gender-transformative intervention on household socio-economic and maternal and child health indicators in the Eastern Democratic Congo 83
5.3.1 Background 84
5.3.2 Methods 87
5.3.3 Results 93
5.3.4 Discussion 96
5.3.5 Conclusion 99
6 Family planning challenges through a gender lens 100
6.1 Barriers to family planning use in the Eastern Democratic Republic of the Congo: an application of the theory of planned behavior 100
6.1.1 Background 101
6.1.2 Methods 103
6.1.3 Results 109
6.1.4 Discussion 114
6.1.5 Conclusion 117
6.2 Family planning in the Eastern Democratic Republic of the Congo: personal beliefs, intimate partner negotiations, and social pressure 118
6.2.1 Background 119
6.2.2 Methods 121
6.2.3 Findings 123
6.2.4 Discussion 136
6.2.5 Conclusion 141
7 General Discussion 142
7.1 Main findings 142
7.2 Male involvement and gender 146
7.3 Male involvement in maternal health 147
7.4 VSLA, men's sensitization and involvement, and child nutrition 149
7.5 Theory of change 149
7.6 Implications for policy and practice 152
7.7 Implications for further research 153
8 General Conclusion 155
References 156
Annexes 172

List of tables

Table 1. Study population group for the quantitative component 19
Table 2. Definition of some variables... 21
Table 3. Power calculations for child anthropometric data 23
Table 4. Socio-demographic characteristics of respondents in the baseline 38
Table 5. Food insecurity (FIES) 40
Table 6. Household food insecurity level 41
Table 7. Summative scale of household food insecurity 42
Table 8. Multilevel ordinal regression of food insecurity 43
Table 9. Socio-demographic characteristics of children.. 54
Table 10. Effect of the intervention on anthropometric measurements.................................... 54
Table 11. Linear regression results of the change in wasting, stunting, and underweight by the supposed factors 58
Table 12. Study participants by intervention and control villages (baseline and follow-up)... 89
Table 13. Measurement of main outcome variables 91
Table 14. Socio-demographic characteristics of participants (baseline and follow-up)........... 93
Table 15. Distribution of the main and the secondary outcome variables 94
Table 16. Estimates of the impact of the intervention on socio-economic and health outcomes. 95
Table 17. Socio-demographic characteristics.. 109
Table 18. Use of contraceptives 110
Table 19. Factor analysis for indicators of the TPB 111
Table 20. Standardized path coefficients of the latent variables GSEM 113
Table 21. Summary of main findings: qualitative vs quantitative 143

List of Figures

Figure 1 Mawe Tatu Program in North and South-Kivu 8
Figure 2. Mawe Tatu’s Project framework.. 15
Figure 3 Research Framework 17
Figure 4 Food insecurity Experience Scale (FIES) FAO 34
Figure 5. HAZ of children before and after the intervention (one-year-interval).................... 55
Figure 6. WAZ of children before and after intervention (one-year-interval) 56
Figure 7. WHZ of children before and after the intervention (one-year-interval).................... 57
Figure 8 presents the TPB model built from existing qualitative findings............................. 106
Figure 9 Theory of planned behavior using GSEM: diagram 112

List of annexes

Annex 1 Appendices A 173
Annex 2 Appendices B 181
Annex 3 Longitudinal survey with women: Questionnaire...186
Annex 4. Qualitative guide..242
Annex 5. Information sheet..245
Annex 6 Consent form 250

Abbreviations

ADJ: Amis de la Justice

AIC: Akaike Information Criterion

AIDS: Acquired Immuno-deficiency Syndrome

ANC: Antenatal Care

CARE: Cooperative for Assistance and Relief Everywhere

CFA: Confirmation Factor Analysis

COMEN: Congo Men's Network

CSE: Comprehensive Sexual Education

DHS: Demographic Health Survey

DRC: Democratic Republic of the Congo

EKNZ: Ethik Kommission Nord-und Zentralschweiz

FAO: Food and Agriculture Organization

FGD: Focus Group Discussion

FIES: Food Insecurity Experienced Scale

FP: Family Planning

GBV: Gender-Based Violence

GEM: Gender Equity Measurements

GSEM: Generalized Structured Equation Modelling

HAZ: Height for Age

HIV: Human Immunodeficiency Virus

IDI: In-Depth Interview

IFPF: International Federation for Family Planning

IPV: Intimate Partner Violence

MUAC: Mid-Upper Arm Circumference

NGO: Non-governmental Organization

ODK: Open Data Kit

SD: Standard Deviation

SEM: Structural Equation Modelling

SGBV: Sexual and Gender-Based Violence

SRH: Sexual and Reproductive Health

SRMSR: Standardized Root Men Square Residual

SSA: Sub-Saharan Africa

Swiss TPH: Swiss Tropical and Public Health Institute

TPB: Theory of Planned Behavior

UNDP: United Nations Development Programme; PNUD (Programme des Nations Unies pour le Développement in French)

VSLA: Village Savings and Loans Associations

WAZ: Weight for Age

WFP: World Food Programme

WHO: World Health Organization

WHZ: Weight for Height

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Summary

This PhD research is embedded in an evaluation of a program aiming at improving household economic level with a complex gender-transformative approach associating women's empowerment through Village Savings and Loans Associations (VSLA) and engaging men on gender equity in the Eastern Democratic Republic of the Congo (DRC).

The Eastern DRC is suffering from conflicts and armed rebellions for years now. Poverty is widespread; the level of food insecurity is alarming. The country carries the high burden of food insecurity in absolute numbers and child malnutrition is very high. Maternal and child mortalities remain high although WHO has stated that almost 90% of deaths can be avoided with the right access to maternal health services on time. Malnutrition is associated with around 45% of child mortality.

In order to increase economic gains and maximize available resources, the program initiated VSLA which empowered women economically while men were sensitized by their peers in positive masculinities to reduce gender-based violence (GBV).

This doctoral thesis aimed, therefore, to assess the initial food insecurity level of households as an indicator of the economic level of households, to assess the impact of combining women's empowerment and men's sensitization on gender on maternal health services use (skilled birth and antenatal care attendance) and family planning (FP) use; to also assess changes in child nutritional status in households when husbands were sensitized to promote women's empowerment, and finally, to explore family planning challenges with regards on gender norms in the society.

To investigate research questions, a mixed-methods approach was employed associating quantitative study in parallel with qualitative study. Quantitative studies used a longitudinal cohort with women participating in VSLA. The calculated sample size was 1200 women (800 in the intervention and 400 in control). In the first round of data collection, 1812 randomly

selected women, regular residents of 120 randomly selected villages in North and South-Kivu were enrolled, out of which only 1055 were retrieved in the second round. Children aged 1-5 years under the guardianship of a participating adult were also enrolled and their anthropometric measurements were followed after a year. Electronic tablets using Open Data Kit (ODK) were used to collect survey data on household and individual socio-demographic characteristics (income, wealth self-assessment, socio-cultural values, religion, personal beliefs, and conviction), gender aspects (women's participation in decision-making, couple cohesion, breadwinner gender), knowledge and utilisation of maternal health services (skilled birth and antenatal care and FP use). Birth date, age, weight, height, and mid-upper arm circumference (MUAC) of children were taken as anthropometric measurements.

In the qualitative component, VSLA members whose husbands were sensitized in reflection groups (*Baraza Badirika*), i.e. 54 women, participating in the program, were followed for three years. Husbands of VSLA members, i.e. 18 men, were also recruited and interviewed.

The introduction and the context of the study highlighted the state of knowledge on the topic in the region and a summary of the project's components. This chapter paves the way for the research questions which define the objectives of the thesis. The next chapter will give a summary of the methods.

The following chapters employed multiple methods to identify determinants of food insecurity and to assess the impact of the project on different outcomes and lastly barriers to the use of FP.

Food insecurity remained high in the two provinces of North and South-Kivu where 87.8% of households were experiencing severe food insecurity. Multilevel regression was run to identify gendered-determinants of food insecurity. Women's participation in decision-making decreased household food insecurity while tolerance to GBV was associated with a high level of food insecurity.

Globally, all anthropometric measurements of children improved. However, the effect of the intervention was not statistically significant. The intervention increased household income but decreased the ability to pay bills without contracting debts. The food insecurity level of households decreased but the change was not statistically significant. After one year of assessment, we did not find enough statistically significant effects of the intervention on women's participation in the decision-making at the level of household, nor on the couple's cohesion or the use of FP, skilled birth, or Antenatal Care (ANC) attendance.

However, from qualitative findings, almost all the socio-economic outcomes (income, food insecurity, women's participation in decision-making, couple cohesion, tolerance to GBV) changed positively. The welfare of households increased when the two partners were participating in the intervention. More cash was available at the level of the household, cohesion between the couple increased and men were more likely to include their wives in the decision-making process. Men were also more likely to be involved in childcare including feeding and accompanying their wives to ANC services and were more compassionate during pregnancy.

The apparent opposition between qualitative findings and quantitative findings is linked first to the nature of the approaches. Qualitative approaches are more open and go to a deeper level of investigation. Few people were followed over a long period and fidelity could have been easily controlled. On the contrary, quantitative studies are more structured (less opportunity to redefine according to the participants' perceptions) within a big sample, questions and scales are defined and fixed. The period assessment of the quantitative study was also quite short being that of one year.

The use of FP remained low in that only 14.2% of women used modern contraceptives during their last sexual intercourse. Education level, religious beliefs, couple dynamics, and perceived self-control were identified as determinants of the intention to use FP which may have led to the adherence to FP. From a qualitative perspective, precariousness, personal beliefs, fear of

side effects, and power dynamics within the couple were the main drivers of the decision on FP. The typical profile of FP use was when women were the sole providers of the family.

The findings of this PhD contribute to the growing literature on men's engagement and VSLA in difficult settings. This study is among a few looking at the impact of gender-transformative intervention on the economic level of households including food insecurity, the use of FP, skilled birth attendance, and antenatal care. Furthermore, it contributes to defining adapted strategies that can help mitigate a number of health issues in the region including food insecurity, malnutrition, ANC, and the use of FP. Lastly, it shows that despite the complexity of combining women's economic empowerment through VSLA while their husbands are sensitized on gender equity, it is a promising approach. However, more time is needed for quantitative assessments.

Given the state of poverty and precariousness of life, the prevalence of GBV and the power dynamics within the couple in male-dominant societies, such approaches will help mitigate injustice and will encourage men and women to work together for the welfare of all the family. A call to respect pre-existing norms and traditions in order to avoid conflicts, or at least to define helpful strategies without generating more issues within the couple and the society, will hopefully emerge. Socio-cultural components are capital for implementing projects to improve women's health or the economic levels of households.

Impact of a complex gender-transformative intervention on maternal and child health outcomes in the Eastern Democratic Republic of the Congo[1]

Wyvine Ansima Bapolisi, Giovanfrancesco Ferrari, Clara Blampain, Jean Makelele, Lenneke Kono-Tange, Ghislain Bisimwa and Sonja Merten

1 Introduction

Maternal and child health are among the most important indicators of a country's development. Major causes of maternal mortality can be prevented and treated with simple, affordable health interventions such as antenatal care (ANC) or vaccination if used adequately and on time (Media center 2016). Children's nutritional status is a sensitive indicator of household poverty, with childhood malnutrition having many long-term effects on health (Black, Allen et al. 2008, Klasen 2008, WHO and UNDP 2018). The Democratic Republic of the Congo (DRC) is among the poorest countries in the world and heavily indebted (World Bank 2022). The country was ranked the 179th of 191 countries in terms of human development index (UNDP 2021). In 2015 maternal mortality was estimated at 693 per 100000 and the under-five mortality rate was around 308 per 1000 (WHO 2018). Malnutrition is rampant where 43% of children under five are malnourished and around 76% of women encounter barriers accessing maternal health care services (DHS 2014). The country has been involved in repetitive wars for over twenty years, and the eastern part of the country is still facing rebellions. Insecurity prevails and unemployment is widespread. Like in many other countries, women ensure much of the economic activities of a household, and largely carry the responsibility for providing and caring for household members; men endorse the role of decision-making for all expenditures including health (Duflo 2012, Manda-Taylor, Mwale et al. 2017, Dumbaugh, Bapolisi et al. 2018). This is confirmed according to the Demographic and Health Survey 2014, where only 29% women decided themselves how to use the money they had earned. When it comes to decision-making

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about their own health, only 36% of the women decide themselves (DHS 2014). As women are usually the main caregivers of children, women's limited decision-making negatively affects their children's health and wellbeing (Abdullah Yusof and Duasa 2010, Keino, Plasqui et al. 2014, Akombi, Agho et al. 2017, Alaofè, Zhu et al. 2017). Men's involvement remains important although a lack of participation of men in programs improving sexual and reproductive health (SRH) has also been revealed as one of the reasons for poor progress observed in the domain of family planning and persisting disagreement between spouses regarding their choice for SRH service use (Kabagenyi, Jennings et al. 2014, Tilahun, Coene et al. 2014, Tilahun, Coene et al. 2015, Kabagenyi, Reid et al. 2016). Studies showed that male involvement led to better results regarding the use of contraceptives (Sternberg and Hubley 2004, Dumbaugh, Tawiah-Agyemang et al. 2014, Tilahun, Coene et al. 2015). Barker and others have further demonstrated that the involvement of men in family health can be a mediator towards better health (Madhavan and Townsend 2007, Bich 2008, Barker, Ricardo et al. 2010, Abate and Belachew 2017).

Women's empowerment is a process of awareness and capacity building leading to greater participation, greater decision-making power, and transformative action in different domains such as rights, health, or economics (Duflo 2012, Rahman 2013). In the literature, economic empowerment was presented as a key factor for better health and to palliate all types of violence including intimate partner violence (Abramsky, Devries et al. 2016, Raj, Silverman et al. 2018, Schuler and Nazneen 2018). However, in a male-dominated society, women's economic empowerment is not the sole factor to fight partner violence and can lead to resistance due to restrictive gender norms. Therefore, actions engaging men to support women's empowerment must be part of interventions that aim at strengthening women's economic participation (Gupta, Falb et al. 2013, Falb, Annan et al. 2014, Hossain, Choudhury et al. 2017).

It has been shown that sufficient resources and an enabling environment allow women to make decisions about their health, which leads to improved health outcomes specifically as regards SRH (Kelly and Dunford 1999, McDonagh 2001, Van Rooyen, Stewart et al. 2012, Reiter and Peprah 2014). Yet, in South-Kivu and other African contexts, women often lack access to health services and also the financial resources to meet every day needs (MacPherson, Sadalaki et al. 2015, Dumbaugh, Bapolisi et al. 2018). As both are required, improvement of cash income and more equitable decision-making about the use of resources at the level of the household, complex interventions combining those two aspects are needed.

One of the most widely implemented approaches to improve population health is the introduction of microfinance including projects containing a social development component such as Village Savings and Loans Associations (VSLA) (Gibbs, Willan et al. 2012, Annan 2013, Oxfam 2013, Zakaras, Weiser et al. 2016). A VSLA is a platform for developing women's capacities in organizational and financial matters, to improve self-efficacy and decision-making, and other skills. This approach was receiving increasing attention in the 1990s as a community-managed microfinance approach with a social mobilization component (Christopher Ksolla 2016). A VSLA is a self-selected group of 15 to 30 persons who agree to save a certain amount defined by all the members every week. Members self-organize in a committee with a president and meet every week. Loans can be taken up to 3 times the savings a member has contributed, and the loan has to be paid back with an interest rate of 5-10% according to what the group has defined. A normal cycle of a VSLA is nine to twelve months, after that, a new VSLA has to be set up.

Several studies evaluated VSLA programs showing positive effects on general welfare and child well-being (Annan 2013, Oxfam 2013, Aurélie Bruniea 2014). Positive impacts on health were stronger if VSLA programs were in conjuncture with health education (Kim, Watts et al. 2007, Van Rooyen, Stewart et al. 2012, Abate and Belachew 2017). There is some evidence on

the effectiveness of VSLA in fragile contexts, which focuses on specific subgroups. A study in the post-conflict Ivory Coast showed positive effects of an intervention focusing on gender relations in combination with VSLA on household economies and gender equity (Falb, Annan et al. 2014). In Eastern DRC, a project evaluation among female sexual violence survivors showed a positive effect of a VSLA program on food consumption and stigma reduction (J. Bass 2016). A limitation of the approach is, however, the self-selection process when forming VSLA groups, which can lead to the exclusion of socially marginalized persons if they are not explicitly targeted (Mersland and Eggen 2007, Surmont 2017).

To improve gender equity within households, several approaches towards engaging men for gender equity have been developed, a prominent example being the Promundo approach, which is based on men-to-men sensitization developing ‘positive masculinity’. Men engage men towards more equitable gender norms to adopt attitudes and behavior promoting women’s economic empowerment and helping to reduce gender-based violence; “Positive masculinity” refers to positive changes in attitudes and behaviors transforming the socio-cultural norms associated with masculinity (Barker, C. et al. 2007, Promundo, salud et al. 2013). Once men are sensitized to the benefits of women’s empowerment, they could become active advocates for women’s and children’s welfare in the household as well as in the community and change gender-based inequities in health (Gibbs, Willan et al. 2012).

Increasingly, projects target women and men jointly in order to transform gender-inequitable norms and behaviors, yielding encouraging results for example in reducing gender-based violence (Abramsky, Devries et al. 2016, Hossain, Choudhury et al. 2017, Casey, Carlson et al. 2018). Projects engaging men can be part of complex interventions, but only a few have combined these approaches with VSLA (Gupta, Falb et al. 2013, Falb, Annan et al. 2014).

1.1 Context of the study

The Democratic Republic of the Congo is a sub-Saharan country in the center of Africa. After decades of conflict, the government is weakened. Economic and socio-cultural life in eastern DRC needs improvement. South-Kivu is a province in the Democratic Republic of the Congo (DRC) bordering Rwanda and Burundi and its capital is Bukavu. North Kivu is a province on the border with Rwanda and Uganda and its capital Goma is on the shores of Lake Kivu in eastern DRC. Those areas have been affected by years of civil war (1994 to 2003) and the current political instability continues to result in significant population movements (World Bank Group 2018). The security of both regions remains very uncertain with continued violence and human rights violations. The density of the population is 60 inhabitants per km2 and a large part has gathered in the plains and cities of the province, looking for security (UNDP-CD 2009). The Demographic Health Survey (DHS) found that 27% of married women (aged 15 and over) had experienced sexual violence in the last year, mostly by their spouse or partner (DHS 2014). Rape results in unwanted pregnancy, HIV infection, or fistula and increases the risk to women's health (Mukengere Mukwege and Nangini 2009, Nelson, Collins et al. 2011). Survivors encounter difficulties seeking justice and compensation because the justice system is weak. Additionally, most of the survivors do not have enough financial support to manage medical complications resulting from the rape (fistula or infections). The unfavorable socio-economic situation and the difficult economic environment fuel gender-based violence (GBV) in the region. Women are raised by rigid gender norms. Frustrated, many men turn to unhealthy behaviors to assert their masculinity: alcohol abuse, irresponsibility, lack of productivity, and violence. Surprisingly women are more tolerant to GBV; for example, 43.5% of women think that it is justified for a man to beat his wife if she refuses the sexual act (vs only 22.9% of men) (DHS 2014).

Some laws and conventions have been signed by ministries in the DRC in the past to fight violence against women, and national strategies were defined (Office 2018). However, the government has taken little action to ensure compliance with international laws, or its own laws on gender issues. Asresult, international agreements and national laws supporting equity have little or no impact at the local level.

Within this context, several local and international non-governmental organizations (NGOs) have been fighting GBV by promoting equity in societies. One of the promising approaches is the engagement of men and young people in women's empowerment and the GBV fight.

One of the NGOs involved is CARE International, which for decades now has been interested in women's empowerment and more egalitarian societies (CARE International 2013).

1.1.1 CARE in DRC

CARE (Cooperative for Assistance and Relief Everywhere, formerly Cooperative for American Remittances to Europe) is an international humanitarian organization providing emergency relief and developing long-term international development projects. Founded in 1945, CARE is one of the oldest anti-poverty relief organizations (CARE International 2018).

CARE is focused on women's empowerment, defined as the amount of change needed for a woman to enjoy all her human rights. CARE designs and implements projects in parallel to the Global Women's Empowerment Framework, which recognizes the power of individuals to change and make the change happen. CARE believes that women alone cannot achieve empowerment, but that men as formal and informal holders of power must also be involved in the change.

To operationalize women's empowerment, CARE promotes the involvement of all sectors of society in dismantling the unjust norms and policies that prevent women and girls from enjoying their human rights. Recognizing the complex, long-term nature of this work, and requiring it to be decreed by the same people it is trying to change, CARE collaborates with multiple actors,

from rural women and men to traditional leaders and technocrats from the ministry, and seeks to promote change (or collaborate with others who promote change) of individuals, relationships, and structures. Women's and girl's empowerment is its key strategy to eradicate poverty, conflict, human suffering, and gender inequality.

The office of Care DRC is located in Goma with representations in Kinshasa, Kasai, Bukavu, and Uvira. In North and South-Kivu, CARE has implemented several projects including *Tufaidike wote*, *Sisi vijana*, *Mawe Tatu*, and *Uzazi bora*. In the context of this project, we were working with the "*Mawe Tatu*" program. *Mawe Tatu* is a CARE project that wants to increase household economic status through women's empowerment associated with a men's engagement component (CARE International 2018).

Mawe Tatu is implemented in the height territories of North and South- Kivu: Goma, Karisimbi, Nyiragongo, and Rusthuru in the North-Kivu, Bagira, Ibanda, Kadutu, and Walungu in the South-Kivu. Walungu and Rutshuru are rural while the others are urban except Nyiragongo which is semi-rural (Figure 1).

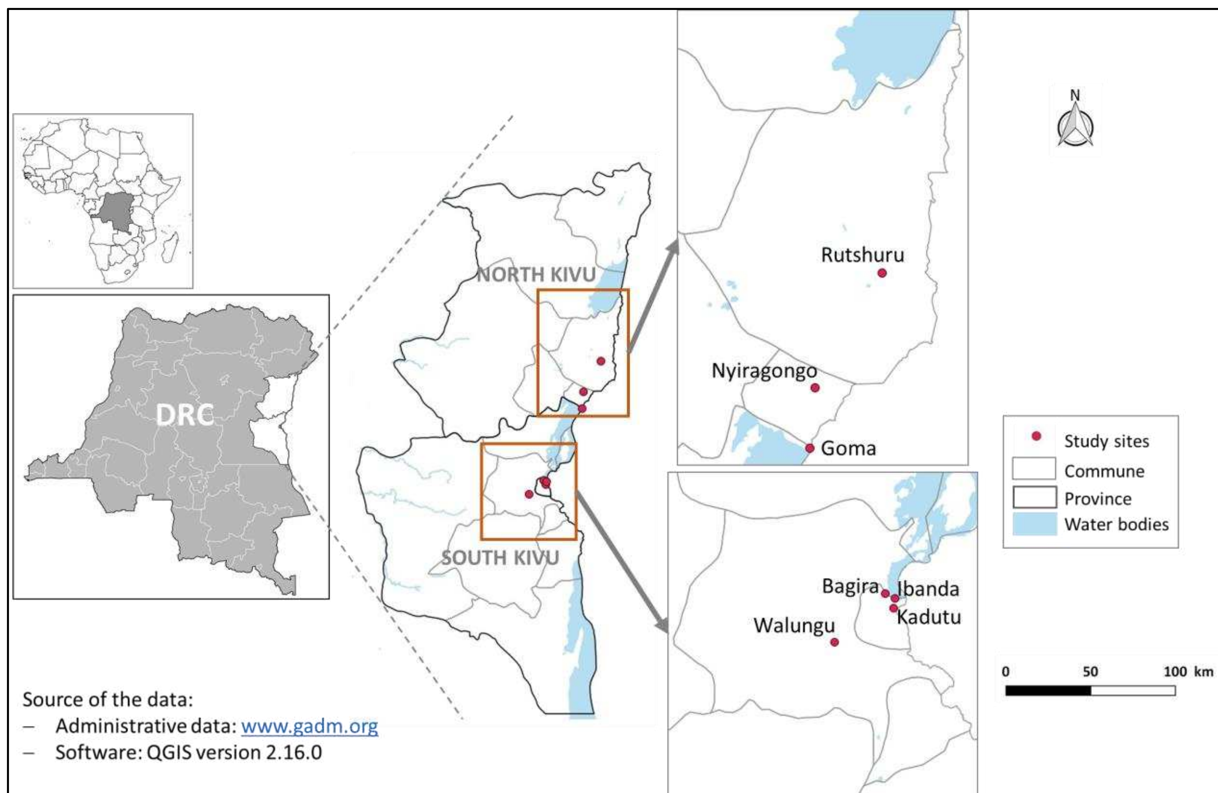


Figure 1 Mawe Tatu Program in North and South-Kivu

1.1.2 *Mawe Tatu's* components

Mawe Tatu is an integrated program led by CARE DRC and several partners, including the Congolese Network of Men (COMEN), "Amis de la Justice" (ADJ), the Swiss Tropical and Public Health Institute (Swiss TPH), and the Ministry of Health and Gender, the Ministry of Primary, Secondary and Vocational Education and other relevant ministries in the Kivu.

The "*Mawe Tatu*" program is based on three approaches:

1. Improve the social and economic status of women and their families through Village Savings and Loan Associations (VSLA) interventions and raise awareness of women regarding their sexual and reproductive rights;
2. Engage with men to increase knowledge, skills, and support of women's economic empowerment;
3. Empowering women and young men in sexual and reproductive health and rights through comprehensive sexuality education.

First approach: *Mawe Tatu* uses the VSLA model developed and validated by CARE, to stabilize and improve the economic conditions of women, and develop the capacities of the members in the organizational and financial competencies as well as in other skills within households and their communities. By participating women gain self-confidence and the necessary knowledge to improve their analytical skills and make decisions about their lives through different themes: human and women's rights, women's leadership skills, literacy, and entrepreneurial skills. VSLA members collaborate for personal, collective, and economic well-being: they create and seize meaningful opportunities to build relationships and coalitions of affinity to pursue their interests. VSLA is, in other words, a strong platform for individual change and relationships as specified by CARE in the context of women's empowerment. VSLA also serves as a platform to discuss issues of common interest, and also as a stepping stone for women to take on leadership roles in local development efforts. VSLA can at a certain point constitute a network. These networks are supposed to take the relay in the setting up and the perpetuation of VSLA for sustainability.

Mawe Tatu's **second approach** is tightly bound to the first and postulates that men - ideally VSLA members' spouses - adopt attitudes and behaviors that support women's economic empowerment and do not tolerate violence against women, and promote positive masculinities as an approach derived from previous successful approaches. This includes Promundo's programs, but also uses materials from the Men Care Campaign, engaging the men and boys Toolkit, and the Gender Equality Scale (Gender Equitable Men's Scale)(Promundo, salud et al. 2013). The project works with groups of men to understand the nature of gender norms, limitations that masculinities (and femininities) impose on an individual or family and the well-being of the community, as well as the risks and benefits of opposing the standards in force. Men acquire knowledge, skills, and mutual support they need to analyze and change their idea of internalized masculinity. They encourage new behaviors toward children, spouses, and

neighbors, and better manage relatives' reactions to new behaviors. Therefore, *Mawe Tatu* established simple systems through which selected participants were trained and supported over time as facilitators of their groups and more comprehensive dialogues in their communities. Facilitators were equipped with context-specific tools and materials to support participants through the information and activities mentioned above.

In a **third component** of the project, young people were sensitized on the one hand to positive masculinity, on the themes of gender and rights, and on another side to comprehensive sexuality education (CSE) with the aim that young people develop skills and attitudes that promote healthy relationships by recognizing women's rights. Project participants gain functional knowledge of CSE by following the standards of the International Federation for Family Planning (IFPF) on issues such as abstinence, body image, contraception, gender, personal growth and development, procreation, pregnancy, relationships, sexual anatomy and physiology, sexual behavior, sexual health, prevention and transmission of HIV / AIDS and other sexually transmitted infections, family planning methods and the health knowledge relationships they need to engage in healthy behaviors and reduce risk. They also learn life skills (such as communication, condom negotiation, access to health services, and conflict resolution) that support engagement in healthy behaviors and prevention of GBV. *Mawe Tatu* ensured that young people were trained in CSE in schools in collaboration with the Ministry of Primary, Secondary, and Vocational Education, as well as youth centers and peer educators to ensure that they adhere to global best practices in the content and implementation of CSE; and with the aim that young people can consider themselves as equals in their relationships, to enable them to protect their health, and to facilitate their engagement as active participants in society. By participating in several youth forums, young people gain more confidence and social skills to participate actively and positively in their relationships (peers, parents, and potential partners) in the difficult and fragile context of the eastern DRC.

Prior to using the South-Kivu CSE program in *Mawe Tatu* schools and youth centers, CARE and its partners: (1) advocated at the policy level with the education and health sectors in North Kivu to optimize the adaptation and integration of CSE in the national education program; (2) add a module that helps educators to deeply address the topic of gender and social norms; and (3) raise parents' awareness (mothers and fathers) and nodes of influence in communities, including religious and traditional leaders, to ensure that CSE takes place in a tolerant society and a supportive environment. However, the third component, the youth part is not investigated in the context of this PhD.

With these three approaches, "*Mawe Tatu*" offers an ambitious outreach and communication package that: (a) guides participants to negotiate social change within their communities, and (b) reinforces a policy-friendly, legal environment, security, and service delivery around such a change.

Because of the sensitive topic of the project, which addresses gender relations and sexuality, a high buy-in by local communities is the key to its success. To evaluate the *Mawe Tatu* program, the approach aims at adopting a participatory approach, in collaboration with project implementers and potential beneficiaries to inform and improve the project throughout its implementation.

1.1.3 VSLA methodology

Village Savings and Loan Associations (VSLA) can be defined as independent associations that provide poor people in remote, rural areas with safe places to store small amounts of money and to constitute a common fund from which small, flexible loans can be taken by members. They work without long-term technical support and injections of donor capital. The VSLA do not receive any direct capital investment from CARE or from other organizations. The members choose for themselves according to trust and the money stays in the community

therefore the high costs linked to microfinance are zipped. Since 1991 CARE has established more than 54000 VSLA in more than 30 countries (Allen and Staehle 2007).

A single association consists of 15 to 30 members who save a pre-defined small amount (share) every week. A share is defined by the members at the beginning of the group to allow everybody to be able to save regularly, and members can contribute up to five shares every week. One can take a loan that is three times the amount she has as savings at the moment and an interest (generally up to 5-10% in accordance with what was defined at the beginning of each VSLA) is required for the reimbursement. Rules are also set at the beginning by a common agreement. The common agreement also comprises modalities of reimbursement which includes the period of time after which one should be able to reimburse the loan. The VSLA's funds are kept in a cash box which is fitted with three padlocks; the keys are kept by three different members elected by the group. The cash box is kept by another person, different from those having the key for more transparency.

In addition, the cash box also holds social funds. The amount of weekly social funds is also set at the beginning of the VSLA and each VSLA defines how much it will be contributing. The social fund is called in *Swahili "upendo"* which means "charity". The social funds are used for assistance in case of illness, death, hospitalization, etc. Once again, all the members agree in the beginning on what events would benefit from the assistance of the VSLA and the amount to allocate to each type of event.

Unlike savings, social funds are compulsory for everyone in every VSLA meeting.

The starting and closed balances of cash and social funds, as well as loan disbursement, are recorded in the group ledger and shared with everyone at the beginning and the end of each meeting. In every meeting, members remember themselves through a question-answer game about how much was in the cash box and how much was in the social funds, to ensure that everyone is on the same page.

The VSLA model is lauded not only for its transparency but also for the adaptability for illiterate members, all operations, deposits, withdrawals, loans, and loan repayments occur in the weekly meeting with the entire group present and participating in decisions.

Each member has an individual passbook which is stamped every week, with one stamp representing one share.

At the end of a cycle (9 to 12 months), the total of all savings accrued with interest (coming from reimbursement) is shared among members in proportion to each individual's savings. After the disbursement of funds, the groups normally re-form immediately and begin a new cycle of saving and lending.

While the number of VSLA is growing and loans are given, CARE and its partners supply extensive training on gender dynamics, governance, money and business management, and family planning with a focus on gender aspects in all domains.

1.1.4 *Baraza Badirika* or a men's engagement component

Men engage their peers towards more equitable gender norms to adopt attitudes and behavior promoting women's economic empowerment and helping to reduce GBV.

Baraza Badirika (literally means "peer let us change") is the *Mawe Tatu* application of "men engaging through positive masculinity." The Baraza Badirika assimilates groups of up to 30 men. They meet weekly for three months and discuss many gender-related topics.

A total of 80 facilitators (moderators of B*araza* groups) were trained at the beginning of the program. The curriculum is the same for all the groups and consists of 13 themes. The different themes are: (1) identity and concepts of gender; (2) masculinities, the cycle of male and female socialization; (3) the socialization of gender, acting like a man, acting like a woman;, (4) men and interpersonal violence; (5) GBV; (6) involvement of men in the prevention of GBV; (7) the ten tips for good fatherhood; (8) sharing of work and child care within the household; (9) fair

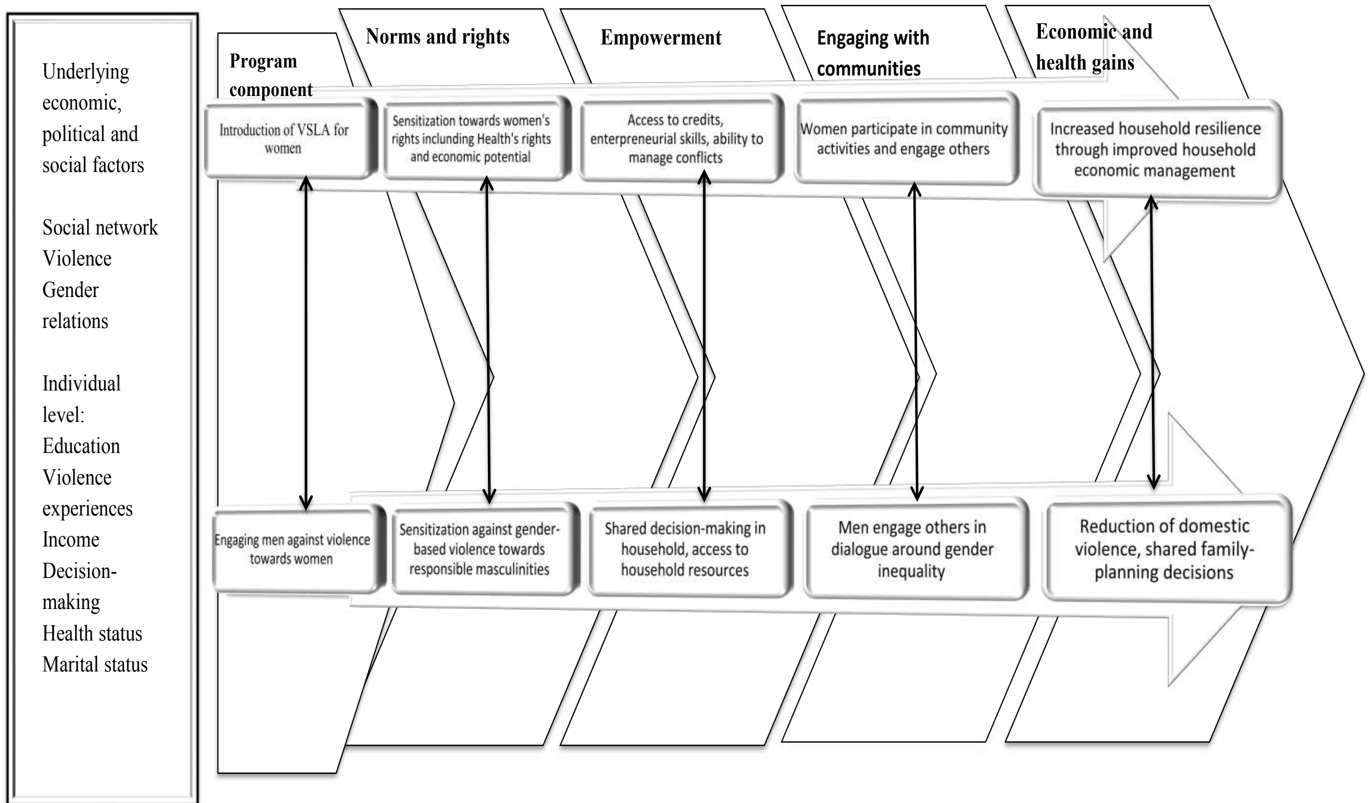
negotiation, equity, and equality; (10) economic partnership; (11) mutual respect and dialogue between spouses; (12) family planning; and (13) dissemination methodology.

A typical session is based on questions asked to each peer on how they act in different situations. Everyone is called to share his point of view or experiences. Then, men are given "assignments" (regarding their relationship with their wives or children) to do at home and they share their experiences in the group before the beginning of the next topic of the next week.

The wives, spouses of Baraza's members were invited to follow the instructions with their husbands on three of the main themes: economic partnership, mutual respect and dialogue between spouses, and family planning. For each session, the facilitator gives the take-home messages resuming what was discussed according to the curriculum. At the end of the course, men engage themselves as actors in the fight against GBV by sensitizing their peers in the community. Unlike the VSLA component, there are no savings or any economic aspects in this component. At the end of the course, men can decide to begin a common activity to stay in contact such as a livestock project.

Figure 2 presents *Mawe Tatu*'s framework describing the mechanisms by which changes were expected to happen when combining women's empowerment through VSLA and men participating in the *Baraza Badirika.*

Figure 2. Mawe Tatu's Project framework



2 Objectives, PhD project aim, and framework

2.1 PhD project aim

This PhD project aims to clarify: (a) the impact of a complex intervention associating the VSLA program with the men's engagement program on socio-economic, reproductive, and child health indicators, and (b) to clarify the contribution of a peer-to-peer sensitization approach engaging men for more equitable gender norms as part of a complex intervention. Main outcomes include: household economy including income, household food insecurity level, gender norms and gender-based violence, couple and neighbor cohesion, and women's participation in household decision-making processes. Reproductive and child health outcomes include: child nutritional status, utilization of antenatal care services, facility-based delivery, and family-planning use.

2.2 Objectives

The specific objectives of this present PhD are to:

a) Assess the initial food insecurity level of households as an indicator of the initial economic level of households

b) Assess changes in child nutritional status in households when husbands are sensitized to promote women's empowerment

c) Assess the impact of combining women's empowerment and men's sensitization towards gender on maternal health services use (skilled birth attendance, antenatal care, and family planning use) and socio-economic factors including food insecurity, income, resilience, women's participation in decision-making, and couples and neighbor cohesion

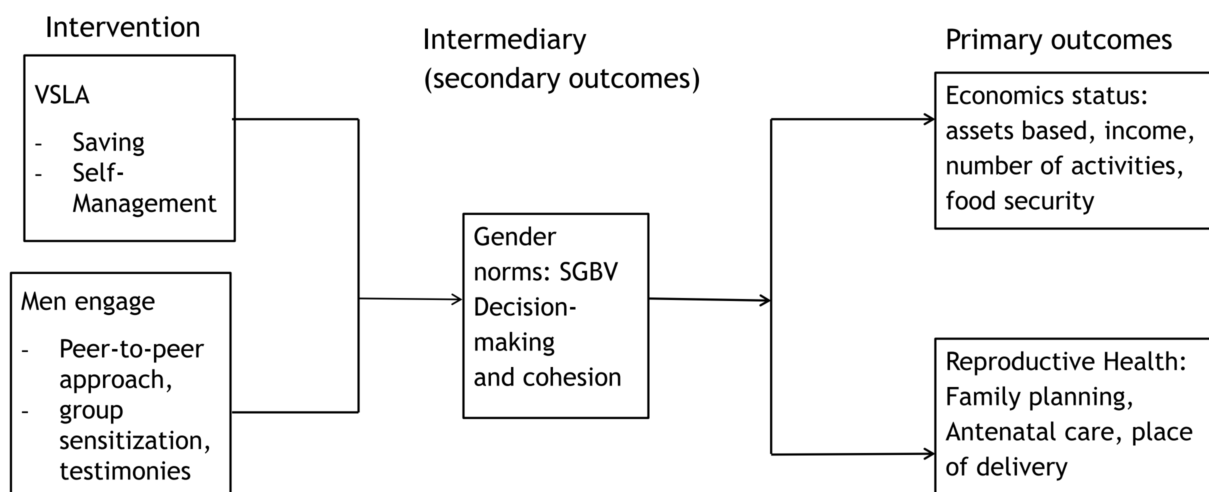
d) Explore family planning challenges through a gender lens

2.3 Conceptual framework of the PhD project

A framework has been developed to operationalize how "positive masculinity" in combination with women's economic empowerment impacts the economic status of the household and health and wellbeing (Figure 3).

Through the *Mawe Tatu* program, men are sensitized to women's rights, including sexual and reproductive health rights. Together with women participating in VSLA, they were expected to become agents of change in regard to the transformation of gender norms, which will lead to more gender-equitable attitudes, joint intra-household decision-making, and increased economic activities and autonomy among women, with a positive impact on household economic status and family health. It is further expected that engaging men for gender equity (decision-making within the household, women's participation in economic activities, and couple communication) enhances the health and wellbeing of the family, including children's nutritional status.

Figure 3 Research Framework



Changes in men's attitudes and behaviors, by encouraging women's empowerment, constitute "positive masculinity" in the context of this study.

"Positive masculinity" refers to changes in attitudes and behaviors i.e. when men are sensitized, they become active in advocating for and ensuring children's and women's welfare in the household as well as in the community. Barker and colleagues called it "changing gender-based inequity in Health" (2007).

By women's health, we investigated FP use, antenatal care, and skilled birth attendance. We expected therefore that men sensitized by *Mawe Tatu* must be agents of change for better health of their wives, by using family planning and other maternal health services.

3 Methods

This PhD project employed a parallel mixed-method design, combining a longitudinal cohort study (Study 1) with a longitudinally designed qualitative study (Study 2). Quantitative findings were triangulated with qualitative findings in order to deepen the understanding of the forces that trigger and sustain the expected change.

3.1 Study component 1 - Quantitative

3.1.1 Study design and study population

A cluster-randomized, longitudinal intervention study compared VSLA participants in an intervention area with controls. The intervention districts were identified a priori by the implementing organization, but the intervention and control sites (villages) were randomly selected within these districts. In the intervention sites, all participants in a newly created VSLA were eligible for inclusion in the intervention arm. While participation in a VSLA is based on self-selection, a random sample of VSLA participants was selected based on VSLA members' lists available from the *Mawe Tatu* program.

A control group of participants was recruited in adjacent randomly selected villages where VSLA were not offered. Participants who were self-selected took part in an information session on income-generating activities or a related theme in order to recruit participants with a similar

socio-economic profile as the VSLA members. A random sample of participants from the information sessions was then included in the study as controls.

Additional inclusion criteria for the study included being long-term residents of the study site (living in the household for at least 6 months) and being at least 15 years old. For participants with children, all children ages 1-5 years currently living in the household of an adult study participant were recruited for inclusion in the anthropometric study module (**Table 1**). Children included in the study were under the guardianship of the adult study participant.

Table 1. Study population group for the quantitative component

Group	Intervention group	Control group
Women	VSLA member	Participated in an information session, not member of a VSLA
Children (1- 5 years)	Children who are in the guardianship of an adult study participant member of VSLA	Children in the guardianship of an adult participating in the control group

Table 1 summarizes the inclusion criteria of the study population.

3.1.2 Instruments

The survey questionnaire included questions about primary outcomes: household economy (income-generation, income, assets, housing, relative household status, and health insurance), child nutritional status, and unmet needs of family planning. Secondary outcome variables encompassed gender norms and rights (perception of women's rights and gender equity, women's participation in decision-making and income-generation, women's utilization of reproductive health services, and women's perceived self-efficacy to speak out in community meetings). Further questions included information about the household structure (household composition and headship), individual socio-demographic information (age, education, marital status, number of children), and program-related variables (participant of VSLA, time in VSLA, partner participation in men's reflection groups) (**Table 2**). Questions from previously validated

instruments were used FP use, women's participation in decision-making (DHS 2014), Food-insecurity experience scale (FIES) (Cafiero, Viviani et al. 2018), Gender-equitable Men scale (Nanda 2011). Anthropometric data was collected from children under 5 years of age living in the household including weight, height, and mid-upper arm circumference (MUAC).

An overview of the indicators used is provided in **Table 2**.

Table 2. Definition of some variables

Variables	Type of variable	Units
Economics related variables		
Relative household economic status	Categorical	
Household food security	Likert scale and qualitative data	1-3
Monthly income	Continuous	
Income-generating activities	Categorical	
Composite wealth indicator, asset- based	Categorical	
Child anthropometrical measurements		
Weight	Continuous	Kg
Height	Continuous	Cm
MUAC	Continuous	Mm
Reproductive Health		
Attendance of ANC during last pregnancy	Binary and qualitative data	Yes or no
Place of delivery of the last child	Categorical	Hospital, health care facilities, home
Counselling and use of FP	Binary	Yes or no
Intermediary variables: gender and decisions making		
Perceptions related to gender relations (beliefs and attitudes)	Likert scale and qualitative data	
Sexual violence, sexual and reproductive health knowledge	Likert scale and qualitative data	
Knowledge of family planning commodities and existing services	Likert scale, and qualitative data	
Participation in decision-making (household and community level)	Likert scale, and qualitative data	
General characteristics		
Sex	Binary	Male/female
Age	Continuous	Months
Marital status of parents/tutor	Categorical	Married, single, divorced,
Household size	Continuous	
Breadwinner	Binary	Male/female
Belonging to VSLA	Binary	Yes or no
Partner or husband engaged in peer-to-peer reflexion group	Binary	Yes or no

3.1.3 Sample size calculation/justification

The power calculation was based on the hypothesis that establishing savings and loan systems at the village level lowers the risk of children's stunting up to the time of follow-up. Improved child growth is a result of increased livelihood and food security that is sustainable over some time. The surveys were conducted in 80 villages in North and South-Kivu with an average of 15 households per village. Assuming an attrition rate of 30% during follow-up, a final analytic sample size of 800 was estimated in the intervention group. The control group, planned to be smaller with 40 villages (600 households), assuming the same attrition rate, was estimated to be 400 households in the final control arm. A total of 1227 women (households) in the intervention group and women (households) were recruited in the beginning. The study ended up with a total of 730 women in the intervention (91.2% of the calculated sample size) and 316 control (79.0% of the calculated sample) in the control.

The loss to follow-up was mainly due to security reasons in the North-Kivu. Two villages were very insecure and could not be reached during the entire period of the second round of data collection. The other reasons involved the natural movement of the population looking for better places to survive.

As there are few data on the distribution of individual growth rates among children in the study area, we expressed the intervention effect in terms of a certain fraction of the standard deviation SD of individual growth rates. If the mean change in height during a given period increases by z standard deviations as a consequence of the intervention, then this corresponds to a shift of the median of growth to the Φ (z)-quantile of the distribution in the control group (where Φ denotes the cumulative density function of the standard normal distribution. For instance, if z = 0.25, this corresponds to an intervention-related shift of the distribution whose new median is where the 60th percentile of the original distribution was located **(Table 3).**

Table 3. Power calculations for child anthropometric data

Effect size	Shift of median to	ICC*	SD of random village effect	Child in every HH Power	Child in 50% HH Power
0.27 SD	P61	0.01	0.1 SD	99%	86%
		0.02	0.14 SD	98%	84%
		0.03	0.18 SD	97%	83%
		0.04	0.21 SD	96%	81%
		0.05	0.23 SD	95%	79%
		0.10	0.33 SD	86%	-
0.25 SD	P60	0.01	0.1 SD	97%	80%
		0.02	0.14 SD	96%	78%
		0.03	0.18 SD	95%	77%
		0.04	0.21 SD	93%	75%
		0.05	0.23 SD	91%	73%
		0.10	0.33 SD	80%	-
0.2 SD	P58	0.01	0.1 SD	88%	-
		0.02	0.14 SD	84%	-
		0.03	0.18 SD	81%	-
		0.04	0.21 SD	78%	-
		0.05	0.23 SD	75%	-

*Proportion of variance explained by the factor village

SD = standard deviation of individual growth rates.

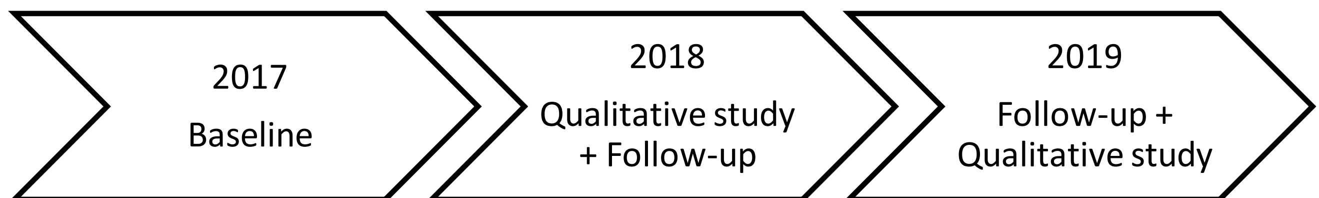
The table above (**Table 3**) gives the achievable power for different effect sizes and intra-class correlation coefficients. The expected power is given both under the assumption that: a) a child under 5 years old will be found in each household, and b) that a child under 5 years old is found

only in every other household. Intra-class coefficients reported in other African contexts range from 0.01 to 0.05.

Data collection

Baseline data were collected from March 2017 to December 2017. The long period is explained first by security reasons. The instability in DRC due to the reported elections makes it difficult to go into the field or to reach some areas; second, the nature of a VSLA which is a spontaneous activity makes it difficult to have at the same time at least one new VSLA in the selected 80 villages. Data were collected at the third meeting of the VSLA when it was quite sure that the group was settled with no newly enrolled members and the chance of members abandoning was reduced.

The follow-up data collection began from June 2018 to February 2019. An interval of more or less twelve months between baseline and follow-up was respected.



A team of local researchers fluent in the locally spoken languages was trained over a week in data collection methods, followed by a pilot study. Participation in the survey was voluntary. The study information and consent forms were translated into local languages. Informed verbal and written consent were obtained from each individual before the beginning of data collection. Data were collected strictly respecting confidentiality. No compensation was offered in exchange for participation in the survey and no fees were required from participants. The structured questionnaire was administrated using tablet technology and the Open Data Kit (ODK) software package. Data were stored on a secured server located at the Swiss Tropical and Public Health Institute in Basel, Switzerland.

Anthropometric measurements of children were taken by trained surveyors using a weighing scale, a tape measure, and a (mid-upper arm circumference) MUAC measuring tape (World Health Organization 2007).

3.1.4 Statistical analysis

An intention-to-treat analysis comparing all persons who were initially participating in a VSLA with a control group was established; the effect of participating in the project on household economies (composite wealth score; number of income-generating activities), on child nutritional status (height for age z-score HAZ, weight for age z-score WAZ, and weight for height z-score WHZ, MUAC), and the use of family planning (current use of modern family planning method; the unmet need for contraception) as the primary outcomes.

Primary outcomes

Household economic status was assessed using daily and monthly income and food insecurity levels.

To measure child nutritional status, measures of chronic and acute malnutrition were used. Stunting (small-for-age) as a measure of chronic malnutrition was measured as height-for-age index z-scores (HAZ): a HAZ < -2SD was defined as stunted, a HAZ between -2SD and -3 SD was defined as moderate stunting, and a HAZ < -3 z-score was defined as severe stunting. Underweight was measured as weight-for-age index z-scores (WAZ): a WAZ < - 2SD was defined as underweight, a WAZ between – 2SD and -3 SD was defined as moderate underweight, and a WAZ < - 3SD was defined as severe underweight. Wasting, measuring acute malnutrition as weight-for-height z-scores (WHZ) < -2 SD, a WHZ between – 2SD and – 3SD as moderate wasting, and a WHZ < -3SD as severe wasting. A MUAC < 115 mm was also defined severe malnutrition (World Health Organization 2007, World Health Organization and United Nations Children's Fund 2009, World Health Organization 2010). To measure food security, the FAO food insecurity experience scale was used (Cafiero, Viviani et al. 2018).

Secondary outcomes

In addition to the primary outcomes, secondary outcomes included: changing gender norms (attitudes towards women's rights, gender-based violence, women's roles) and women's empowerment (participation in the economy, self-efficacy to express their views, intra-household decision-making, use of health services, gender-based violence). (**Table 2**)

First, descriptive statistics were calculated for the primary and secondary outcome variables and socio-economic characteristics: a) assets; b) number of income-generating strategies; c) food security and child nutritional status; d) use of FP methods and other reproductive health services; and e) prevalence of perceptions of gender relations (beliefs and attitudes) were documented. For this purpose, percentages, means, and standard deviations were computed. To assess self-efficacy and decision-making power, indices were built using Mokken analysis, which is a nonparametric procedure based on item-response theory that has been used to assess similar scales in previous studies (Stochl, Jones et al. 2012, Gari, Malungo et al. 2013). Differences between education level, and rural and urban populations were assessed statistically using Chi2 tests for different degrees of freedom for categorical variables or using t-tests for continuous variables.

To assess the intervention effects, mixed-effect regression models were run for each primary outcome variable to establish a change in the outcome variables over time (baseline to endline) and by intervention and control group. The models were adjusted for socio-economic confounders, and clustering was considered at the level of villages. The same analysis for primary outcomes was conducted for secondary outcomes. In addition, we studied whether children's nutritional status improves if men are supportive of women's economic activities. Generalized structural equation modelling (GSEM) with maximum likelihood estimation was conducted to investigate the complex and multidimensional pathways by which the association of positive masculinity and women's empowerment directly or indirectly affects the use of FP and the potential role of mediating variables.

Women who completed the full cycle of a VSLA and men who participated in the full course of the peer-to-peer sensitization group determined the fidelity to the intervention. Results were discussed considering the fidelity to the intervention.

Analysis was conducted with STATA V.15.

3.2 Study Component 2: Qualitative

A qualitative study with households participating in a VSLA was conducted by collecting data on gender relations, women's economic participation, and access to sexual and reproductive health services.

3.2.1 Study design

Qualitative studies are by nature smaller and capable of providing in-depth insights into processes within selected households and couples of a particular study site (Luborsky and Rubinstein 1995).

With the qualitative study, women and men (not couples) were closely followed through multiple interviews, including the collection of information related to their income and expenditures, as well as information on gender-based dynamics within families and communities. Health-related behaviour and perceptions of family planning were explored in the context of men engaged in gender equity and women's empowerment to assess any change in behaviours and perceptions after men's sensitization as well as motivations for the change.

3.2.2 Instruments

For the qualitative interviews, guides were developed to explore the dynamics of participating in VSLA and men's sensitization for traditional roles and decision-making at the level of the household with a specific focus on gender, household economy, and maternal and child health. Over time, the instrument was adapted based on the results from previous interviews to capture emerging themes.

A total of ten Focus Group Discussions (FGD), composed of six with women and three with men were conducted with 6-8 participants each. Sixteen individual in-depth interviews (IDIs) were conducted with ten participants.

3.2.3 Study population and sampling

Participants were recruited from households where both partners were involved in the intervention i.e. women participating in a VSLA and their partners participating in a male reflection group, *Baraza Badirika*. All participants were married.

Women and men in the qualitative study were recruited in the same villages but were not in couple nor part of the quantitative study. Women aged twenty-two to fifty-two years and men aged twenty-four to sixty years were enrolled.

A purposive sampling was undertaken to recruit women participating in VSLA whose husbands were also participating in either a VSLA or a reflection group. Different themes such as gender norms, roles and justice in society, cohesion between husband and wife, and gendered responsibility in health and households' economics were explored. Observations of women in VSLA and at their homes during the visits were done throughout the process. Attitudes, the ability to feel confident to speak about anything related to women's health, and the nutrition of children with special regard to the involvement of men were collected.

3.2.4 Data collection

Interviews were conducted in Kiswahili after written informed consent was obtained. No compensation was offered in exchange for participation in the study. Interviews were conducted in an isolated place chosen by the participant either in their home or outside. We made sure that privacy and confidentiality were always granted. The narratives from the qualitative data collection were voice-recorded and transcribed in Swahili. Observations of women in VSLA and at their homes during the visit were conducted; notes were taken and transcribed into French/English.

3.2.5 Data analysis

Coding was done with the help of qualitative data analysis software (Atlas TI). Latent themes were identified by an inductive analysis, reading and re-reading transcripts as well as notes from observations. At every round of iterative analysis, emergent codes were compared, grouped, and contextualized. Finally, using a hermeneutic approach, the emerging hypotheses were integrated into a wider contextual analysis.

3.3 Quantitative and qualitative: Data triangulation

Quantitative data provided associations between outcomes and different factors in the study. Throughout the analysis, qualitative and quantitative results were discussed within the study team, and triangulation was done between qualitative and quantitative results (convergent parallel design). The qualitative analysis sheds light on aspects that cannot easily be quantified. Qualitative research was conducted to understand why people give a specific answer, especially for sensitive topics like gender, power, and decision-making as those are strongly linked to social norms and individual perceptions. It has also helped to generate hypotheses on how to construct the structural equation models during the quantitative analysis.

During the next chapters, we will explore the gendered determinants of food insecurity as an initial assessment of the socio-economic level of the households; the determinants of use of FP as well as perceptions of the population on the FP with regards to gender aspects, and we will finally assess the impact of the complex intervention associating women's empowerment and men's engagement on socio-economic and reproductive health outcomes through changes in gender norms. We will also assess if any change happened to child anthropometric measurements after one year of the intervention.

4 Gendered determinants of food insecurity in ongoing regional conflicts, North and South-Kivu, the Democratic Republic of the Congo[2]

Abstract

Background: Food insecurity remains a major concern worldwide. In North and South-Kivu provinces, the Democratic Republic of the Congo, repeated wars and gender-based violence exacerbate the situation. However, little is known about the determinants of food insecurity in the region.

Objective: This study analyzed the gendered determinants of food insecurity in North and South-Kivu in the Democratic Republic of the Congo, a region of ongoing civil conflict.

Methods: A cross-sectional study included 1754 women. Multilevel ordinal logistic regression was used to identify household-level determinants of food insecurity.

Results: The poorest households were five times more likely to be food insecure (OR= 5.66, 95% CI= 3.74 - 8.55). Women's participation in decision-making about resource allocation decreased the risk for household food insecurity (OR= 0.68, 95% CI= 0.57- 0.87) while higher tolerance to gender-based violence increased the risk of food insecurity (OR = 1.29, 95% CI= 1.05 - 1.54).

Conclusion: Involving empowered women in decision-making about resource allocation and actions to reduce gender-based violence could help to mitigate food insecurity.

Keywords: household food insecurity, gender-based violence, decision-making, wealth perception, Kivu.

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4.1 Background

Worldwide, food insecurity is a major concern; over 820 million people are estimated to suffer from hunger which translates to one in nine persons globally (FAO 2019). Food insecurity is a social as well as a biological, nutritional, and economic phenomenon (Frongillo 1999). Food security is achieved when all people in the household, at all times, have physical, social, and economic access to sufficient, safe, and nutritious food that meets their dietary needs and food preferences for an active and healthy life (FAO 1996). Food security is about availability, stability, accessibility, and utilization; food availability is necessary but not sufficient for access. Access is necessary but not sufficient for utilization, and stability is necessary but not sufficient for utilization (Webb, Coates et al. 2006).

For years, blanket strategies were implemented to achieve food security across entire world regions. Evidence demonstrates, however, that every region faces unique challenges and solutions should therefore be adapted to context (Maxwell 1996, Rukuni 2002, Haile 2005, Maxwell, Vaitla et al. 2014). Authors examining determinants of food insecurity found that household gender dynamics are key. In several studies, households headed by men were more likely to have a low level of food insecurity (Omonona, Bolarin et al. 2007, Donn, Ngondi et al. 2016, Tibesigwa and Visser 2016, Abdullah, Zhou et al. 2017). However, some authors postulate that differences in food insecurity lie not so much in the gender of the household head but in some unobserved differences affecting the use of household resources (Kassie, Ndiritu et al. 2014); others point to the lack of women decision-makers in the household (Handa 1994, Quisumbing, Haddad et al. 2001). Some authors working in African contexts advocate that female heads of households will enhance household food security as women are in charge of food preparation, processing, and preservation (Ibnouf 2011, Duflo 2012). Few authors have studied other aspects of the gender-power balance in decision-making, including gender-based violence and its impact on food insecurity.

One in four people in Africa faces widespread and chronic malnutrition as well as a constant threat of acute food crisis and famine (Rukuni 2002, Watkins and Quattri 2016, FAO, IFAD et al. 2017). The Democratic Republic of the Congo (DRC) is one sub-Saharan country where food insecurity persists. The DRC ranks among the poorest countries in the world (PNUD 2013). In 2018, approximately 13.1 million Congolese experienced acute food insecurity and livelihood crisis with 51% of the population involved in farming (DHS 2014, FAO 2017, Classification 2018). The combination of persistent armed conflict, massive population displacement, poor or non-existent infrastructure, and widespread deterioration of productive assets has significantly affected food security in the DRC. With growing insecurity in rural areas due to civil wars, land is abandoned leading to urban overpopulation. Kasai, South-Kivu, North Kivu, Ituri, Maniema, and Tanganyika provinces are facing population displacement which limits households' abilities to access typical livelihood activities and places many at risk for food insecurity (FAO 2017, USAID 2020). Simultaneously, gender-based violence is increasing in the Kivu region (Mukengere Mukwege and Nangini 2009, Johnson, Scott et al. 2010, Nelson, Collins et al. 2011, Peterman, Palermo et al. 2011, Elbert, Hinkel et al. 2013). South-Kivu has one of the highest burdens of sexual violence in the country. According to the Demographic Health Survey (DHS), 34.5% of women were victims of sexual violence in 2014 (DHS 2014).

Few studies investigating the gendered dimensions of food insecurity in ongoing conflict zones in DRC exist. The purpose of this study is to explore the determinants of household food insecurity in North and South-Kivu, DRC including decision-making and gender of the household head. This analysis will help inform specific actions to be taken to address food insecurity in these and similar regions.

4.2 Methods

4.2.1 Study setting

Data were collected as part of an evaluation of a gender empowerment project in North and South-Kivu, DRC from March to December 2017. Data were collected in both rural (Walungu, South-Kivu and Rusthuru, North Kivu) and urban (Goma, Karisimbi in North-Kivu, and Ibanda, Bagira, Kadutu in South-Kivu) contexts.

4.2.2 Study design and sampling

This paper analyzes cross-sectional data from women who participated in the baseline study of the "*Mawe Tatu*" project aimed at improving household socio-economic status through the VSLA approach. The project *Mawe Tatu* targeted persons of "lower" socio-economic background and selected women for participation by using community-based targeting – approaching community leaders to provide listings with vulnerable households and invite women from these households to an initial meeting – but participation in the project was voluntary. To select villages that were to be included in the study, cluster-randomized sampling was used. The power calculation was based on the hypothesis that village saving and loan systems lower the risk of stunting in children. The sample size calculation has been described in detail elsewhere (Bapolisi, Ferrari et al. 2020). Eighty villages were randomly selected for inclusion in the study and, in each village, participants were randomly selected from new VSLA implemented by the *Mawe Tatu* project.

In the *Mawe Tatu* project, 23,000 were expected to take part of which a minimum of 1200 women was to be included in the baseline study. For villages with one new VSLA, 15 women were recruited for the study. For villages with two or more new VSLA, 25 women were recruited. Ultimately, 1754 women were enrolled in this study.

4.2.3 Instruments

The questionnaire included questions about household food insecurity and socio-economic variables that affected food insecurity including age, sex, gender, education level, household

size, employment status, and self-rated level of household poverty compared to the surrounding community. To ensure unbiased answers on the self-rated level of household poverty, a previously validated scale was used (Rutsein 2004). In addition, research assistants ranked household's wealth based on the construction of the house (mud house, mud house with an iron sheet roof, brick house). Further questions included the relation of the participants to the household head, the main breadwinner, the main household decision-maker, and attitudes towards gender-based violence and gender inequality. Scales were used to measure respondent food insecurity, attitudes towards gender-based violence, and intra-household decision-making.

Food insecurity measurement

Food insecurity was the main outcome of interest. Food insecurity was defined by the globally employed Food and Agriculture Organization's Food Insecurity Experience Scale (FIES) (FAO 1996), used in previous studies on food insecurity (Radimer, Olson et al. 1992, Kendall, Olson et al. 1995). Since the dependent variable was food insecurity, the FIES was computed as a summative-scaled score with ten items (yes/no responses), categorizing household food insecurity into three levels: *severe*, *moderate*, and *mild*. The recall time question was of four weeks (or 30 days).

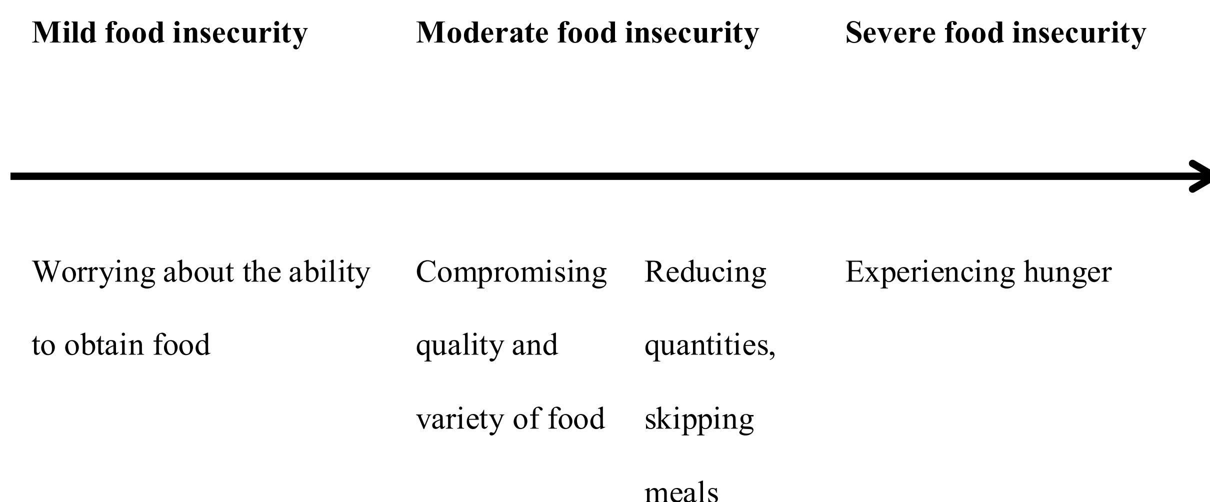

Figure 4 Food insecurity Experience Scale (FIES) FAO

Many authors have studied food insecurity as an ordinal categorical variable (Lokosang, Ramroop et al. 2011, Kassie, Ndiritu et al. 2014, Asesefa Kisi, Tamiru et al. 2018). Due to the

high prevalence of food insecurity in the study region, a summative scale was computed to assess the difference in the households according to their experience. To ensure that the model was not sensitive to outliers (robustness), percentiles were created from the FIES scale.

Decision-making and gender-based violence measurements

The items included in intra-household, summative scales measuring decision-making and tolerance of gender-based violence (GBV) were defined according to previous studies, including the DHS (DHS 2014, Swiss TPH 2015).

Items included: "*Who in your household usually decides on special expenditures such as health care?"; "More specifically, who decides where to seek care for maternal and child health issues?"; "Who in your household usually decides if you personally want to take a loan?"; "Who in your household decides if someone in your household wants to buy or sell a mobile phone?"; "Who in your household decides regarding buying or selling land?"; "Who in your household decides how your own income is used?"; "Who in your couple decides when to have children?"; and "Who within your couple decides whether to use family planning?"* Each item was coded 1 if the woman was participating in the household decision-making and 0, if not; then the summative scale was computed.

For the tolerance of GBV scale, nine binary items were retained based on previous studies in the region (DHS 2014, Swiss TPH 2015): *(a) "It is normal that a man beats his wife if she is unfaithful"; (b) "It is normal if a parent beats a girl if she gets pregnant outside of marriage"; (c) "It is normal if a man beats his wife if she doesn't want to have sex with him"; (d) "If someone insults a man he must defend his reputation using violence if needed"; (e) "If a person wastes money, it is normal that he/she is beaten"; (f) "It is normal that a man beats his wife if she goes out without telling him"; (g) "It is normal that a man beats his wife if she argues with him"; (h) "It is normal that a man beats his wife if she neglects the children"; and (i) " It is normal that a man beats his wife if she burns the food*". Then, a summative scale was computed for each participant.

4.2.4 Data collection

Data was collected using tablets with the Open Data Kit software package; questions were translated into the main local language, Swahili. A team of 20 local researchers fluent in locally spoken languages were trained over a week in data collection methods, followed by a pilot study. Regular data quality checks were done using a short verification questionnaire with a randomly selected sub-sample of 30 participants after the interview and with consistent field supervision. Data was stored on a secured server accessed only by core research team members.

4.2.5 Data analysis

Mokken analysis is a nonparametric procedure based on an item-response theory and helped to confirm the unidimensionality and reliability of the food insecurity, decision, and violence scales. Mokken analysis was used to assess similar scales in previous studies (Stochl, Jones et al. 2012, Gari, Malungo et al. 2013). Mokken scale analysis establishes hierarchies of items. Three basic assumptions are required: unidimensionality, local independence, and monotonicity. Scale homogeneity is based on Loevinger's index of homogeneity H (Loevinger 1948). As a rule of thumb Loevinger's coefficient $H < 0.30$ indicates poor scalability properties, for $0.30 < H < 0.40$ the scale is weak; for $0.40 < H < 0.50$ the scale is medium, and for $H > 0.50$ the scale is strong. The reliability of Mokken scales is estimated using Rho, which is a test-retest reliability coefficient with Rho > 0.7 considered to indicate a reliable scale (Sijtsma and Molenaar 1987). The items that satisfied the three assumptions of the Mokken analysis can be added up and individual scores are then computed as the rank of the highest endorsed item in this hierarchy, i.e. it is a simple total score (sum of positive responses). This total score is used as an estimate of the level of the latent construct, in this case, decision-making, violence scale, and food insecurity in each subject.

Intra-household decision-making: All items were included in the scale using (msp average inter-item correlation: 0.46; scale reliability coefficient 0.88; Hjk 0.839).

Tolerance of gender-based violence scale: Ten items were included in the retained scale, score of reliability: 0.74; average inter-item correlation 0.227; Hjk 0.776).

Bivariate binary logistic regression analysis was performed to show the crude association between food insecurity (the outcome) and the exposure variables of interest (age, education, marital status, relation to the head of the family, number of children, wealth perception, breadwinner, decision-making within the couple, violence scale). Then a multilevel ordinal regression was used to identify determinants of household food insecurity by using the adjusted association between food insecurity and the exposure variables. In post-conflict zones, multilevel ordinal regression has been established as a robust method to study the determinants of food insecurity (Lokosang, Ramroop et al. 2011). Mixed-effect models were used to account for the clustering design. The Hosmer-Lemeshow goodness-of-fit was used to check if the necessary assumptions for multilevel logistic regression were fulfilled. The model had a p-value > 0.05 suggesting that the model fit the data well. The AIC was used to compare different models; the model with the lowest AIC was retained. Odds ratios with 95% confidence intervals (CI) were calculated and the statistical significance was accepted at the 5% level of significance ($p < 5\%$). Data were analyzed using Stata 15.0.

4.2.6 Ethical issues

Informed verbal and written consent were obtained from each individual before the beginning of data collection and all consent forms were translated into local languages.

Participation in the study was voluntary, and refusal to participate in the study had no repercussions whatsoever. Confidentiality was guaranteed. Any participant requesting help or information on a particular topic including GBV was referred to the closest health care facility. No fees were required of participants and no compensation was offered in exchange for participation in the study.

4.3 Results

4.3.1 Respondent and respondent household socio-demographics

Table 4 summarizes the socio-demographic characteristics of the households.

Table 4. Socio-demographic characteristics of respondents in the baseline

Variables	Number	Percentage
Age	36 years ±12.9 years	
	n=1754	
Less than 20 years old	98	5.6
20-29	472	26.9
30-39	474	27.0
40-49	428	24.4
≥ 50	282	16.1
Education	**n= 1748**	
None	336	19.2
Primary	575	32.9
Secondary	745	42.6
University	92	5.3
Married	**n= 1752**	
No	419	23.9
Yes	1333	76.1
Residence	n= 1754	
Urban	1237	70.5
Rural	517	29.4
Occupation (main occupation of the household)	**n = 1754**	
Employment (any),	382	21.8
Self-employment	953	54.3
No employment	419	23.9
Household size	7.5± 3.12	
≤4	287	16.4
5-7	613	35.0
8-10	599	34.1
More than 10	255	14.5
Land	**n= 1748**	
Yes	1029	59
No	719	41
Number of meals per day	1.82 ± 0.61	
Wealth perception	**n= 1565**	
Much richer than others	11	0.7
Somewhat richer than other	126	8.0
The same	666	42.5
Somewhat poorer than other	486	31.0
Much poorer than others	276	17.6
Relation to the head of the household	**n= 1686**	
Respondent is the head	361	21.4
Partner is the household head	1190	70.6
Respondent's relative is the head	110	6.5
Partner’s relative is the head	25	1.5
Breadwinner in the household	**n= 1727**	
Male	974	56.4
Female	500	28.9
Relative	253	14.7

The mean age of the study population was 36 ±12 years. The majority of the study population 53.9% (n= 946), were aged between 20 years and 39 years; 42.6% (n=745) of the sample reached the secondary level at school; 76.1% (n= 1333) were married and 70.4% (n=1237) were living in urban areas (**Table 4**). More than half, 54.3% (n= 953) of the sample size reported they were self-employed, mostly involved in small business; and 70.5% (n=1237) of the participants lived in urban settings. The mean average of household size was 7.5±3.1 people. The mean meals per day was 1.8 ±0.6 meals; 42.5% (n= 666) of people interviewed perceived their household to have the same wealth as the neighborhood, and more than 31% (n= 486) estimated that they considered themselves somewhat poorer than others. More than 70% (n= 1190) reported their husband or partner as the head of the household (**Table 4)**. Most households reported having a male breadwinner.

4.3.2 Food insecurity

Table 5. Food insecurity (FIES)

Food insecurity	Frequency	Percentage	Level of food insecurity
1. You were worried you would run out of food because of a lack of money or other resources.	1446	82.8	Mild
2. You were unable to eat healthy and nutritious food because of a lack of money or other resources.	1459	83.6	Moderate
3. You ate only a few kinds of food because of a lack of money or other resources.	1379	79.0	Moderate
4. You had to skip a meal because there was not enough money or other resources to get food.	1444	82.7	Moderate
5. You ate less than you thought you should because of a lack of money or other resources.	1455	83.2	Moderate
6. Your household ran out of food because of a lack of money or other resources.	1472	84.4	Severe
7. You were hungry but did not eat because there was not enough money or other resources for food.	1308	74.9	Severe
8. You went without eating for a whole day because of a lack of money or other resources.	1243	71.0	Severe
9. Your children were not able to eat healthy or nutritious foods.	1330	78.0	Moderate
10. Your children were not given enough food to eat because of a lack of money or other resources.	1339	78.3	Moderate

Table 5 reports household FIES with a recall period of four weeks (30 days); 71.0% (n= 1243) went without eating for a whole day because of a lack of money or other resources, and 78.3% (n= 1339) reported that children were not given enough food to eat **(Table 5).**

Classifying the households' food insecurity according to FIES, almost all of the study population were experiencing food insecurity, with 87.8% of the respondents experiencing severe food insecurity and only 5.5% reporting to have been food secure **(Table 6)**.

Table 6. Household food insecurity level

Level of food insecurity	frequency	Percentage
	n= 1742	
Food secure	96	5.5
Mild food insecurity	7	0.4
Moderate food insecurity	109	6.3
Severe food insecurity	1530	87.8

Due to the very high prevalence of food insecurity, we could not run a logistic regression to find the determinants of food insecurity using this scale.

Table 7 presents household food insecurity classes using percentiles.

Table 7. Summative scale of household food insecurity

10 Quantiles of food scale	Frequency	Percentage
	n= 1750	
Level 1	170	9.7
Level 2	182	10.3
Level 3	168	9.7
Level 4	183	10.5
Level 5	1047	59.8

Level 1 represents the lower level of food insecurity while level 5 is the higher level of food insecurity (**Table 7**).

The multi-level ordinal logistic regression assessed risk factors for food insecurity levels generated from the 10 quantiles of the summative scale.

Table 8. Multilevel ordinal regression of food insecurity

(Using the summative food insecurity scale based on FAO/FIES scale 1-5 where 1 = lower level of food insecurity and 5 = higher level of food insecurity)

Variables	Odds ratio	95% Confidence Interval		P-value
Age	1.045	0.988	1.105	0.118
Age squared	0.999	0.998	0.999	**0.037**
Education				
No education (reference)	1			
Primary	0.764	0.519	1.126	0.174
Secondary	0.594	0.403	0.877	**0.009**
University	0.664	0.356	1.239	0.199
Number of children	1.052	0.998	1.108	0.056
Wealth perception				
Same (reference)	1			
Much richer	0.238	0.063	0.895	**0.034**
Somewhat richer	0.351	0.239	0.518	**0.000**
Somewhat poorer	3.314	2.506	4.384	**0.000**
Much poorer	5.660	3.746	8.551	**0.000**
Married	1.611	0.927	2.800	0.090
Income-generating activities				
None (reference)	1			
Employment	1.565	1.179	2.078	**0.002**
Self-employment	2.266	1.484	3.452	**0.000**
Provenance				
Urban (reference)	1			
Rural	0.483	0.326	0.714	**0.000**
Decision-making in the couple	0.687	0.538	0.877	**0.003**
Breadwinner				
Myself (reference)				
Husband/partner	1.283	0.880	1.869	0.194
Someone else(relative)	1.272	0.712	2.272	0.416
Relation to the head				
Herself (reference)	1			
Partner/husband	0.633	0.399	1.004	0.052
Relative	1.357	0.684	2.690	0.382
Violence scale	1.296	1.054	1.594	**0.014**

Cut 1	-1.656	-0.422	-2.891
Cut 2	- 0.606	-0.621	-1.833
Cut 3	0.086	1.314	-1.141
Cut 4	0.686	1.916	-0.542
Village var (cons)	0.540	0.895	0.326

Odds ratios associated with food insecurity are presented in **Table 8**. Participants perceiving their household as 'poorer' or 'much poorer' were respectively three times and five times more likely to be food insecure (OR= 3.31, 95% CI= 2.50- 4.38; OR= 5.66, 95% CI= 3.74- 8.55 respectively). The more the woman was participating in decision-making, the less likely the household was to be food insecure (OR= 0.68, 95% CI= 0.53- 0.87). Higher tolerance of gender-based violence increased the risk of the household being food insecure (OR = 1.29, 95% CI= 1.05 - 1.59). Women who were employed or self-employed were more likely to be food insecure (respectively OR = 1.56, 95% CI =1.17- 2.07 and OR= 2.26, 95% CI = 1.48 - 3.45). Having a secondary level of education decreased the risk of the household being food insecure (OR= 0.59, 95% CI = 0.40 - 0.87). Perceiving oneself 'somewhat richer' than others and living in an urban area decreased the risk of the household being food insecure (OR =0.35, 95% CI = 0.24 - 0.52; OR= 0.48, 95% CI = 0.32 - 0.71, respectively) (**Table 8**).

Households headed by the husband or male partner were less likely to be food insecure (OR= 0.56, 95% CI=0.35 - 0.90), but the association was not statistically significant (**Table 8**).

4.4 Discussion

Socio-demographic characteristics of the studied sample were consistent with regional socio-demographics reported in the most recent DHS survey, giving the sample credibility to be representative of the community.

The observed difference between being the head of the family and being the breadwinner is of note but has been described as the result of the high unemployment rate and the development of small activities by women to ensure the survival of the family (Brenton, Bashinge et al. 2011, Nfundiko 2015).

The study results indicated that food insecurity is very high in eastern DRC, which correlates with reports from FAO and other authors (Kaluski, Ophir et al. 2002, Alinovi, Hemrich et al. 2007, FAO 2017). The level of food insecurity in this region is higher than what was found in Kinshasa, the capital of DRC, and in other African countries (Hadley, Linzer et al. 2011, Lebailly and Muteba 2011, Crush, Frayne et al. 2012, Verpoorten, Arora et al. 2013, Birhane, Shiferaw et al. 2014, Battersby and Watson 2018). The ongoing conflicts in North and South-Kivu may be the key explanation to this as FAO has classified the Kivu region as a high conflict zone area (FAO 2017). More than 70% of the study population resided in urban areas; unfortunately, the level of food insecurity measured in this study was worse compared to the results from studies done in other urban areas in Africa (Alinovi, Hemrich et al. 2007, Birhane, Shiferaw et al. 2014, Battersby and Watson 2018). However, this study reinforced what other authors highlighted about the rapid increase in urban population due to rural migration, urban food crisis, and other related factors (Omba 2011, Birhane, Shiferaw et al. 2014, Chinnakali, Upadhyay et al. 2014, Craveiro, Alves et al. 2016, Tacoli 2017). In the study region, many villages are deserted because of insecurity due to ongoing armed conflicts and wars. The unemployment rate, which increased with the growth of the urban population, could have worsened the situation. The surprisingly high prevalence of food insecurity in employed and self-employed people can be explained by the fact that employed people are mostly functionaries. They are underpaid and/or irregularly paid in Congolese francs, a highly unstable currency. Unfortunately, the variation in salaries does not follow the fluctuations of the currency, unlike goods on the market. The precarious socioeconomic conditions in the region force employed and self-employed individuals to work hard to barely secure their livings while unemployed people can only rely on charity for their daily survival.

It was not surprising that regression also showed that wealth perception was statistically associated with household food insecurity levels.

Unlike previous studies, the present results showed that men being the head of the household was not significantly associated with a lower likelihood of food insecurity (Rukuni 2002, Omonona, Bolarin et al. 2007, Abdullah, Zhou et al. 2017, Asesefa Kisi, Tamiru et al. 2018). However, Kassie et al. explained that the difference between male- and female-headed households is mainly because women often do not have the same access to remunerative work in Africa and they generally do not have a level of education that can help them cope (Kassie, Ndiritu et al. 2014). Appleton and Duflo predicted that households headed by women would be less food insecure as women are responsible for preparing food for all of the family members. Contrary to men, women devote the bulk of their earnings to household expenditures which has positive effects on other members' welfare (Appleton 1996, Duflo 2005). The assumption was not verified in the present study, probably because female-headed households would be more vulnerable to extreme poverty exacerbated by the long period of conflict in the region. Others found similar results that women-headed households faced multiple challenges such as limited access to land ownership, technology, or lack of agriculture extension services (Negesse, Jara et al. 2020). However, women and men encounter the same agricultural technology challenges in the Kivu regions.

Tolerance of GBV was significantly associated with food insecurity, which corroborates other findings (Whittle, Palar et al. 2015, Ricks, Cochran et al. 2016, Diamond-Smith, Conroy et al. 2019). However, previous studies also found that food insecurity increased gender-based violence and specifically intimate partner violence (Miller, Bangsberg et al. 2011, Fong, Gupta et al. 2016, Hatcher, Stockl et al. 2019, Lim, Park et al. 2019). Fong et al. are among the few who stated that the relationship between gender-based violence and food insecurity could be bidirectional (Fong, Gupta et al. 2016).

This study also found that an increased level of women's decision-making drives down the likelihood of food insecurity. Gendered divisions of labor generally place women in a central role in the preparation and production of food. Women's active participation in household

decision-making, supported by higher levels of formal education, can challenge prevalent socio-cultural norms that unequally distribute food between genders (A A Hyder 2005, Rao 2006).

However, further research is needed to assess if women's participation in decision-making alone or tolerance of gender-based violence is associated with food insecurity, excluding potential mediators such as societal norms.

Strengths and limitations

The strength of this study lies in being community-based with a considerable participation rate. This study is among the few studies done to assess the food insecurity in North and South-Kivu in DRC with special attention to gender and household power dynamics.

In the present study, food insecurity was an experienced scale to measure the household's ability to afford food. However, the scale did not consider other aspects that could have had a bearing on food insecurity, such as the quality of food consumed, food fads, and food preferences.

4.5 Conclusion

In regions with a high prevalence of food insecurity, measuring determinants of food insecurity is not easy. However, this study succeeded in contributing to the literature by highlighting several important findings. First, household wealth perception was strongly associated with food insecurity: the poorer the household, the more likely it was to be food insecure. A secondary level of education decreased the risk of food insecurity while having employment surprisingly increased the risk. Women's participation in decision-making was associated with lower levels of food insecurity. Finally, tolerance of violence was associated with higher levels of food insecurity.

More studies are needed to better understand the relationship between gendered aspects of household power dynamics and food insecurity. Cultural and societal barriers women face in the community may play an important role in the association between gender aspects and food

insecurity. Further research could help to better understand these associations and inform as-of-yet unexplored approaches to interventions to combat this prevalent regional challenge.

Policy implications

These results have policy implications for interventions aiming to fight food insecurity, especially in ongoing conflict zones. First, interventions should consider improving women's participation in household decision-making and reducing tolerance and experience of gender-based violence. This study suggests that interventions to improve food security must take into account gender dynamics in the household. For example, gender transformative approaches to empower women to express their opinions and sensitize men to reduce gender-based violence could have a positive impact on ensuring greater food security for more households. Further research on the effects of gender-transformative approaches on food security outcomes would help to develop more context-specific policies for implementation on local and regional levels.

5 Impact of the intervention on different outcomes

5.1 Effect of combining women's economic empowerment through village savings and loans associations with men's involvement in gender equity on children's malnutrition in the Eastern Democratic Republic of the Congo[3]

Wyvine Bapolisi, Ghislain Bisimwa, Christian Chiribagula, Sonja Merten

Abstract

Background: Malnutrition is a serious condition that occurs when an individual diet does not contain the right amount and quality of nutrients. In the Democratic Republic of the Congo, food insecurity and malnutrition in children under five years of age impose a greater burden. The ongoing conflict in the Eastern region worsens the situation. Among other approaches developed to address this urgent issue, women's empowerment through village savings and loans associations (VSLA) associated with men's sensitization in gender equity was launched in North and South-Kivu to improve the household economic status. This study aims to assess the impact of combining women's empowerment through VSLA and men's sensitization on gender norms on children's anthropometric measurements.

Methods: Children aged 1-5 years old were included with follow-up over a year. Height-for-age, weight-for-age, and weight-for-height were calculated using WHO Anthro Software. Prevalence of stunting, wasting, and underweight were calculated before and after intervention, and linear regression models were run to assess any impact of the intervention on the WHO children's anthropometric measurements.

Results and conclusion: Prevalence of stunting, wasting, and underweight decreased over the year in intervention and control areas. The intervention did not seem to show a statistically significant impact on child nutritional parameters. Multi-sectorial approaches are vital in addressing the problem, and a long-term assessment of the impact is needed because the change in anthropometric parameters cannot happen in a short period of time.

[3] Submitted to Public Health Nutrition Cambridge

5.1.1 Background

Malnutrition is one of the main challenges the Democratic Republic of the Congo (DRC) is facing. After many years of armed conflicts, poverty is still increasing and the government is struggling in terms of resource mobilization and legal regulations to improve the population's well-being (World Bank Group 2018, USAID 2020). The country was mainly relying on agriculture, but production is declining because among others, many lands are now abandoned because of insecurity, and villages are deserted (USAID 2018). The rural exodus makes life difficult in the towns due to scarcity of employment. In 2018, it was estimated that 73% of the Congolese population, equaling 60 million people, lived on less than $1.90 a day (the international poverty rate)(World Bank-IBDR-IDA 2019). With these constraints, feeding the family, especially children is difficult. According to the World Food Program, over 26.2 million Congolese are experiencing acute food insecurity and 3.3 million children are suffering from acute malnutrition (World Food Programme 2021). This situation makes the DRC the world's largest hunger crisis in absolute numbers. The main causes are protracted conflicts mainly in North and South-Kivu, epidemics, natural hazards, and the effects of the coronavirus disease in 2019 (Rosenthal, Breman et al. 2020, World Food Programme 2021).

In 2019, it was estimated that 42.7% of Congolese children suffered from stunting while 8.1% were affected by wasting (Statistique 2019, Report 2021). Additionally, WHO estimated that in DRC, approximately a 45% mortality in children under five years of age was associated with child malnutrition (WHO 2015).

Malnutrition causes are complex and conceptualized as: a) immediate (poor diets and disease) (Burgess and Danga 2016); b) underlying (family food insecurity, inadequate care of a household's vulnerable members including children, unhygienic living conditions, and inadequate health services) (Burgess and Danga 2016); and c) basic (poverty, lack of information, political and economic insecurity, war, lack of resources at all levels, unequal status for women, and natural disasters) (Burgess and Danga 2016). Malnutrition affects

children's physical health as well as their motor and cognitive development and leads to many metabolic disorders in adulthood (Victora, Adair L Fau - Fall et al., Aurélie Bruniea 2014).

Many social factors including parent's level of education, women's participation in decision-making in the household, or the gender of the head of the household have been identified as determinants of food insecurity and malnutrition in under five-year-olds (Kandala, Madungu et al. 2011, Birhane, Shiferaw et al. 2014, Kismul, Acharya et al. 2017, Bapolisi, Ferrari et al. 2021). Abate et al. found for example that women's autonomy associated with men's involvement in childcare and feeding was in tandem with better child anthropometric outcomes (Abate and Belachew 2017).

Although in many sub-Saharan countries, childcare including child feeding is recognized as a mother's "attribution", there is more and more evidence that involving men can be of benefit to children (Thuita, Martin et al. 2015, Abate and Belachew 2017, Kansiime, Atwine et al. 2017). Including fathers in childcare and child feeding is important in many sub-Saharan countries because men are the key decision-makers in the household. Most of the time culture and traditions have reserved the bigger or best portion of food for the husband (father) and children just eat the rest (Kuhnlein 2017). Another reason is that now due to poverty, women are more and more involved in working outside the household (Johanna Mannergren Selimovic, Åsa Nyquist Brandt et al. 2012, Hilhorst; and Bashwira 2014) which implies leaving children under the guardian of the father if they do not have any relatives nearby. To take care of the children optimally, fathers must be involved in one way or another.

This study aims to assess the changes in child anthropometric measures when women are empowered through a VSLA when men are sensitized on gender issues to support their wives in daily tasks and childcare.

5.1.2 Methods

Study design

A longitudinal cohort study was conducted in 120 randomly selected villages (80 intervention and 40 control) in North and South-Kivu.

Study population

All children aged 1-5 years (12-59 months) currently living in the household of an adult study participant were recruited. Children included in the study were under the guardianship of the adult study participant. A total of 1400 children were enrolled in the baseline and only 916 children were retrieved in the follow-up.

Data collection

A team of local researchers fluent in the locally spoken languages (Swahili and Mashi) was trained over a week in data collection methods, followed by a pilot study. The structured questionnaire was administrated using tablet technology and the Open Data Kit (ODK) software package. Data were stored on a secured server located at the Swiss Tropical and Public Health Institute in Basel, Switzerland.

Anthropometric measurements of children were taken by trained research assistants using a weighing scale, a tape measure, and a MUAC measuring tape (WHO 2007).

Analysis

An intention-to-treat analysis comparing all children who were initially participating in a VSLA with a control group was established; the effects on a child's nutritional status (height for age z-score HAZ, weight for age z-score WAZ, and weight for height z-score WHZ, mid-upper-arm circumference) were recorded.

To measure the child's nutritional status, measures of chronic and acute malnutrition were used. Stunting (small-for-age) as a measure of chronic malnutrition was measured as height-for-age index z-scores (HAZ): a HAZ < -2SD was defined as stunted, a HAZ between -2SD and -3SD was defined as moderate stunting and a HAZ < -3 z-score was defined as severe stunting.

Underweight was measured as weight-for-age index z-scores (WAZ): a WAZ < - 2SD was defined as underweight, a WAZ between – 2SD and -3SD was defined as moderate underweight and a WAZ < - 3SD was defined as severely underweight. Wasting, measuring acute malnutrition as weight-for-height z-scores (WHZ) was < -2 SD, a WHZ between – 2SD and – 3SD was moderate wasting, and a WHZ < -3SD was severe wasting. A MUAC < 115 mm was also defined severe malnutrition (World Health Organization 2007, World Health Organization and United Nations Children's Fund 2009, World Health Organization 2010).

Regression analyses were run with only perfectly matched children to be sure to detect any effects of the project; 366 children that were perfectly matched as to baseline-follow-up were retained for the regression analysis. Not including the children who did not match in baseline and follow-up could have affected the power of the study. However, we believed that in having more than 200 children (the calculated sample size for the follow-up), we felt comfortable running the analysis. In addition to the regression analysis, considering only children with enough evidence of matched pairs in baseline and follow-up according to their date of birth, age, and sex, allowed us to be more comfortable about the accuracy of data and therefore of the analysis.

5.1.3 Results

a) Socio-demographic characteristics

Table 9 presents the sociodemographic characteristics of children participating in the study

Table 9. Socio-demographic characteristics of children

	Baseline		**Endline**	
Variables	**Intervention**	**Control**	**Intervention**	**Control**
Sex	**Frequency (%)**	**Frequency (%)**	**Frequency (%)**	**Frequency (%)**
Female	426(46.9)	237(48.2)	311(50.2)	147(49.7)
Male	482(53.1)	255(51.8)	309(49.8)	149(50.3)
	Mean ± SD	**Mean ± SD**	**Mean ± SD**	**Mean ± SD**
Age (months)	35.4±13.5	33.0±13.1	37.8±13.7	35.3±13.5
Weight	12.9±3.3	12.6±2.8	13.3±2.8	12.9±2.8
Height	84.8±11.1	85.2±10.2	88.2±10.7	87.2±10.9
MUAC	14.7±1.6	14.6±1.3	15.2±1.2	15.1±1.2

Compared to the intervention group, the control group was a bit younger (35.4±13.5 vs 33.0±13.1). MUAC did not vary much in all the participants (**Table 9**).

b) Prevalence and change of anthropometric measurements over the year

Table 10 presents the prevalence (and their 95% CI) of stunting, underweight, and wasting for the baseline and endline.

Table 10. Effect of the intervention on anthropometric measurements

	Baseline prevalence n (%)				**Follow-up prevalence n (%)**			
	Intervention		**Control**		**intervention**		**Control**	
Variables	**Severe**	**Moderate**	**Severe**	**moderate**	**Severe**	**moderate**	**Severe**	**moderate**
Stunting HAZ	300(33.6)	516(57.8)	125(36.5)	202(59.1)	144(26.1)	281(50.9)	63(24.2)	112(43.1)
Underweight WAZ	68(7.2)	176(18.5)	27(7.6)	70(19.8)	18(3.2)	68(12.1)	8(3)	34(12.6)
Wasting WHZ	23(2.6)	60(6.7)	4(1.1)	14(4.1)	16(1.1)	16(2.9)	2(0.8)	7(2.7)

In general, the prevalence of all three parameters decreased for all participants in the intervention and control from baseline to follow-up. In the intervention group, severe stunting

(HAZ <-3) decreased from 33.6% prevalence (baseline) to 26.1% at the follow-up. Severe wasting (WHZ <-3) in the intervention area decreased from 2.6% prevalence to 1.1% at the follow-up (**Table 10**).

The figures below show the z-scores of different anthropometric measurements compared to WHO Child Growth Standards before and after intervention in intervention and control groups.

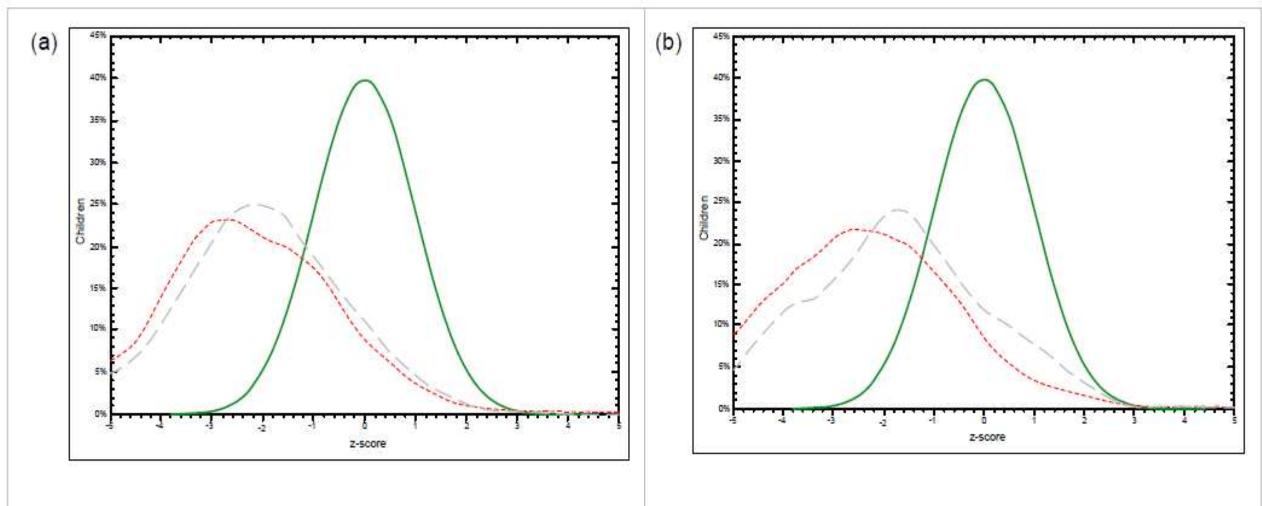

Figure 5. HAZ of children before and after the intervention (one-year-interval)

Legend

——— : WHO Standards

------- : Baseline: intervention n=875; control n= 337

— — — : Follow-up: intervention n= 543; control n= 257

(a) : HAZ intervention

(b) : HAZ control

In the two groups, a shift of the HAZ curve to the right was observed with a tendency to align with WHO standards (Figure 5)

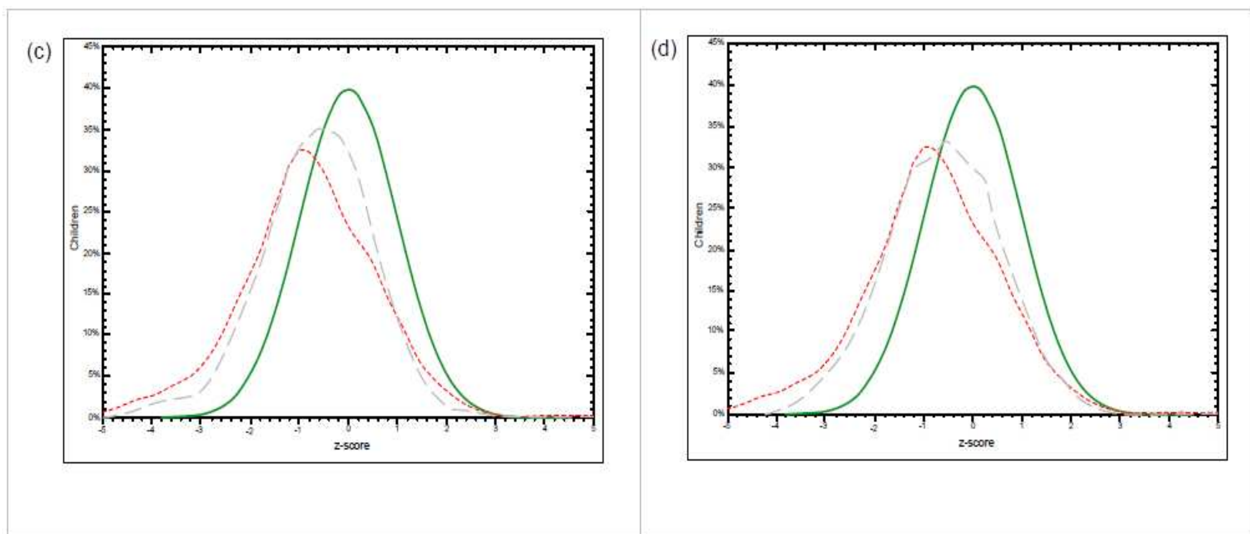

Figure 6. WAZ of children before and after intervention (one-year-interval)

Legend:

——— : WHO Standards

----------- : Baseline: intervention n= 918; control n= 340

— — — : Follow-up: intervention n= 562; control n= 259

(c) : WAZ intervention

(d) : WAZ control

For the underweight in the intervention group, after one year the WAZ curve tended towards normalization following the WHO standards (Figure 6).

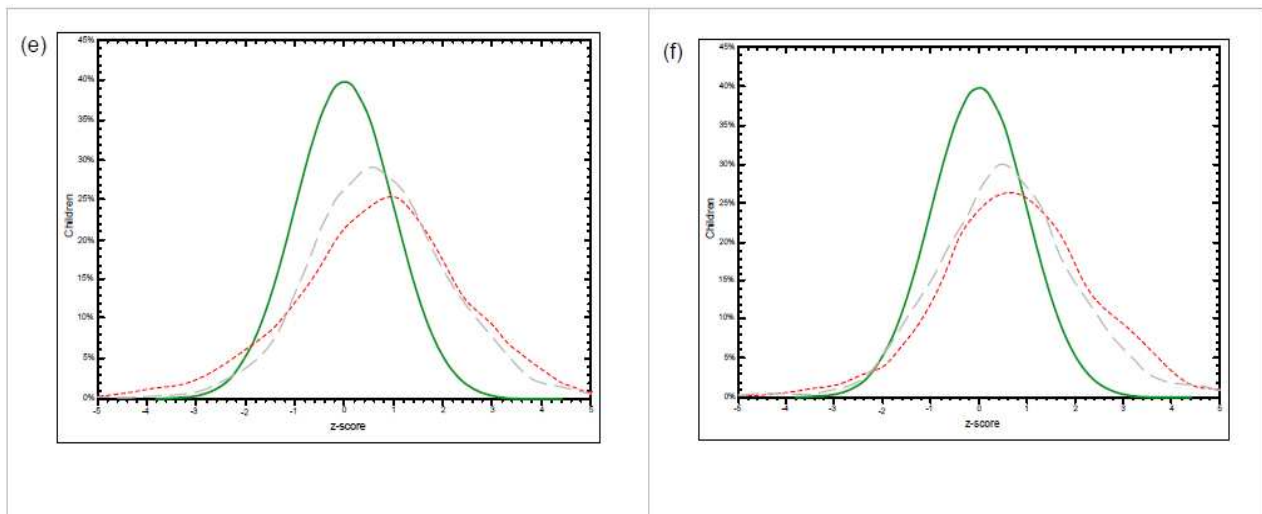

Figure 7. WHZ of children before and after the intervention (one-year-interval)

Legend

——— : WHO Standards

----------- : Baseline: intervention n= 882; control n= 338

— — — : Follow-up: intervention n= 542; control n= 259

(e) : WHZ intervention

(f) : WHZ control

In both groups control and intervention, a shift to the left was observed with a tendency towards normalization. The shift to the right was larger in the intervention group compared to the control group (Figure 7). This suggested that more children with z-score < -2 were shifted out of the danger zones.

c. Estimated impact on child outcome variables by the intervention program controlling for other supposed factors

Table 11. Linear regression results of the change in wasting, stunting, and underweight by the supposed factors

	dWHZ†		**dHAZ‡**		**dWAZ§**	
Variables	**coefficient**	**p**	**coefficient**	**p**	**coefficient**	**P**
Sex	-0.034	0.603	-0.023	0.750	0.041	0.358
Age	**-0.006***	**<0.001**	**-0.006**	**<0.001**	**0.003**	**<0.001**
Education						
Primary	-0.071	0.176	-0.094	0.105	0.031	0.370
Secondary	-0.018	0.719	-0.021	0.701	0.002	0.953
Tertiary	0.118	0.275	0.122	0.310	-0.085	0.239
Married	0.035	0.537	0.015	0.811	-0.001	0.966
Intervention	0.061	0.102	0.051	0.220	-0.040	0.104
Baseline value**	**0.034**	**0.020**	**-0.122***	**<0.001**	**-0.060***	**<0.001**
dWHZ †	**-**		**-1.072***	**<0.001**	**0.644***	**<0.001**
dHAZ‡	**-0.850***	**<0.001**	**-**		**0.555***	**<0.001**
dWAZ§	**1.465***	**<0.001**	**1.585***	**<0.001**	**-**	

*: $p < 0.05$; †: Weight for height (difference between baseline and follow-up value); ‡: Height for age (difference between baseline and follow-up value); §: weight for age (difference between baseline and follow-up value); **: Baseline value of WHZ, HAZ, WAZ

A negative association was found between baseline value and every outcome; the higher the baseline value, the less likely the difference at the follow-up was larger and vice versa. An increase in dWHZ was associated with a decrease risk in dHAZ (coefficient = -0.728; 95% CI [-0.762,-0.694]), and an increase in dHAZ was associated with a decrease in dWAZ. Between dHAZ and dWHZ (coefficient = -0.857; 95% CI [-0.929, -0.794]), the association was also negative: an increase in dHAZ was associated with a decrease in dWHZ. While for dWHZ and dWAZ the association was positive (coefficient = 1.336; 95%CI [1.244, 1.429]: a larger change in dWAZ was associated with a risk of a lower change in dWHZ. The effect of the intervention

on the three anthropometric measurements (dWHZ, dHAZ, dWAZ) was not statistically significant (**Table 11).**

5.1.4 Discussion

Overall, although the prevalence of malnutrition (stunting, wasting, or underweight) remains higher, we found a decrease in the frequency of malnutrition in children when comparing baseline and endline, in both intervention and control.

Contrary to previous studies, the gender of the child (boys being more affected) and the education of the parents, did not show any influence on the evolution of the anthropometric measurements of the children after a year of follow-up (Habyarimana 2016, Akombi, Agho et al. 2017, Kismul, Acharya et al. 2017). In addition, in our study, none of the other supposed factors were associated with malnutrition. One of the first reasons could be the fact that the current state of nutrition and food security is alarmingly poor in the region and in the whole country, which is confirmed by the association between the three anthropometric parameters. This relation between height-for-age and weight-for-height was also found elsewhere; Soliman et al. found that daily weight gain was correlated significantly with height growth during nutritional rehabilitation (Soliman, Itani et al. 2019). We also could not find statistical evidence of the impact of the intervention (VSLA combined with gender sensitization of male partners). We did not look for other parameters described elsewhere (Omba Kalonda 2011, Akombi, Agho et al. 2017) which could have been associated with those we collected to try to understand the phenomenon of malnutrition and anthropometric measures of the children. Those parameters included the breastfeeding period of each child, the household diet before and after the intervention, and low birth weight. These parameters were not included in the present study because of the complexity of the initial study design (Bapolisi, Ferrari et al. 2020).

However, although the expected improvement of anthropometric measures was not found when associating the involvement of men in nutrition and gender equity with women's economic empowerment, these results are far from being negative. This study is not the first with non-

statistically significant results on child anthropometric measures. Bruniea et al. did not find any significant effect of VSLA on weight-for-age (Aurélie Bruniea 2014). In the present study, the short evaluation period (one year) may partly explain the fact that the change was not statistically significant. Improvement or correction of anthropometric measurement norms happens easily in acute malnutrition with the improvement of diet or additional supplements feeding after treating associated infections (Bashir and Zaman 2016, Lindsey Lenters 2016). Many studies have shown improvement in acute malnutrition in children who received ready-to-use therapy or supplements in conflicts and unstable contexts (Rose, Blevins et al. 2015, Bashir and Zaman 2016). For chronic malnutrition (stunting) which involves mainly height, especially for children who have been suffering from malnutrition over a long period, no evidence of change was found (Golden 1994, Bashir and Zaman 2016). Bueno, for example, stated that environmental conditions in which the child lives negatively influence the stunting recovery and late admission to the medical center despite the intensive treatment (Bueno, Lisboa et al. 2018). Others demonstrated that the catch-up occurs mainly in adolescence or earlier adulthood with continuous follow-up (Aiga, Abe et al. 2019).

Secondly, depending on the environmental conditions in which children live in their households, the economic improvement observed has been mixed. This is because women continue to rely on VSLA and accrue debts apparently even for basic needs such as education of children or medical bills. As mentioned above, the devaluation of the local currency is also a significant factor affecting the improvement of the economic status of the household. The picture is also getting darker with armed conflicts with their heavy consequences of displacement and insecurity. Parents are more concerned with survival and neglect certain aspects of childcare which, in short, results in a precarious situation in which families live (Kristi Mahrt and Nanivazo 2016, World Food Programme 2021).

Thirdly, in such a state we should wonder about the person in charge of the nutrition and the follow-up of the children. The two parents are torn between finding money and food for their

children, the countless family needs, and struggle to prioritize. For some families, the priority is between paying the rent, food, and schooling for the children. This sometimes leads parents to give preference to boys for schooling, for example. Even though this is changing it is difficult for some families to institute daily or weekly meal rounds.

However, the short evaluation period of this study remains a key element in the conclusion. The qualitative results conducted in parallel show some improvement in the amount of money spent on food and the quality of the food. We remain convinced that this combination of women's empowerment through VSLA and men's gender awareness for their involvement in children's health remains a hope as many have pointed out. A long-term complex approach should be considered to understand malnutrition and its multiple determinants and to assess the impact of such a combined approach. Additionally, to avoid the confusion resulting from the disengagement of women and the involvement of men, it will be necessary for one of the partners to be accountable for certain household duties e.g. cooking food, helping children with their homework, or changing nappies. This implies that the available parent will be responsible for their children's care.

5.1.5 Conclusion

The prevalence of all types of malnutrition (stunting, wasting, and underweight) remains high in the region. We did not find enough statistically significant results on the effect of combining women’s economic empowerment and men’s involvement in childcare through gender sensitization. However, this approach can have long-term benefits with permanent actions as anthropometric measurements especially take greater time to demonstrate improvements. There is also a need to understand and control environmental factors such as security, war, and consequences in fighting malnutrition which is a multifaceted health burden.

5.2 Exploring the impact of associating women's empowerment through village savings and loans associations with men's sensitization on gender equity on socio-economic and maternal and children health outcomes[4]

Abstract

Background: The Democratic Republic of the Congo is among the poorest countries in the world with a low gender development index. To help households improve their economic levels and address gender-based violence, the *Mawe Tatu* programme was created to combine women's empowerment through Village Savings and Loans Associations (VSLA) with engaging men in changing their attitudes and adopting positive masculinities.

Methods: This study explores the impact of women's empowerment through VSLA while their husbands participate in a men's reflection group pursuing a gender equity curriculum. Data were collected over three years through focus group discussions and in-depth interviews with both men and women. Data were analysed using an inductive approach, building themes based on respondents' narratives.

Results: Household welfare was described as "improved" when both partners participated in the intervention. More cash was available in the household, cohesion within the couple increased, and men were more likely to involve their wives in decision-making processes. Men were also more involved in childcare and more concerned about their partner's health, especially during pregnancy.

Conclusion: Combining women's economic empowerment through VSLA while raising awareness of gender equity among their husbands is a promising approach. However, it is necessary to develop positive femininities in parallel to positive masculinities, as women to avoid being judged may fear changes preserving empirical gender norms. Creating more "friendly" and inclusive spaces in the health centers will make it easier for men to accompany their wives for maternal health services.

[4] Under review in Community Development Journal

5.2.1 Background

The Democratic Republic of the Congo (DRC) is one of the poorest countries despite its wealth in natural resources (World Bank Group 2018). The east of the country is plagued by ongoing conflicts and rebellions that exacerbate poverty and gender-based violence. The Gender Development Index, defined as a ratio of the female to the male Human Development Index, placed the country in the last group (Group 5) (UNDP 2020). Similarly, the Gender Inequality Index, which reflects gender-based inequalities ranked the country 150th out of 162 countries (UNDP 2020).

The DRC's labour market is dominated by unpaid work and self-employment, although salaried employment has started to propagate – especially for men (Reyes Aterido 2017). Women are predominantly working in the agricultural sector (Reyes Aterido 2017, Kalemasi Mosengo Cedrick 2022). Around 62% of women in the DRC participate in the labour market and only 6.4% of women work in wage employment, compared to 23.9% of men (World Bank 2021).

In eastern DRC, the persisting insecurity due to armed conflicts and the fact that many families have sold their lands has jeopardized women's income through agricultural production. In addition, the banana Xanthomonas wilt disease dramatically affected local banana production (Ocimati, Bouwmeester et al. 2019), a main source of income. Hence, agriculture, which enabled women to combine income and domestic work, is currently not a thriving sector (DHS 2014).

Household economy, violence, and gender

In DRC, research showed that men want to maintain their dominant role even though they are not able to provide financial or moral protection to their wives due to various socio-economic and cultural constraints (Banwell 2020). Women are increasingly contributing more to the household income than their partners, which can lead to a higher risk of intimate partner violence (IPV) (Mtenga, Pfeiffer et al. 2018, Abramsky, Lees et al. 2019). IPV is triggered by

men's insecurity regarding power dynamics with the potential shift of power to the main provider. Some men resort to violence as a last resort to retain power (Banwell 2020).

Reproductive health and gender

In DRC, maternal mortality is high (~693 per 1000 in 2013) (DHS 2014). Traditional roles are challenging men's involvement in reproductive health service utilization, with men deciding when and where to seek healthcare (Manda-Taylor, Mwale et al. 2017, World Bank 2021). Women living in areas where gender norms were relatively tolerant of violence against women were less likely to use skilled birth services or timely antenatal care (Leight and Wilson 2021). Gender inequality may thus contribute to the high maternal mortality in DRC.

Empowering women through Village Savings and Loan Associations (VSLA) can enhance household welfare by improving women's economic participation (Safaa 2019, Maganga 2020). VSLA are self-managed groups putting savings together and providing loans, which bear a lower risk of increasing indebtedness compared to other microfinance institutions. Microfinance institutions do not only increase indebtedness but also reinforce vulnerabilities and gendered discriminations (Keating, Rasmussen et al. 2010). Authors described how VLSA combined with a gender transformative approach improves the household economy, gender equity (Safaa 2019) and maternal health and spousal communication (Nkwonta; and Messias 2019).

To improve socio-economic level of households, a programme called "*Mawe Tatu*" was launched in the eastern DRC. The rationale behind *Mawe Tatu* was that VSLA combined with men's sensitization towards gender equity would improve household economic power. Gender transformative approaches such as *Mawe Tatu* fit in social change movements which refer to how human interactions and relationships change over time, transforming social and cultural institutions (University of people 2021, Wilterdink 2021).

This study aims to explore, through the social change lens, how engaging men in positive masculinities, combined with women's empowerment through VSLA, affects household

economies and seeking maternal health services, such as the use of antenatal care, skilled birth attendance, or family planning (FP). In patriarchal societies, the results can help clarify how men can be involved in programs promoting women's health through greater gender equity and improved household economies.

5.2.2 Methods

Study setting

This study is embedded in the impact evaluation of "*Mawe Tatu*" which was implemented in North and South- Kivu Provinces, DRC. Data were collected in two urban health zones in Bukavu, Bagira, and Kadutu. *Mawe Tatu* targeted persons of “lower” socio-economic backgrounds and selected women for participation in the project by using community-based targeting. Community leaders provided listings with vulnerable households and invited women from these households to an initial meeting – but participation in the project was voluntary. In parallel, men were regrouped into reflection groups, “*Baraza Badirika*” and sensitized on gender equity using a peer-to-peer approach. Women were also sensitized on their rights including sexual and reproductive health (SRH) and FP methods. Men motivated their peers to adopt positive masculinity, which included support of women’s empowerment and fighting against gender-based violence.

Research team and reflexivity

WB conducted the interviews and eight focus group discussions (FGD), while two trained researchers and nurses MM and AM conducted two other FGD. To avoid gender bias for men’s FGD, a male research assistant was present during interviews. All researchers involved in data collection were living in the region and met the participants only during the interviews or during operational research documenting the testimonies.

At the beginning of each interview, the goals and reasons for conducting the research were explained to the participants. After each interview and FGD, to control for interpretation bias, impressions on participants’ views or attitudes during the interview were discussed between the

researchers and with the key informants in the community. Field notes were taken and completed. Findings and interpretations were further explored with SM.

Study population, design & justification

Women aged twenty-two to fifty-two years and men aged twenty-four to sixty years were enrolled; women were participating in VSLA while their husbands/partners were members of "*Baraza Badirika*" groups. Men included were members of a reflection group while their wives were in VSLA. "*Baraza Badirika*" engaged men in groups that followed a curriculum on gender equity, consisting of sensitization sessions on GBV, FP, and household economy among others. Women were part of the program from the beginning and participated for 3 years. Men were part of the project from the beginning of their component, which was launched a bit later because VSLA were designed to be their entry point. For this reason, men participated only for one year and a half.

All participants were married. Men included in this study were not the husbands of the women interviewed. Half of the women participants were "stay-at-home mothers" engaged in small agricultural production, some were involved in small businesses, two were state employees, and one was a teacher. Many men participating were unemployed. Others included two pastors, one nurse, and four shop owners.

FGD of six-to-eight participants and individual interviews were conducted. Seven FGD were complemented with sixteen in-depth interviews (IDI) and observations. Purposive sampling was used to recruit participants until saturation was reached. Ten FGDs, seven with women and three with men, were conducted using the same guide with four-to-eight participants each, with a total of fifty-four women and eighteen men. Twelve IDIs were conducted with seven women as some participants were interviewed several times. All participants were scheduled to be interviewed at least twice but some were not available for second interviews.

Data collection

Observations were performed and notes were taken during IDI and FGD. In VSLA, women were observed throughout the process namely: attitudes, ability to feel confident to speak about anything related to women's health, and gender norms.

The FGD or IDI took place in the participant's household or another place designated by her/him. Different themes, including but not limited to dialogue and negotiation within couples, and perceptions and use of maternal health services, were explored. A guideline was used and adapted as new questions emerged. Male partner attitudes and behaviours about FP were explored. Interviews mainly in Swahili lasted 30-70 minutes; FGD took 90 -130 minutes. Narratives were voice-recorded, translated, and transcribed verbatim.

Analysis

Analysis was performed by inductive coding of interview transcripts, building themes based on respondents' narratives, independent of a project-related theory of change. Codes were compared, grouped, and interpreted through observation notes. Emerging themes were integrated into a broader contextual analysis and hypotheses were formulated using Atlas TI 8 software for coding.

5.2.3 Findings

We first present the local perception of gender order in the current economic and social context and then highlight how the *Mawe Tatu* project was perceived in transforming gender relations. Three main threads of debates were identified: (1) discussions related to tensions of the current, increasingly unequitable **labour division between men and women** in view of a perceived need to preserve patriarchal order with normative masculine and feminine identities; (2) men and women expressed fear of separation and dissolution of the household unit pointing at issues of reputation, emotion, childcare, and social belonging, thus expressing a strong wish to achieve and preserve **marital 'harmony'**; and (3) despite fears of marital dissolution, there was limited awareness for the **protection of (pregnant) women's bodies** in terms of their physical health.

After the presentation of these themes, we will explore how the *Mawe Tatu* project altered these perceptions.

(1) Gender subdivision of work: different scenarios for income-generation and domestic work

Many participants explained unlike in the past, women could now do the same jobs as men:

> *"... But nowadays, there are women who are bricklayers, carpenters, so all the work... In the past, the tradition prescribed that if women built a house, it was taboo. But today it does no longer exist, girls or women are learning all kinds of jobs..."*
>
> *(Woman, 40 years)*

The general socio-political crisis and poverty were identified as the main reasons for women to undertake any kind of job. The opportunity to take on the same jobs as men were, however, not necessarily interpreted as an advantage by local women, who rather consider this a consequence of the precarious economic context:

> *"... According to the realities of today's life, all jobs are done by both men and women... they (women) have even become bricklayers. However, [women] are not fit for heavy work... but they do it because of the hardness of today's life…" (Woman, 50 years)*

Perceptions of women's capacities have changed due to sensitization on parity by the government, supported by NGOs such as UNICEF. For example, the slogan "*toutes les filles à l'école*" ("all the girls at school") sensitized people towards more gender-neutral job profiles:

> *"...Nowadays we can't say that there are jobs for men and women. What the man can do, the woman can also do the same. Like what they say 'all the girls at school' ..." (Man, 35 years)*

It was increasingly accepted that women pursue income-generating activities outside their homes, but men control their wives' incomes and ensure the money earned is used for the wealth of the family. Many women therefore informed their husbands about their earnings:

"…The money I will earn in my small business, I will come and tell him I have earned this then he will say okay let's do this and this… he is the chief of the family. He must know…" (Woman, 34 years)

Even in wealthier households, women may prefer to tell their husbands how much they earn. Women believed that their husbands were more willing to accept their activities outside of their homes if they could prove that they could successfully generate an income:

"…I don't have to tell him how much I earned as long as I use it for the family welfare … (laughs)… but it's better to tell him [husband] so that he can know that your business is productive [so that he will support your activity and never ask you to stop it…]" (Woman, 40 years)

In most cases, men's and women's ideas converged; they still prefer a clear subdivision of roles within the couple at the level of the household following culturally prescribed gender norms:

"…The father's role is to look for the daily bread that he will give to the mother… The father earns money…, I go to the market to buy food that I cook and give to the children..." (Woman, 50 years)

The fear remains if women have equal power as men, trouble may result within the couple and in the household where "*there can only be one head*", a man said. Men might take advice from the wives but a woman cannot (and never in public) tell the man the final decision:

"…You can ask her opinion but in the end, I decide. You are the man, the head of the family…" (Man, 40 years)

Changes can happen but the authority of men must be respected. Men felt insecure, fearing to lose control over the family:

"…Because if women are given money they are given power, some become impolite, they do not obey…" (Man, 35 years)

Men commonly refer to the authority of the church to legitimize their superiority within the couple as the religious world is sticking to patriarchy in Christian families:

"…It's biblical, I make the decision I can ask her opinion but I am not bound to follow what she tells me. When I decide she will see it …" (Man, 45 years)

Pregnancy and childbearing are common arguments to naturalize gender-specific domestic roles:

"…The pregnant woman takes care of the baby and the man looks for money and not the other way around, that's why at home too there will be tasks for women and men, we must not mix (the roles),...outside the house it's different"... (Man 50 years)

Men further legitimized their quest for the superior position in the family by claiming they were intellectually superior to women:

"…Women are less intelligent, they are rather cunning..." (Man, 35 years)

Affirming their own perceived supremacy, men repeatedly expressed that women were not intelligent, but merely attempted to 'trick' them:

"…Women are very cunning, you have to be careful with them, they do not think sometimes, they can mislead you... but you have to listen to them…" (Man, 50 years)

If a woman wants to be heard, she should suggest her ideas without challenging a man's position:

> *"…men are complicated, you have to be smart, use diplomacy to get your idea across to him... sometimes he won't tell you that he has taken your idea but you will only see how he will act,…" (Woman, 35 years)*

(2) Women's empowerment as a challenge to marital stability

As a reaction to the changes in intra-household power-relations, men pointed to the threat of marital problems if women were more financially independent.

'Harmony' within the couple is as important for men as for women. Financially emancipated women can leave their husbands. The children are supposed to stay with their father unless they are still very young. Children remaining with the mother may be negatively affected, as they may lose their inheritance from the father:

> *"…[if a woman leaves] It hurts us a lot and maybe we [men] are the ones who become more victims of it because I will marry another woman, but maybe the children I had with her [the former wife] will not enjoy my inheritance…" (Man, 32 years)*

Some men feared that educated women easily could verbally advocate for themselves knowing how to place words correctly. From this perspective, higher education was seen as undesirable and a risk to marital stability. Discussing general preferences for their partner, many men preferred less educated women because they argued less:

> *"…You cannot have two leads in the household; you must be the only chief in the house... Educated women argue for everything and it is not easy to convince them…" (Man, 35 years)*

Women, including educated women, did not openly express an interest in overruling their husbands; instead, they mentioned that they have the responsibility to keep their relationship working and to satisfy their husband's needs.

(3) Gender power-relations and reproductive health

Men's awareness of women's health needs especially during and following pregnancy is still often limited. As health services are not free in DRC, men as the main decision-makers in the household play decisive roles in whether or not women would be able to seek healthcare. Awareness of the importance of men's involvement in mother and child health is growing but is still far from mainstream. Many men were reluctant to accompany their wives to reproductive health services, which were perceived as being geared towards women:

> *"… [My husband] would accompany me to the health center and then return... he couldn't feel comfortable in these conversations with lots of women…" (Woman, 32 years)*

Not all women however are keen on their husbands accompanying them to routine healthcare services, especially if they fear their controlling and potentially violent behaviour:

> *"… I never went with him and I don't want him to accompany me. He should only give me the money. If he accompanied me you know men are jealous for nothing... so to avoid problems I ask him for the money only…" (Woman, 34 years)*

Other women regarded visits to health facilities as an opportunity to ask their husbands for money, which they could then use for other purposes, beyond the control of their spouses:

> *"…I would not like [my husband] to come [to the health facility] either, they easily give the money for ANC when I am pregnant and I can ask as*

much as I want... if he comes he will know the normal price and I don't want that…" (Woman, 30 years)

While the DRC maintains a labour code for maternity protection of 14 weeks, the situation is different concerning domestic work. Some men still perceive that women have to fulfill their household duties even if they are pregnant or have recently delivered:

"...Nobody is going to contradict me here, here at the Bushi we say: "Omukazi arharhama" which means, "a woman never gets tired". And that's why many people have in mind that even if the woman is pregnant, she has to do the job she is supposed to do..."(Man, 54 years)

Thus, male involvement in reproductive healthcare is not always welcome as it also opens another door for men's unwelcome control of women's actions and resource allocation.

(4) ***Changes and consequences***

When asked about the impact of the project on their families, participants indicated many positive developments. For example, positive change in income resulted in VSLA generating more options for savings or loans, then sensitization of males resulting in transparency regarding their own income. This led to resources being more viable for the households.

> *"...I have also seen the change; my husband was earning money and finished everything… (he was) living a happy life, he did not know that someone could save. But, today, if he gains something, we save a little first and we manage the rest together…"* (Woman, 34 years)

After sensitization towards gender equity, men included their wives more in financial management at the household level, which helped to meet the basic needs of the family such as food availability.

"…We were struggling to feed the children… today with what my husband brings I can say we eat much better…" (Woman, 30 years)

Women and men reported that women are increasingly included in the decision-making process within the household and their opinions are taken into account.

> *"...In the past, you could tell him: I think we can do this, but he says, "No, I have to decide about my things and that is how it is." Today, even when he has already planned to do something when you give him a contrary advice, he considers it. For me, these instructions made a real change..."* (Woman, 30 years)

Men pay more attention to their wives building couple cohesion.

> *"...I can tell there is a very big difference. My husband was unfaithful, and he was abusing alcohol. These instructions brought a change in my couple, (he has stopped all those things)... I find that the two (VSLA and Baraza Badirika) create happiness in families, especially in my house..."* (Woman, 32 years)

However, men felt insecure in that women might have their incomes increased without going into deeper discussions on gender. This could lead to conflicts within the couple and could open ways to infidelity.

> *"...She will be there once she starts to dress well, even if it is you who gives it to her, she will be more and more solicited (by other men) outside, and if she has developed an addiction to good things, she will succumb… your couple will be broken…"*(Man, 32 years)

Additionally, the 'burden' of the woman might increase; next to working or being an entrepreneur, she would still be responsible for all/the majority of household tasks.

Yet many men and women who participated in the project agreed that husbands should help their wives with household duties especially when they were the only ones working and providing for the households or when they were sick or pregnant.

"…Personally, now, my husband is helping me a lot. In the morning because I go to buy goods (ware) in bulk in Rwanda… When I come back, I find the room cleaned; the children have eaten. If I had left the clothes outside, he put them in the house and if there is electricity he irons…" (Woman, 34 years)

At the household level, an individual couple might want to change regarding sharing household chores, but there is fear of losing their reputation in the community; a man may not meet expectations of masculinity; a woman may be considered unruly.

"...If I do this (helping in cooking the traditional food 'fufu'), maybe someone in the neighbourhood will say that my wife once made me carry the ISTM (a big building in the town) and put charcoals on my head... This is why we said that day that custom/tradition was misleading us. Any work that the man can do, the woman can also do..." (Man, 54 years)

Furthermore, the loss of leadership in organizing the household may lead to a certain chaos. Changes in gender roles should consider addressing changes in responsibilities, if any occur, so that everyone feels comfortable knowing they are in charge of given tasks while receiving help from one's partner.

Men also started to be more actively concerned about health issues, encouraging the family to follow hygiene measures, for example:

"…When you see the dirt, you must not call on the child or the woman to remove it... You have to remove… To be sick with malaria, diarrhoea, cholera, ... is a serious infraction because our dirty environment causes them. That's why a man should take this as his first concern…" (Man, 40 years)

Regarding pregnancy and SRH services attendance, men were increasingly concerned about their wives' health.

".... At this time (if she is pregnant it is good to help her. If it is preparing the fufu, the man can do it, he can do the laundry and other household tasks and comfort her if you do not have big girls… " (Man 38 years)

Furthermore, men described that now they are accompanying their wives to maternity wards. If the husband accompanied a woman to deliver her baby, it was considered a strong commitment and a sign of fidelity:

"...I accompany my wife myself to give birth. I go with the neighbour because she will go in and stay there. I go back home to take care of the other child. And you can see how proud she is. She feels reassured because if I dared to accompany her, she has nothing to worry about (no-extra conjugal affairs)…" (Man 32 years)

However, customs are still restraining men from going to maternity appointments. According to popular belief, if a partner had been cheating, it could lead to the death of his wife and the newborn if he had accompanied his wife during the delivery and explains why certain men were hesitant.

Participants expressed some limitations to the project approach. Men felt like they received too much sensitization on gender issues while their spouses were focused on economic and financially lucrative aspects. Men wished that sensitization on gender norms would contain the same standards for women. Some found resistance when they tried to help in household duties:

"…That's why I insist on adding a positive femininity component. In the VSLA, it is like they only give them instructions on the money (economic aspect) not on daily life (for example how to discuss with their now changed husband). We would have liked to see the women's instructions deepened …" (Man, 32 years)

Some respondents felt that the approach was not enough, as it fully relied on voluntary participation. A woman mentioned that she did not see any change in her marital relationship although they were both sensitized:

"…Everybody knows the person she is married to, and you must stay at your place. This is how we have been living for years we are used to…"

(Woman 42 years)

Despite these limitations, many wanted those ideas to continue:

"… (We wished that) the sensitization continue, do not end them otherwise we are going to lose the benefit…" (Man, 35 years)

5.2.4 Discussion

Positive changes were reported in terms of women's inclusion in the decision-making process in the household, couple cohesion, and redistribution of household chores.

Findings highlighted improvement in the households regarding income, finance, and management, corroborating previous findings (Safaa 2019, Maganga 2020).

Women and men in our study recognized the value of more gender equity and empowering women but were more concerned about radical changes in pre-existing social norms. Men are concerned about misbehaviours that can result from women's empowerment; women are more concerned about keeping peace within the couple and their relationship. These corroborated results found that in the same communities, women should remain responsible for domestic chores whereas men must be the breadwinners (Mulumeoderhwa 2021).

The challenge is therefore to find the perfect equilibrium for women to recognize and deal with the injustices embedded in social relationships that define their identities and give meaning to their lives, without, negating or undermining these relationships (Kabeer and Huq 2010, Kabeer 2011). Programs that do not take into account this balance can generate discomfort and will

require additional actions to remedy the societal unrest thus generated. These results aligned themselves with the reflection regarding femininities and ways to address/define injustices. Therefore, gender transformative change will require time, engagement, and participation of the community (Mtawa 2019, Tabron 2019). Co-designing and involving the community at all stages of implementation may improve the effectiveness of projects (Cummings, Dhewa et al. 2023).

Social change takes years or centuries to be noticed. Every community has its own characteristics, beliefs, and historical past that will ultimately influence the uptake of new behaviour. Thus, social change is specific to a given context. Sociologists described social movements that mobilize resources: political pull, mass media, personnel, money, etc. (Almeida 2019). This theory, however, does not adequately discuss the issue of how opposition influences the actions and direction of social movements.

Social change theories also refer to the reason why people are mobilized for changes, e.g. the theory of relative deprivation (Bernstein and Crosby 1980, Smith, Pettigrew et al. 2020). In our study, this would refer to women who were marginalized and who may, despite being deprived, lack the resources for change. This theory does not address why perceptions of personal or group deprivation cause some people to reform society, and why other perceptions do not. The question might be "Are the women deprived or frustrated enough? At what level must a woman be frustrated or deprived to trigger the change in gender norms?" However, deprived subaltern groups (the women in this case) can develop a certain common behaviour (e.g. laziness, avoidance or disloyalty, etc.), which is not a radical change but instead resistance (Vinthagen and Johansson 2013, de Heredia 2017).

There is no doubt that empowering women economically and addressing gender equity can benefit their accomplishments. However, the main concern would be the freedom of women to choose and accomplish what and how is best for them. The assumption that women will automatically align themselves in what is perceived to be in their interests lies in the fact that

there is something intrinsic to women that should predispose them to oppose practices, values, and injunctions that religion or traditional culture embody (Mahmood 2011). This assumption is not always continuously verified everywhere and every time. Mahmood's ways of describing femininities and freedom and their challenges (Mahmood 2011) can be applied in a broader way, thus in our context. Some predefined behaviours result in long-term interactions between men and women that lead them to organize themselves the way they are. An external examiner can define a certain act or organisation as disfavouring of women while for women in the given region, it has a larger significance than what is perceived outwardly (Mahmood 2011). For example, the veil in Muslim culture would be seen by someone externally as subjugation, whereas for some women in Islam, it has greater significance in that some women consider the veil as being crucial to their identities and history (Mahmood 2011). It is then essential to define and better understand the needs of women to empower them in a given society. In our studies, the fact that women wanted the changes but still wanted to keep their marriages working illustrates this well. Thus after identifying community needs for changes or injustices, the main challenges will be to define the ways forward (Seferiadis, Cummings et al. 2017). Moreover, maybe the main vision of change has not to be transformational but instead, comprising small, incremental, locally embedded changes, which recognises the role of social capital (Seferiadis, Cummings et al. 2017).

These seemingly small changes in gender norms must not be underestimated as they are the basis for more equity and women's successful participation in the formal economy. They may have positive consequences in setting examples for the next generation. Understanding and defining positive masculinities and femininities will benefit gender-transformative approaches in societies.

Regarding SRH services, through positive masculinities, men are more inclined to recognize women's health needs and send their wives to ANC or maternity clinics. Although they are increasingly concerned with their wives' health, they are more likely to play the traditional, not

active, assigned role as previously found in other male-dominant societies (Bougangue and Ling 2017, Maluka and Peneza 2018). Male involvement in maternal health and gender-integrated interventions is a promising intervention, but with limited evidence of effectiveness, particularly for mortality and morbidity outcomes (Tokhi, Comrie-Thomson et al. 2018). Still, some studies supported that proactive male involvement can ensure better health for their partners (Aborigo, Reidpath et al. 2018, Nkwonta; and Messias 2019). The "unfriendly" environment for men during the ANC or birth attendance reported in this study was found elsewhere as a barrier (Gopal, Fisher et al. 2020). In addition to societal and personal beliefs that restrained the husband from accompanying the wife in the labour room or maternity ward, men feared to "induce" the loss of the unborn/newborn or both mother and child if they were involved in any extra-conjugal affairs.

This intervention and some others have shed light on the benefits of fighting gender inequity through positive masculinities (Izugbara; Jacques Emina et al. 2022) in order to increase household welfare. However, an important step should be to address besides individual masculinities, the social policing of masculinity (Graaff 2021). Men in all communities are not always free and equally able to make changes in their practices. Therefore, the change will happen not by placing the responsibility to 'fix' masculinities onto individual men but, instead as discussed above, by taking into account the societal and relational nature of gender, and all the powerful social pressures, that maintain gender roles (Graaff 2021).

Policy implications

To implementers: consideration should be given to implement an equal economic component for men because poverty does not only affect women. In parallel to positive masculinities, positive femininities must also be developed with respect to the local perception of gender inequity.

To researchers: VSLA combined with men's sensitization for gender-transformative society are a fascinating approach, however, much is needed to understand how conflicts are generated within the couple and the perceived imbalance.

Limitations

These analyses are particular to specific geographic and socio-cultural locations, thus findings cannot necessarily be generalised to other contexts. It is probable that our sampling failed to include the most marginalised women, especially those who could not afford the minimal sum to join a VSLA or those without rich social networks. We did not analyse pre-existing social networks, which may play a major role in the decision to join VSLA (Musinguzi 2016).

5.2.5 Conclusion

This analysis wanted to assess the impact of women's economic empowerment through VSLA combined with men's sensitisation on gender norms on the household welfare including income, couple cohesion, women's participation in decision-making, and maternal and child health. Men's sensitisation increased income in the households and dialogue in the family while women became growingly involved in the decision-making. Benefits of raising men's awareness of maternal and child health issues were found, although much is to be learnt especially in fragile settings. However, empowering women economically and involving men in gender issues will not be for benefit for the household and societies if the same emphasis on gender discussions is not open for women (positive femininities). In fact, economically empowered women might end up creating conflicts within their marriages, which could lead to divorce if they do not learn how to manage their marital relationships. This could generate much disequilibrium and could leave these women without a sense of accomplishment. Gender-transformative approaches must equally develop gender and economic topics with both genders and subsequently in joint meetings in order to expect more impact.

This said, in the given or similar contexts, the results of this study show that gender-transformative approaches such as *Mawe Tatu* are seeds that have been thrown in the ground,

and still need accompanying actions to enhance balanced gender relationships with respect to fundamental norms to bear fruit in the community.

5.3 Engaging men in women's empowerment: Effectiveness of a complex gender-transformative intervention on household socio-economic and maternal and child health indicators in the Eastern Democratic Congo[5]

Wyvine Bapolisi, Jean Makelele, GiovanFrancesco Ferrari, Lenneke Kono-Tange, Sonja Merten

Abstract

Background

In the Democratic Republic of the Congo (DRC), women in (peri-) urban areas are commonly engaged in small trade, which allows them to meet the basic needs of their families. Microsavings approaches are a low-risk option to obtain financing for economic activities. A project combining men's sensitization on gender equity and women's empowerment through village savings and loan associations (VSLA) were implemented in North and South Kivu to raise the household economic level.

Objective

This study assessed how involving men in gender equity affects women's health and socio-economic outcomes, including food security.

Methods

A cohort study was conducted with 1812 women at the baseline; out of them, 1055 were retrieved at the follow-up. To identify socio-economic changes and gender perception changes, linear and logistic regressions were run.

Results

Results showed that the household income improved with intervention (coefficient = 0.327; p = 0.002), while the capacity to pay high bills without contracting debts decreased (coefficient = 0.927; p = 0.001). We did not find enough statistically significant evidence of the influence of the intervention on skilled birth attendance (coefficient = 0.943; p = 0.135), or family

[5] Under review at BMC Public Health

planning use (coefficient = 0.216; p = 0.435) nor women's participation in the decision-making (coefficient = 0.033; p = 0.227) nor on couple's cohesion (coefficient = 0.024; p = 0.431). Food insecurity levels decreased over time regardless of being in the intervention or control area.

Conclusion

Empowering women while sensitizing men on gender aspects improves financial well-being (income). Time, security, and strong politics of government recognizing and framing the approach are still needed to maximize the benefit of such projects on social factors such as women's participation in decision-making and social cohesion.

Keywords: microfinance, gender, household economy, reproductive health.

5.3.1 Background

Programs to enhance women's economic empowerment can spur economic growth through increased economic participation (Khan S 2021), which positively impacts household welfare for example by improving household food security (Aziz, He et al. 2022), also in humanitarian settings (Vallet, Frankenberger et al. 2021). Positive effects were further described for the foundational drivers of household welfare that benefit the next generation, such as maternal health (Pratley 2016) and educational attainment (Baloch, Noor et al. 2017). Microfinance approaches are an important way of addressing women's economic empowerment (Addae 2015). The effectiveness of microfinance programs has however shown inconsistent results for microcredit, microsavings, or microinsurance approaches (Duvendack and Mader 2019). Especially microcredit projects showed mixed effects, as the loans taken were hardly reimbursed – they were consumed without generating any benefits. This sometimes led to bankruptcy, worsening population impoverishment (Van Rooyen, Stewart et al. 2012, Annan 2013).

A better alternative, easing the negative impact of microfinance projects, Care International and other NGOs introduced the Village Savings and Loan Associations (VSLA) approach, initially targeting primarily women (Allen and Staehle 2007, Annan 2013). VSLA differs from

traditional microfinance institutions in that the money for loans comes from the members themselves. The process of saving and lending money is managed by the members of the group themselves, which reduces the cost linked to microfinance institutions (Allen and Staehle 2007, Annan 2013). VSLAs provide poor people in remote areas with a safe place to store small amounts of cash and build up a fund from which members can take small, flexible loans (Hendricks and Chidiac 2011, Annan 2013, Oxfam 2013, Christopher Ksolla 2016). They work without long-term technical support and injections of donor capital; instead, the members decide themselves about loans depending on trust, and the money stays in the community. Indeed, microsavings programs, including VSLAs, have shown small but more consistent positive effects on people living in poverty, as the approach carries less risk of debt than microcredit programs (Duvendack and Mader 2019).

In the Democratic Republic of the Congo (DRC), women in (peri-) urban areas are commonly engaged in small trade, which allows them to meet basic needs (Hilhorst; and Bashwira 2014). Women entrepreneurs account for more than one-third of all private sector firms, such as agriculture and informal businesses (Atsede Woldie 2018). The DRC is an indebted country with the majority of the population living with less than one dollar per day (World Bank Group 2018). Ongoing conflict since the Congo war between 1996 – 2004 displaced large parts of the population in the East of the country, jeopardizing rural livelihoods as a consequence of the persistent insecurity and engendering overcrowding in towns (Omba Kalonda 2011). Consequently, land was abandoned, household food production declined, and when employment became rare in rural areas, most people tried to get more income through small businesses (Omba Kalonda 2011, FAO 2017, USAID 2020). Women in particular have difficulty obtaining finances to develop their small-to-medium enterprises (Knight 2019). In this situation, micro-savings approaches can be a low-risk approach to improve women's access to finance, although there may be limitations as many women cannot decide how to use their own income but have to consider their husband's will (DHS 2014). Moreover, women's

increasing financial contributions to the household economy were not unconditionally welcomed by their husbands, despite many families being food insecure and facing problems paying medical bills or other expenses such as school-fees (Soeters, Peerenboom et al. 2011, Gerstl, Sauter et al. 2013, Laokri, Soelaeman et al. 2018, Ntambue, Malonga et al. 2019). The growing participation of women in the economy challenged men's traditional breadwinner role, and some men resented that women were often not at home to pursue their household chores (Lwambo 2013, Hilhorst; and Bashwira 2014). The frustration with the changing roles and power-relations, which increases when women earn more than men, may ultimately engender intimate partner violence (IPV) (Mtenga, Pfeiffer et al. 2018, Abramsky, Lees et al. 2019).

Concerning the determinants of household welfare, it is recognized that women's economic empowerment can positively affect health outcomes, especially maternal and child health (Pratley 2016). This is relevant as reproductive health is foundational for the health of future generations, and given that the DRC is carrying a high burden of maternal mortality (693 per 100000) (DHS 2014). Economic empowerment alone may however not suffice: men's involvement in reproductive health is pivotal. A lack of participation of men in sexual and reproductive health programs and the persisting disagreement between spouses regarding their choice for the respective health service use was for example considered a main reason for the low rate of family planning uptake in the region (Tilahun, Coene et al. 2014, Kabagenyi, Reid et al. 2016). Not least from a gender equity perspective, engaging men in health programs is pivotal because women are expected to abide by their husband's decisions before spending their own money on health care, even for their own health (Shefer, Crawford et al. 2008, DHS 2014, Casey, Carlson et al. 2018, Gibbs, Jewkes et al. 2018, Semahegn, Torpey et al. 2019).

The intervention – a gender-transformative economic empowerment approach

Mawe tatu is a project developed by CARE in the Democratic Republic of the Congo to improve household economies and factors foundational for the health of future generations. The project combines three approaches: (i) Village Savings and Loans Associations (VSLAs), as a platform

that offers economic, social, and personal gains; (ii) a men-to-men sensitization to engage in learning, practice, and publicly adopt new attitudes and behaviors towards gender equality and non-violence; and (iii) education for youth to engage in healthy relationships with new models of gender equality (DRC 2015).

A VSLA is a self-selected group of 15 to 30 persons who pool weekly savings of a self-defined share (Allen and Staehle 2007). The savings are invested in a credit fund which is used to provide loans to members (Allen and Staehle 2007). In parallel to the VSLA, women received training on topics such as gender and rights, or business management.

In parallel, around 30 men living in the same communities where the VSLA were introduced, are organized in reflection groups called "*baraza badirika*," literally meaning, "peer let us change". The men-to-men sensitization aims at developing 'positive masculinity' and engaging men, ideally husbands/partners of VSLA's members, towards more equitable gender norms. It is expected that men promote women's economic empowerment and help to reduce gender-based violence. Participation in *baraza badirika* was voluntary.

This article aims to determine the impact of combining women's empowerment through VSLA with a positive masculinity approach ("baraza badirika") on household socio-economy (women's income, financial resilience, household food security, women's participation in decision-making and cohesion), and foundational health outcomes (reproductive health outcomes, and family planning use, and gender-based violence) in a humanitarian setting in North and South Kivu Provinces, DRC.

5.3.2 Methods

Study setting

The project was implemented in eight territories of North and South Kivu: Bagira, Ibanda, Kadutu, Walungu, Goma, Karisimbi, Nyiragongo, and Rutshuru.

Study design

A cluster-randomized intervention study was conducted for a comprehensive evaluation of the effectiveness of the *Mawe Tatu* program. Intervention and control villages were randomly selected from within the eight territories.

Study population

In the randomly selected intervention and control villages, the village head invited women from poor households to a meeting; participation in this meeting was voluntary. In the intervention villages, meeting participants received information about the VSLA approach, whereas in the control villages, an information session on an economic topic was provided. Women from villages that were randomly assigned to be in the intervention group received further introduction to the VSLA approach, while women from the control villages were only re-contacted later on for the baseline and the follow-up data collection. All women participating in these meetings who were long-term residents of their village (living in the household for at least 6 months) and were at least 15 years old were eligible for the study; based on the attendance lists, 15 women per village were randomly selected to participate in the study.

Data collection

The baseline data collection was conducted from May to December 2017 while the follow-up took place from July 2018 to January 2019, with at least a 1-year interval (exposure) for each participant between the first and last interview. Data were collected with face-to-face interviews. Research assistants familiar with the local context and fluent in the local language who received 2 weeks of intensive training on technical and ethical issues conducted the interviews. To ensure that participants would be easily found again, the names of the head of the household, addresses, and the mobile telephone number of participants when available (or the mobile telephone number of someone living in the house), were obtained.

Sample size calculation/justification

The power calculation was based on the initial hypothesis that establishing village savings and loan associations at the village level will lower the risk of stunting children. In this article,

intermediate outcomes of the program are evaluated, while the initial sample size calculation was conducted for child growth as the main outcome, which required a total sample of 800 women. Baseline data were collected in 120 selected villages (80 intervention and 40 control villages) with an average of 15 households per village. This resulted in an initial sample size of 1200 participants in 80 villages in the intervention group and 600 in the control villages. In each intervention village, 15 participants in case of one and 25 participants in case of two VSLAs in the village were randomly selected from the initial meeting attendance lists. In the control villages, 15 persons were randomly selected; if less participants attended the meeting, all attendees were included. After 12 months out of the 1812 initially enrolled participants, we could re-contact 730 women in the intervention group (91.2% of the calculated sample size) and 316 participants in the control group (79.0% of the calculated sample) (Table 12).

Table 12 presents participants in the study at baseline and the final evaluation (follow-up).

Table 12. Study participants by intervention and control villages (baseline and follow-up)

	Calculated sample		Baseline		Follow-up	
			N	%	N	%
Intervention	800	66.7	1225	67.6	730	70.9
Control	400	33.3	587	32.4	316	29.1
Total	1200	100	1812	100	1046	100

Ultimately, 1055 women remained in the study at the follow-up. However, only 1046 women indicated whether or not they belong to VSLA (**Table 12**). The high loss to follow-up (42.3% = 100 (1-(1046/1812)) can partly be explained by the fact that two villages could not be visited during the follow-up because of escalating armed conflicts in North Kivu. Therefore, all the participants of these villages were excluded. Additionally, data from one interviewer raised quality concerns and were excluded from the analysis (n=79). However, the sample size calculation took into account the high rate of loss to follow-up.

A few participants (31 persons representing 3% of the final sample)) switched from the control to the intervention group. This concerned persons who were living in control villages but had

nonetheless joined a VSLA group. In a VSLA program, new groups are self-initiated in addition to the initially set-up groups, and we could not prevent the 'spill-over' to some of the control villages. We therefore decided to re-assign all persons initially recruited in the control village who later on, nonetheless, became part of a VSLA to the intervention group.

Instruments

The survey questionnaire includes questions about several outcomes: household economy (income, resilience, and FAO food insecurity level), maternal health services use (attendance of antenatal care, place of birth for the last pregnancy, and use of family planning (FP) modern methods), and social factors (women's participation in decision-making, couple's cohesion, and household cohesion).

The same questionnaire was used for the baseline and final data collection. Some impact questions were added to the follow-up questionnaire to measure the project's effect. For those participating in the intervention this included among others:

(1) Since your husband is in a reflection group and you are in a VSLA: Can you say that your kids are going to school more regularly /Can you and your family access health care services more easily;

(2) Is your husband a member of the "baraza badirika" reflection groups [if yes], since your husband is a member of the focus group/ can you easily go to the health center for ANC, post-natal care, childbirth / can you easily go to the health center for FP (information or use of a method). / do you feel that he supports the generative activities that you do in VSLA to promote the feeding of your children? / What does your husband do for children's nutrition?

Measurement

Table 13 presents different variables and measurements used in this study.

Table 13. Measurement of main outcome variables

Variables	Type	Measurement
Household economy variables		
Income	Numeral	Income in Congolese francs or estimation (expressed in ln)
Low Resilience (resilience=ability to pay a bill of $50* without contracting a debt or asking relatives)	How would you/your household pay $50 for a hospital bill:	Using cash or savings, selling products (maize, charcoal..), selling productive assets** (goat, chickens, land) (low resilience = 0), or if had to borrow/ask money in the family, asking money from relatives, asking money from neighbors, church members, friends, making debts (low resilience =1)
Food security	Scale (FAO)	Severe food insecurity, moderate food security, mild food insecurity, food security
Foundational health outcomes (reproductive health		
Skilled-birth attendance	Binary	Yes= 1, no=1
ANC attendance	Binary	≥3 ANC during the last pregnancy =1; <3 ANC =0
Use of FP	Binary	Uptake of any modern FP method during the last 12 months: yes = 1 and no =0
Gender-based outcomes		
Tolerance gender-based violence	Likert-scale	0-1
Neighbor/couple Cohesion	Likert-scale	0-1
Women's participation in decision-making	Likert-scale	0-1

*$50 was defined after a rough estimation of the average cost for a woman to deliver without complications in a local health facility.

**productive assets: definition adapted to the context (Calder, Rickard et al. 2020). One goat or three-four chickens costs approximately $50.

The household economic level was assessed using the monthly income. For those missing monthly income (Baseline n=279, 40.5% Missing: n=409, 59.5%; follow-up n=212, 30.8%. Missing n=476, 69.2%), we imputed monthly income from daily income, assets (None, radio, TV, mobile phone, electricity, computer/tablet, bicycle, motorcycle, car, boat, engine (mill, boat, other), plough, other valuables), and subjective wealth score (much poorer to much richer) as an approximation. Multiple imputation (mi) is a general approach that aims to allow for the

uncertainty about the missing data by creating several different plausible imputed data sets and appropriately combining results obtained from each of them (Sterne, White et al. 2009). To facilitate the imputation of missing data, the income variable was categorized into six classes using assets, sum and income variables; and mixed ordinal logistic regression with multiple imputations was used to analyze the ordinal variable.

Additionally, age, education, and marital status were collected. Women's participation in decision-making at the household level was assessed using a scale with eight items. Before and after the intervention, social cohesion was also assessed using validated scales described elsewhere (Gari, Malungo et al. 2013). All scales and individual items results are presented in tables as supplementary material.

Data analysis

Descriptive statistics were calculated for socio-economic variables. A threshold of 80% was used. Participants in the VSLA group (intervention group) are coded as G=1 as opposed to the control group (G=0). Participation in a VSLA was investigated at the beginning of the study (T=0) and one year after the implementation (T=1).

For each main outcome variable, the treatment effect β is the difference between the intervention and control groups one year after the start of the program, adjusting for the difference between the two groups one year before the intervention:

$B = E(Y| G=1, T=1) – E(Y| G=0, T=1) – E(Y| G=1, T=0) – E(Y| G=0, T=0)$ (equation 1).

It was assumed that the gap between the intervention and the control groups in the following period would have been unchanged if VSLAs had not been implemented.

To account for the sampling frame, multilevel mixed-effect logistic regression models were run to estimate the impact of VSLA on socio-economic factors (income-generating activities, resilience, women participation in decision-making, and cohesion) and maternal health outcomes (ANC and skilled-birth attendances and use of FP).

5.3.3 Results

Socio-demographic characteristics of participants

Table 14 presents the socio-demographic characteristics of the population in the study

Table 14. Socio-demographic characteristics of participants (baseline and follow-up)

	Baseline			**Follow-up**		
	Intervention	*Control*	*Total*	*Intervention*	*Control*	*Total*
	N (%)	N (%)	N (%)		N (%)	
Province	n=1239	n=573	n=1812	n=730	n=316	n=1046
North-Kivu	600(48.4)	269(47.0)	869(48.0)	282(38.6)	115(36.4)	397(38.0)
South-Kivu	639(51.6)	304(53.0)	943(52.0)	448(61.4)	201(63.6)	649(62.0)
Urban	n=1001	n=470	n=1471	n=721	n=314	n=1035
Rural	213(21.3)	63(24.51)	317(21.6)	171(23.7)	57(18.1)	228(22.0)
Urban	631 (63.0)	169(65.76)	940(63.9)	485(67.3)	225(71.7)	710(68.6)
Semi-urban	157(15.7)	25(9.73)	214(14.5)	65(9.0)	32(10.2)	97(9.4)
Youth	n=1239	n=573	n=1812	n=730	n=316	n=1046
>25	1046(84.4)	403(70.3)	1449(80.0)	665(91.1)	246(77.9)	911(87.1)
<=25	193(15.6)	170(29.7)	363(20.0)	65(8.9)	70(22.1)	135(12.9)
Education	n=1235	n=571	n=1806	n=729	n=315	n=1044
None	222(18.0)	123(21.5)	345(19.1)	145(19.9)	69(21.9)	214(20.5)
Primary	441(35.7)	158(27.7)	599(33.2)	234(32.1)	79(25.1)	313(30.0)
Secondary	514(41.6)	251(44.0)	765(42.4)	319(43.8)	147(46.7)	466(44.6)
Tertiary	58(4.7)	39(6.8)	97(5.4)	31(4.2)	20(6.3)	51(4.9)
Married	n=1238	n=572	n=1810	n=730	n=316	n=1046
No	266(21.5)	154(26.9)	420(23.2)	143(19.6)	75(23.7)	218(20.8)
Yes	972(78.5)	418(73.1)	1390(76.8)	587(80.4)	241(76.3)	828(79.2)

Compared to the intervention group, the controls were younger (before intervention: control 15.6% (n=193) vs intervention group 15.6% (n=170) and after intervention: control 22.1% (n=70), intervention group 8.9% (n= 63) (**Table 14**).

Low resilience increased in both control and intervention groups. In both control and intervention areas, the percentage of households without food insecurity increased from 8.9% (n=51) to 14.9% (n=47) for the control group and 5.3% (n=66) to 10.3% (n=75) for the intervention group (**Table 15**).

Table 15. Distribution of the main and the secondary outcome variables

Distribution of main and secondary outcome variables

Variables	Baseline			Follow-up		
	Intervention	*Control*	*Total*	*Intervention*	*Control*	*total*
Income-generating activities:	n=1239	n=573	n=1812	n=730	n=316	n=1046
One activity [a]	537(43.3)	305(53.2)	842(46.5)	395(54.1)	147(46.5)	542(51.8)
More than one activity [a]	702(56.7)	268(46.8)	970(53.5)	335(45.9)	169(53.5)	504(48.2)
Daily Income (FC) [b]	14332±41510	9731±14929	13387±37652	16882±36654	10127±23194	15403±34247
Monthly Income (FC) [b]	249761±2195756	155208±365608	227927±1931057	264411±1462997	158691±172270	241733±1299214
Low resilience:	n=1239	n=573	n=1812	n=730	n=316	n=1046
No [a]	638(51.5)	255(44.5)	893(49.3)	327(44.8)	178(56.3)	505(48.3)
Yes [a]	601(48.5)	3138(55.5)	919(50.7)	403(55.2)	138(43.7)	541(51.7)
Food insecurity:	n=1239	n=573	n=1812	n=730	n=316	n=1046
None [a]	66(5.3)	51(8.9)	117(6.5)	75(10.3)	47(14.9)	122(11.7)
Mild [a]	114(9.2)	45(7.9)	159(8.8)	59(8.1)	29(9.2)	88(8.4)
Moderate [a]	221(17.8)	89(15.5)	310(17.1)	133(18.2)	48(15.2)	181(17.3)
Severe [a]	838(67.7)	388(67.7)	1226(67.7)	463(63.4)	192(60.7)	655(62.6)
Foundational health outcomes						
Variables	Baseline			Follow-up		
	Intervention	*Control*	*Total*	*Intervention*	*Control*	*total*
Place of last delivery:	n=1142	n=482	n=1624	n=697	n=285	n=982
Skilled-birth attendance [a]	1036 (90.7)	436 (90.5)	1472(90.6)	634(90.0)	254 (89.1)	888(90.4)
Attendance of ANC:	n=1239	n=573	n=1812	n=730	n=316	n=1046
<3 ANC [a]	132 (10.7)	71 (12.4)	203(11.2)	76(10.4)	28(8.9)	104(9.9)
≥3 ANC [a]	1107(89.3)	502(87.6)	1609(88.8)	654(89.6)	288(91.1)	942(90.1)
Use of FP	n=1239	n=573	n=1641	n=730	n=316	n=1046
No [a]	1133 (91.4)	508 (88.7)	1641(90.6)	654(89.6)	268(84.8)	922(88.1)
Yes [a]	106 (8.6)	65(11.3)	171 (9.4)	76 (10.4)	48 (15.2)	124 (11.9)
Gender-based outcomes						
Variables	Baseline			Follow-up		
	Intervention	*Control*	*Total*	*Intervention*	*Control*	*total*
Women's participation in decision-making*, [b]	0.69±0.28	0.59±0.31	0.66±0.30	0.75±0.28	0.67±0.29	0.72±0.28
Tolerance to GBV*, [b]	0.41±0.21	0.41±0.26	0.42±0.26	0.43±0.28	0.45±0.29	0.44±0.26
Neighbor cohesion*, [b]	0.82±0.24	0.76±0.26	0.80±0.24	0.85±0.21	0.85±0.22	0.85±0.22
Couple cohesion*, [b]	0.87±0.28	0.82±0.33	0.85±0.24	0.86±0.29	0.87±0.28	0.86±0.29

* Likert scale: included items are presented in tables as supplementary material (Appendices A)

[a] Data variables presented as percentage of overall population n (%)

[b] Data variables presented as Mean±SD

Overall, the percentage of FP users increased in both groups, intervention and control from 8.6% (n=106) at the baseline to 10.4% (n=120) at the follow-up and from 11.3% (65) to 15.2% (48) respectively. Over the time, the percentage of skilled-birth attendance and ANC did not change in the intervention group (**Table 15**).

Intervention effects on main outcomes

Table 16 presents economic outcomes by the assumed risk factors after controlling for age, education, and marital status. For each regression, only estimates of the intervention on the outcome are shown.

Table 16. Estimates of the impact of the intervention on socio-economic and health outcomes.

Outcomes	Estimates	95% CI		p
Income (mi)	0.395	0.141	0.650	0.002*
FAO food insecurity	0.261	-0.363	0.887	0.412
Low resilience**	0.927	0.379	1.474	0.001*
Neighbor cohesion	0.007	-0.041	0.056	0.764
Couple cohesion	0.024	-0.035	0.084	0.431
Woman's participation in decision-making	0.033	-0.021	0.088	0.227
Tolerance to GBV	0.040	-0.016	0.097	0.159
Attendance of ANC**	-0.065	-0.583	0.452	0.805
Family planning use**	0.216	-0.326	0.759	0.435
Birth place**	0.943	-0.293	2.180	0.135

* p value remains statistically significant after Bonferroni and Bonferroni-Holm corrections

**logistic regression

Income was positively associated with the intervention (coefficient= 0.395; p=0.002) and significantly increased low financial resilience (coefficient= 0.927; p=0.001) (**Table 16**). The other outcomes (FP use and skilled birth and ANC attendances, tolerance to GBV, and intermediate outcomes like women's participation in decision-making, neighborhood, and couple cohesion) were not statistically significantly associated with the intervention. The detailed results of each outcome are presented in tables as supplementary material (Appendices B).

5.3.4 Discussion

VSLAs combined with a positive masculinity program component improved the household income in this highly insecure area, while financial resilience seemed to have decreased with the intervention. We did not find significant statistical results showing the impact of the intervention on women's participation in decision-making and cohesion or health outcomes after one year of program activities.

Economic outcomes

We found that VSLA helped people to increase their income, corroborating what was described elsewhere (Christopher Ksolla 2016, Karlan, Savonitto et al. 2017). In the present study, the considerable number of the baseline controls shifting to the intervention group at the end of the assessment period reflects that VSLA are perceived to really help households to improve their economic status. However, the resilience (=ability to pay a bill of $50 (hospital bill for example) without contracting a debt or selling assets) declined with the intervention. This may be explained by the savings approach – the money is paid into the VSLA pool and no longer immediately accessible, which may seemingly lead to decreasing financial resilience. Even though the VSLA is considered a secure place where people can take "secure" loans instead of pledging their house or land (Hendricks and Chidiac 2011, Brannen and Sheehan-Connor 2016), being part of a VSLA is not without risk according to what was found elsewhere (Mtenga, Pfeiffer et al. 2018). Women with economic hardship are more likely to have debts in

VSLAs since they cannot raise enough money to support their membership. Some women also belonged to several VSLA, which brought them into the situation that they could not keep up reimbursing all the loans without contracting debts elsewhere. The risk-free attitude toward making debts is also explained by the hope that they will have enough money for reimbursement after the sharing of savings at the end of a cycle. Consequently, women enter into a vicious circle of taking loans to reimburse previous ones rather than using the savings in the VSLA to improve their welfare. However, more studies are needed to understand the characteristics, purposes, and motivations of VSLA members continuing to make debts.

The surprisingly inverse relationship between the improvement in household income, on the one hand, and the reduction in the ability to pay high bills (resilience) without getting into debt, on the other, can also be partly explained by the depreciation of the national currency. At the beginning of the project, 1 US dollar was equivalent to 960 Congolese francs. One year after 1 US dollar was equivalent to 2000 Congolese francs. At the local market, the goods are appraised and sold using the fiscal franc, which in principle is equivalent to the value of US dollars. Although women can be making savings and benefits, they end up with money that is not valued in the market.

The level of food security was not affected by the program contrary to findings elsewhere (Brannen and Sheehan-Connor 2016, Christopher Ksolla 2016). In the study area, many villages are facing high levels of food insecurity due to displacement and difficulty in investing in such precarious conditions (Omba 2011, USAID 2020). The short duration of the follow-up period has to be considered though, as long-term members are generally faring better than recent joiners (Brannen and Sheehan-Connor 2016).

Maternal health and socio-gendered outcomes

We did not find statistically significant evidence of an impact of the intervention on maternal health outcomes (place of birth of the last child, attendance of antenatal care, and use of family planning). In the case of this study, this can be explained by an already high percentage of

attendance at health facilities for delivery (> 93%) and for antenatal care at the baseline, which means that any positive effect would be small. For family planning, although there was an increase in the prevalence of those using FP at the end of the project with the intervention group, the intervention was not statistically associated with an increased in the use of FP.

For the social factors, the intervention did not statistically influence the women's participation in decision-making, nor the neighbor's or the couple's cohesion, nor GBV tolerance. The fact that social changes are hardly obtained can explain the absence of any positive change in social factors in this short period (Nowack and Research 2009, Berkman 2018). Contrary to a previous qualitative study we did not find enough evidence that engaging men besides women will be advantageous for gender equity and reducing GBV (Falb, Annan et al. 2014). A recent review concluded that women's economic empowerment programs challenging gender norms in a patriarchal society might generate conflicts in the couple resulting in gender-based violence (Slegh 2014, Abramsky, Lees et al. 2019, Eggers Del Campo and Steinert 2022). Those conflicts may require understanding the gender dynamics to build a new balance protecting the marginalized women, which are adhered to by both, men, and women. It could be worthy to explore the impact of the intervention using qualitative methods to highlight the outcomes and potential conflicts generated by this gender-transformative approach.

Limits

This study has several limits. First, pairing VSLA members and controls was difficult in the context because there was no clear enumeration of the population. However, we did control for the sex and socio-economic backgrounds (villages in the same areas). Second, the percentage of women participating in VSLAs with husbands/ partners as members in reflection groups was low (around 10%), which might have led to under or over-estimation of some effects of the project. Overall, 31 persons (3% of the final sample) were shifted from the control to the intervention group for this analysis because they joined the VSLA after the first round of data collection. Last, the project's assessment period was quite short, only one year after the

implementation. This short assessment period might explain why some expected qualitative results such as food security were not improved. Future assessment after one or two additional years might lead to more conclusive results.

Policy implications

- To fight poverty promote mixed programs empowering women economically through VSLA while men and women are sensitized on gender equity.
- Define adapted strategies to mitigate the easiness of taking debts that can allow women to use savings for household welfare.
- Governments and nations must provide a minimum of security to people so that they can benefit from their VSLA and invest more.
- Further research is needed to investigate more deeply the dynamics of changes happening and potential consequences such as conflicts in the couple.

5.3.5 Conclusion

This analysis provides evidence that women's empowerment through the VSLA approach associated with male engagement in positive masculinity raises household incomes. The capacity to pay a debt without contracting any debt (resilience) decreased with the participation in VSLA. However, we did not find any effect on FAO household food insecurity level, women's participation in decision-making or household cohesion. Engaging men to support women’s economic activities is of value but additional time is required to better assess the impact. The increase in income is already a premise that after years, if all the parameters are well canalized (security and strong politics to stabilize local currency), VSLA may help to improve household socio-economic and health factors.

6 Family planning challenges through a gender lens

6.1 Barriers to family planning use in the Eastern Democratic Republic of the Congo: an application of the theory of planned behavior[6]

Wyvine Bapolisi, Ghislain Bisimwa, Sonja Merten

Abstract

Objective

In the Democratic Republic of the Congo, there is a low adherence of the population to the use of family planning (FP) due to various social barriers. This study aimed to understand the drives from social barriers to the use of FP in women in the Kivu, a region particularly affected by poverty and many years of conflicts. A theory of planned behavior (TPB) using a generalized structural equation modeling has been applied to understand the complex socio-cultural drivers of the intention and the ultimate decision to use FP.

Design: Longitudinal study.

Setting: A community-based approach was used to investigate FP use in the North and South-Kivu regions.

Participants: Overall, 1812 women 15 years and older were enrolled in the baseline study and 1055 were retrieved during the follow-up.

Primary and secondary outcomes: Family planning use and intention to use FP.

Results: The mean age was 36±12 years, with a minimum of 15 years old and a maximum of 94 years old. Among sexually active participants, more than 40% used a modern contraceptive method at the last sexual intercourse. Education was positively and significantly associated with intention to use FP (β=0.367; p=0.008). Being married was positively and marginally significantly associated with intervention (β=0.524: p=0.050). Subjective norms were negatively and significantly associated with intention to use FP (β= -0.572; p= 0.003) while "perceived control" was positively associated with intention to use FP (β= 0.578; p <0.0001).

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Education and perceived control were positively and significantly associated with the use of FP (β = 0.422, p=0.017; and β = 0.374; p=0.0170.001) while Intention to use FP was positively and marginally significantly associated with the use of FP (β = 0.58; p=0.050).

Conclusion: TPB helped understand socio-cultural barriers to FP use and it can be useful to define adapted strategies in different contexts.

Strengths and limitations

- This study is relevant to embrace the complexity of socio-cultural factors associated with FP use.
- Large community-based survey with random selection.
- The components used to define attitudes and subjective norms may not be complete.
- Generalized structural equation model designs do not allow causal inference.
- Most deprived women could not have been included due to lack of enough resources to integrate the intervention group, but they could have been found in control areas.

6.1.1 Background

Family planning (FP) refers to policies, services, and methods aimed at controlling fertility. WHO recommends the use of FP in Sub-Saharan Africa (SSA) countries to fight poverty and hunger (WHO 2019). In African countries including the Democratic Republic of the Congo (DRC), researchers have identified many barriers to adhering to FP, all methods confounded, including: financial aspects, religious beliefs, or couple dynamics (Tilahun, Coene et al. 2014, Muanda, Ndongo et al. 2017). On the other hand, children are seen as a sign of wealth; the more children a family has, the wealthier it is considered to be (Mbadu Fidèle Muanda 2017). Moreover, many authors found that the fear of side effects was a principal barrier to the uptake of FP methods (Muanda, Ndongo et al. 2017, Schwarz, Dumbaugh et al. 2019, Schrumpf, Stephens et al. 2020).

To overcome economic barriers to FP use in DRC, non-governmental organizations (NGOs) are working with the government to promote and provide FP. Social marketing approaches

using social networks or mobile apps and media campaigns are widespread to provide information on FP even in remote areas. Many programs give incentives such as small gifts (soap, etc…) or money for the use of FP or support health facilities so that women and couples can access free FP methods (Dumbaugh, Bapolisi et al. 2017, Ali, Azmat et al. 2019). The assumption often underlying such interventions is that FP methods are unavailable or difficult to access for those who want to use them (Casey and Tshipamba 2017, Ali, Farron et al. 2018). Even though FP methods are now more available and affordable throughout countries in SSA, increasing FP use has remained challenging. Despite many individuals' intentions to use a FP method, intention is not always followed by an uptake of FP. Qualitative research has highlighted that social factors, which may act as barriers to the uptake of contraception, are seldom considered when implementing FP programs (Kabagenyi, Reid et al. 2016, Muanda, Ndongo et al. 2017, Schwarz, Dumbaugh et al. 2019).

The decision to use FP is complex. Therefore, understanding the drivers of behavior change requires a comprehensive model, such as the theory of planned behavior (TPB), to understand how knowledge, social norms, and beliefs can interfere with women's intentions. Ajzen developed the TPB in 1991 (Ajzen 1991, Godin and Kok 1996, Armitage and Conner 2001). TPB states that *attitudes, subjective norms,* and *perceived behavior control* are the three components shaping an individual's behavior and intentions. *Attitudes* are defined by behavioral beliefs that represent an individual's favorable or unfavorable evaluation of the behavior. *Subjective norms* refer to perceived social pressure from society/individual's community. *Perceived behavior control* refers to the ease or difficulty of performing a behavior in different situations (Ajzen 1991).

Many authors used the TPB to study health-related behaviors, including the use of condoms and other contraceptives (Brein, Fleenor et al. 2016, Ayodele 2017, Banas, Lyimo et al. 2017, Gilissen, Pivodic et al. 2018). Its efficacy has been demonstrated for years (Armitage and Conner 2001) although some authors postulate that the TPB is out-of-date, raising controversy

in understanding health behaviors (Head and Noar 2014, Sniehotta, Presseau et al. 2014, Rhodes 2015). The definition of *perceived control* was among authors' criticisms although it is an important aspect of health behavior. However, supporters of the theory state that TPB does not need to be retired, but rather, extended. They recommend that the application of the theory must be adapted in every context for better operationalization (Ajzen 2015, Conner 2015).

Using TPB as a framework for analysis, this study provides quantitative evidence on the importance of considering the full range of factors, which influence contraceptive behavior. This analysis brings to light barriers women encounter when attempting to use FP methods, contributing to the development of adapted strategies to meet first-time contraceptive users' needs.

6.1.2 Methods

Study design and study setting

This study is embedded in the impact evaluation of an intervention called "*Mawe Tatu*" in North and South-Kivu Provinces, DRC. *Mawe Tatu* is a gender transformative approach associating women's empowerment through village savings and loans associations (VSLA) with a "men engage" component to improve household economies and maternal health. The "*Mawe Tatu*" project targeted specifically economically vulnerable women in the community. In order to establish associations of socio-cultural factors with the use of family planning prior to the intervention, this analysis uses the dataset of the *Mawe Tatu* evaluation (baseline and follow-up). A longitudinal cohort study was conducted from May to December 2017, before any sensitization for gender issues and/or family planning had taken place (baseline) and from July 2018 to January 2019 (follow-up), with at least a 1-year interval (exposure) for each participant between the first and last interview. For more details on the *Mawe Tatu* project, the impact evaluation protocol was published elsewhere (Bapolisi, Ferrari et al. 2020).

Study population and sampling

Women eligible for the project or the control group were identified by using community-based targeting i.e. approaching community leaders to provide listings with vulnerable households and invite women from these households to an initial meeting – but participation in the project was voluntary (Bapolisi, Ferrari et al. 2020, Bapolisi, Ferrari et al. 2021).

The initial sample size calculation was based on the hypothesis that VSLA lower the risk of stunting in children (Bapolisi, Ferrari et al. 2020). A two-stage cluster-randomized sampling was used to select 120 villages in eight health zones (80 in the intervention area and 40 in the control) for inclusion in the study (Bapolisi, Ferrari et al. 2020). A second level of random selection was done using the list of all participants in the *Mawe Tatu* project and from the control groups. A control group consisted of a sample of women in villages with no intervention i.e. economically vulnerable women invited to informative sessions on household economy held by community leaders were considered controls, based on a list of those present. For villages with VSLA, 15 (one VSLA) to 25 (>1 VSLA) women participating in a VSLA were then randomly selected for inclusion in the study. In the control villages, 15 women were randomly chosen from the lists of those present at the information meeting.

Twenty-three thousand women were expected to take part in the *Mawe Tatu* project. Ultimately, 1812 women were enrolled in the baseline study and an individual identification number (ID) was assigned to every participant; out of them, 1055 were retrieved during the follow-up using the unique ID for individuals and households. To ensure that they would be easily retrieved, addresses, the mobile telephone number of participants when available (or the mobile telephone number of someone living in the house), and the names of the head of the household were taken. The loss to follow-up was mainly due to security reasons in the North-Kivu. Two villages were insecure and could not be reached during the entire period of the follow-up. The other reasons involved the natural movement of the population looking for better places to survive. Sample

size calculation was maximized taking into account a high rate of loss to follow-up described in the region (Bapolisi, Ferrari et al. 2020).

All women participating in the study aged 15 years and older were included in the present analysis.

Patient and public involvement

The public was involved in the conduct and dissemination plans of the research. Stakeholders and the community guided the researchers in the field and dissemination sessions were planned to obtain the community's feedback on the findings and ways forward.

Data collection

Survey data were collected via electronic tablets using the Open Data Kit software package. To control bias, in addition to the random selection, a team of local researchers fluent in the locally spoken languages was trained over a week in data collection methods, followed by a pilot study. Data were directly saved on a secure server located at the Swiss Tropical and Public Health Institute in Basel, Switzerland.

Instrument

The impact evaluation questionnaire included Demographic Health Surveys-validated questions about the use of FP and knowledge of different contraceptive methods: "Did you ever use a contraceptive?"; "Did you use any contraceptive at last sex intercourse?"; "Use of modern contraceptive at last sex intercourse?"; "Who in a couple should, according to you, decide the use of a contraceptive?"

To control socio-demographic factors that may affect the use of family planning, we also recorded participants' age, education level, religion (catholic or other), provenance (urban, semi-rural or rural), and marital status (married/in couple or single).

Data analysis

Descriptive statistics were calculated for socio-demographic variables, and FP use-related questions (uptake of contraceptives, decision-making on the use within the couple).

FP pathways have been studied in the past using many types of regression analyses. However, to address the complexity of FP uptake, especially in the study region, the use of generalized structural equation modeling (GSEM) appeared appropriate when building the model of the TPB. GSEM is a multivariate statistical analysis technique used to analyze structural relationships between variables and latent constructs. GSEM is a combination of factor analysis and multiple regression analysis using endogenous and exogenous variables. Structural Equation Modelling has been used previously to determine the utilization of condoms or other contraceptive methods (Noar and Morokoff 2002, Hardee, Patterson et al. 2018). Data with missing values were discarded. Analyses were performed using Stata V.15.0.

Model specification

To build the model of planned behavior, qualitative findings from previous research were used (Wulifan, Brenner et al. 2016, Mbadu Fidèle Muanda 2017, Dumbaugh, Bapolisi et al. 2018, Schwarz, Dumbaugh et al. 2019).

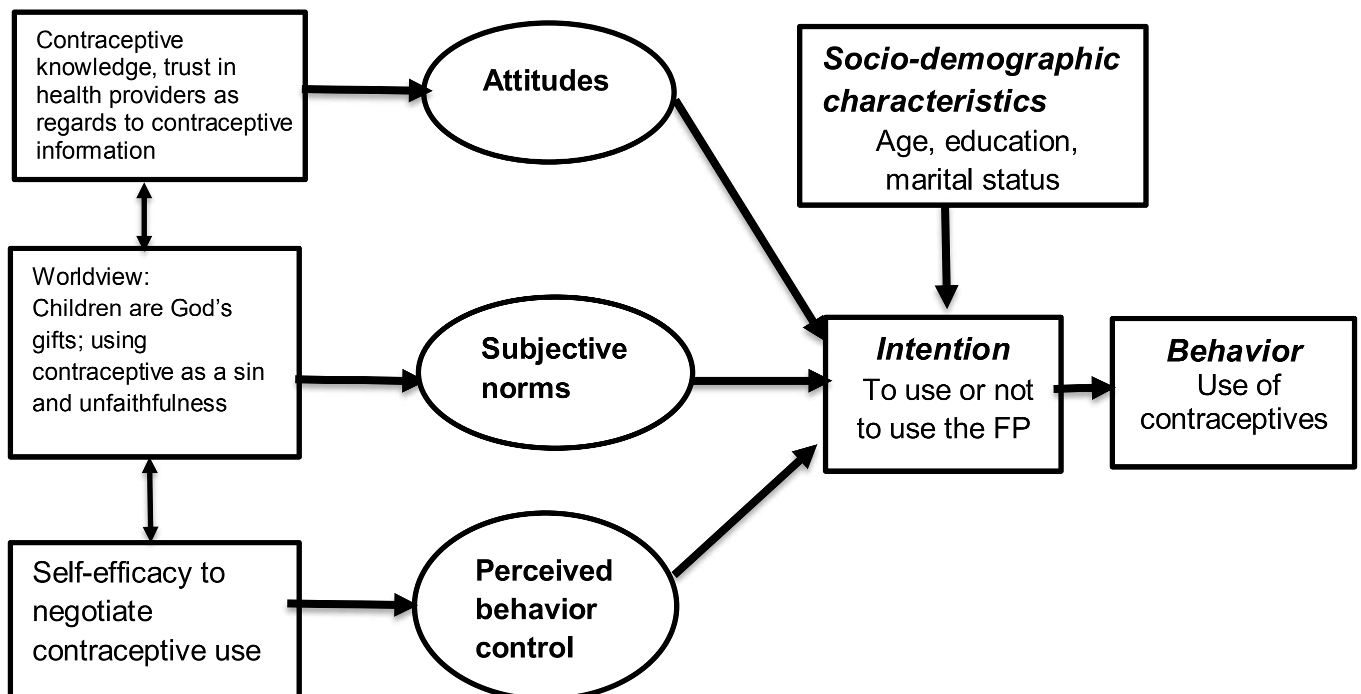

Figure 8 presents the TPB model built from existing qualitative findings

This TPB model analyzes pathways linking *personal beliefs (attitudes, subjective norms* in the society, and *perceived control*), *intention to use or not a FP method*, and the *uptake of the behavior* (use of a FP method) (Figure 8).

To identify and confirm the underlying structure of latent variables in the GSEM, different factors were tested using factor exploratory analysis. Factor exploratory analysis identified the number of latent constructs and the underlying factor structure of the TPB *attitudes*, *subjective norms,* and *perceived control*. The confirmatory factor analysis (CFA) examined the appropriateness and generalizability of the measurement portion of the GSEM. Factor loadings > 0.4 were retained.

Two "yes/no" items reflecting knowledge and behavior beliefs on contraceptives measured "Attitudes": 1) "Contraceptive methods obtained at a health facility, are of good quality" and 2) "I trust in what health professionals in this community say about contraceptives."

Three "yes /no" items constructed "subjective norms": 1) "Children are a gift of God. Contraceptives should not be used"; 2) "The use of contraceptives is a sin"; and 3) "The use of contraceptives encourages infidelity."

To assess "the *perceived control* on behavior", two "yes/no" items were considered: 1) "If my partner and I want to have sex and I want to protect myself I can always convince him/her to use protection"; and 2) "If your partner wants to have sexual relations with you, do you think you can convince him/her to use a contraceptive method?"

Primary and secondary outcomes: The "*intention* to use a contraceptive method" was assessed by the question: "Even if you have never used a method, we would like to learn about your preferences: which contraceptive method do you or would you prefer?" Intention to use any FP was coded "1" if the woman cited one modern contraceptive method and "0" otherwise. In the present analysis, we consider baseline values to define the *intention* to use.

The behavior, the "use of a FP method", was defined by the use of a modern FP method during the last 12 months. For the final analysis, the outcome included all new users of modern FP at follow-up, excluding those who were already using it at baseline.

The coefficient of determination of 0.951 and the Standardized Root Mean Square Residual SRMR of 0.074 (less than 0.08) indicated the model fit our data (Schreiber, Nora et al. 2006). The potential confounding effects of the intervention (being a member of VSLA) and socio-demographic characteristics such as age, religion, provenance (rural or urban), education, and marital status were controlled. Only education and perceived self-control were significantly associated (at a level of 0.10) with the use of FP in a binary association controlling for intention, therefore, we kept these associations in the final model.

Ethical approval

The EKNZ Ethical committee (Ethik Kommission Nord-und Zentralschweiz N° EKNZ BASEC UBE 2016-01878) in Switzerland and the Ethics Committee of the Catholic University of Bukavu (N° UCB/CIE/NC/019/2016) approved the main research proposal for the impact evaluation of the "*Mawe Tatu*" intervention in 2016. Informed verbal and written consent were obtained from each individual before the beginning of the survey. Confidentiality was guaranteed. For participants below 18 years old, written consent from the parent or legal tutor was obtained.

6.1.3 Results

Descriptive results

Table 17 indicates the socio-demographic characteristics of the participants in the study.

Table 17. Socio-demographic characteristics

	Baseline		**Follow-up**	
Variables	**Frequency Mean/standard deviation**	**%**	**Frequency Mean/standard deviation**	**%**
Age (years)	36.0±12.9		37.8±12.5	
Education	**n=1806**		**n=1055**	
none	345	19.1	217	20.6
primary	599	33.2	316	30.0
secondary	765	42.3	469	44.6
university	97	5.4	51	4.8
Marita status	**n=1740**		**n=1055**	
single	420	23.2	218	20.7
Married/couple	1320	76.8	837	79.3
Number of children	5±3	5±3	6±3	
Religion	**n=1806**		**n=1055**	
Catholic	959	53.1	606	57.4
None catholic	847	46.9	449	42.6
Urban	**n=1471**		**n=1055**	
Urban	317	21.6	234	26.4
Semi-urban	940	63.9	555	62.6
Rural	214	14.5	97	11.0
Intervention	**n=1812**		**n=1046**	
VSLA	1225	67.6	730	69.8
Control	587	32.4	316	30.2

The mean age was 36±12.9 years, with a minimum of 15 years old and a maximum of 94 years old at the beginning of the study. Over 76% of the study participants were married (**Table 17**).

Table 18 details participants' uses of contraceptive methods.

Table 18. Use of contraceptives

Variables	Baseline		Follow-up	
	Frequency	%	Frequency	%
Did you ever use a contraceptive?	**n= 1709**		**n=1015**	
Yes	583	34.1	365	36.0
No	1126	65.9	650	64.0
Use of contraceptive at last sexual intercourse	**n=567**	**%**	**n=359**	**%**
yes	365	64.4	204	56.8
no	202	35.6	155	43.2
Use of modern contraceptives at last sexual intercourse	**n=567**	**%**	**n=359**	**%**
yes	243	42.9	130	36.2
no	324	57.1	229	63.8
Who in a couple should, according to you, decide the use of a contraceptive?	**n= 1673**	**%**	**n=997**	**%**
Myself	121	7.2	55	5.5
My partner	299	17.9	150	15.1
The couple together	1253	74.9	792	79.4
Who decides with in your couple the use of a contraceptive?	**n= 573**	**%**	**n=357**	**%**
Myself	117	20.4	82	23.0
My partner	85	14.8	55	15.4
The couple together	371	64.8	220	61.6
New FP users	**n=965**	**%**	**n=982**	**%**
Yes	96	9.9	94	9.6
no	869	90.1	888	90.4

Approximately 76.9 % of the participants in the study thought that the couple must decide together as to whether to use a contraceptive while only 70.6% thought the same (**Table 18**). At the baseline, 9.9 % of new modern FP users were registered whereas 9.6% of new FP users were registered during the follow-up. Approximately, 57.1% of the participants at baseline thought that the couple must decide together whether to use a contraceptive compared to 63.8% during the follow-up (**Table 18**).

Factor analysis results

Three factors (eigenvalues > 1.0) emerged as results in the factor analysis (**Table 19**): *attitudes* (two indicators), *subjective norms* (three indicators), and *perceived control* (two indicators).

Table 19. Factor analysis for indicators of the TPB

Latent construct	Items included in the survey	Factor loadings EFA	Determinant of the correlation
Attitudes	Contraceptive methods, which are obtained at a health facility, are of good quality.	0.539	0.838
	I trust in what health professionals in this community say about contraceptives.	0.500	
Subjective norms	Children are a gift of God. Contraceptives should not be used.	0.574	0.767
	The use of contraceptives is a sin.	0.488	
	The use of contraceptives encourages infidelity.	0.445	
Perceived control	If my partner and I want to have sex and I want to protect myself, I can always convince him/her to use protection.	0.694	0.638
	If your partner wants to have sexual relations with you, do you think you can convince him/her to use a contraceptive?	0.695	

All factor loadings were significant at $p < 0.05$ (**Table 19**).

SEM results

The final adjusted SEM results are presented in Figure 9 and Table 20. The standard path coefficients and p-values in the standardized metric are reported (Figure 9 and Table 20).

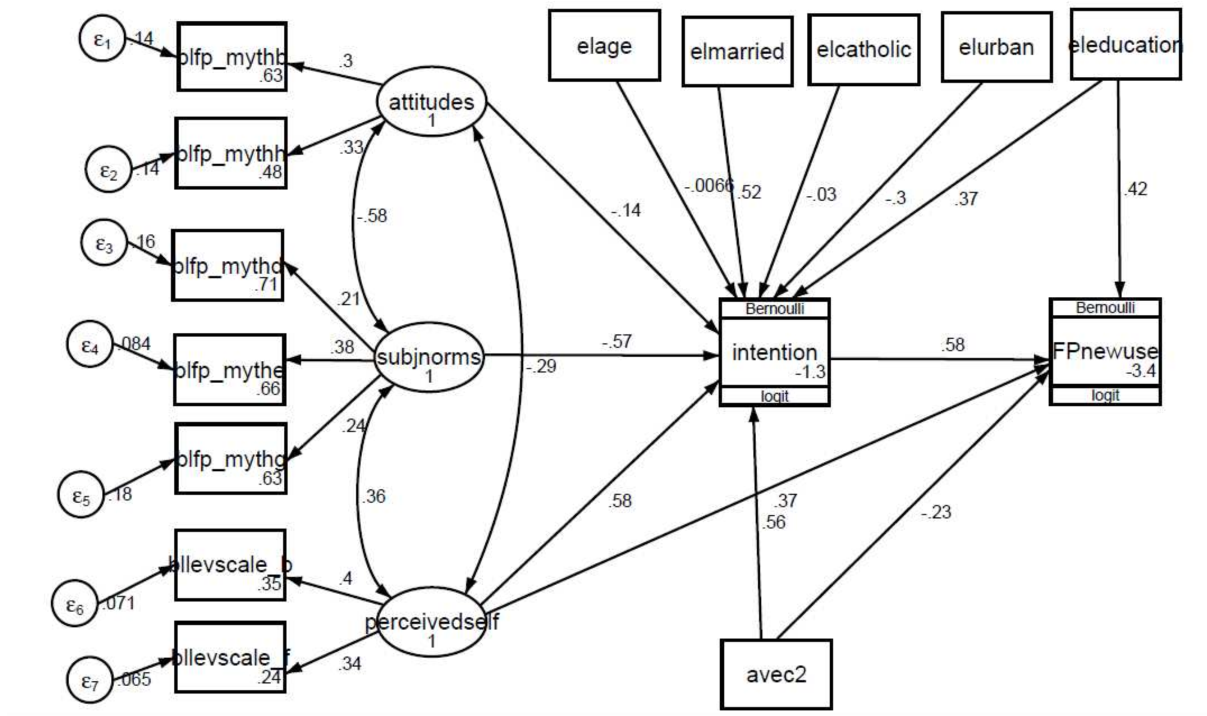

Figure 9 Theory of planned behavior using GSEM: diagram

Fp_mythb: "Contraceptive *methods, which are obtained at a health facility, are of good quality";* fp_mythh: *"I trust in what health professionals in this community say about contraceptives"*; fp_mythd "*Children are a gift of God. Contraceptives should not be used*."fp_mythe FP:_*"The use of contraceptives is a sin*." Mythg: "*The use of contraceptives encourages infidelity*." Levscale_b: "*If my partner and I want to have sex, and I want to protect myself, I can always convince him/her to use protection*." Levscale_f: *" If your partner wants to have sexual relations with you, do you think you can convince him/her to use a contraceptive?"*

Table 20. Standardized path coefficients of the latent variables GSEM

Variables		
Intention	**β [95% CI]**	**P**
Endogenous variables		
Attitudes	-0.136 [-0.573, 0.299]	0.539
Subjective norms	**-0.572 [-1.013,-0.131]**	**0.003**
Perceived self-control	**0.578 [0.293, 0.862]**	**<0.001**
Exogenous variables		
Age	-0.006 [-0.024, 0.011]	0.474
Marital status	**0.524 [0.0007, 1.048]**	**0.050**
Religion	-0.029 [-0.462, 0.403]	0.893
Urban	-0.295 [-0.660, 0.069]	0.113
Education	**0.367 [0.097, 0.636]**	**0.008**
Intervention	**0.563 [0.108, 1.019]**	**0.015**
Contraception use		
Education	**0.422 [0.076, 0.767]**	**0.017**
Intervention	-0.025 [-0.771, 0.32]	0.419
Perceived self-control	**0.374 [0.067, 0.682]**	**0.017**
Intention	**0.583 [-0.005, 1.171]**	**0.052**

Education (high level) was positively and significantly associated with intention to use FP (β=0.367; p= 0.008). Being married was positively and marginally significantly associated with intervention (β=0.524; p= 0.050) (**Table 20**). Among latent constructs, "*subjective norms*" was negatively and significantly associated with the intention to use FP (β= -0.572; p= 0.003) while "*perceived control*" was positively associated with the intention to use FP (β= 0.578; p <0.0001). Education and *perceived control* were positively and significantly associated with the use of FP (β = 0.422, p= 0.017; and β = 0.374; p= 0.017) while *Intention to use FP* was positively and marginally significantly associated with the use of FP (β = 0.58; p=0.050) (**Table 20**).

6.1.4 Discussion

The percentage of those who used a contraceptive method in our sample population was low (36% during the follow-up) and is similar to other study findings elsewhere in DRC (DHS 2014, Ntambue, Tshiala et al. 2017). In the last decade, many NGOs made contraceptive methods free or available at a lower cost in the Kivu region, which can explain why the prevalence of contraceptive use is higher compared to other regions (Kandala; Lukumu; et al. 2015, Rattan, Noznesky et al. 2016, Casey, Gallagher et al. 2019).

Education was significantly associated with the use of contraceptives, corroborating findings from existing literature that higher education enhances women's ability to make reproductive choices including contraceptive use (Martin 1995, Azmat, Ali et al. 2015, Kandala; Lukumu; et al. 2015, Solanke 2017). Education "corrupts" peoples' normative values and ways of seeing the world, which can include changing women's perspectives on fertility. Fertility preference becomes a "calculus of conscious choice" (van de Walle 1992, Kim 2016) rather than a pre-determined destiny. In addition, schooling changes the objective conditions under which women and couples' decisions are made such as by increasing the opportunity cost of women's labor (Chisadza Carolyn and Manoel 2015, Brinton and Oh 2019). To enhance their career, educated women are more likely to use FP because they can decide how many children they want and when to have them.

The model constructed fits our data well and significantly predicts contraceptive use. In a given society, as Ajzen (1991) postulated, behavior is shaped by the interaction between *attitudes*, *subjective norms*, and *perceived behavior control* [12]. These factors lead to *intention* before adoption - or not - of the designed behavior. Authors found that misconceptions and misinformation were associated with lower contraception use (Sedgh and Hussain 2014, Muanda, Gahungu Ndongo et al. 2016). However, in our survey, (mis) trust of health providers or knowing where to get information (defining *attitudes*) was not statistically associated with

the use of FP. This reflects that an individual's knowledge and favorable evaluation of FP might not necessarily lead to its use. Some other factors rooted in social life may be more decisive.

In our study context, *subjective norms* are first rooted in religion as contraceptive use is considered a sin. People choose not to use a contraceptive to avoid feeling guilty, judgment by society, or punishment by God. Many other studies have also found that religious beliefs were barriers to contraceptive use (Izale, Govender et al. 2014, Ntambue, Tshiala et al. 2017, Kaniki 2019, Schwarz, Dumbaugh et al. 2019). The literature describes religious barriers in terms of blanket prohibition and many religious communities are against the use of FP in the study region (Mpunga, Lumbayi et al. 2017, Kaniki 2019).

We also found, like other studies in comparable contexts, that children are considered as 'gifts from God', and therefore it is wrong to use contraceptives to avoid pregnancy (Kabagenyi, Reid et al. 2016, Dumbaugh, Bapolisi et al. 2018).

Moreover, our findings suggest that power dynamics within the couple are a strong predictor of contraceptive use. While FP use ideally requires the implication of both partners, the male partner is more often the key decision-maker (Hilhorst; and Bashwira 2014). Existing literature states that partner's opposition is a limiting factor for women to use FP (Matungulu, Kandolo et al. 2015, Wulifan, Brenner et al. 2016, Warren, Alvarez et al. 2017, Casey, Gallagher et al. 2019). In these male-dominant societies, partner's opposition can result from many reasons like personal beliefs against FP use or society's pressure.

Across low and middle-income contexts, the communities perceive there is no need to use FP within marriage. Furthermore, the conviction that someone using contraceptive methods is susceptible to being unfaithful is another limiting factor to the use of FP (Wulifan, Brenner et al. 2016). When a married woman uses contraceptive methods (mainly without her partner's knowledge) that implies she has extra-conjugal affairs and does not want to be caught with an unexpected pregnancy (Wulifan, Brenner et al. 2016, Mtenga, Pfeiffer et al. 2018). However, previously, researchers highlighted that some women are ready to use contraceptive methods

without their partner's knowledge (Dumbaugh, Bapolisi et al. 2018) to protect themselves from approaching births and consequences.

The third element of TPB, *perceived behavior* control, was illustrated in our study as perceived control over the decision to use any FP method. Women with enough confidence and capacity within their partnership to negotiate the use of contraceptives are most likely to use a contraceptive method, corroborating other findings (Shakya, Dasgupta et al. 2018, Adanikin, McGrath et al. 2019). Through education and financial independence, women acquire negotiation skills empowering them to raise and fight for their own opinions within the couple (Solanke 2017).

The intervention was not statistically associated with an increase in the use of FP. The results also demonstrated that before any intervention, women who joined the VSLA were already more likely to have an intention to use FP. The short-term interval (1 year between the baseline and the follow-up) might explain why we did not see any change in the use of FP despite the expressed intention. However, it is not excluded that *subjective norm*s could have prevented them from taking action. A long-term evaluation could help understand better all the interactions.

Many FP interventions focus on health system-based solutions such as information campaigns and increasing availability of FP methods. This study contributes to the growing literature base and shows that health system-related factors do not seem to play a dominant role in contraceptive uptake. Rather, subjective norms such as religion and couple power dynamics, namely women’s low bargaining power, remain crucial considerations to increase FP uptake.

Limitations

The selection of the two groups (intervention and control) was done randomly assuring the representability of the population of selected areas. However, due to the self-selection in VSLA groups, it is not excluded that some women could have been marginalized either because they were too poor to afford the weekly contribution in VSLA or because of a poor social network.

These analyses cannot necessarily be generalized to the entire population given the self-selection of participants in the groups.

Another limitation is that the definition of certain concepts like subjective norms could not have been exhaustive. We only considered the measurements reported in an existing questionnaire, which was broader and covered many aspects. However, others have used the same scales or items to understand the use of FP in similar settings. Lastly, some control variables such as employment status were not taken into account because they did not fit in the generalized structural equation model. However, before discarding them, we ran univariate and bivariate regressions of employment status over intermediary and dependent variables (intention and/or use of FP) and the associations were not statistically significant, which reinforced our decision not to consider them.

Policy implications

To circumvent barriers to FP use, programs should:

- promote women's education to empower women by raising their self-efficacy to negotiate the use of contraceptives when needed;
- consider addressing gender norms and other cultural aspects with religious leaders and other stakeholders; and

fight against subjective norms by providing accurate information on FP use to the two partners and the community.

6.1.5 Conclusion

A theory of planned behavior, using a GSEM, allowed us to demonstrate that the use of contraceptives is deeply related to one's perception of contraceptive use and many other socio-cultural constructs. Education, *subjective norms* (children are gifts from God, the use of contraceptives is a sin, contraceptive use encourages infidelity), and *perceived control* (self-efficacy to negotiate the use of contraceptives) influence a woman's intention to use FP.

Programs promoting FP use must take into account the empowerment of women to give them accurate information and involve the male partner in sensitization sessions.

6.2 Family planning in the Eastern Democratic Republic of the Congo: personal beliefs, intimate partner negotiations, and social pressure[7]

Wyvine Bapolisi, Mari Dumbaugh, Selina Felber, Ghislain Bisimwa, Sonja Merten

Abstract

Background: The Democratic Republic of Congo has a low prevalence of family planning use. Availability and accessibility to FP methods were targeted as the main barriers to the use of FP. However, recent studies highlighted the great role played by socio-cultural factors in the decision to use or not FP.

Methods: This study uses a qualitative approach to explore barriers surrounding the use of FP methods in an ongoing conflict region, North and South-Kivu. Women and men were interviewed. Nine FGD (six with women and three with men) and 12 IDI with women were conducted to understand their perceptions and habits regarding FP. An inductive approach was used to analyze data.

Results: Precariousness of life, religious beliefs as well as fear of side effects emerged as limiting factors to the use of FP. Power dynamics in the couple also played an important role in the decision. Sole provider women were more likely to use FP including hormonal methods.

Conclusion: In parallel with addressing availability and accessibility, FP Programs should take into account socio-cultural factors, personal beliefs, and fear of side effects in order to meet the unmet needs of the population in FP.

Policy implications

- Promote the dialogue on FP in the community to understand preferences and define ways to meet people's expectations.

[7] Underreview in Culture, Health and Sexuality

- Assess the community acceptance of FP programs and adapt the strategies with respect to the community's beliefs
- Train and equip the health care staff, especially in terms of the management of side effects, and listen to their opinions and proposal as part of society.
- Emphasize male FP methods that seem to be little known or proposed but could be an excellent alternative to circumvent the side effects of feminine methods.

6.2.1 Background

Family planning (FP) could help maximize available resources to households and communities, thereby reducing poverty in sub-Saharan Africa (Caldwell 1987, Cleland, Ndugwa et al. 2011, Starbird, Norton et al. 2016). Controlling fertility can be an essential factor in reducing maternal and under-five-child mortality (Mukaba, Binanga et al. 2015, Kwete, Binanga et al. 2018). However, fertility is more complex than the number of children per couple itself. Fertility has an ontological dimension in African settings. People have children (or not) for many reasons, including to carry on the family name or ensure generations of family lines survive and help families economically (Nauck and Klaus 2007, Lotz 2009). Especially in contexts of high migration and displacement, having children links people to perpetuate the culture (Ezembe 2009, Gendre 2011). Children are also expected to help their elderly parents materially and with social support. Children are 'wealth' and social security – or they can be a 'burden' when household resources cannot stretch to provide minimal standards of life such as a healthy diet, clothing or studies (Kabagenyi, Reid et al. 2016, Muanda, Ndongo et al. 2017, Dumbaugh, Bapolisi et al. 2018).

Studies assessing FP use at health facilities in multiple African countries, including the DRC show an increase in demand for FP in regions where FP-specific programs are implemented (Casey, Cannon et al. 2017, Babazadeh, Lea et al. 2018, Casey, Gallagher et al. 2019). FP programs improve the availability of FP methods by supplying health centers with commodities (Casey, Mitchell et al. 2009, Babazadeh, Lea et al. 2018, Casey, Gallagher et al. 2019). Many

studies embedded in FP programs showed an increase in demand and utilization of health facilities (Casey, Mitchell et al. 2009, Babazadeh, Lea et al. 2018, Casey, Gallagher et al. 2019). However, in the community, the actual use does not seem to increase. According to the DHS and other surveys in DRC, the utilization in the community remains low, only 19% of women are using any kind of contraceptives with only 8% using modern contraceptives (DHS 2014). The Democratic Republic of Congo (DRC) is a central African country with a high rate of fecundity. The Kivu region in particular has a high rate of fertility at 6.7 average births per woman (DHS 2014). Many have studied FP in South Kivu or the DRC. Reluctance to use FP methods stems from a number of social barriers such as socio-cultural norms that value high fertility or a lack of partner support for FP use (Matungulu, Kandolo et al. 2015, Kabagenyi, Reid et al. 2016, Muanda, Ndongo et al. 2017). Additionally, potential users often report their fear of contraceptive side effects (Kwete, Binanga et al. 2018, Schwarz, Dumbaugh et al. 2019). Religious and church leaders were also found to negatively influence individuals and couples' use of FP (Izale, Govender et al. 2014, Ntambue, Tshiala et al. 2017, Kaniki 2019).

Muanda and colleagues found that rural women in DRC were more likely to be favorable to FP compared to men because of difficulties during pregnancy (Muanda, Ndongo et al. 2017). Although men are the main household decision-makers, women are more and more the material providers for the family in the Kivu region (Hilhorst; and Bashwira 2014), making them torn between personal convictions, the solicitations of daily life, and negotiating with their spouse for their unmet needs for FP.

Although many have studied FP in the Kivu region, the low prevalence of FP users despite the availability of modern methods suggests there is still a need to understand resistance and perceptions surrounding FP. We believe that there is still much to learn about the complex, intersectional, socially-charged motivations and barriers to FP use in DRC and similar contexts. By exploring FP men and women's opinions from different perspectives, this study contributes to the growing body of literature that frames reproduction, fertility and FP use as socially-

embedded issues (Johnson-Hanks 2007, Bongaarts and Casterline 2013, van der Sijpt 2014). These findings can inform the development of FP programs with context-specific realities of women's navigation of FP use to better respond to their needs.

6.2.2 Methods

Study setting

This study is embedded in the impact evaluation of "*Mawe tatu*," a project developed in North and South- Kivu Provinces, DRC. "*Mawe Tatu*" aimed at improving households' socio-economics status mainly through Village Savings Loans Associations (VSLA) in rural and urban settings). VSLA, an approach introduced by CARE, are self-managed and self-capitalized groups putting savings together and providing loans and social assistance to the members in pre-defined circumstances. Generally, 15-30 members select themselves in the community based on trust to constitute one VSLA.

Data for this study were collected in two health zones of the urban center of Bukavu. Religious groups mainly run health facilities in these health zones, with most patients and providers identifying as Christians. In many health facilities supported by NGOs in the Kivu region, contraceptive methods are now readily available (Kayembe, Babazadeh et al. 2015, Casey, Cannon et al. 2017, Kwete, Binanga et al. 2018).

Study participants and data collection

We conducted in-depth interviews (IDIs) and Focus Group Discussions (FGDs) for this analysis. Participants were all married. Women aged twenty-two to forty-five years and men aged twenty-four to sixty years were enrolled. Purposive sampling was used to recruit women participating in a VSLA whose husbands were also participating in a reflection group linked to the *Mawe Tatu* project. Additionally, to control for gender-based perception bias, a few men, husbands of women members of VSLA, participating in reflection groups were also interviewed using the same FGD guide. Men interviewed were not in couples with women participants. Nine FGDs, six with women and three with men, were conducted with 6-8 participants each.

Twelve IDIs were conducted with seven participants as some participants were interviewed several times. We planned to interview all of the participants at least twice but some participants were not available for second interviews and the others explained that they did not have any further information to provide since nothing had changed since the first interview.

Half of the women participants were stay-at-home mothers, some were involved in small businesses (selling fish, beans etc...), and two were state employees and one a teacher. Many participating men were unemployed. Others included two pastors, one nurse, and four shop owners. To protect anonymity, participant names reported here have been changed.

The interviews were conducted at different times from July 2017 to March 2020. We stopped data collection when saturation was reached. Data collection took place in the participant's household or another location selected by the participant. IDIs and FGDs were voice-recorded, translated from the local language into French/English, and transcribed verbatim.

Women participated in at least two FGDs with at least one year between each discussion, while men participated in only one FGD. FGDs explored different themes, including attitudes towards and the use of FP including modern contraceptives, dialogue and negotiation within the couple, and perceptions and rumors about modern contraceptives. Women were more likely to share their experiences while most of the time men referred us to their wives or other women mentioning that women would be the more appropriate persons to provide comprehensive answers. Men stated that they were not "mainly concerned" especially regarding women's reproductive health. The research guides were adapted as interviews were conducted to capture emergent themes.

Data analysis

Analysis was inductive without any preconceived ideas guiding coding. WB initially read interviews to identify emergent themes, some of which were used as initial codes. WB then identified latent terms by comparing codes, re-reading the all interviews and forming new codes. WB analysis and developed an initial codebook. The codebook was discussed with SM,

refined and edited as the analysis progressed. Finally, using emerging hypotheses, results were integrated into a broader contextual analysis.

Ethical considerations

The main research proposal for the impact evaluation of the *Mawe Tatu* project was submitted and approved in 2016 by the EKNZ Ethical committee (Ethik Kommission Nord-und Zentralschweiz) in Switzerland and by the Ethics Committee of the Catholic University of Bukavu.

We obtained informed verbal and written consent from each individual before the beginning of data collection, and all consent forms were translated into local languages. Participation in the study was voluntary and refusal to participate in the study did not have any repercussions. Anonymity and confidentiality were guaranteed. Any participant requesting help or information on a particular topic, including FP or sexual and gender-based violence, was referred to the closest health care facility. No fees were required of participants, and no compensation was offered.

6.2.3 Findings

Participants were able to cite different FP methods, traditional and modern included. Participants were also aware of places where they could access FP services. While participants of both genders were able to relay justifications for using FP from government and NGO messaging, few participants reported that they personally ever used or were thinking of using any FP methods in the future.

Four major themes emerged from our analysis of participants' opinions, fears, and beliefs surrounding FP: choice of family planning and precariousness; religious beliefs; side effects; and societal norms influencing FP choices. We did not find any notable difference between perceptions according to gender. However, women were more likely to share their experiences while men referred us to women estimating that they (men) were not FP users and therefore could not provide enough insights on the topic. Overall, findings illustrate how women and men

navigate between insecurity, poverty, and family/societal pressures when weighing and making FP-related decisions.

a) Awareness, precariousness, and the value of children

- Awareness and choice of family planning methods

The concept of FP and available contraceptive methods are well known in the community as ways to limit or space births. Participants reported they could access FP information and modern contraceptives in their communities at health posts, health centers, and hospitals.

> *"There at the health center of the Christian community you can get information and any methods you want..."* (Female, 32 years, 5 children)

Many participants (men and women) preferred natural methods such as the "*buchanga*" or "*rosary*" (standard days method using a beaded necklace to count cycle days).

> "*Counting the days well is what I am doing... we had what they call the "rosary," they give it to us at health centers. We [My husband and I] used to use it and I was spacing births for two years...*" (Female, 28 years old, 4 children)

Participants also cited contraceptive pills, condoms, implants, and injections as possible FP methods. However, even though people were encouraged to use FP via mass media they were often reluctant to use FP themselves. Generally, participants were more open to condom use than long-acting hormonal contraception.

> *"We are not planning to use [FP]... but if I had to choose maybe condoms not the other [methods] ..."* (Female, 26 years, 3 children)

- Family planning and a precarious future

Life across the DRC, but especially in the country's eastern regions, has become precarious. Meeting daily needs is increasingly challenging, especially for large families. This precariousness pushed a number of people to practice FP:

"*Because life has become difficult today… birth planning is necessary to have the means to feed these children and to make them grow…*" (Female, 30 years, 4 children)

This participant draws on Government and NGO messaging that frames FP as a solution to help people meet their family's daily needs. However, a number of participants also suggested that their precarious reality would not automatically lead to their uptake of FP. For some women, an uncertain future pushes them to have *many* children because they do not know how many of their children will survive into adulthood.

"*Let us suppose that you have one or two children, you know the realities we are living with all those kids' diseases. And let's say you have the bad luck both of them die when they are still young and you said no, no…who would you run to?*" (Female, 35 years, 5 children)

- **Children: wealth or burden?**

For many women and men, planning for a set number of children was not a priority. Few participants said they discussed their desired number of children with their spouse or partner.

"We discussed about the number of children [before], like when we got married he wanted 4 children, me I wanted more… but now we don't talk about it, we just receive what God is giving us and we are thinking about how to feed them" (Female, 35 years, 5 children).

Participant responses generally demonstrated the persistence of socio-cultural norms that value high parity. Women reported that although times have changed and life is more difficult, children are not a burden. In fact, having a number of children is a practical and emotional *'blessing'*:

"*Today I can enjoy all the children I have carried are now grown-up, they can come or send me the grand-children… I am blessed to have them. They are taking care of us now that we cannot do anything (work)…*" (Female, 51 years, 7 children)

Another woman shared:

"*You know having children is such pure joy, you know how many [people] want children?... I can not lie to you, all of us are standing here because of our children... if we never would have had those children we could not be here (smile)..."* (Female, 28 years, 4 children)

Another participant conveyed the deeply important cultural meaning associated with having children, especially for women:

"You know me I wish I could have given birth after the twins I had, but I did all I could have done. It was not possible. A married woman without children is not respected. But if they call you 'Mama Fulani', meaning the mother of someone, everybody will respect you…and you know this song, 'If God brings a child He will also bring his plate" [meaning "If God gives you a child He will give you what is needed to feed him"*]…(singing). [Once you've had children] you don't have to fear."* (Female, 33 years, 3 children)

One male participant who said he was *"proud now that he had a son who would represent the family"* was asked if he and his spouse would now start to use FP methods. His response was, *"I still need more children, it will be to us (parents) to see how to provide for basic needs.*" (Male, 30 years, 3 children)

b) Family planning is not a choice, but God's will: where religious beliefs play a role

Religious beliefs emerged as a common influence on and framework for FP beliefs and practices for all participants. Participants were mainly Christian, either Catholic or Protestant, and God or religious beliefs were mentioned often in relation to FP. Most participants reported meeting weekly in "*shirika*"(a small social unit of a church where Christians meet to share the gospels and other church news) for sensitization on different topics or sharing personal experiences, including FP. Sensitization on FP occurred two or three times a year in the *shirika*.

Usually, experts such as nurses or medical doctors were invited to speak in the presence of the priest or the pastor and FP topics were discussed in the light of Catholic or Protestant faith. Some women framed their beliefs in terms of divine intervention and prayer: if a Christian asks God for a favor, for example, to have a child or birth spacing of two years, if they are a good Christian their prayers will be answered.

> "*Yes, God has given [us] intelligence, but what you ask for you shall have. For those for whom it does not work* [prayers are not answered]*, there is a problem, something must be wrong somewhere, but when I ask God for something, He gives it to me. [But] I don't want to speak for someone else."* (Female, 51 years, 7 children)

Other participants believed that fertility was predestined, that God was in complete control, as evidenced by women's varying experiences and timing of fertility. A widespread opinion was that God has given every woman a corresponding number of children. Every woman has her particular fertility pathway and only God knows when a woman will have a child. Therefore, there was no need to manipulate or control fertility:

> *"… there is nothing to do, you cannot [control fertility], there are women who want to give birth but they can't, others don't want [to] but they give birth, some women give birth after two years, others about four years without using anything... God gives to everyone differently*". (Female, 44 years, 5 children)

> *"...you can want to have more [*children] *but you don't know how many are going to survive….and one can want to have a child now but can't, [while] another can have a child without asking for [it]…"* (Female, 33 years, 3 children)

One woman suggested that using contraceptives could interfere with one's destiny and could risk '*losing'* one's chance that God has given you:

"*You may decide to use a contraceptive, but what if that was the only time that God has planned for you to have a child? You will lose your chance then begin to ask God without knowing that He has already given you [your chance], but you refused to take what he gave you*."(Female, 50 years, 5 children)

Other participants expressed a kind of human impuissance in controlling births because FP does not work for everyone. Participants cited people who used a contraceptive method, but it did not work while others spaced births without using any FP. A 40-year-old woman explained*:*

"Every woman has her child in her belly; there is nothing one can do. If it was written two children for you that is it. It all depends on how you [the woman] were created. You cannot change that…" (Female, 40 years, 4 children)

Some participants said using modern contraceptives was going against the will of God by killing life and could result in punishments, such as side effects. Other possible '*punishments'* included sterility and becoming more vulnerable to diseases such as malaria. Participants mainly referenced experiences shared by family or friends.

Christians who used any type of modern contraceptive, condoms excluded, also reported feeling guilty after experiencing side effects.

*"I told him [*her husband] *that what we had agreed on [*wife taking hormonal contraceptive, injection*] wasn't right for my health. I told him that God did not want that. He asked me to get some medicine to help me, but there was none at the health center. I went from one [health] center to another without getting help ... And after everything was settled and seeing that the life we were leading was not good, I asked God not to give birth anymore and God listened to me, He helped me and so far I had not given birth for ten years…."* (Female, 40 years, 4 children)

c) **Side effects: God's punishment or just misfortune?**

Unlike hormonal contraceptive methods, natural methods were reported not to have side effects if the couple managed to follow the instructions. Participants reported side effects from

hormonal contraceptives from either their own or a relative or friend's experience. Side effects reported by participants including irregular bleeding, losing weight, and sterility.

A woman reported what happened to someone she knew:

> *"There is one woman who had taken this Depo, she had her period from one day to the next. She did not have peace; she was bleeding like a [slaughtered] cow. Sometimes she had started putting on plastic rubber pads because of this Depo. She could not find assistance from the nurse. They [hormonal contraceptives] are harmful to a woman's body. It is not right... "(*Female, 28 years, 4 children)

José's husband suggested she take modern contraception to keep her job because her husband was unemployed. However, the side effects in terms of bleeding quickly made them give up on the idea.

> *"[My husband] was the first to raise the idea to look for a contraceptive so as not to continue giving birth while life is difficult and without a job... I accepted the contraceptive but it was not without consequences. I took the Depo for three months. Then I was bleeding continuously, from the beginning of the month to the end, I did not know where to go to seek help… I then swore to [my husband] not to do that anymore, maybe if he could go [to the health center] because even men go there, either for injection or for tablets...*" (Female, 40 years, 4 children)

José's experience highlights the alternative idea for the husband to use a method of contraception. Her story sheds light on men's (limited) options for contraceptives.

Apart from bleeding, the pill and the implant were also reported to induce sterility.

> "*There is a woman who had put this [implant] in for five years. Her husband said she must take it out so she can give birth now.' 'It has been five years now, and she has never been late [miss a period] even for one month. She is trying to conceive without success..."* (Female, 50 years, 6 children)

Another side effect reported was losing or gaining weight. A woman described a friend of hers who lost so much weight people thought she had contracted AIDS.

> *"She lost weight and everybody was thinking that she had AIDS, but it was because of the metal they put in her… "(*Female, 28 years, 4 children)

Another perceived damaging effect of contraceptives scaring women was cancer. There was a strong belief stemming from others' experiences that contraceptives gave uterine cancers to women through unknown mechanisms.

Others reported the possibility of migrating implants and that should pregnancy occur it could endanger the woman and the child.

> *"We didn't know that this metal (implant) had left its original location and implanted itself in the uterus. When she (a lady she knows) pushed the baby, a metal appeared. The health worker told us that this metal was placed in the arm, but it was already in the womb. When she gave birth, this metal was tiny. They showed it to us. Wasn't she pregnant while she was doing family planning, and that pregnancy almost killed her? "(*Female, 50 years, 6 children)

d) Societal norms

Participants illustrated that an individual's personal position or attitude towards FP was not always the sole factor in the decision to use contraceptives. Rather, the influence of family or community perceptions also seemed to play an essential role in FP decision-making.

- Health care providers: if they do not, why should I?

Another reason participants raised for not using FP was the "bad example" set by some health care providers. Participants reported that some health care providers recommended that people use FP but did not practice FP themselves. Gabrielle illustrates that health providers are seen as reference models:

"His [nurse's] wife is giving birth every day [every year]; why should I practice these methods?"

Annie reinforces this point; her husband is a nurse but refuses to use a modern contraceptive:

> *"...he is my husband and a nurse... I do not even ask myself any question about that; he knows my body better than I do. He is the one who decides. And he doesn't want [to use FP] so we don't use [it]."* (Female, 22 years, 3 children)

- **Family planning, a 'couple's business'?**

Participants reported that FP is a "couple's business", whether it is a modern method or natural method, and that both the man and woman should participate in decision-making.

Young women openly declared that they use contraceptive methods, with the agreement of their partners.

> *"Family planning concerns equally men and women. You talk about it with your husband. Because you cannot do family planning if your husband doesn't agree. Doing family planning without your husband's knowledge can cause you problems in your household. You must talk to each other, husband and wife, to do family planning..."* (Female, 30 years, 4 children)

For example, a woman firmly believes that she needs to involve her partner to practice FP; otherwise, she will fail. If she plans to space births and her partner does not know her intentions she cannot negotiate condom use with him.

Participants did not find discussing contraception within the couple to be taboo, however going to seek information on FP at health facilities seemed to be a woman's business alone.

Men were said to feel uncomfortable in "*women*" sessions at antenatal or postnatal care, for example. While a man might be encouraged to accompany his wife to antenatal care sessions, he could often find himself being the only man in attendance.

It was also reported that it could be difficult for the couple to go together to FP counselling because someone needs to stay at home and attend to daily household tasks. One woman reported that:

"*Some men may stay home taking care of the children… The consultation can last all day... Not that the visit itself is long but the time to reach the health facility, the time for the nurse to be available if they are notwithstanding of emergencies and the time to come back home…you can spend all the day at the Health facility.”* (Female, 32 years, 5 children)

Although it is presented as ideal by health care providers and accepted by many that the couple should go together to counselling for a contraceptive method, some young women prefer to go to FP sessions alone, without their partners. They found that it was an opportunity to meet with peers in a social setting.

“That is our time to meet with friends and discuss women's stuffs between us, he doesn’t have to be there…”

In addition, some men do not easily give their wives money. However, giving wives money for hospital fees and transport could be an exception. Women suggested they should, therefore, take advantage of an opportunity to leave the house alone and ask their husbands for as much money as possible:

“... it's also my way of earning something (laughs) when I go I can even ask for ten dollars or even 20 because he has to pay for the transport and the fees there at the hospital and he's going to give (laughs)... It's going to be my pocket money. I earn a bit like that... so if one day he comes it's all over, that's why it's better that they don't come...” (Female, 33 years, 3 children)

Women explained that they are afraid of how men will react should their wives require a medical examination, especially if the provider is male himself:

"But men are also complicated… suppose that we arrive there (at the health center for ANC or post-natal) … sometimes the nurse or the doctor must examine you, men are very jealous men, especially if it is a man who is there, he will get angry, maybe not even talking to you for a while… that is why it is better that (I) go alone (to those consultations). Then I give him the report." (Female, 30 years, 4 children)

Therefore, to avoid conflicts and preserve peace in the couple, women should go to these appointments alone. Once the wife arrives home with the medical "report" on different method options, the couple could discuss and decide together.

- **Being a young woman and providing for the family**

The only justification for using hormonal contraceptives given by female participants in our study was to keep working while their male partner was unemployed. For example, in an increasingly competitive society, a teacher and state officer felt that spacing their births was the only way to secure their jobs.

"*To be productive, you have to control your births,*" one woman said. (Female, 30 years, 4 children)

Another woman said, "*I was the only one working at that time so we did not have any other choice than to not give birth at the moment, we decided to use injections (contraceptive)…*" (Female, 32 years, 4 children)

Gisele had four children and said her business and the family income depended on her not giving birth:

"We are still young. I am a saleswoman, I go to buy Rwanda every day in the morning; my husband has no steady job. So if I start giving birth every day, what are we going to become? My business will stop. And my family will starve... I took the Depo. I haven't been used to it for long, but at least I know that this one (showing her baby) won't have a little brother by then. And I'm going to keep doing what I'm doing (selling fish)." (Female, 28 years, 4 children)

For another woman, “logistical" reasons explained why they were using FP like their husband working in another province.

> *"...my husband is working in Masisi... when he is back, if you're in a bad [fertile] period [in your menstrual cycle] you're not going to tell him no (when he wants to have sex), listen as we plan to wait a bit (because you are using natural methods), no... So I had to take the 3-month injection. Now I'm comfortable even if he comes, there is no problem. It has been a year now, and I'm fine."* (Female, 26 years, 2 children)

- **Family pressure or gender power dynamics**

FP use was also shaped by negotiations around sex within the couple. Traditionally in this context, a woman must be ready and willing to have sex when her husband asks. This normative power dynamic remains anchored in society and affects couples’ conversations around sex, including FP use and the timing and number of births. Participant experiences navigating gendered divisions of power in the couple demonstrate the difficulties women faced in using contraceptives – natural or hormonal – and can explain the high rate of abandonment of contraceptives.

Another story illustrated the challenges that women faced when they had to negotiate the timing of sex and how this could affect the efficacy of FP, especially for those women who need their husband’s consent/participation to be used (i.e. natural methods, condoms, withdrawal). A woman and her husband went together for FP counseling, and they chose to use a natural method:

> *“On the same day we were back, he told me: you know, I want (to have sex)! I pretend not to have understood anything, I don't tell him anything because if you [I] refuse, he gets very angry. I shut up and go to bed, until the next day. In the morning, he reminds me: I told you but you went quiet. And then I asked him if he didn't follow what we were told at the [FP] consultation! Then he said to me: I knew that all these things would*

happen... You want to follow what those people said, then they will remain your husbands ..." (Female, 34 years, 5 children)

Fortunately for her, at their third FP consultation at the health center, the husband ended up following the advice of the health provider, agreeing to abstain from sex during fertile periods. This story demonstrates that it is not easy for a woman to negotiate or refuse her husband sex, and that power dynamics in the couple play an important role in the decision to use and consistently practice FP.

In the case of disagreement over the use of FP within the couple, we found that the woman was supposed to give in to her husband's wishes. If she did not, the extended families of both were called to resolve the issue. Only women with very strong convictions and motivation could even get the contraceptive discussion to reach this level. Participants reported that most often women gave in to their husbands' FP wishes to avoid being treated as unfaithful or, in the worst case, sent back to their family's house for 're-education.' Even if the family was called in to arbitrate between the couple, participants said the family would usually rule against the wife. For the woman's family, it is shameful if she dared to argue with her husband on this sensitive topic.

Another's woman story, however, is a bit different. She decided to take contraceptive pills without telling her husband because she wanted to have a break from childbearing. Unfortunately, she had side effects and was forced to explain what was happening to her husband.

"*I started to bleed every day regardless of my periods. [My husband] asked what was going on... I didn't explain, but when I saw that it lasted a month, two months... I said, eh I'm going to tell him so that someone [herself] doesn't die here without people knowing what was happening...* "(Female, 30 years, 4 children)

Her husband called her family, and she was blamed. Only her excellent negotiation skills in this situation prevented her from losing her marriage.

Generational differences in perceptions on the use of FP use

Young women and men (mostly in their 20s or 30s) were more likely to advise the use of contraceptives than older women or men (above 45 years old). In the FGDs, some younger participants reacted to older participants' advice to stick to natural methods if they needed to use FP.

> "*I ignored that advice [not to use modern contraceptives]. And I think our moms [the elders] here need to start understanding, you think it is easy the natural method [but] if your husband asks you during the night what are you going to say… they [men] quickly forget why you use [FP]…*(Female, 28 years, 3 children)
>
> *"I have understood what our mums have just said now. I respect their advice. But things are difficult the counting method does not work. They are here tell me who here if her husband asks during the night they will easily say no you know we are planning, I am in my fertile period… you can say it once or twice, but you know how it's difficult… but having this implant helped"* (Female, 29 years, 3 children)

For young people, the need to provide for the family, difficulties taking care of children without adequate support, and good negotiation skills within the couple justified the use of FP, including the use of hormonal contraceptives.

6.2.4 Discussion

From our analysis, we found that there are a multitude of factors affecting women's FP uptake and adherence. In this context, women struggle to navigate between the precariousness of life, social pressures, their own personal and religious beliefs, and the fear of side effects. Our findings demonstrate the importance of understanding FP use within the social context of the target population and developing interventions, which respond to these factors in a comprehensive way. In this part, we will not discuss much the secondary effects because we believe they are sufficient literature on them. We will focus mainly on the social/couple pressures and personal or religious beliefs. We did in fact include the side effects in the results

because they were reported and still reported as one of the major barriers and accordingly to our findings there is a need for better responsiveness to the adverse effects.

While different FP methods were widely known and available, our findings suggest that when FP was acceptable, the couple was more open to women's contraceptive methods than men's ones. Generally, however, participants were reluctant to use hormonal contraceptives for FP and a web of intersecting social factors characterized this hesitancy, in accordance with what was found elsewhere (Muanda).

The population of DRC is accustomed to living in such a state of uncertainty about the immediate present, that limiting births in relation to a seemingly distant, unknown future seemed to be neither a priority nor a consideration. As found in other contexts, the uncertainty about tomorrow led people to want more children because they were unsure if they would all survive (Elmusharaf, Byrne et al. 2017). Moultrie (2012), for example, stated that FP use is influenced by ambiguities about the future in much of SSA, including uncertain property rights, low education quality and employment prospects for one's children, and the absence of social welfare systems. For him, the deemed-rational preference for low fertility and small families advocated by FP interventions would be anything other than rational in these settings (Moultrie 2012).

Additionally, the ontological dimension of having children makes the population dubious of limiting their number of children. In the study settings of Bantu origins, the household's number of children measures one dimension of "wealth." This conception is still predominant in African communities today so that when a young person dies the first concern is to know if he or she left a child. In this sense, children are not only wealth because of what they can generate economically through their productive labor but culturally they also carry on the identity of their parents and other ascendants (Gendre 2011). Having children is a significant accomplishment, often compared to having a higher education degree, imbuing the parents and family with valuable cultural capital. Understanding what is tangibly and socially "rational"

within a particular context is essential to better understand and respond to FP choices. Rationale is subjective and will change from context to context. Therefore, western norms surrounding family size, household economy and FP - from which many FP programs are developed - may not, in fact, be rational' in other contexts.

Our research also corroborates findings from several other studies that the fear of side effects from hormonal contraceptives, and inadequate access to information on how to mitigate contraceptive side effects is one of the main barriers to FP uptake and use for women and couples across settings (Muanda, Ndongo et al. 2017, Schwarz, Dumbaugh et al. 2019, Schrumpf, Stephens et al. 2020). Participants in our study illustrated that side effects destabilized their personal equilibrium, deeply troubling some people, even driving people to question themselves about the meaning of life. For example, many thought that using the hormonal FP was wrong because side effects were punishments. Some reduced or stopped their daily activities (income-generating activities or household care) looking for solutions when experiencing bleeding the whole month.

In addition, in the context of the study, health care providers are often overwhelmed with their many daily tasks. This can imply that they do not, or are unable to, provide adequate counselling and care to help women and couples find a contraceptive method that works well for them. Providers should clearly explain what side effects to expect, and what to do if they have them. Some methods do cause side effects as the body adjusts, but providers are sometimes reluctant to tell women this. Analyzing participants' experiences, counselling for side effects/ regularly scheduled follow-up visits after, for example, the first month of using injectable contraceptives could be helpful. The couple or the user subsequently feels like they are left on their own without any medical or moral support to understand and address side effects. This could also explain why some individuals and couples decide to abandon the use of hormonal FP after experiencing complications.

In order to reduce the negative repercussions of experienced or anticipated side effects on contraceptive uptake and continued use, integral care including psychosocial support is required. A reinforcement of the health care staff for comprehensive care, both from a psychological and somatic point of view, should be considered by health systems and expressly integrated into interventions increasing access to FP. It is worth noting, however, that not all women in our study shared fears or experiences of side effects. Some women do successfully adhere to hormonal contraceptives and are planning to continue their use for a while. Women and couples who have successfully navigated FP, and hormonal contraceptives in particular, can be advocates for FP in the community by sharing their experiences to help others who are hesitant but in need of a method for planning births.

A number of participants in our study highlighted the role of health care providers as FP reference models. Given their unique positionality, as both clinical medicine/ health system actors *and* community members navigating their own fertility, health care providers, especially those who choose not to use FP, could be a valuable resource for understanding barriers to FP use. If the fears and concerns of health care providers of reproductive age who choose not to use FP are understood and addressed, they might be more likely to use and recommend FP. This could, in turn, lead to increased community uptake and adherence given health providers' influential roles in the community.

Religious inclinations were also one of the reasons for low adherence in the present study. This is in accordance with what was found by others that family planning was a sin and side effects God's punishments (Izale, Govender et al. 2014, Ntambue, Tshiala et al. 2017, Kaniki 2019). Most of the time, Christians fear adhering to predefined normality that goes beyond what they consider as people's intrinsic values (procreation and all mysteries surrounding life). To allow the population to enjoy their fertility, it could be better to assess the opinion of the highly predominant Christians and religions in the region and to work with them. Some programmes

have already begun to do so and some religious leaders are taking part in such projects but the resistance is still higher.

Yet, our findings also suggested that the power dynamics in couples are crucial. From negotiations around sex to the use of FP, many socio-cultural norms in this and other contexts do not give women enough space to express their needs on sensitive topics such as sexuality. Both men and women in our study said the husband's ability to single-handedly 'veto' FP use was a major barrier. Therefore, it is preferable to work with both men and women at the same time so that both can have the same understanding of FP use with its advantages to minimize conflicts between couples. The existing literature frequently shows a male partner's opposition to FP use and the reproach that FP encourages infidelity are barriers to FP use (Matungulu, Kandolo et al. 2015, Wulifan, Brenner et al. 2016, Muanda, Ndongo et al. 2017, Warren, Alvarez et al. 2017, Casey, Gallagher et al. 2019). In our findings, the partner's opposition or at least approbation was a determinant of the FP use; however, few explicitly cite infidelity as barrier for the partner's adherence to FP.

From our analysis, young women who contributed significantly to household finances and/or were the sole household providers. For these women, practicing FP to space and/or limit births allowed them to continue to work and provide for themselves, their children and, in some cases, their husbands as well. When the husband was working far from his house, the wife was also more likely to use hormonal FP methods to avoid an unplanned pregnancy when the husband was back unexpectedly. It appeared that women who were the sole household providers and who were willing to use FP met little resistance from their husbands to FP use. In fact, some husbands were even the first within the couple to propose the use of hormonal contraception. Some of these women even overlooked their religious beliefs against hormonal contraception and started using contraception as their income was essential to the well-being of the household. The non-user was a woman over 40 years old, who experienced side effects of FP or knew someone who did and who had strong personal or religious convictions against the use of

hormonal contraception. Our findings suggest that personal/religious beliefs often correlate with a fear of side effects.

Using FP methods is often considered a standard or ideal by program implementers and donors, disregarding those not adhering to this 'normal' health behavior. However, in order to identify and then meet the unmet needs of the population, interventions have to take into account other social considerations such as couple dynamics within the couple or the ontological dimension of fertility and children.

6.2.5 Conclusion

We found that the use of FP remains challenging in the community. The use of FP is influenced by the precariousness of life, women's beliefs, social pressure including the couple dynamics and fear of side effects. For all the participants, husband's opinion was very important in the decision to use or not FP. Often neglected during FP counseling by health workers, side effects and personal/religious beliefs have emerged as key reasons that individuals are not using contraceptives or stop using them. However, when it comes to the necessity of continuing to provide for the family, women encouraged by their husbands put aside their personal/religious beliefs and fear of side effects to use hormonal FP methods.

Programs implementing FP should take into account beneficiaries' beliefs including religious ones because the Kivu region, like many other African regions, is still one of the provinces where people practice religion. These findings suggest that FP programs must also include a socio-economic component for a more comprehensive and holistic approach. Once insecurity and doubt about survival are addressed, families can be convinced of the need for family planning. Moreover understanding the couple dynamics and involve at the same time, and at all levels of FP counselling, the wife and husband will be of advantage. Lastly, health care staff should also be well trained and informed to support women and their families in all dimensions regarding the use of FP.

7 General Discussion

This PhD aimed to assess the impact of a complex intervention associating women's empowerment through the VSLA program with men's engagement in gender equity on socio-economic, reproductive health, and child health indicators.

The specific objectives were: (i) to assess the initial food insecurity level of households as an indicator of the economic level of households; (ii) to assess the impact of combining women's empowerment and men's sensitization of gender on maternal health services use (skilled birth and antenatal care attendance and FP use) and socio-economic factors including food insecurity; (iii) assess changes in child nutritional status in households when husbands have been sensitized to promote women's empowerment; and (iv) explore (unmet) family planning challenges with regard on gender norms in the society.

The next paragraphs present the summary of the main findings, implications, and conclusion.

7.1 Main findings

Generally, income and economic factors (income and cash available) increased in qualitative assessment as well as in the quantitative one. **Table 21** presents the summary of results comparing qualitative and quantitative findings.

Table 21. Summary of main findings: qualitative vs quantitative

Outcomes	Qualitative findings	Quantitative findings
Socio-economic outcomes		
1) Household income; available cash	• Increased	• Increased; statistically significant
2) Resilience (ability to pay $50 loan without contracting debt)	• Women encouraged by husbands to contract debts through VSLA	• Decreased; statistically significant
3) Food insecurity	• More cash available for food; family and children eat better	• No change with the intervention • Women's participation in decision-making decreased the risk of household food insecurity; tolerance to GBV increased same risk
4) Women's participation in decision-making	• Improved; after participation in Baraza Badirika; men more likely to involve wives in decision-making processes	• No change with intervention
5) Couple cohesion	• Improved; men treat wives with respect, help in daily tasks, dialogue increased within couples	• No change with intervention
6) Tolerance of GBV against women	• Men engage in the fight against GBV; stop beating wives; become less violent; engage in discussions on gender equity with children and peers	• No change with intervention
Health (reproductive and child) outcomes		
1) ANC	• All participants attended ANC sessions during pregnancy;	• High attendance prevalence

	• Many think men should not accompany wives to "women" sessions to: 1) allow women to meet with peers; 2) get money from husbands; 3) preserve peace by avoiding male's jealousy	• No change with intervention
2) Skilled-birth attendance	• No changes reported; many women encouraged by husbands were using and still using skilled-birth attendance; all women reported skilled-birth attendance	• No changes with intervention; • High percentage of skilled birth attendance before and after
3) FP use	• Remained low; • Tendency not to adhere to hormonal FP use; more young people think differently	• Low prevalence before and after; • No change with Intervention
4) Child nutrition and anthropometric measurements (stunting, wasting, underweight)	• Improved; both parents participating in feeding children and more cash available	• No change with intervention; • WHZ and HAZ increased- not statistically significant; WAZ decreased - not statistically significant

The qualitative component found that the intervention improved household welfare, couple cohesion, and women's participation in decision-making at the household level (**Table 21**). We also found that men became more considerate of their wives and children's health, by helping with the household's tasks mainly when the wife was working or pregnant. Men participating in the program were also more likely to accompany their wives to ANC or other maternal health services.

In the quantitative results, food insecurity improved but the prevalence was still high; malnutrition prevalence was still high. In the intervention within the household, the increase in income was statistically significant. Paradoxically, the resilience (ability to pay back a loan without contracting debts) also increased. The intervention did not have a statistically significant effect on women participating in the decision-making, couple cohesion, or

attendance of skilled birth or ANC. Children's anthropometric measurements (stunting, wasting, and underweight) improved but the effect of the intervention was not statistically significant (**Table 21**).

In both qualitative and quantitative components, the use of FP remained low and the intervention did not seem to increase the FP adherence. Precariousness of life, religious and personal beliefs, fear of side effects, and power dynamics within the couple were identified as the main barriers explaining the low adherence to FP.

7.2 Male involvement and gender

Qualitative results found a positive impact of the intervention of male involvement and gender aspects (women's participation in decision-making and tolerance to GBV against women) while quantitative results could not confirm this.

The opposite results between qualitative and quantitative findings can be explained by the fact that the assessing period for the quantitative part was only one year while qualitative participants were followed for more than one year. Qualitative studies are designated to go much further in-depth than quantitative studies and they give more opportunities to explore a given subject in different ways (Creswell 1998).

In quantitative studies, we used structured pre-existing scales to investigate gender while in qualitative studies the participants explained changes in their own ways not necessarily the same ways as captured in the scales. Decision-making or violence-gendered scales were defined based on pre-existing scales which did not take into account the definition of changes in the context of the study. This means that some preexisting scales were not capturing all aspects of gender definition in the context and may need more adaptation or redefinition. For example, the help in household tasks was described as a change in qualitative but could not be measured by the scale in the gender quantitative part. This calls for a more comprehensive definition of complex components such as gender, women's participation in decision-making (power dynamics within the couple), and couple cohesion or violence in a given context.

Qualitative findings provided areas for improving the definition of scales. Another factor that needs to be mentioned is that in qualitative studies with regular meetings, it is much easier to follow the couples (limited number and can be performed at low cost) and to ensure that participants are still members of the intervention arm. It is also easier to understand "lost to follow-up" and the reasons for dropouts of the study. In quantitative longitudinal studies when the participants are seen only at the beginning and the end, the percentage of loss to follow-up was higher and there were not enough opportunities to go beyond the rigid quantitative structure.

However, following what was described elsewhere, the gender-transformative approach is a key element that will positively impact the socio-economic level of the household. It will require more time to assess changes and engage the community for sustainability because change in behavior does not happen quickly.

7.3 Male involvement in maternal health

Our findings suggest that involving males in SRH can help to promote maternal and children's health. Qualitative studies showed positive changes in men accompanying their wives to ANC or delivery however quantitative findings failed to provide enough evidence on how involving men could enhance maternal health services use.

This mitigates results between qualitative and quantitative studies and are not the first of their kind. In the literature, such interventions had variable effects, and sometimes negative outcomes were identified (Aguiar and Jennings 2015, Ayebare, Mwebaza et al. 2015, Yargawa and Leonardi-Bee 2015, Aborigo, Reidpath et al. 2018). For example, it was described that male involvement increased institutional delivery and skilled birth attendance but did not affect birth preparedness, ANC utilization, or miscarriages (Aguiar and Jennings 2015). During the early postnatal period, the male antenatal accompaniment was associated with a higher uptake of postnatal services, but with mixed effects on breastfeeding and newborn survival (Aguiar and Jennings 2015, Ayebare, Mwebaza et al. 2015, Yargawa and Leonardi-Bee 2015). However, in

the case of our study, the short interval of time for assessing the change could also explain why no change was found. On another note, having the majority of participants meeting the number of ANC sessions or skilled-birth attendance could explain why there were not remarkable changes because the sensitization only reinforced what they already had been doing.

Following what others found, although male involvement in maternal health and gender-integrated interventions have shown limited evidence of effectiveness (Kraft, Wilkins et al. 2014, Yargawa and Leonardi-Bee 2015), male involvement is a promising intervention that can improve maternal and child health indicators. These studies supported that male involvement interventions can have a positive effect on health services utilization and home care practices such as breastfeeding (Ayebare, Mwebaza et al. 2015, Yargawa and Leonardi-Bee 2015).

In the literature, it was reported that men did not wish to be more actively involved in antenatal care and delivery but they were more inclined to financially support ANC and delivery (Maluka and Peneza 2018). Unlike in the findings of the present study where men who followed the instructions of *Baraza Badirika* were ready to engage themselves and accompany their wives to maternal health services, the resistance came from some women. The women preferred to go to the hospital without their husbands to avoid their husbands becoming jealous or to ask for more money so that they could benefit from this.

However, previous results showed that male involvement in reproductive health programs was associated with an increased uptake of family planning services, HIV counseling and testing, and improved maternal health and spousal communication (Nkwonta; and Messias 2019). Further research on male knowledge, attitudes, and involvement in reproductive health issues and interventions is required and would contribute to the establishment and sustainability of best practices.

7.4 VSLA, men's sensitization and involvement, and child nutrition

A positive impact of male involvement in child nutrition was found in the qualitative component. Child anthropometric measurements (stunting, wasting, and underweight) were improved but the effects of the intervention were not statistically significant.

Most of the time the correction of anthropometric measurement deficiencies happened in adolescence or early adulthood which may explain why the change was not statistically significant. As mentioned through our research, the assessment period was too short to identify greater evidence of changes in child malnutrition. Malnutrition has a complex range of factors (diet, economic, environmental, and constitutional) that should be addressed together in order to assess changes. However, following the literature, the findings suggested that male involvement in child nutrition mainly child care and child feeding has encouraging results (Abate and Belachew 2017, Ihekuna, Rosenburg et al. 2018).

The reported implications of men's involvement in child education and their participation in child care are the premises for peace and more inclusive roles for men and women together in their children's lives. This will also result in the beginning of new redistributions of tasks in the households and influence in the community.

7.5 Theory of change

The underlying theory of change in *Mawe Tatu* was that the combined introduction of VSLA for women with men's engagement against violence towards women would improve the economy and ultimately lead to health gains (*Figure 2*). VLSA would provide sensitization towards women's rights including health rights and economic potential which could improve access to credits, entrepreneurial skills, and ability to manage conflicts; women were also supposed to engage in communities and with others in order to increase household economic management and to improve the socio-economic level of the household. In parallel, men were sensitized against GBV towards becoming responsible males through positive masculinity; they began to share in decision-making in the household and family-planning matters. Men would

have access to household resources and engage with others in dialogue around gender inequality which would ultimately result in a reduction of domestic violence.

The theory of change has been studied in different ways and the intervention has been shaped by different theories of change. For years, authors have deconstructed the theory of lack of access or availability for the uptake of certain behaviors. Behavioral change is a long process that does not depend only on the availability or intention to change. Many have defined different steps that shape a change of behavior happening in a given society.

One of the theories defined six stages before a behavioral change can be observed: pre-contemplation, contemplation, preparation, action, maintenance, and termination (in a given population, 40% are in pre-contemplation, 40% in contemplation, and only 20% in preparation (Prochaska and Velicer 1997)). Many implementers assume that if the services are available, this will lead automatically to the uptake of better health behaviors. However, many authors highlighted that the decision to uptake new health behaviors is complex and specific to different contexts, and individuals. A change in behavioral health is more complex and there is a need to understand all the emotions in the individual and his particular context. Hanks and others, for example, showed that having the intention to use FP does not lead ultimately to the uptake of contraceptives; between intention and action, there are cultural repertoires that mediate and need to be well understood (Johnson-Hanks 2007, Bongaarts and Casterline 2013).

The equation becomes even more complicated when gender-transformative approaches are associated with health behavior changes. Every society, especially in SSA, has its long past of traditions and culture, and this plays an important role in how people react to social change specifically when touching sensitive topics such as gender dynamics, gender equity or reproductive health.

Prochaska concluded that if results with stage-matched interventions continue to be replicated, health promotion programs will be able to produce unprecedented impacts on the entire at-risk population (Prochaska and Velicer 1997).

Subtly, our results fit well with the theory of change. Indeed, the quantitative results showed some positive changes, particularly regarding the increase in income. While, for other outcomes, the quantitative results (on a large sample, subject to the relatively high rate of loss to follow-up) showed very little or no change. However, qualitative findings (smaller sample but more regular follow-up) showed that some seeds are already growing: in households where the woman is a member of VSLA and the man is a member of the *Baraza Badirika*, the socio-economic level is improved, there is more cohesion between the couple and dialogue within the family; many men are more aware of their wives' health and are now involved directly or indirectly to support their wives in attending maternal health services (attendance of ANC, skilled-birth attendance), for example, or in helping them in the household duties when they are pregnant. Only the results on FP do not seem to improve in both qualitative and quantitative as results of the intervention. However, with cohesion and dialogue improving within the couple, we can expect in the coming years to have more positive results regarding the use of FP.

This relative disparity between qualitative and quantitative results, far from being a negative element, is a sign that the movement has been launched. Qualitative studies provide more in-depth insights into how people were evolving where people were more likely to open up themselves and share the positive changes in their own words. Quantitative studies are more structured, more time-limited, and sometimes do not allow capturing a change at an earlier stage. It will be necessary to go through the different phases described earlier in this section, much more the maintenance level, to hope that the changes (resulting from women’s empowerment and men’s sensitization) will impress upon and break through to the community; thus to initiate the adoption or termination of the social and health changes (in this case women’s participation in decision-making, couple cohesion, fight against GBV, men’s participating in SRH of their wives, and child nutrition).

7.6 Implications for policy and practice

1. **Improve security, and stability of local currency as well as strong policies to legitimatize and protect VSLA platforms**. Poverty is widespread and regional insecurity recurrent. Additionally, the instability of the local currency does not allow people to benefit from the increase in their income. Although incomes have increased, the current value of money does not allow people to take advantage of this. However, more time is required to allow people to invest and to take more advantage of investment opportunities. This will require that the government support the VSLA and protect the rights of the people when they face fraudulent activities or misappropriation. The precariousness in which the population is living, i.e. poverty which is often severe, prevents the population from focusing on FP, for example, which may ultimately affect a family's income and stability.
2. **More attention should be paid to gender aspects such as women's participation in decision-making, couple cohesion in improving the economic level of households, and maternal and child health outcomes**. Improving the economic status of households or health outcomes requires the involvement of both men and women. When more cohesion exists within the couple, the outcomes can be more easily improved.
3. **Improved engagement of the couple, i.e. husband and wife, and to ensure that they are receiving the same package of information on gender equity**. The findings confirmed that sensitizing men to gender norms has positive results on social behaviors (fighting against GBV for example). However, more often the women's component through VSLA focused solely on the economy, on money/financial aspects, and not enough focus on the gender component; this in the end led to disequilibrium. Men were seen as ready to change but sometimes their partners were not. Ensuring that both wives and husbands are receiving the same package of information on gender equity at the

same time will help mitigate the potential conflicts or at least give a neutral space where those conflicts can be arbitrated and ways forward can be defined.

4. **Men's participation in SRH can be improved by including them and creating "friendly" spaces where they can feel like they are not alone and by respecting traditions and cultural limits at the same time**. We found that sensitized men are more conscious of the benefits provided to their wives/partners participating in all SRH services, but many were not yet ready to join. This is a limiting factor specifically for FP where their "veto" carries much weight.

7.7 Implications for further research

During this study, a concerted effort was made to measure the impact on a wide variety of measures while controlling for selection bias, and the results were generally encouraging. However, time, insecurity, and financial constraints severely limited both the scope and the methodological strength of the study.

For future research projects, adjustments or additions could improve the strength of the results in several areas. First, increasing the size of the sample of those benefiting as a couple in both components of the project could improve the precision of the results.

In addition, the inclusion (or redefinition) of some additional parameters may improve upon the present study. For example, some scales such as women participating in decision-making or the couple cohesion could benefit from new items in the light of qualitative findings which would improve and contextualize pre-existing scales for more accuracy.

Similarly, a deeper analysis of women's empowerment social change, and conflicts generated within the couple would greatly improve the depth and breadth of future studies.

Some additional parameters such as the daily diet of every child during a given period of time (one month for example before and after the intervention) are difficult and time-consuming to collect but could help to be included or at least the reasonable proxies from which impacts may be estimated.

Considering the importance of resilience, the power dynamics within the couple, and gendered parameters for both the current and future welfare of the household, it would be worthwhile to investigate these issues further. This might be achieved by using alternative parameters to measure a household's resilience and power dynamics within the couple. Moreover, as many studies have found that female members of VSLA are more likely to contract debts, there is a need to understand how this affects the money collected, the characteristics of those contracting debts, and furthermore, a comparison between those more inclined to contract debts and those who do not.

Considering the importance of income-generating activities in the field of improving household economic status, a similar study may benefit from a deeper analysis of enterprise dynamics.

8 General Conclusion

This analysis wanted to assess the impact of women's economic empowerment through VSLA combined with men's sensitization on gender norms on the household socio-economic outcomes (income, food insecurity, resilience, tolerance to GBV couple cohesion, and women's participation in decision-making), and maternal and child health. Combining women's empowerment with men's sensitization on gender norms is a promising approach. Although more time is required to obtain quantitative evidence, qualitative evidence confirmed the changes happening within the couple, in the household, and in the community regarding socio-economic outcomes and maternal and child health.

Men are now engaged beside their wives/partners in some household tasks, in child education and nutrition, and in helping their wives mainly when they are pregnant. The couple cohesion and the participation of women in the decision-making within the household were higher after the interventions.

This approach should be integrated or at least supported by the government for sustainability.

However, some questioning remains that will need future research. Regarding gender norms, there is a call to identify and develop a scale adapted from the changes reported from qualitative findings. At the level of the households, men are engaged now in helping their wives but it is obvious that the organization of households remains on women's shoulders. It would be interesting to study the deeper negotiations between couples and the future reorganization at the level of households around daily tasks when the wife is the main provider.

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Annexes

Annex 1 Appendices A

Table A.1. Women's participation in decision-making

	Items		Before			After		
			Intervention	Control	Total	Intervention	Control	Total
1	**Who in your household usually decides on everyday expenditure?**		**n (%) n=1227**	**n (%) n=570**	**n (%) n=1797**	**n (%) n=727**	**n (%) n=314**	**n (%) n=1041**
	1	Woman participate	769(62.7)	252 (44.2)	1021(56.8)	521(71.7)	185(58.9)	706(67.8)
	2	Women does not paticipate	458(37.3)	318(55.8)	776(43.2)	206(28.3)	129(41.1)	335(32.2)
2	**Who in your household usually decides on special expenditures such as healtcare?**		**n (%) n=1223**	**n (%) n=569**	**n (%) n=1792**	**n (%) n=725**	**n (%) n=314**	**n (%) n=1039**
	1	Woman participate	657(53.7)	232 (40.8)	889(49.6)	464(64.0)	176(56.0)	637(61.3)
	2	Women does not paticipate	566(46.3)	337(59.2)	903(50.4)	261(36.0)	138(44.0)	402(38.7)
3	**More specifically, who decides where to seek care for maternal and child health issues?**		**n (%) n=1201**	**n (%) n=556**	**n (%) n=1757**	**n (%) n=710**	**n (%) n=310**	**n (%) n=1020**
	1	Woman participate	754(37.2)	305 (54.9)	1059(60.3)	485(68.3)	197(63.5)	682(66.8)
	2	Women does not paticipate	447(44.1)	251(45.1)	698(39.7)	225(31.7)	113(36.5)	338(33.2)
4	**Who in your household usually decides if you personally want to take a loan in your household ?**		**n (%) n=1202**	**n (%) n=532**	**n (%) n=1734**	**n (%) n=724**	**n (%) n=308**	**n (%) n=1032**
	1	Woman participate	900(74.9)	334 (62.8)	1234(71.2)	583(80.5)	218(70.8)	801(77.6)
	2	Women does not paticipate	302(25.1)	198(37.2)	500(28.8)	141(19.5)	90(29.2)	231(22.4)
5	**Who in your household decides if someone in your household wants to buy or sell a mobile phone?**		**n (%) n=1177**	**n (%) n=542**	**n (%) n=1719**	**n (%) n=699**	**n (%) n=305**	**n (%) n=1004**
	1	Woman participate	790(67.1)	302(55.7)	1092(63.5)	489(70.0)	189(62.8)	678(67.5)
	2	Women does not participate	387(32.9)	240(44.3)	627(36.5)	210(30.0)	116(38.0)	326(32.5)

6	**Who in your household decides regarding buying or selling land?**		**n (%) n=1150**	**n (%) n=527**	**n (%) n=1677**	**n (%) n=705**	**n (%) n=301**	**n (%) n=1006**
1		Woman participate	784(68.2)	313 (59.4)	1097(65.4)	529(7509)	201(66.8)	730(72.6)
2		Women does not participate	366(31.8)	214(40.6)	580(34.6)	176(25.0)	100(31.8)	276(27.4)
7	**Who in your household decides how your own income is used?**		**n (%) n=1221**	**n (%) n=559**	**n (%) n=1780**	**n (%) n=721**	**n (%) n=312**	**n (%) n=1033**
1		Woman participate	1005(82.3)	450 (80.5)	1455(81.7)	627(87.0)	257(82.4)	884(85.6)
2		Women does not participate	216(17.7)	109(19.5)	325(18.3)	94(13.0)	55(17.6)	149(14.4)
8	**Who in your couple decides when to have children?**		**n (%) n=957**	**n (%) n=433**	**n (%) n=1390**	**n (%) n=599**	**n (%) n=248**	**n (%) n=847**
1		Woman participate	744(77.7)	308 (71.1)	1052(75.7)	479(80.0)	190(76.6)	669(79.0)
2		Women does not paticipate	213(22.3)	125(28.9)	338(24.3)	120(20.0)	58(23.4)	213(21.0)
9	**Who in your couple decides whether to use family planning?**		**n (%) n=1027**	**n (%) n=496**	**n (%) n=1523**	**n (%) n=624**	**n (%) n=268**	**n (%) n=892**
1		Woman participate	841 (81.9)	374 (75.4)	1215(79.8)	524(84.0)	219(81.7)	242(83.3)
2		Women does not participate	186 (18.1)	122 (24.6)	308 (20.2)	100(26.0)	49(18.3)	75(16.7)

Table A.2. Cohesion

			Before			After		
	Items		**Intervention**	**Control**	**Total**	**Intervention**	**Control**	**Total**
1	**In times of crisis I can turn to my spouse/partner for support**		**n (%) n=969**	**n (%) n=425**	**n (%) n=1394**	**n (%) n=583**	**n (%) n=249**	**n (%) n=832**
		yes	841(86.8)	353(83.1)	1194(85.7)	505(86.6)	216(86.7)	721(86.7)
		no	128(13.2)	72(16.9)	200(14.3)	78(13.4)	33(13.3)	111(13.3)
2	**My spouse/partner and I get along well together**		**n (%) n=956**	**n (%) n=424**	**n (%) n=1380**	**n (%) n=572**	**n (%) n=249**	**n (%) n=821**
		Yes	868(90.8)	370(87.3)	1238(89.7)	524(91.4)	224(90.0)	748(91.1)
		No	88(9.2)	54(12.7)	142(10.3)	48(8.4)	25(10.0)	73(8.9)
3	**If I come home late without the permission of my partner/husband he gets very upset**		**n (%) n=952**	**n (%) n=412**	**n (%) n=1364**	**n (%) n=564**	**n (%) n=247**	**n (%) n=811**
		Yes	518(54.4)	236(57.3)	754(55.3)	327(58.0)	145(58.7)	472(58.2)
		No	434(45.6)	176(42.7)	610(44.7)	237(42.0)	102(41.3)	339(41.8)
4	**In general I can trust my neighbours**		**n (%) n=1189**	**n (%) n=531**	**n (%) n=1720**	**n (%) n=711**	**n (%) n=300**	**n (%) n=1011**
		Yes	830(69.8)	343(64.6)	1173(68.2)	563(79.2)	229(76.3)	792(78.3)
		No	359(30.2)	188(35.4)	547(31.8)	148(20.8)	71(23.7)	219(21.7)
5	**If my child had an accident my neighbours would immediately help**		**n (%) n=1144**	**n (%) n=492**	**n (%) n=1636**	**n (%) n=689**	**n (%) n=286**	**n (%) n=975**
		Yes	1051(91.9)	427(86.8)	1478(90.3)	657(95.4)	264(92.3)	921(94.5)
		no	93(8.1)	65(13.2)	158(9.7)	32(4.6)	22(7.7)	54(5.5)
6	**I often talk to my neighbours**		**n (%) n=1227**	**n (%) n=566**	**n (%) n=1793**	**n (%) n=723**	**n (%) n=313**	**n (%) n=1036**
		Yes	1172(95.5)	519(91.7)	1691(94.3)	697(96.4)	294(93.9)	991(95.7)
		No	55(4.5)	47(8.3)	102(5.7)	26(3.6)	19(6.1)	45(4.3)
7	**The majority of people in this community generally get along with each other.**		**n (%) n=1137**	**n (%) n=495**	**n (%) n=1632**	**n (%) n=670**	**n (%) n=287**	**n (%) n=957**
		Yes	933(82.1)	384(77.6)	1317(80.7)	577(86.1)	244(85.0)	821(85.8)
		No	204(17.9)	111(22.4)	315(19.3)	93(13.9)	43(15.0)	136(14.2)
8	**I feel that I am really a part of this community.**		**n (%) n=1206**	**n (%) n=546**	**n (%) n=1752**	**n (%) n=713**	**n (%) n=300**	**n (%) n=1013**

		Yes	1114(92.4)	483(88.5)	1597(91.2)	659(92.4)	271(90.3)	930(91.8)
		No	92(7.6)	63(11.5)	155(8.8)	54(7.6)	29(9.7)	83(8.2)
9	**I can rely on people in my community if I need to borrow money.**		**n (%) n=1159**	**n (%) n=523**	**n (%) n=1682**	**n (%) n=696**	**n (%) n=287**	**n (%) n=983**
		Yes	761(65.7)	265(50.7)	1026(61.0)	485(69.7)	197(68.6)	682(69.4)
		no	398(34.3)	258(49.3)	656(39.0)	211(30.3)	90(31.4)	301(30.6)

Table A.3. Tolerance to SGBV

	Items		Before			After		
			Intervention	Control	Total	Intervention	Control	Total
1	**It is normal that a man beats his wife if she is unfaithful**		**n (%) n=1180**	**n (%) n=526**	**n (%) n=1706**	**n (%) n=689**	**n (%) n=300**	**n (%) n=989**
	1	Yes	733(62.1)	318 (60.5)	1051(61.6)	428(62.1)	167(55.7)	595(60.2)
	2	No	447(37.9)	208(39.5)	655(38.4)	261(37.9)	133(44.3)	394(39.8)
2	**It is normal if a parent beats a girl if she is getting pregnant outside of marriage**		**n (%) n=1186**	**n (%) n=542**	**n (%) n=1728**	**n (%) n=701**	**n (%) n=307**	**n (%) n=1008**
	1	Yes	522(44.0)	208 (38.4)	730(42.2)	283(40.4)	116(37.8)	399(39.6)
	2	No	664(56.0)	334(61.6)	998(57.8)	418(59.6)	191(62.2)	609(60.4)
3	**It is normal if a man beats his wife if she doesn't want to have sex with him**		**n (%) n=1147**	**n (%) n=530**	**n (%) n=1677**	**n (%) n=687**	**n (%) n=299**	**n (%) n=986**
	1	yes	437(38.1)	205 (38.7)	642(38.3)	259(37.7)	96(32.1)	355(36.0)
	2	no	710(61.9)	325(61.3)	1035(61.7)	428(62.3)	203(67.8)	631(64.0)
4	**If a person wastes money it is normal that he/she is beaten**		**n (%) n=1192**	**n (%) n=524**	**n (%) n=1716**	**n (%) n=687**	**n (%) n=298**	**n (%) n=985**
	1	yes	344(28.9)	144 (27.5)	488(28.4)	204(29.7)	70(23.5)	274(27.8)
	2	No	848(71.1)	380(72.5)	1228(71.6)	483(70.3)	228(76.5)	711(72.2)
5	**It is normal that a man beats his wife if she goes out without telling him**		**n (%) n=1193**	**n (%) n=541**	**n (%) n=1734**	**n (%) n=701**	**n (%) n=303**	**n (%) n=1004**
	1	Yes	373(31.3)	186(34.4)	559(32.2)	245(35.0)	101(33.3)	346(34.5)
	2	No	820(68.7)	355(65.6)	1175(67.8)	456(65.0)	202(66.7)	658(65.5)
6	**It is normal that a man beats his wife if she argues with him**		**n (%) n=1197**	**n (%) n=527**	**n (%) n=1734**	**n (%) n=704**	**n (%) n=305**	**n (%) n=1009**
	1	yes	339(28.3)	192 (35.8)	531(30.6)	265(37.6)	108(35.4)	373(40.0)

	2	No	858(71.7)	345(64.2)	1203(69.4)	439(62.4)	197(64.6)	636(63.0)
7	**It is normal that a man beats his wife if she neglects the children**		**n (%)** **n=1206**	**n (%)** **n=535**	**n (%)** **n=1741**	**n (%)** **n=697**	**n (%)** **n=307**	**n (%)** **n=1004**
	1	Yes	407(33.8)	193 (36.1)	600(34.5)	627(87.0)	257(82.4)	399(39.7)
	2	No	799(66.2)	342(63.9)	1141(65.5)	94(13.0)	55(17.6)	605(60.3)
8	**It is normal that a man beats his wife if she burns the food**		**n (%)** **n=1211**	**n (%)** **n=554**	**n (%)** **n=1765**	**n (%)** **n=709**	**n (%)** **n=310**	**n (%)** **n=1019**
	1	yes	140(77.7)	63 (11.4)	203(11.5)	79(11.1)	32(10.3)	111(10.9)
	2	No	1071(22.3)	491(88.6)	1562(88.5)	630(88.9)	278(89.7)	908(89.1)

Annex 2 Appendices B

Table B.1. Income

Income (MI)	coeff	95%		p
Age	0.014	0.004	0.025	0.005
Education				
None (reference)	1			
Primary	0.018	-0.427	0.465	0.934
Secondary	0.232	-0.200	0.665	0.292
Tertiary	0.901	0273	1.530	0.005
married	0.607	0.300	0.913	0.000
Provenance				
Rural (reference)	1			
urban	0.225	-0.093	0.544	0.166
Semi-urban	-0.164	-0.721	0.391	0.561
Province*				
North-Kivu (reference)	1			
South-Kivu	-0.254	-0.524	0.014	0.064
VSLA	0.395	0.141	0.650	0.002
Income0	0.226	0.135	0.317	0.000

Table B.2. Low resilience

Low resilience	coeff	95%		p
Age	-0.009	-0.029	0.010	0.342
Education				
None (reference)	1			
Primary	-0.358	-1.239	0.523	0.426
Secondary	-0.947	-1.803	-0.091	0.030
Tertiary	-1.29	-2.523	-0.068	0.038
Married	0.322	-0.264	0.909	0.281
Provenance				
Rural (reference)	1			
Urban	-0.152	-0.837	0.531	0.661
Semi-urban	-0.106	-1.282	1.069	0.859
Province				
North-Kivu (reference)	1			
South-Kivu	0.097	-0.476	0.672	0.739
VSLA	0.927	0.379	1.474	0.001
Low resilience0	1.05	0.598	1.516	0.000

Table B.3. FAO food insecurity

FAO food insecurity level	coeff	95%		p
Age	0.001	-0.025	0.027	0.937
Education				
None (reference)	1			
Primary	-0.782	-2.160	0.595	0.266
Secondary	-0.795	-2.125	0.534	0.241
Tertiary	-0.596	-2.290	1.098	0.490
Married	0.751	0.084	1.417	0.027
Provenance				
Rural (reference)	1			
Urban	0.672	-0.083	1.428	0.081
Semi-urban	1.142	-0.528	2.812	0.180
Province				
North-Kivu (reference)	1			
South-Kivu	-0.004	-0.650	0.641	0.989
VSLA	0.261	-0.363	0.887	0.412
FAO food insecurity level/baseline				
1	0.839	-0.224	1.904	0.122
2	1.610	0.591	2.628	0.002
3	2.339	1.369	3.309	0.000

Table B.4. Women participation in decision-making

Women participation in decision-making	coeff	95%		p
Age	0.004	0.002	0.006	0.000
Education				
None (reference)	1			
Primary	-0.027	-0.124	0.069	0.582
Secondary	-0.010	-0.105	0.084	0.827
Tertiary	0.062	-0.068	0.194	0.348
Married	0.064	0.0009	0.128	0.047
Provenance				
Rural (reference)	1			
Urban	0.030	-0.036	0.097	0.374
Semi-urban	0.022	-0.094	0.139	0.709
Province				
North-Kivu (reference)	1			
South-Kivu	0.041	-0.015	0.098	0.153
VSLA	0.033	-0.021	0.088	0.227
Womendecides0	0.299	0.207	0.391	0.000

Tables B.5. Cohesion

Table B.5.1. Neighbor cohesion

Neighbor cohesion	Coeff	95%		p
Age	0.0008	-0.001	0.002	0.406
Education				
None (reference)	1			
Primary	0.018	-0.067	0.103	0.679
Secondary	0.016	-0.066	0.099	0.701
Tertiare	0.019	-0.097	0.136	0.742
Married	-0.011	-0.067	0.045	0.704
Provenance				
Rural (reference)	1			
Urban	-0.053	-0.115	0.007	0.085
Semi-urban	-0.080	-0.187	0.026	0.141
Province				
North-Kivu (reference)				
South-Kivu	-0.017	-0.070	0.034	0.504
VSLA	0.007	-0.041	0.056	0.764
Neighbor cohesion0	0.276	0.182	0.370	0.000

Table B.5.2. Couple cohesion

Couple cohesion	Coeff	95%		p
Age	-0.003	-0.006	-0.001	0.001
Education				
None (reference)	1			
Primary	0.092	-0.011	0.197	0.083
Secondary	0.113	0.011	0.215	0.028
Tertiary	0.131	-0.009	0.273	0.067
Married	0.209	0.135	0.283	0.000
Provenance				
Rural (reference)	1			
Urban	0.001	-0.074	0.078	0.961
Semi-urban	-0.149	-0.281	-0.017	0.026
Province				
North-Kivu (reference)	1			
South-Kivu	0.008	-0.054	0.072	0.787
VSLA	0.024	-0.035	0.084	0.431
Couple cohesion0	0.144	0.036	0.252	0.009

Table B.6. Violence scale

Couple cohesion	coeff	95%		p
Age	0.001	-0.0008	0.003	0.210
Education				
None (reference)	1			
Primary	-0.004	-0.104	0.096	0.938
Secondary	-0.086	-0.183	0.011	0.084
Tertiary	**-0.167**	**-0.305**	**-0.029**	**0.017**
Married	0.029	-0.036	0.095	0.377
Provenance				
Rural (reference)	1			
Urban	**-0.091**	**-0.160**	**-0.022**	**0.009**
Semi-urban	-0.075	-0.197	0.046	0.226
Province				
North-Kivu (reference)	1			
South-Kivu	**0.062**	**0.002**	**0.122**	**0.042**
VSLA	0.040	-0.016	0.097	0.159
Gemviolscale0	**0.172**	**0.071**	**0.272**	**0.001**

Table B.7. ANC

ANC	coeff	95%		p
Age	0.011	-0.010	0.033	0.316
Education				
None (reference)	1			
Primary	-0.293	-1.123	0.536	0.489
Secondary	0.384	-0.427	1.197	0.353
Tertiary	0.518	-0.782	1.818	0.435
Married	-0.005	-0.738	0.727	0.998
Provenance				
Rural (reference)	1			
Urban	0.064	-0.576	0.704	0.844
Semi-urban	0.242	-0.877	1.363	0.671
Province				
North-Kivu (reference)	1			
South-Kivu	**-0.251**	**-0.798**	**0.296**	**0.369**
VSLA	-0.065	-0.583	0.452	0.805
ANC0	**1.301**	**0.834**	**1.768**	**<0.001**

Table B.8. Skilled-birth attendance

Couple cohesion	coeff	95%		p
Age	-0.032	-0.076	0.011	0.146
Education				
None (reference)	1			
Primary	-1.301	-3.224	0.621	0.185
Secondary	-0.107	-2.098	1.882	0.915
Married	0.133	-1.374	1.641	0.862
Provenance				
Rural (reference)	1			
Urban	**1.385**	**-0.0001**	**-2.770**	**0.050**
Semi-urban	-0.315	-2.809	2.1776	0.226
Province				
North-Kivu (reference)	1			
South-Kivu	**-0.966**	**-2.644**	**0.711**	**0.259**
VSLA	0.943	-0.293	2.180	0.135
Skill-birth0	**4.041**	**2.434**	**5.648**	**<0.001**

Table B.9. Use of FP

Use of FP	coeff	95%		p
Age	-0.036	-0.069	-0.004	0.026
Education				
None (reference)	1			
Primary	-0.237	-1.367	0.892	0.681
Secondary	-0.371	-1.453	0.710	0.501
Tertiary	**0.859**	**-0.476**	**2.195**	**0.207**
Married	**1.140**	**0.184**	**2.096**	**0.019**
Provenance				
Rural (reference)	1			
Urban	0.234	-0.610	-1.078	0.587
Semi-urban	0.398	-0.969	1.765	0.568
Province				
South-Kivu	0.113	-0.554	0.782	0.738
VSLA	-0.227	-0.835	0.379	0.462
UseFP0	**1.062**	**0.343**	**1.781**	**0.004**

Annex 3 Longitudinal survey with women: Questionnaire

Highlighted sections indicate questions added for the finale data collection (endline)

	0 M3 survey start	
001	M3 household survey M3 household survey Spike household survey	|__________|
002	Start time Heure du début Heure du début	|__________|
003	Imei (international mobile equipment identity) Imei (international mobile equipment identity) Imei (international mobile equipment identity)	|__________|
004	Imsi (international mobile subscriber identity) Imsi (international mobile subscriber identity) Imsi (international mobile subscriber identity)	|__________|
005	Today's date Date Date	|__________|
	0 location **0 location** **0 location**	
006	Interviewer id Code de l'enquêteur Kitambulisho cha muhoji	|__________|
007	County Pays Jimbo	|__________|
008	Village/neighborhood/compound Village/quartier/avenue Kijiji/mji	|__________|
009	Facility name (nearest facility) Nom de la structure sanitaire la plus proche Jina la kituo cha afya	|__________|
010	Gis GIS Gis	|__________|
	0 identification **0 identification** **0 identification**	
011	Household id Ménage n Kitambulisho ya nyumba	|__________|

012	Consent form Fiche de consentement Fomu ya kukubali	Y/N
013	Can the interview start? Pouvons nous commencer l'interview? Je, tuanze mazungumuzo?	Y/N
	0 time **0 temps** **0 temps**	
014	Interview date Date de l'interview Tarehe ya mazungumuzo	
015	Enter survey start time: $(Yotebieng, Chalachala et al.) Mettez heure exacte du début de l'entretien: Ente saa ya kuanza mazungumuzo	
016	Exact time when interview starts Heure exacte du début de l'entretien Saa kamili wakati mazungumuzo ilipoanza	
	0 anthropometry **0 anthropométrie** **0 anthropométrie**	
017	Boy or girl ? Fille ou garçon? Mtoto mwanaume ao mwanamuke ? *0 boy — garçon — Mwanaume* *1 girl — fille — Binti* *2 no own child under 5 — pas d'enfant de moins de 5 ans — pas d'enfant de r de 5 ans* *3 child absent — enfant absent — enfant absent*	
018	How many years and months old is the child? Quel age a cet enfant (années, mois) Myaka ngapi uyu mtoto anayo (mwaka na myezi)	
019	Is the age confirmed by a document (under5 chart, vaccination chart)? Est-ce que l'age est confirmé (carte de vaccination, etc.) Myaka iyo inapatikana katika kitabu ya mtoto uyu (kakartasi ya nduyi ama ya serkali)	
020	Weight in kg, with one digit (e.g. 12.4 kg) Poids (kg, par example 12.4 kg) Saa kamili wakati mazungumuzo ilipoanza (kwa mufano 12,4 kg)	
021	Height in cm (e.g. 104 cm) Largeur (cm, par example 104 cm) Kimo/burefu (cm, kwa mufano 104cm)	

022	Was the child measured standing or lyong down? Est-ce que l'enfant était mesuré débout? Kimo iyi ilitwaliwa na mtoto anashimama? *1 standing* *Debout* *kushimama* *2 laying* *Allongé* *kulala* *3 not measured* *Non mesuré* *aikukamatiwa*	|__________|
023	MUAC in cm (e.g. 20 cm) MUAC (cm, par example 20 cm) MUAC (cm, kwa mufano 20 cm)	|__________|
	Section 1. Sociodemographic characteristics **Section 1. Charactéristiques sociodemographiques** **Section 1. Charactéristiques sociodemographiques**	
	I would first like to pose some questions about yourself. *J'aimerais vous poser quelques questions personnelles* *Ningependa kukuuliza maswali machache kuhusu wewe mwenyewe.*	
100	Sex (don't ask - just fill in) Sexe(ne pas demander)	M/F
101	In what month and year were you born? En quelle année, quel mois êtes vous né? Ulizaliwa mwezi and mwaka gani?	|__________|
102	How old are you? Quel âge avez-vous ? Una umri wa miaka mingapi?	|__________|
103	What language do you speak at home? Quelle langue parlez-vous à la maison? Luga gani mwaongeya nyumbani ?	|__________|
104	Do you normally live here/in this area? Habitez vous normalement ici? Uko mkaaji wa hapa?	Y/N
105	What is the highest grade of school you have attended? Quel est le niveau d'étude le plus élevé que vous ayez atteint? Ganzi gani ya juu zaidi cha elimu ulipo kuwa nayo?	|__________|
106	How many years did you go to school in total? Combien d'années au total avez vous été à l'école? Umekwenda miaka mingapi ku masomo?	|__________|
107	What is your religious denomination? Quelle est votre religion? Dini yako ni ipi?	|__________|
	Household composition *Composition du menage* *Composition du menage*	

108	I would now like to know more about your household. How many persons live in your household? Maintenant, j'aimerais connaitre un peu plus sur votre ménage. Combien de personnes y vivent? Ependa sasa kujua zaidi juu ya nyumba yako. Ni watu wangapi unaoishi nao kwa nyumba ?	|____________|
109	How many persons in your household are under 18 years old? Combien de pesronnes dans votre maison ont moins de 18ans Kati ya hao unaishi nao wangapi wana umri chini ya miaka kumi na nane ()?	|____________|
110	How many children in your household are under 5 years old? Combien d'enfants ont moins de 5 ans? Kati ya hao unaishi nao wangapi wana umri chini ya miaka mitano ()?	|____________|
111	What is your relationship to the household head? Quelle est votre relation avec le chef du ménage? Una uhusiano gani na kiongozi wa nyumba?	|____________|
112	What is your marital status? Quel est votre état matrimonial? Hali yako ya sasa ya ndoa ni gani ?	|____________|
113	For how long have you been in this marriage/relationship? Depuis combien de temps êtes vous dans cette relation? Umeishi katika ndoa/uhusiano huu kwa muda gani?	|____________|
114	Does your partner/husband currently live here with you? Est-ce que votre partenaire/mari vit actuellement avec vous? Je, unaishi na mpenzi/mume wako kwa sasa hivi?	|____________|
115	Where did you settle after getting married? Où avez vous habité juste après votre marriage? Mliishi wapi baada ya ndoa?	|____________|
116	Are you living in a polygynous marriage? Vivez vous dans un ménage polygame? Unaishi katika ndoa ya wake zaidi ya moja?	|____________|
	Children *Enfants* *Enfants*	
117	How many children do you have? Combien d'enfants avez-vous? Je, una watoto wangapi ?	|____________|
118	What is the date of birth of your lastborn? Quelle est la date de naisssance de votre dernier-né(dernière-né)? Mtoto wako wa mwisho alizaliwa tarehe gani ?	|____________|
119	How many years old is this child? Quel âge a votre dernier-né ? Mtoto huyu, ana myaka/miezi ngapi?	|____________|

120	Are all your children still alive ? Est-ce que tous vos enfants sont en vie? Watoto wenu ni wazima ao kuko benyi wamesha fariki?	Y/N
121	If not, how many are still alive? Si non, combien sont encore en vie? Kama sivyo, wangapi wangali wazima ?	|___________|
	Section 2. Housheold assets and amenities **Section 2. Ménage et avoirs** **Section 2. Ménage et avoirs**	|___________ |
201	*I would now like to ask you about what your household and you yourself own.* Does any member of your household own land? J'aimerais vous poser quelques questions sur votre ménage et vos avoirs. Y-t-il un memebre de votre famille qui est propriétaire d'une parcelle? Ningependa sasa kujua ni mali gani munazo nyumbani mwako na malii wewe mwenyewe anayo. Je, kuna mmoja kwa nyumba yako anayekuwa na shamba/parcelle?	Y/N
202	How many acres does the household own in total, including your own? Combien d'hectares/ares occcupent toutes vos terres(parcelles), la tienne y compris? Kwa nyumba yako, ni ektari mingapi munazo kwa ujumla?	|___________|
203	How many acres do you own yourself? Combien d'hectares/ares vaut la tienne à elle seule? Una ektari mingapi wewe mwenyewe?	|___________|
	Animals *Animaux* *Animaux*	|___________ |
204	What of the following animals does your household have, including your own? Parmi ces animaux, lesquels votre menage possède t-il, y compris les vôtres ? Kwa nyumba yako, muna manyama gani kwa hawa?	|___________|
205	Other (specify) Autre(précisez) Ingine (eleza) _____	|___________|
206	What animals do you personally own? Parmi ces animaux lesquels vous appartiennnt personnelement? Ni wanyama gani wewe mwenyewe unazo? *0 None* — *Aucun* — *Hakuna* *1 Cattle* — *Bétail* — *Ngombe* *2 Goats* — *Chèvres* — *Mbuzi* *3 Sheep* — *Mouton* — *Kondoo*	|___________|

	4 Horses/donkeys/mules — Chevaux/ ânes/ mules — Farasi/punda/nyumbu *5 Pigs — Cochons — Nguruwe* *6 Rabbits — Lapins — Sungura* *7 Chicken — Poulets — Kuku* *8 Turkey — Dindes — Bata msinga* *9 Ducks — Canards — Bata* *10 Other animals: — Autres animaux: — Wanyama wengine:*	
207	Other (specify) Autre(précisez) Ingine (eleza) ____	|____________|
	Assets *Assets* *Assets*	
208	Does your household, including yourself, have any of the following in working condition? Votre ménage, vous inclus, avez un élement de cette liste en bon état d'utilisation? Je, kwa nyumba yako munakuwa vitu kama hivi na viko kwa hali nzuri ya matumizi? *0 None — Aucun — Hakuna* *1 Radio — Radio — Redio* *2 Tv — Télé — Televisheni* *3 Mobile — Téléphone protable — Simu ya rununu* *4 Electricity — Electricité — Umeme* *5 Computer, tablet — Ordinateur, tablette — Kompyuta kibao* *6 Bycicle — Vélo — Baisikeli* *7 Motor cycle — Moto — Piki piki* *8 Car — Voiture — Gari* *9 Boat — Bateau — Mashua* *10 Engine (mill, boat, other) — Moteur (moulin, bateau, autre) — Injini (posho, mashua, nyenginezo)* *11 Plough — Charrue — Jembe la kuvuta ngombe*	|____________|
209	Other (specify) Autre(précisez) Ingine (eleza) _____	|____________|
210	What of those items do you personally own? (answer categories see 208) Lesquels parmi ces éléments vous appartiennnent personnellement? Kwa hivyo vitu, zawapi zinazo kuwa zako mwenyewe?	|____________|

211	Other (specify) Autre(précisez) Ingine (eleza) _____	|___________|
212	What type of fuel does your household mainly use for cooking? Quel type de combustible votre ménage utilise souvent pour la cuisson des aliments? Moto unayotumia mara nyingi kupiga chakula inatokana na nini? 1 *No cooking in household* — *Ne cuisine pas dans le ménage* — *Hakuna kupika kat nyumba yangu* 2 *Electricity* — *Électricité* — *Umeme* 3 *Lpg/natural gas* — *Gpl/ gaz naturel* — *Gesi* 4 *Solar cooking oven* — *Four solaire* — *Jiko la jua* 5 *Kerosene* — *Kérosène* — *Mafuta taa* 6 *Charcoal* — *Charbon de bois* — *Makaa* 7 *Firewood/straw* — *Bois de chauffage/ paille* — *Kuni/nyasi* 8 *Animal dung* — *Excréments d'animaux* — *Kinyesi cha mnyam aliyefugwa*	|___________|
213	What is the main source of drinking water for members of your household? Quelle est la source principale de l'eau de consommation utilisée par votre ménage? Kwa kawaida, munatoa maji ya kunywa kwa nyumba wapi? 1 *Piped water* — *Eau courante* — *Maji ya mfereji* 2 *Open well/spring* — *Puits ouvert/ source* — *Kisima kilicho wazi/chemichemi* 3 *Water from borehole* — *Eau de forage* — *Maji ya kisima* 4 *Surface water (river, pond)* — *Eau de surface (rivière, étang)* — *Maji ya chini (mto, dimbwi)* 5 *Rain water* — *Eau de pluie* — *Maji ya mvua* 6 *Bottled water* — *Eau en bouteille* — *Maji ya chupa*	|___________|
214	What kind of toilet facility does your household have? Quel type d'installation sanitaire(toilettes) votre ménage possède t-elle? Kwa nyumba yako,munaenda choo wapi? 1 *No facility/bush/field* — *Pas de toilette/ brousse/ champ* — *Hakuna choo/kichaka/uwan* 2 *Flush toilet* — *Toilet à chasse* — *Vyoo vya kuvuta m* 3 *Ventilated improved pit latrine* — *Latrine aérée à fosse* — *Choo cha shimo kinacho kiingizach hewa*	|___________|

	4 Traditional pit latrine / *Latrine à fosse traditionnelle* / *Choo cha shimo cha asilia*	
215	How many rooms in your home are used for sleeping? Combien de chambres à coucher avez vous? Nyumba yako, inavyumba vya kulala vingapi?	|__________|
216	Does your household own this structure [house, flat, shack], do you rent it, or do you live here without paying? Est-ce que votre ménage possède cette structure [maison, appartement, cabane], louez-vous, ou vivez-vous ici sans payer? Je, muna nyumba (iwe kambabi ama apana), ama munalipiya ama munaishi amo bila kulipa chochote?	|__________|
217	How much rent do you pay in a month? Quel loyer payez vous pour un mois? Makatu ngapi unalipa kwa mwezi?	|__________|
	Income and income generating activities *Activités génératrices de revenue* *Activités génératrices de revenue*	
218	Who is earning most income in your household? Qui est gagnant plus de revenus de votre ménage? Kwa kawaida, nani analeta hela nyingi za kugharamia maisha kwa hii nyumba?	|__________|
220	Please list all income-generating activities of your household, including your own: S'il vous plaît citez toutes les activités génératrices de revenus de votre ménage, y compris les vôtres: Taya shughuli za kuleta mapato kwa nyumba hii: *1 Permanent employment, skilled* / *Emploi permanent, qualifié* / *Ajira ya kudumu, wenye ujuzi* *2 Permanent employment, unskilled* / *Emploi permanent, non qualifiée* / *Ajira ya kudumu, usi na ujuzi* *3 Piecework, non-permanent work* / *A la piéce, travail non permanent* / *Kibarua, si ajira ya kudumu* *4 Farming, no cattle* / *Agriculture, pas de bétail* / *Kulima, hakuna ngombe* *5 Farming, with cattle* / *Agriculture, avec bétail* / *Kulima, kuna ngomb* *6 Fishing* / *Pêche* / *Kuvua samaki* *7 Self-employed (formal or informal)* / *Travailleur indépendant* / *Kujiajiri (rasmi au usiyo rasmi)* *8 Unemployed, looking for work* / *Au chômage, à la recherche d'emploi* / *Sina ajira, natafuta kazi*	|__________|

	9 Housework (unpaid) — Tâches ménagères (non rémunéré) — Kazi za nyumbani (zisizolipwa) *10 Studying/in school — Etudier/ à l'école — Ninasoma/ niko shuleni* *11 Retired (elder) — Retraité (aîné) — Mstaafu (mzee)*	
221	Other (specify) *Autre (préciser)* Ingine (eleza)	|__________|
222	What is the main income-generating activity of the household? (the strategy that generates most cash) **answer categories see 220** Quelle est la principale activité génératrice de revenus principale du ménage? (la stratégie qui génère plus d'argent) Ni shughuli gani haswa inawapa pato muhimu?	|__________|
223	Other (please specify) Autre (préciser) Ingine (eleza)	|__________|
224	What is your own main income-generating activity? **Answer categories see 220** Quelle est votre principale activité génératrice de revenus? Ni shughuli gani unafanya mwenyewe inayokupatia pato muhimu?	|__________|
225	Other (please specify) Autre (préciser) Ingine (eleza)	|__________|
226	What is the average monthly income of your household in fc, including your own income? Quel est le revenu mensuel moyen de votre ménage en fc, y compris votre propre revenu? Unakadiria mapato kwa nyumba yako changa na ya kwako ningapi kila mwezi mu franga za congo?	|__________|
227	What is your own average monthly income in fc? Quel est votre propre revenu mensuel moyenn en fc? Unakadiria mapato yako mwenyewe ni ganpi kila mwezi mu franga za congo?	|__________|
228	What is the average daily household income in fc, including your own? Quel est le revenu du ménage quotidien moyen en fc, y compris le vôtre? Unakadiria mapato ya jamaa ya kila siku ni ganpi mu franga za congo?	|__________|
229	What is your own average daily income in fc? Quel est votre propre revenu moyen quotidien en fc? Unakadiria mapato yako mwenyewe ya kila siku ni ngapi?	|__________|
230	How much do you usually spend for food per day in this household?	|__________|

	Par jour, combien dépensez-vous habituellement pour la nourriture dans le ménage? Ni pesa ngapi munatumia kununua chakula kila siku?	
231	Where does the money to buy food usually come from? D'où vient l'argent pour acheter de la nourriture en générale? Hizo pesa za kununulia chakula zinatoka wapi? *1 Myself — Moi même — Pekee yangu* *2 Husband/partner — Mari/ partenaire — Mume/mpenzi* *3 Relative of mine — Parents proches — Jamaa wangu* *4 Husband/partner's relative — Mari/ proches de partenaire — Jamaa wamume/ mp*	|__________|
232	Does your household have any savings? Est-ce que votre ménage a des épargnes? Nyumba yenu ina weka azina? *1 yes, in cash — Oui, en espèces — ndiyo, na pesa* *2 yes, in kind (animals, jewellery,..) — Oui, en nature (animaux, bijoux, ..) — ndiyo, tulilipa na m fulani (mbuzi, ngon bijou,…)* *3 yes, in bank, or through microfinance project (formal) — Oui, par la banque, ou par projet de microfinance (formelle) — ndiyo kupitiya bank kikundi ya ku linda ikuwe inajulikana n serkali* *4 yes, in community association (informal) — Oui, par association communautaire (informelle) — ndiyo kwa kikiundi kulinda azina mu k tuu(kuwekeshana,)*	|__________|
233	Do you have any savings yourself? Est-ce que vous-même avez des épargnes? Wewe pekeyako unaweka azina? *1 yes, in cash — Oui, en espèces — ndiyo, na pesa* *2 yes, in kind (animals, jewellery,..) — Oui, en nature (animaux, bijoux, ..) — ndiyo, tulilipa na m fulani (mbuzi, ngon bijou,…)* *3 yes, in bank, or through microfinance project (formal) — Oui, par la banque, ou par projet de microfinance (formelle) — ndiyo kupitiya bank kikundi ya ku linda ikuwe inajulikana n serkali* *4 yes, in community association (informal) — Oui, par association communautaire (informelle) — ndiyo kwa kikiundi kulinda azina mu k tuu(kuwekeshana,)*	|__________|
	Food security	

	Sécurité alimentaire *Sécurité alimentaire*	
	Thinking about food in your household, how true are the following statements: En pensant à la nourriture dans votre ménage, combien vraies sont les déclarations suivantes: Ukafikiri juu ya chakula nyumbani, ni majibu gani yanayofuata unanaishaidiya kweli?	
234	You were worried you would run out of food because of a lack of money or other resources? Vous étiez inquiet que vous auriez pu manquer de nourriture à cause d'un manque d'argent ou d'autres ressources? Muna wasi wasi amutakuwa nachakula ya kutosha sababu ya kukosa pesa ao mali ingine	Y/N
235	You were unable to eat healthy and nutritious food because of a lack of money or other resources? Vous ne pouviez pas manger des aliments sains et nutritifs à cause d'un manque d'argent ou d'autres ressources? Munashindwa kula vizuri sababu ya kukosa pesa ao mali ingine	Y/N
236	You ate only a few kinds of foods because of a lack of money or other resources? Vous avez mangé seulement quelques types d'aliments en raison d'un manque d'argent ou d'autres ressources? Munatumiya kadiri moya ya chakula kwa sababu ya ku kosa pesa ama mali yoyote?	Y/N
237	You had to skip a meal because there was not enough money or other resources to get food? Vous avez dû sauter un repas parce qu'il n'y avait pas assez d'argent ou d'autres ressources pour obtenir de la nourriture? Muna ruka saa ya kukula kwa sababu mumekosa pesa ao mali ingine ya kunuanuwa chakula?	Y/N
238	You ate less than you thought you should because of a lack of money or other resources? Vous avez mangé moins que vous pensiez que vous devriez en raison d'un manque d'argent ou d'autres ressources? Munakula kidogo kuliko munayo taka kwa sababu munakosa pesa ama mali ingine?	Y/N
239	Your household ran out of food because of a lack of money or other resources? Votre ménage a terminé la nourriture en raison d'un manque d'argent ou d'autres ressources? Jamaa yenu inakosewa nachakula yoyote kwa sababu ya kukosa pesa ama ingine mali	Y/N

240	You were hungry but did not eat because there was not enough money or other resources for food? Vous aviez faim, mais vous ne mangiez pas parce qu'il n'y avait pas assez d'argent ou d'autres ressources pour la nourriture? Ulisiskiya njala naukakosa byakula kwa sababu ulikosa pesa mali ingine	Y/N
241	You went without eating for a whole day because of a lack of money or other resources? Vous êtes allé(e) sans manger pendant toute une journée en raison d'un manque d'argent ou d'autres ressources? Umepistsha mcana mzima bila kula sababu ya kukosa pesa ama chakula ingine	Y/N
242	Your children were not able to eat healthy or nutritious foods? Vos enfants ne pouvaient pas manger des aliments sains ou nutritifs? Watoto wako wamekoswa na chakula nzuri na ya afya	Y/N
243	Your children were not given enough food to eat because of a lack of money or other resources? Vos enfants n'avez pas mangé assez à cause d'un manque d'argent ou d'autres ressources? Watoto wako wamekosa chakula ya kutosha sababu ya kukosa pesa ama mali ingine?	Y/N
244	How many meals do you usually eat per day? Combien de repas mangez-vous habituellement par jour? Kwa kawaida, je, huwa munakula mara ngapi kwa siku?	|__________|
245	Compared to other households in your community, would you say your household is…. Par rapport à d'autres ménages dans votre communauté, diriez-vous que votre ménage est .... Tukilinganisha nyumba yako na zingine zilizoko kijijini , unaweza sema nyumba iko……	|__________|
	Section 3. Health insurance and financial schemes **Section 3. Assurance santé et régimes finacies** **Section 3. Assurance santé et régimes finacies**	
301	Are you or your husband/partner/children covered by health insurance? Êtes-vous ou votre mari / partenaire / enfants couvert par l'assurance maladie? Je wewe ao mume/mpenzi/watoto wako wamepata bima ya afya?	Y/N
302	What type of health insurance? Quel type d'assurance-maladie? Hii bima/mutuelli yenu ya afya ni ya aina gani? *1 Health insurance* — *Assurance maladie* — *Bima ya afya ya j* *2 Community-based health insurance* — *Assurance maladie à base communautaire* — *Bima ya afya ya j*	|__________|

	3 *Private health insurance* *Assurance maladie privée* *Bima ya afya ya kibinafsi*	
303	Other (specify) Autre (préciser) Ingine (eleza)	|__________|
304	Do you or someone in your household receive cash transfers (e.g. For ovc) Est-ce que vous ou quelqu'un dans votre ménage reçoit des transferts en espèces (par exemple pour les associations pour orphelins etc...) Je, wewe au mtu mwingine katika nyumba yako amepata pesa za serikali, zinazopewa wasiojiweza kijijini (kwa mfano mpango wa kusaidia watoto waliyo yatima (ovc))	Y/N
305	Please specify: S'il vous plaît préciser: Ingine (eleza)	|__________|
306	How would you/your household pay 50$ for a hospital bill: Comment payeriez-vous une facture de 50$ (500 fc) de l'hôpital? Namna gani utaweza lipa 50$(500FC) ku hospitali? 1 *Using cash or savings* — *Cash ou épargnes* — *kulipapa palepa ao kuweka maku* 2 *Selling products (maize, charcoal..)* — *Vendre des produits (maize, charbon..)* — *kuuzisha bitu fu fulani(mihindi, makala,..)* 3 *Selling productive assets (goat, chickens, land)* — *Vendre animaux (poules, chèvres) ou terrain* — *kuuzisha bitu m (kuku, mbuzi,..)* 4 *Asking money from relatives* — *Demander en famille* — *kulomba mu jam* 5 *Asking money from neighbors, church members, friends* — *Demander des amis, église, voisins* — *kulomba marafi jirani ama kanis* 6 *Making debts, work for cash* — *Debts* — *deni* 7 *I could not pay* — *Je ne pouvais pas payer* — *nilishindwa lipa*	
307	What financial schemes for loans or credits have you heard of? Please list all: Qu'est-ce que les régimes financiers pour les prêts ou crédits avez-vous entendu parler? S'il vous plaît énumérer Ni mifumo ipi ya bima za afya ushawahi sikia? Tafadhali orodhesha zote…… 1 *VSLA* — *AVEC* — *AVEC*	|__________|

	2 Microfinance *Microfinance* *Microfinance* *3 Bank* *Banque* *Banque*	
308	Other (specify) Autre (préciser) Ingine (eleza)	|____________|
309	Have you ever participated in a VSLA? Avez-vous déjà participé à un AVEC? Je, umeshawahi pata haya mavocha/AVEC hapo awali?	Y/N
310	To what extent has the vsla helped you to avoid financial problems? Without VSLA... Dans quelle mesure l'avec aidé à éviter des problèmes financiers? Sans AVEC.. Namna gani iyi vsla imekusaidiya kuepuka ajali kutokeya kukosewa kipesa? *1 I could not pay for school fees* — *Je ne pouvais pas payer les frais scolaires* — *Singeweza kulipa k za shule* *2 I could not pay for enough food* — *Je ne pouvais pas payer pour assez de nourriture* — *Singeweza kulipia chakula cha kutosh* *3 I would need to asked my relatives for money* — *Je devrais demander de l'argent à mes parents* — *Inge ni bidi niulize jamaa wangu pesa* *4 I would have debts* — *J'aurais des dettes* — *Ningekuwa na ma* *5 There would be conflicts about money in the household* — *Il y aurait des conflits au sujet de l'argent dans le ménage* — *Kungekuwa na mgogoro kwa nyum yangu juu ya fedh*	|____________|
311	Have you ever been denied participation in a VSLA? Vous êtes-vous déjà vu refuser la participation à un AVEC? Je, ushawahi kukatazwa kupata vocha/oba ambayo ulitaka kununua?	Y/N
312	What were the reasons? Quelles sont les raisons? Sababu zilikuwa zipi? *1 Income too low* — *Revenue trop bas* — *Pato dogo saana* *2 No partner consent/signature* — *Sans consentement du partenaire/ signature* — *Hakuna hiari ya mpenzi wangu/sahi* *3 Income too high* — *Revenu trop élevé* — *Mapato ya juu san*	|____________|
313	In general, do you think the right persons got VSLA members? En général, pensez-vous que les bonnes personnes sontdes membres des AVEC?	Y/N

	Kwa maoni yako, unawaza kama watu wenyi kuji eshhimu wana kuwa wanamemba wa vsla?	
314	According to you, are there people in the community who should but cannot participate in a VSLA? Selon vous, y at-il des gens dans la communauté qui devrait, mais ne peut pas participer à un AVEC? Kwa maoni yako, je kuna watu katika mtaa/kijiji chenu ambao hawakupata vocha lakini wangefaa waipate? *1 Very poor women — Femmes très pauvres — Wamama walio maskini sana* *2 Unmarried women — Femmes célibataires — Wanawake hawajaolewa* *3 Adolescent women — Adolescentes — Vijana wanawake* *4 Women living with hiv — Femmes vivant avec le vih — Wanawake wanao na virusi vya ukimv* *5 Those living far away — Ceux/ celles qui vivent loin — Wale wanaoishi mb* *6 Nomadic people — Populations nomades — Wafugaji wanaoha* *7 Migrants/refugees — Migrants/ réfugiés — Wahamiaji/ wakimb* *8 Those not voting government — Ceux qui ne vote pas — Wale hawajapigia serikali*	|__________|
315	Other (specify) Autre (préciser) Ingine (eleza)	|__________|
316	Who do you feel should rightfully provide support to the poorest households? Qui pensez-vous devrait légitimement fournir un soutien aux ménages les plus pauvres? Je, unawaza ni nani angepashwa lipa hudumiya wasiyo jiweza? *1 Every person should support him/herself — Chaque personne devrait être en mesure de se soutenir — kila mutu anapashv kuwa na gisi ya kuj garamiya* *2 The household head is responsible to earn enough money even if he/she is poor — Le chef de ménage est responsable de gagner assez d'argent, même s'il/ elle est pauvre — kicwa/mkubwaa wa jamaa njo mwenyi anapashwa leta pes ma jamaa nyingi at kama nimukosefu* *3 The parents and families are responsible to support the poorest — Les parents et les familles sont responsables de — wazazi na ma jama wana pashwa garamiya masikini*	|__________|

<table>
<tr><td></td><td>soutenir les plus pauvres
4 — The government should provide money for the poorest to meet basic needs — Le gouvernement devrait fournir de l'argent pour les plus pauvres pour répondre aux besoins de base — serkali ilipashwa pana matokeo kipesa ya ku garamiya wa masikini ku shida za maisha
5 — NGOs should pay for the poor to meet basic needs — Les ONGs devraient payer pour les pauvres pour répondre aux besoins de base — Les ONGs devraient payer pour les pauvres pour répondre aux besoins de base</td><td></td></tr>
<tr><td>317</td><td>Other (specify)
Autre (préciser)
Ingine (eleza)</td><td>|__________|</td></tr>
<tr><td></td><td>Section 4 decision-making and support
Section 4. Prise de décision et support
Section 4. Prise de décision et support</td><td></td></tr>
<tr><td></td><td>Who in your household usually decides on…?
Qui dans votre ménage décide habituellement sur ... ?
Nani katika nyumba yenu anafanya uamuzi kwa.. ?</td><td></td></tr>
<tr><td>401</td><td>Everyday expenditure?
Des dépenses de tous les jours?
Matumizi ya fedha muhimu kama huduma za afya?

1 — Myself — Moi même — Pekee yangu
2 — My partner/spouse — Mon partenaire / conjoint — Mpenzi/mume wangu
3 — Jointly with my partner — Conjointement avec mon partenaire — Tuliamua pamoja na mpenzi wangu
4 — Someone else from my family — Quelqu'un d'autre de ma famille — Mtu mwingine kutoka familia yangu
5 — Someone else from my partner/spouses family — Quelqu'un d'autre de la famille de mon partenaire/ conjoint — Mtu mwingine kutoka familia mpenzi/ mume wangu
6 — Someone else outside the family — Quelqu'un d'autre en dehors de la famille — Mtu mwingine njee y familia</td><td>|__________|</td></tr>
<tr><td>402</td><td>Special expenditures such as healtcare?
Des dépenses spéciales telles que soins de santé?
Gharama za kila siku?
Choices see question 401</td><td>|__________|</td></tr>
</table>

403	More specifically, who decides where to seek care for maternal and child health issues? Plus précisément, qui décide où aller pour les soins de santé maternelle et infantile? Kwa makini. Ni nani anayefanya uamuzi wa kuenda kutafuta huduma za uzazi ya mama na afya ya mtoto? ***Choices see question 401***	|__________|
404	Who decides if you want to take a loan? Qui décide si vous voulez prendre un prêt? Nani anaye amuwa kama mutatwali deni? ***Choices see question 401***	|__________|
405	Who decides if someone in your household wants to buy or sell a mobile phone? Qui décide si quelqu'un dans votre ménage veut acheter ou vendre un téléphone mobile? Nani anaye amuwa kwa kuuza ao kuuzisha simu ya mukono ama telefoni? ***Choices see question 401***	|__________|
406	Who decides regarding buying or selling land? Qui décide en ce qui concerne l'achat ou la vente de terres? Nani anaye amuwa kuuzisha ama kuuza shamba? ***Choices see question 401***	|__________|
407	Who decides how your own income is used? Qui décide comment votre propre revenu est utilisé? Nani anaye amuwa gisi ya kutumiya pato yako? ***Choices see question 401***	|__________|
408	Who decides when to have children? Qui décide quand d'avoir des enfants? Nani anaye amuwa wakati ya kupata watoto? ***Choices see question 401***	|__________|
409	Who decides whether to use family planning? Qui décide d'utiliser la planification familiale? Nani anaye amuwa kutumiya mpango ya uzazi? ***Choices see question 401***	|__________|
	Some decisions are taken at the community level. Please let me know whether you agree with the following statements: Certaines décisions sont prises au niveau communautaire. S'il vous plaît laissez-moi savoir si vous êtes d'accord avec les énoncés suivants: Katika maamuzi yenyi kuchukuliwa katika ngazi ya jamii. Tafadhali, niambie kama wewe unabaliya na kauli hizi:	
410	I am sure that I could express my opinion at a community meeting Je suis sûr(e) que je pourrais exprimer mon opinion lors d'une réunion de la communauté	Y/N

	Mimi nina uhakika naweza kutoa maoni yangu katika mkutano wa jamii	
411	I am sure that I could express my opinion at a community meeting even if some people would not agree with that opinion Je suis sûr(e) que je pourrais exprimer mon opinion lors d'une réunion de la communauté, même si certaines personnes ne seraient pas d'accord avec cette opinion Mimi nina uhakika naweza kutoa maoni yangu katika mkutano wa jamii hata kama baadhi ya watu hawashiriki maoni hii	Y/N
412	I am sure that I could express your opinion at a community meeting even if most people would not agree with that opinion Je suis sûr(e) que je pourrais exprimer votre opinion lors d'une réunion de la communauté, même si la plupart des gens ne seraient pas d'accord avec cette opinion Mimi nina uhakika naweza kutoa maoni yangu katika mkutano wa jamii ingawa watu wengi hawashiriki maoni hii	Y/N
413	In the past 12 months have you participated in a conflict resolution in your community? Au cours des 12 derniers mois, avez-vous participé à une résolution des conflits dans votre communauté? Katika miezi 12 iliyopita wewe uli walishiriki maazimio utatuzi wa mikorogo katika jamii yako *1* *Yes, and I could express my opinion* *Oui, et je pouvais exprimer mon opinion* *x* *2* *Yes, but I could not express my opinion* *Oui, mais je ne pouvais pas exprimer mon opinion* *x* *0* *No, I did not participate in such an event* *Non, je n'ai pas participé à un tel événement* *x*	|__________|
	Section 5. Social support and social cohesion **Section 5. Le soutien social et la cohésion sociale** **Section 5. Le soutien social et la cohésion sociale**	
	I would now like to find out more about the support you count on in your partnership, household, and neighborhood. *Je vouudrais maintenant en savoir plus sur le soutien que vous espérez dans votre partenariat, ménage, et le voisinage.* *Ningependa sasa kujua zaidi juu ya usaidizi unayoweza kutumainia kupata kwa mpenzi wako, kwa nyumba yako na majirani wako.*	
501	In times of crisis I can turn to my spouse/partner for support En temps de crise, je peux demander à mon conjoint / partenaire pour un soutien	Y/N

	Wakati wa shida, ninaweza kuwa na matumaini kupata msaada kutoka kwa mume/mpenzi wangu ?	
502	In my household there are many conflicts because of money Dans ma maison il y a beaucoup de conflits à cause d'argent Katika nyumba yangu, kuna mikogoro juu ya fedha	Y/N
503	There are lots of bad feelings in the household Il y a beaucoup de sentiments négatifs dans le ménage Kuna kutokusikilizana katika familia yangu	Y/N
504	In my household we try to help each other if there is a problem Dans ma maison, nous essayons de nous entraider s'il y a un problème Katika familia yangu tunasaidiana wakati wa shida	Y/N
505	My spouse/partner and I get along well together Mon conjoint / partenaire et moi nous nous entendons bien Mume/mpenzi wangu tunaishi vizuri pamoja	Y/N
506	If I come home late without the permission of my partner/husband he gets very upset Si je rentre tard sans la permission de mon partenaire / mari, il se fâche Nikirudi nyumbani kuchelewa bila ruhusa ya mume/mpenzi wangu anakasirika	Y/N
507	In general I can trust my neighbors En général, je peux faire confiance à mes voisins Kwa ujumla mimi nina waamini majirani wangu	Y/N
508	If my child had an accident my neighbors would immediately help Si mon enfant a eu un accident mes voisins pourraient immédiatement aider Inapokuwa mtoto wangu amepata ajali majirani wanaweza kumsaidia kwa haraka	Y/N
509	I often talk to my neighbors Je parle souvent à mes voisins. Huwa nazungumza na majirani wangu mara nyingi	|___________|
510	The majority of people in this community generally get along with each other. La majorité des gens de la communauté s'entendent bien Wakaaji wa mungini wanasikilizana mara mingi	|___________|
511	I feel that I am really a part of this community. Je sens que je suis vraiment une partie de cette communauté. Najisikiya mwenyewe mwanamemba wa muungini yangu	|___________|
512	I can rely on people in my community if I need to borrow money. Je peux compter sur des gens dans ma communauté si je dois emprunter de l'argent. Naweza tumainiya watu wa iyi mungi kama na tafuta deni	Y/N
	Section 6. Gender and rights **Section 6. Genre et droits**	

	Section 6. Genre et droits	
	People have different views concerning motherhood and marriage. I would like to read you some statements. Please tell me for every statement whether you agree. *Les gens ont des opinions différentes concernant la maternité et le mariage. Je souhaiterais vous lire un certain nombre de ces opinions. Pour chacune d'entre elles, je souhaiterais que vous me disiez si vous êtes d'accord.* *Watu wana maoni mbali mbali kuusu kuzaa na ndowa. Nda wa someya uhakikisho zimoya, na kati yazo, ni ngali penda muni ambiye…*	
601	Women who are getting pregnant without being married are considered free women and lose respect in this community Les femmes qui tombent enceintes sans être mariées sont considérées comme des femmes libres et perdent le respect de la communauté. Wana wake wenye kubeba mimba bila kuolewa wana kamatwa kama "mbaraga" na wana poteza heshima mu jamii/ ama mu mungini.	Y/N
602	If an unmarried girl gets pregnant it is her own fault if she is shunned Si une fille non mariée tombe enceinte, c'est de sa faute si on l'évite Kama binti mwenye haja olewa ana pata mimba, ni kosa yake kama bana muepuka.	Y/N
603	Men with children out of marriage should support them in the same way as their other children Les hommes qui ont des enfants hors du mariage devraient les soutenir de la même façon que les enfants nés au sein du mariage Wa baba ambao walizaa inje ya ndoa zao, wana cunguza ama kushurulikiya hawa watoto sawa sawa na watoto wa ndoa halali.	Y/N
604	Young unmarried people should have access to family planning Les jeunes personnes non mariées devraient avoir accès à la planification familiale Vijana wenyi awa ja wai funga ndowa wanapashwa tumiya upango ya uzazi.	Y/N
605	Homosexuality should be punished L'homosexualité devrait être punie Kuambatana mume na mume ao muke na muke ku mambo ya mapenzi inastahilii malipizi.	Y/N
606	In case there is not enough money boys should be prioritized over girls to go to schools. Lorsqu'il n'y a pas assez d'argent les garçons doivent être privilégié pour aller à l'école par rapport aux filles. Je kama pesa siyo mingi tafazali kutuma vijana wanaume ku masomo kuliko wa binti.	Y/N
607	In matters of sex men should have the say. En matière de sexe c'est l'homme qui doit avoir le dernier mot.	Y/N

	Kuusu kitendo ya ndowa ni mwanaume ndiye anaye kuwa na neno lamwisho.	
608	A man must never touch a woman or girl if she doesn't want Un garcon/homme ne peut pas toucher une fille/femme si celle ne le veut pas. Kijana(mwanaume) awezi gusa binti(musika) kama uyu arhuusu.	Y/N
609	A woman can go to the health facility without her husband's permission. Une femme peut aller à l'établissement de santé sans l'autorisation de son mari. Mwanamuke anaweza enda ku kituo cha afya vila ruhusa ya mume wake	Y/N
610	A woman can use family planning without her husband's permission. Une femme peut utiliser la planification familiale sans l'autorisation de son mari. Mwanamuke anaweza panga uzazi bila ruhusa ya mume wake	Y/N
611	It is the mother's responsibility to take care of the children. Il est de la responsabilité de la mère à prendre soin des enfants. Ni mapashwa ya mama kuleya watoto	Y/N
612	A man is the one who decides when to have sex with his wife. Un homme est celui qui décide quand avoir des rapports sexuels avec sa femme. Mwanaume niule mwenyi kuchagula wakati ateneya kutana kimwili na bibi yake	Y/N
613	A woman should be able to work outside the house without permission? Une femme devrait pouvoir travailler en dehors de la maison sans autorisation Mwanamuke anaweza kwenda tumika inje ya nyumba yake bila ruhusa ya bwana yake	Y/N
614	A woman should be able to control her own income? Une femme devrait pouvoir contrôler son propre revenu Mwanamuke anapashwa chunguza utumishi ya faidha zake	Y/N
615	A woman should be able to inherit land and assets? Une femme devrait pouvoir hériter les terres et les biens Mwanamuke anaweza kurhiti shamba ama mali zingine	Y/N
616	In the past 12 months have you discussed gender and rights themes with someone? Au cours des 12 derniers mois, avez-vous discuté de thèmes de genre et de droits avec quelqu'un? Mu myezi 12 zilizo pita ulizungumuza mada kama jinsia(gender) ama haki na mutu	Y/N
617	With whom have you talked about gender and rights? Avec qui avez-vous parlé de genre et des droits? Nani uliyo zungumuza kuusa jinsia(gender) na haki	|____________|

	1 Spouse — Epoux/épouse — bwana/bibi *2 VSLA — AVEC — AVEC* *3 Church — Eglise — kanisa* *4 Community — Communauté — kikundi* *5 Friends — Amis — marafiki* *6 Children — Enfants — watoto*	
618	Other, specify Autre (préciser) Ingine (eleza)	|___________|
619	Depuis que vous êtes dans l'AVEC: Tangu mu liingiya mu nkudi AVEC	
620	Vous pouvez dire que vos enfants étudient mieux Uteneya sema kama watoto wako wa nasoma vizuri *1 entièrement d'accord* *2 plutôt d'accord* *3 indécis (e)* *4 plutôt pas d'accord* *5 pas du tout d'accord* *97 Refuse de répondre* *98 Ne sait pas* *99 Réponse manquante*	
621	Vous et votre famille accédez plus facilement aux services de soins de santé Wewe na jamaa yako yote muna tumiya kwepesi zaidi kutumiya bifaa bya afya	
622	Votre mari/partenaire est il membre des groupes de reflexion "*Baraza Badirika*" Bwana wako iko mwana member wa groupes de rflexion *Baraza Badirika*	
623	[if yes] Depuis que votre mari/partenaire est membre des groupes de reflexion, vous pouvez facilement aller au centre de santé pour les CPN, CPS, accouchement (kama ndiyo) Tangu bwana yako iko mwana member wa groupe de reflexion/*Baraza Badirika* uteneya sema kama unaanza tumiya saana kituo ya afya juu ya kwenda ku kipimo CPN, CPS, ku zala	
624	Depuis que votre mari/partenaire est membre des groupes de reflexion, vous pouvez facilement aller au centre de santé pour la PF (conseils ou utilisation d'une méthode) Tangu bwana wako iko mwana member wa *Baraza Badirika* ama groupe de reflexion, munaweza enda saana ku kituo ya afya ku centre de santé juu ya tumiya mipango ya kupanga uzazi	

625	Depuis que votre mari/partenaire est membre des groupes de reflexion, avez vous l'impression qu'il soutient les activités génératrices que vous faites dans l'AVEC pour promouvoir l'alimentation de vos enfants Tangu bwana wako iko mwana member wa Baraza Badirika ama groupe de reflexion, unawaza kama bwana yako iko na soutenir/ mu ma activités zako za matokeyo ki pesa yenyi uko na fanya kwa ku saidiya malishi ya watoto	
626	Que fait votre mari/partenaire pour la nutrition des enfants Je bwana yako ana faa kazi gani kuusu malishi ya watoto	
627	Un de vos enfants ou un de vos enfants vous a-t-il un jour parler du cours d'Education à la Vie Familiale je mutoto wako ao watoto wako wamesha kuku zungumizisha kuusu Education à la Vie Familiale EVF	
628	Avez vous reçu lors de votre participation à l'AVEC des enseignements sur l'un des thèmes suivants: Je wakati ume uzuriya AVEC umepata mafundisho kuusu	
629	Selon vous Mawe Tatu a des activités qui touchent: kwa maoni yako una wazikama Mawe Tatu in ma activités yenyi ku gusa	
630	Est ce que votre AVEC fait parti d'un reseau d'AVEC RAVEC? Je una juwa kama AVEC yenu ina uzuriya RAVEC	
631	Si mari dans groupe de reflexion avez vous déjà participé avec votre mari é des séances communes de sensibilization? Je tangu mumeanza mumesha fata pamoya mafundisho pamoya bibi na bwana mu cadre ya sensibilisation	
632	Si oui lequels? kama ndiyo za wapi	
	Section 7. Health- and health-seeking behavior **Section 7: Santé et comportements liés à la santé** **Section 7: Santé et comportements liés à la santé**	
701	*I would now like to ask you about your health, and health services you used.* In general, would you say your health is… *Je voudrais maintenant vous poser des questions sur votre santé, et les services de santé que vous avez utilisés.* En général, votre santé est--- *Ningependa sasa kukuuliza juu ya afya yako na huduma za afya uliyotumia.* Kwa ujumla, ungesema afya yako iko aje?	|__________|
702	Do you sleep under a bednet? Dormez-vous sous une moustiquaire? Je una lala na moustikere?	Y/N
703	Do your children sleep under a bednet?	Y/N

	Est-ce que vos enfants dorment sous une moustiquaire? Watoto wako wana lala na mustikere?	
704	Do you drink alcohol? Consommez-vous des boissons alcoolisées? Unatumia pia vinywaji vya kulevia?	Y/N
705	In the past 7 days (one week), did you drink alcohol? Dans les 7 jours derniers (une semaine), avez-vous bu de l'alcool? Katika siku saba zilizo pita (juma moja) ulitumiya pombe?	Y/N
706	On how many days did you drink alcohol in the past 7 days? Combien de fois avez-vous bu de l'alcool dans les 7 jours derniers? Mu siku saba za posho iliopita mara ngapi ulitumiya mvinyo ama pombe?	
707	Which of the following health care providers did you or someone else in your household consult in the last 12 months? Lequel des fournisseurs de soins de santé suivants avez-vous (ou quelqu'un d'autre dans votre ménage) consulté au cours des 12 derniers mois? Ni wawapi kati ya watoa zifuatazowenyi kuhudumiya afya, wewe (ao mtu mwingine katika makaoa yako) uliweza ona katika kipindi cha miezi 12? *1 Public clinic or hospital — Clinique publique ou hôpital — Kliniki au hospitali y uma* *2 Private clinic or hospital — Clinique privée ou hôpital — Kliniki au hospitali y kibinafsi* *3 Herbalist — Phytothérapeute — Waganga wa asili* *4 Traditional healer/tba — Guérisseur traditionnel / tba — Mganga wa kiasili/mkunga wa ki* *5 Priest/faith healer — Prêtre/ guérisseur religieux — Kasisi/ mponyaji wa kidini* *6 None because I/we couldn't afford — Aucun parce que je/ nous ne pouvais(ions) pas me (nous) permettre — Akuna kwa sababu atungeliweza kwa ng yetu* *7 None because none was sick — Aucun parce que personne n'était malade — Akuna kwa sababu akuna mwenyi alikuv mgonjwa*	
708	Other (specify) Autre (préciser) Ingine (eleza)	
709	What was the reason? Quelle était la raison? Kwa sabu gani?	

	Section 8. Comprehensive sexuality education **Section 8. Éducation à la sexualité complète** **Section 8. Éducation à la sexualité complète**	
	I would now like to talk about gender relations with you, including questions about women's rights and sexual and reproductive health, the sources of information for young people in your communit yincluded. As before your answers will be treated confidentially *Je voudrais maintenant parler de relations de genre avec vous, y compris les questions concernant les droits des femmes et de la santé sexuelle et reproductive, inclus les sources d'information pour les jeunes dans votre communauté. Vos réponses seraient confidentielles.* *Ninge penda sasa tuzungumuze kuhusu mambo ya kujamiiana(sexualité) na namna ya kuzaa kwa vijana katika jamii zenu. Kama vile hapo mbele, jibu zenu kwa hizo maulizo, zita lindwa kwa siri na hazita ambiwa hata mutu yeyote*	
801	Have you ever received any education on sexual health, sexuality and the body, reproduction, stis, hiv, and rights of women? Avez-vous déjà reçu une éducation sur la santé sexuelle, la sexualité et le corps, la reproduction, les ist, le vih et les droits des femmes? Uliwayi pewa mafundisho fulani kuhusu elimu ya kujamiana inao ndani mambo ya mapenzi/ngono, mufano kuhusu mabadiliko ya mwili, mimba, magonjwa ya ngono ao virusi ya ukimwi?	Y/N
802	Was this in the past 12 months? Était-ce au cours des 12 derniers mois? Ilikuwaka mwa hizi myezi 12 iliyo pita ?	Y/N
803	When this happened, were any didactic materials used? Lors de ces formations y avaient quelques matériels didactiques utilisés? Aliye kufundisha, ali tumiya vitabu ama vitambulisho, fundisho/ picha zingine? *1 Brochure, book — Brochure/livre — Kitabu ama ka kita ndogo ya mkononi* *2 Picture box — Boite à image — Kibweta cya picha mafunisho* *3 Movies — Films — Filamu* *4 Theater, role play — Théâtre/jeu de rôle — Micezo ya teatri an mafundisho* *5 Has not used any materials — N'a utilisé aucun matériel — Hakutumiya hata kitambulisho kimoj mafundisho*	|__________|
804	Other (specify) Autre (précisez) Ingine (eleza)	|__________|

<table>
<tr>
<td>805</td>
<td>Was this individual counseling, group information/counseling, or mass media (e.g. Public viewing)?
Était-ce lors d'un counseling individuel, groupe d'information / consultation, ou les médias (par exemple l'affichage public)?
Je ilpo kuwa katika counseling ya kipekee ama mukikundi ama katika media

<table>
<tr><td>1</td><td>Individual counseling (face-to-face)</td><td>Counseling individuel (face-à-face)</td><td>Mafundisho ya mut yepeke(kuongeya mecho mecho kwa mecho)</td></tr>
<tr><td>2</td><td>Individual information without moderator, e.g. From internet, phone, tablet, magazines, tv</td><td>Informations individuelles sans modérateur, par exemple à partir d'internet, téléphone, tablette, magazines, tv</td><td>Kujifundisha mwenyewe bila mwalimu kama vile kupitiya redio, sinn ya mukono, bitabu, internet)</td></tr>
<tr><td>3</td><td>Group session with moderator who animated the session</td><td>Séance de groupe avec modérateur qui a animé la session</td><td>Mafundisho mu kik pamoja na mwalim mwenyi kuongoza</td></tr>
<tr><td>4</td><td>Group session without moderator, e.g. Public viewing</td><td>Séance de groupe sans modérateur, par exemple projection publique</td><td>Mafundisho mu kik pamoja bila mwalir mwenyi kuongoza k mufano</td></tr>
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<td>|___________|</td>
</tr>
<tr>
<td>806</td>
<td>Could you pose questions and actively participate in a discussion?
Pouviez-vous poser des questions et participer activement à une discussion?
Uliweza uliza mafasiriyo mbali mbali ao ku shiriki mafundisho hiyo na maoni ao maulizo zako?</td>
<td>Y/N</td>
</tr>
<tr>
<td>807</td>
<td>How often in the past 12 months did you receive any sexuality education?
Combien de fois au cours des 12 derniers mois, avez-vous reçu une éducation sexuelle?
Mara ngapi uliwayi kupata mafundisho ku husu maneno inao elekeya kusharikiyana kimapenzi ki mwili(kitendo ya ndowa/kimapenzi,) mwa hizi myezi 12 zilizo pita ?</td>
<td>|___________|</td>
</tr>
<tr>
<td>808</td>
<td>What themes were covered during sexuality education?
Sur quels thèmes avez-vous reçu une éducation à la sexualité sur les thèmes du cycle du corps et de la vie, y inclus la sexualité et reproduction?
Je, mulizungumuziya vipindi hivi mu mafundisho kuhusu mambo inao zunguruka kitendo ya ndowa ama mambo ya kusharikiyana kimapenzi ?</td>
<td>|___________|</td>
</tr>
</table>

	1 *Cycle du corps et de la vie* | *Cycle du corps et de la vie* | *Cycle du corps et de la vie* 2 *La sexualité* | *La sexualité* | *La sexualité* 3 *La reproduction* | *La reproduction* | *La reproduction* 4 *Planning familial* | *Planning familial* | *Planning familial* 5 *Santé sexuelle* | *Santé sexuelle* | *Santé sexuelle* 6 *Vih* | *Vih* | *Vih* 7 *Violence du genre* | *Violence du genre* | *Violence du genre* 8 *Droits des femmes* | *Droits des femmes* | *Droits des femmes* 9 *Diversité dans les relations* | *Diversité dans les relations* | *Diversité dans les relations*	
809	Other (specify) Autre (préciser) Ingine (eleza)	|__________|
810	Where did you receive this education (information)? Où avez-vous reçu cette éducation? Mafundisho haya ya kitendo cya ndoa, uli yapata wapi ? 1 *Hospital* | *Hôpital* | *Hospitali* 2 *Health facility* | *Centre de santé* | *Kituo cha afya* 3 *Faith-based health facility* | *Centre de santé confessionnel* | *Kituo cha afya c dhehebu/kidini* 4 *Church* | *Eglise* | *Kanisa* 5 *Youth centre* | *Centre / organisation pour jeunes* | *Kituo kwa ajili y vijana.* 6 *Health post* | *Poste secondaire* | *Nafasi nyingine de santé)* 7 *Pharmacy* | *Pharmacie / kiosque* | *Farmasia/ duka* 8 *School* | *Ecole* | *Kwenye shule* 9 *Chw* | *Agent de santé communautaire* | *Relai communau* 10 *Peer educator (community)* | *Pairs éducateurs (communauté)* | *Pairs éducateur* 11 *Healthy entrepreneurs* | *Healthy entrepreneurs* | *Healthy entrepre* 12 *Media (radio, tv, magazine)* | *Des medias (radio, tv, journaux)* | *Vyomba vya hab redio,* 13 *Printed information (brochures, leaflets)* | *Informations imprimées (brochures, dépliants, livres)* | *Kitabu ndogo, k ama depliant, ki* 14 *My parents* | *De mes parents* | *Kwa wazazi war*	|__________|

	15 Other family members / *D'autres membres de la famille* / *Wa ndugu wengine* *16 My peers* / *De mes pairs* / *Wezangu*	
811	Other (specify) Autre (préciser) Ingine (eleza)	|____________|
	I would now like to read a series of statements, and i would like to ask you for every one of them to tell me if this is true or false *Je souhaiterais maintenant énumérer un certain nombre d'affirmations et, pour chacune d'entre elles, je souhaiterais que vous me disiez si elle est vraie ou fausse* *Sasa nataka taya ma swali mbali mbali nielezeye kama ni kweli ama apana (akuna jibu mbaya ama nzuri nikufasiliyana tuu)*	
812	Young girls (10 -16 years) are having more pregnancy complications than older women who are in their twenties Les jeunes filles (10 à 16 ans) font face à plus de complications liées à la grossesse que les femmes plus âgées Wa binti wa myaka kidogo (10 mpaka 16) wanapatamatatizo mengi inaelekeya uzazi kuliko wanawake wenyi kukomala	Y/N
813	If a condom is of good quality and used correctly it is an effective means to prevent pregnancy Si le préservatif est de bonne qualité et est utilisé d'une manière correcte, c'est un moyen efficace pour éviter une grossesse Kama kapoti/kondomi iko mzuri na ikitumiwa namna mzuri inaweza saidiya kuepuka mimba	Y/N
814	The pill protects against STIs and HIV La pilule contraceptive assure une protection contre les IST et le VIH Pilule ama comprimé yakuepuka mimba ama ya kupanga uzazi inasaidiya kuepuka ungojwa ya kitendo ya ndowa na ukimwi.	Y/N
815	A woman can become pregnant the first time she has sex Une femme peut tomber enceinte la première fois qu'elle a des rapports sexuels Mwanamuke ateneya beba mimba maraa ya kwanza anafanya kitendo ya ndowa.	Y/N
816	The same condom can be used more than once Le même préservatif peut être utilisé plusieurs fois Kapoti/kondomi moya iteneya tumikishwa maramingi	Y/N
817	STIs can cause infertility L'infertilité peut être causée par les IST Kusitozaa iteneya tokeya na magonjwa yenyi kuya na kitendo ya ndowa	Y/N
818	Men and women can have an STI without having any symptoms	Y/N

	Les hommes et les femmes peuvent avoir une ist sans présenter de symptômes Wanaume na wanawake wateneya pata ungojwa yenyi kutokeya na tendo ya ndowa bila kujuwa(bilakukuwe ata signe moya)	
819	I can get HIV by shaking hands, embracing someone or living together with an HIV infected person Je peux contracter le vih en serrant dans mes bras, en serrant la main ou en cohabitant avec une personne infectée par le VIH Minaweza ambukizwa na ukimui na kukumbatiyana na mutu mikononi ama kuishi naye nyumba moya	Y/N
820	Abnormal genital discharge is a reason to consult a doctor Des pertes anormales au niveau génital sont une raison pour aller consulter un médecin Kutoka buchafu uku chini(ku biungo bya uzazi) inalomba kuenda onana na munganga	Y/N
	Section 9. Family planning **Section 9. Planning familial** **Section 9. Planning familial**	
	I would now like to pose some questions about family planning - the different methods that can be used to space or avoid pregnancy. Your answers will be kept confidential and won't be communicated to anyone. We are interested in your answers. *A présent, je souhaiterais vous parler de façon un peu plus détaillée du planning familial – les différentes méthodes que l'on peut utiliser pour retarder, espacer ou éviter les grossesses.* *Vos réponses à ces questions seront traitées de façon confidentielle* *Kwa sasa ninge penda ni wa eleze kuhusu njia za mupango wa uzazi kiundani-njia mbalimbali ao njiya ambazo zinazo weza kutumikishwa kwa ku chelewesha ama kuepuka mimba. Majibu yenyu kwa maulizo hayata semewa hazarani. Tuna lazima ya habari izo kwa aji*	
901	At what age (approximately) have you had sex for the first time? A quel âge (approximativement) avez-vous eu votre premier rapport sexuel ? Je ku myaka ngapi uliwayi anza kitendo ya ndowa (ngono)?	|__________|
902	Are you currently pregnant? Êtes-vous enceinte? Je una mimba siku izi?	Y/N
903	Can you tell me what methods you know how women and men can avoid a pregnancy? Pouvez-vous citer des méthodes que les femmes ou les hommes peuvent utiliser pour éviter une grossesse ? Una weza kutaja njia ambazo wanamuke ao wanaume wanaweza ku tumikisha juu ya kuepuka mimba?	|__________|

	1 *Female sterilisation* — *Stérilisation féminine (ligature des trompes)* — *Kufunga uzazi kw operatio ya mwan (ligature des trom* *2* *Vasectomy* — *Stérilisation masculine (vasectomie)* — *Kufunga uzazi op ya mwanaume* *3* *Iud, intra-uterine device* — *Diu, dispositif intra-utérin* — *Kifaa (chuma) nd mufuko wa uzazi* *4* *Injection* — *Injection* — *Ku comwa shinda* *5* *Implants* — *Implants* — *Implant (tubitu tu twenyi banachom mwili).* *6* *Pill* — *Pilule* — *Kidonge ya kuzuv mimba (pilule)* *7* *Condom* — *Préservatif masculin* — *Kapoti/kondomi y kiume* *8* *Female condom* — *Préservatif féminin* — *Kapoti ao kondon kike* *9* *Breastfeeding / lactational amenorrhoea* — *Méthode de l'allaitement maternel et de l'aménorrhée (protégée pendant l'allaitement)* — *Kupitiya kunyony ya kuzuiwa damu mwezi toka.* *10* *Rhythm method* — *Méthode des rythmes / abstinence périodique* — *Kupitiya njia ya kisai/kujikatalia n kwa mara kitendo ndoa.* *11* *Withdrawal* — *Retrait (coït interrompus)* — *Uondoaji/kukatiza fanya.(coit interro* *12* *Emergency contraception* — *Contraception d'urgence / pilule du lendemain* — *Kidonge cya hara kingo la mimba/p d'urgence* *13* *Abstinence* — *Abstinence* — *Kujikataliya kwa kitendo cya ndoa.*	
904	Other (specify) Autre méthode (préciser) Ingine (eleza)	|___________|
905	Even if you have never used a method, we would like to learn about your preferences: which contraceptive method do you or would you prefer? Même si vous n'avez jamais utilisé de méthode contraceptive, nous voudrions en savoir plus sur vos préférences. Pour quelle méthode de contraception avez-vous (ou auriez-vous) une préférence particulière ?	|___________|

	Ya wapi kati ya njia hizo yenye kukupendeza? Atakama auya wayi kutumikisha mpango ata moya. **Choices same as in 905**	
906	Other (specify) Autre (préciser) Ingine (eleza)	|____________|
907	(if condom was mentioned) Do you or would you use only a condom, or would you combine it with another method? Utilisez-vous (ou utiliseriez-vous) seulement le préservatif ou en combinaison avec une autre méthode ? Je unatumiya (ama utatumiya) kapoti pamoja naingine njia ama niayo tuu?	|____________|
908	Other (specify) Autre (préciser) Ingine (eleza)	|____________|
909	(if other than condom was mentioned:) Do you or would you only use this method, or do/would you combine it with a condom? Utilisez-vous (ou utiliseriez-vous) seulement cette méthode ou en combinaison avec un préservatif ? Je utatumiya njiya ile yenyewe ao uta ongezeya kapoti/kondomi?	|____________|
	People have different views concerning family planning. I would like to read you some statements. Please tell me for every statement whether you agree. *Les gens ont des opinions différentes sur les méthodes contraceptives. Je souhaiterais vous lire quelques affirmations et, pour chacune d'entre elles si vous êtes d'accord* *Watu wana maoni tafauti juu ya njia ya mpangilio ya uzazi. Nda wa someya baazi ya uhakikisho, na kati ya zimoja, ni ngeli penda muni ambiye, ...*	
910	Contraceptive methods, which are obtained at a health facility, are of good quality Les méthodes contraceptives obtenues dans une structure sanitaire sont de bonne qualité Njia za upango wa uzazi zenyi kutokeya ku kituo kya afya ziko bora zaidi	Y/N
911	In case of side effects they can be well treated in the health facility Si des effets secondaires se produisent, ils peuvent être gérés par un prestataire de services de santé Kama binyume ya mpango ya uzazi yana ji tokeza, yanaweza tunzwa na mungaga wa kituo cha afya	Y/N
912	Children are a gift of god. Contraceptives shouldn't be used	Y/N

	Les enfants sont un don de dieu, il ne faut donc pas avoir recours à la contraception Watoto ni zawadi toka kwa mungu, haifai kutumia mpango	
913	The use of contraceptives is a sin L'utilisation de contraceptifs est un péché Ku tumiya mpango ya uzazi ni zambi	Y/N
914	Contraceptives can reduce sexual satisfaction Les contraceptifs peuvent diminuer votre satisfaction sexuelle Utumiyaji wa mpango ya uzazi unaweza ku punguza utamu wa kitendo cha ndoa/ kingono.	Y/N
915	The use of contraceptives encourages infidelty L'usage de contraceptifs encourage l'infidélité. Utumiaji wa mpangilio wa uzazi unaongeza kusitoaminiana.	Y/N
916	I trust in what health professionals in this community say about contraceptives. On peut faire confiance à ce que les professionnels de santé de cette communauté disent sur les méthodes de contrôle des naissances. Tuna weza tumainiya yote wenyi kuelewa afya mu mungini wanasema kuhusu mpango wa uzazi (contrôle des naissances).	Y/N
917	It is acceptable for young unmarried people to use condoms Il est acceptable pour les jeunes non mariés d'utiliser le préservatif Je imekatazwa nakijana mwenyi aya owa kutumiya kapoti/kondomi.	Y/N
918	Would you like to have (more) children in future, or would you not want to have another child? Aimeriez-vous dans le future avoir des enfants ou préféreriez-vous rester sans enfants ? Je unatamani kuwa na watoto ao unapenda bakiya bila mtoto?	Y/N
919	For how long would you want to wait to have another child? Combien de temps aimeriez-vous attendre avant d'avoir un enfant? Unapenda ngoya muuda ngapi mbele yakupanga kupata watoto?	|____________|
920	Other (specify) Autre (préciser) Ingine (eleza)	|____________|
921	Have you/your partner already used a contraceptive method to delay or avoid a pregnancy? Avez-vous/ votre partenaire déjà utilisé une méthode contraceptive pour retarder ou éviter une grossesse ? Je, wewe kama kipenzi cyako, muliwayi tumiya hata mara moja mpango ya uzazi bora ili mu epuke mimba ama mu sizae mbiyo (ya kufuatana)?	Y/N
922	If not, why are you not using any contraceptives? Si non, pour quelles raisons n'utilisez-vous aucune méthode de contraception?	|____________|

	Ikiwa "hapana", kwa nini ha uwezi tumiya hata mpango moja ya kingo la mimba ama mpango ya uzazi bora?	
923	Other (specify) Autre (préciser) Ingine (eleza)	|__________|
924	What methods have you used in the past 12 months? Quelle(s) méthode(s) vous / votre partenaire avez-vous utilisé dans les 12 derniers mois ? Mpango gani ya uzazi bora, wewe kama mpenzi wako wa kitendo cha ndoa, muliwayi tumikisha kati yenu hii miezi 12 ilipita? **Choices same as in 905**	|__________|
925	Other (specify) Autre méthode (préciser) Ingine (eleza)	|__________|
926	When have you started to use a contraceptive method? Quand avez-vous / votre partenaire commencé à utiliser une méthode contraceptive? Ni wakati gani, wewe kama mpenzi wako, mulianza kutimiza hii mpango ya ku zuwiya mimba?	|__________|
927	Which modern method have you used during your last sexual intercourse? Lors de votre dernier rapport sexuel, quelle méthode contraceptive avez-vous utilisé ? Kwa kitendo yenu ya ndoa ya mwisho, ni mpango gani muliwayi timiza ama tumikisha?	|__________|
928	Other (specify) Autre méthode (préciser) Ingine (eleza)	|__________|
929	Did you use a condom in addition to this method? Un préservatif a-t-il été utilisé en plus de la méthode utilisée ? Je, muli wayi kutumiya kapoti/kondomi umbali-mbali na mtindo ingine muli amuwa ya uzazi bora?	Y/N
930	Why haven't you used a contraceptive method during your last sexual intercourse? Pour quelles raisons n'avez-vous pas utilisé une méthode contraceptive moderne lors de votre dernier rapport sexuel ? Sababu gani aukupendakutumiya mpango ya uzazi ya kizungu ya mwisho ulio tenda kitendo ya ndowa? *1* *It's against my religious beliefs* *Cela va à l'encontre de mes croyances religieuses* *Ina katazwaa na sh za dini langu!.*	|__________|

	2	*My partner disapproves*	*Mon conjoint / partenaire désapprouve*	*Mume wangu ao mpenzi wa ndoa, haimufurahishe.*	
	3	*I was forced to have sex*	*On m'a forcé à avoir des rapports*	*Vinyume vyake vyani ogopesha.*	
	4	*I am worried about side effects*	*Les effets secondaires m'inquiètent*	*Nataka kuwa na watoto wengi.*	
	5	*I want children*	*Je veux davantage d'enfants*	*Si furahishwe na mpango ya kingo la uzazi.*	
	6	*I disagree with contraception*	*Je ne suis pas d'accord avec la contraception*	*Hiyo ya nizuru wakati ya kitendo cya ndoa.*	
	7	*I find it embarrassing during sex*	*Cela me gêne pendant les rapports sexuels*	*Sikuweza elewesha mume wangu ao mpenzi wa ndoa kutumiya dawa yoyote ya kingo kwa mpango ya uzazi.*	
	8	*I didn't manage to ask and negotiate a contraceptive method with my partner*	*Je n'ai pas réussi à demander / négocier l'usage d'un contraceptif avec mon partenaire*	*Hiyo ya punguza ama ya vunja utamu ya kitendo cya ndoa.*	
	9	*It reduces sexual desire or satisfaction*	*Cela réduit la satisfaction / le désir sexuels*	*Si kukuwa na fahamu wala ku juwa uwepo wa dawa yoyote ya kingo ya uzazi.*	
	10	*I wasn't aware of the existence of contraceptives*	*Je n'étais pas au courant de l'existence des contraceptifs*	*Kwa wakati huu, hakuna dawa yoyote ya kingo ya uzazi tayari mu kituo ya afya.*	
	11	*I didn't carry a condom*	*Je n'avais pas de préservatif avec moi à ce moment la*	*Sijuwi wapi naweza pata ao ku uziya dawa yoyote ya kingo ya uzazi.*	
	12	*I didn't know where to get a contraceptive*	*Je ne savais pas où me procurer des contraceptifs*	*Sina bwana kwa wakati uu*	
	13	*My method expired*	*Ma méthode avait expiré*	*Sina ndowa*	
931	Other (specify) Autre (préciser) Ingine (eleza)				|____________|

932	When have you had your last sexual intercourse? Quand a eu lieu votre dernier rapport sexuel ? Je, makati gani uliwayi fanya kitendo ya ndowa ya mara mwisho? *0 In the past 12 months / Dans les 12 derniers mois / Ndiyo mu iyi myezi zilizo pita* *1 Over a year ago / Il y a plus d'1 année / Hapana kunapita mwaka* *2 Over two years ago / Il y a plus de deux ans / Hapana kunapita wyaka mbili* *3 Over three years ago / Il y a trois ans ou plus / Hapana kunapita myaka tatu nazaidi*	|__________|
933	Who in a couple should, according to you, decide on the use of a contraceptive method? Dans un couple, qui, à votre avis, doit décider de l'usage de méthodes de contraception ? Nyumbani mwenu, ama mu maisha yenu kindoa (wa wili), ni nani anazidi cukuwa mpango ama wazo ya mtindo la uzazi bora mutatumiya? *1 Woman / La femme / Mwanamke* *2 Man / L'homme / Mwanaume* *3 Couple together / Le couple doit décider ensemble / Wanandoa wana pashwa amua*	|__________|
934	Who decided in your couple about the use of contraceptives? Dans votre couple qui a décidé d'utiliser une méthode de contraception? Nyumbani mwenu, ama mu maisha yenu kindoa (wa wili), ni nani anazidi cukuwa mpango ama wazo ya mtindo la uzazi bora mutatumiya? *1 I decided on my own / J'ai décidé de ma propre initiative / Niliamuwa mwenye* *2 We decided together / Nous avons décidé ensemble / tumeamuwa pamoy* *3 My partner decided / Mon partenaire a décidé / mcumba/mume/mu wangu ameamuwa*	
	Section 10. Last pregnancy and delivery **Section 10. Dernière grossesse et accouchement** **Section 10. Dernière grossesse et accouchement**	
	I would now like to ask you about your last pregnancy and delivery. *Je voudrais maintenant vous poser une question au sujet de votre dernière grossesse et l'accouchement.* *Ningependa sasa kukuuliza juu ya uja mimba wako wa mwisho na kujifungua kwako.*	
1001	Did you plan your last pregnancy at that time? Avez-vous planifié votre dernière grossesse à ce moment-là?	Y/N

	Je, mlipanga uja uzito wako wa mwisho wakati huo?	
1002	When you got pregnant last time, did you still want to have children later, or didn't you want any children anymore? Lorsque vous êtes tombée enceinte dernièrement, aviez-vous encore envie d'avoir d'autres enfants plus tard, ou n'avez-vous pas voulu plus d'enfants? Wakati ulipata uja uzito uliyopita, je ulitarajia kuwapata watoto wengine baadaye, ama hautaki tena watoto wengine? *1 Later — Oui, encore enfant(s) mais plus tard — Ndiyo tena watoto lakini apana iyi ma* *2 No more children — Non, je ne voulais plus d'enfants — Hapana siku penda watoto wengine*	|__________|
1003	During your last pregancy, how many times did you go for antenatal care? Au cours de votre dernière grossesse, combien de fois êtes-vous allé pour des soins prénataux? Wakati wa uja uzito wako wa mwisho, ulienda kupata huduma ya wamama wazito mara ngapi?	|__________|
1004	Where did you give birth to your last child? Où avez-vous donné naissance à votre dernier enfant? Mtoto wako wa mwisho alizaliwa wapi? *1 At my home — A notre domicile — Nyumbani kwetu* *2 At home at someone elses' place — Au domicile de quelqu'un d'autre — Nyumbani kwa mwengine mutu* *3 Public health facility — Hôpital / centre de santé public — Ku hospitali ao kitu cha afya cha watu wote.* *4 Private health facility — Hôpital / centre de santé privé — Hospitalini ao kituo cha afya cha kipeke* *5 Faith based health facility — Structure de santé confessionnelle — Kituo cya afya ya n zehebu.* *6 TBA — Chez accoucheuse traditionnelle/ guérisseur traditionnel — Kwa mzalishaji wa kiasili ao kwa mponyaji wa asili.*	|__________|
1005	Other (please specify) Autre (préciser) Ingine (eleza)	|__________|
1006	Name of the health facility Nom de l'établissement de santé Jina la kituo cha afya:	|__________|
1007	Why did you not give birth in a health facility?	|__________|

	Pourquoi n’avez-vous pas donné naissance dans un établissement de santé? Ni kwa nini haukujifungua katika kituo cha afya	

1	*I didn't have enough money to go to a health facility*	*Je n'avais pas assez d'argent pour aller au centre de santé*	*Sikuwa na pesa za kwenda katika kitu cha afya*
2	*The health centre was too far away from my home*	*Le cetre de santé était trop loin de chez mois*	*Kituo cha afya kilikuwa mbali san kutoka nyumba yan*
3	*I am more comfortable to deliver at home*	*Je sui plus à l'aise d'accoucher à la maison*	*Napendelea kujifun nyumbani kwangu*
4	*I am afraid of the interventions and procedures at the hospital/clinic*	*J'ai peur des interventions et procédures à l'hôpital/ clinique*	*Naogopa huduma vile matibabu yanavyofanywa hospitalini*
5	*The baby came too quickly to go to the health facility*	*Le bébé est arrivé trop vite pour aller au centre de santé*	*Mtoto alikuja map kabla niende kituo afya*
6	*I have already given birth at home without problems*	*J'ai déjà accouchée à la maison sans problèmes*	*Nimeshawahi kujifungua nyumba bila matatizo*
7	*I prefer the tbas*	*Je prefere les accoucheuses traditionnelles (tba)*	*Mimi napendelea kujifungua kwa mkunga wa kiasili*
8	*I didn't have money for the clothes for the child*	*Je n'avais pas d'argent pour le vêtements de l'enfant*	*Sikuwa na pesa za kumnunulia mtoto nguo*
9	*No one at home can look after the children*	*Personne à la maison ne peut s'occuper de l'enfant*	*Hakuna mtu kwa nyumba anayeweza kuwaangalia watot waliobaki nyumbar*
10	*I don't trust the health professionals in the clinic/hospital*	*Je ne fais pas confiance aux professionnels de la santé dans la clinique / hôpital*	*Mimi si waamini wahudumu wa afya katika kliniki ama hospitalini*

1008	Other reason: Autre raison: Ingine (eleza)	|____________|
1009	Who helped you to deliver your last baby? Qui vous a aidé à accoucher votre dernier enfant?	|____________|

	Nani aliyekusaidia kujifungua mtoto wako wa mwisho ? *1 No one/self — Personne/ j'étais seule — Mimi pekee* *2 Husband — Mari — Mume* *3 Mother — Mère — Mama* *4 Mother in law — Mère du mari — Mama mkwe* *5 Other relative — Autre personne de la famille — Jamaa mwingine* *6 TBA — Accoucheuse traditionnelle — Mkunga au mgang wa kiasili* *7 Community midwife — Sage-femme communautaire — Mkunga wa kijamii* *8 Health professional — Professionnel de santé — Muuguzi/ mkunga/ daktari katika kituo cha afya*	
1010	Other (specify) Autre (préciser) Ingine (eleza)	|____________|
1011	What was the outcome of the delivery? Was it a: Quel était le résultat de l'accouchement? Était-ce un: Matokeo ya kujifungua ilikuwa vipi? Ilikuwa…. *1 Spontaneous vaginal delivery — Accouchement vaginal spontané — Kujifungua mtoto kawaida* *2 Vaginal delivery with complications — Accouchement par voie vaginale avec complications — Kujifungua kawaid palipo matatizo* *3 Uncomplicated cesarean section — Césarienne non compliquée — Kujifungua kawaid kupata matatizo baadaye* *4 Cesarean section with complications — Césarienne avec complications — Kujifungua kwa upasuaji uliyo na s*	|____________|
	Section 11. Self-efficacy **Section 11. Auto-efficacité** **Section 11. Auto-efficacité**	
	I will read you some statements. Please tell me for every statement whether you agree *Je vais vous lire à haute voix un certain nombre d'affirmations. Pour chacune d'entre elles, je souhaiterais que vous me disiez si vous êtes d'accord* *Nda wa someya uhakikisho zimoya, na kati yazo, ni ngali penda muni ambiye, …*	Y/N

1101	If my partner wants to have sexual intercourse and i don't want, i can easily stop things. Si mon / ma partenaire veut avoir des rapports sexuels et que je ne le veux pas vraiment, je peux facilement arrêter les choses de telle sorte que nous n'ayons pas de rapports sexuels Kama mcumba wangu anapenda kutenda kitendo ya ndowa na miye sipendi naweza katala pawakati nakuepuka kufanya kitendo iyo	Y/N
1102	If my partner and i want to have sex and I want to protect myself I can always convince him/her to use protection (against HIV and pregnancy) Si mon partenaire et moi voulons avoir des rapports sexuels et que je veux me protéger, je peux toujours le / la convaincre d'utiliser une protection (contre les grossesses et les IST) Kama mcumba wangu na miye mwenyewe tunapenda tutende kitendo cha ndowa naweza kumuelewesha kutumiya kitukyenyi kya kukinga juu ya mimba na malali.	Y/N
1103	Sometimes I find myself in the situation that I have unprotected sexual intercourse because I couldn't stop things in time Parfois, je me retrouve à avoir des rapports sexuels sans protection avec une copine / un copain / mon partenaire parce que je n'arrive pas à arrêter les choses à temps. Kuna wakati najikuta kuwa natenda kitendo ya ndowa bila kujikinga kwasababu nashinda ku kataa pa wakati	Y/N
	If your partner wants to have sexual relations with you, do you think you can: *Si ton partenaire veut avoir des relations sexuelles avec toi, penses-tu que tu peux:* *Kama kijana/binti anapenda tenda kitendo cya ndowa naweye, kama utaweza:*	
1104	Tell him/her that you don't want even if he/she gets upset? Lui dire que tu ne veux pas même s'il insiste ou se fâche? Kumukataliya ata kama uyu analomba na nguvu ama kusirika?	Y/N
1105	Tell him/her that you don't want even if he/she offers money or a gift? Lui dire que tu ne veux pas, même s'il t'offre de l'argent ou des cadeaux? Kumukataliya ata kama anakupatiya pesa ao zawadi nzuri ama zawadi kubwa?	Y/N
1106	Convince him/her to use a contraceptive? Le convaincre d'utiliser un préservatif? Kumuitikisha mutumiye kapoti/kondomi?	Y/N
1107	Tell him/her what you don't like during sex? Lui dire ce que vous ne voulez pas pendant les relations sexuelles? Kumuelezeya byenyi aupendaki wakati ya kitendo ya ndowa?	Y/N
1108	Tell him/her what you like during sex?	Y/N

	Lui dire ce que tu aimes pendant les relations sexuelles? Kumuelezeya nini unapendaka wakati yenyi kutenda kitendo ya ndowa?	
	Section 12. Violence **Section 12. La violence** **Section 12. La violence**	
	Now i would like to ask you some questions about undesirable events, such as physical or sexual abuse that you may have experienced during your life. I know that some of these questions are very personal. *A présent, je souhaiterais vous poser des questions concernant des événements indésirables, tels que les abus physiques ou sexuels, que vous avez peut-être vécus dans votre vie. Je sais que certaines de ces questions sont très personnelles.* *Kwa muda hii, ningeli penda ni ku ulize swali ya matukio ao mambo isiyo furahisha, yenye ilikufikiyaka ao ulionaka peke yako. Nina juwa kama moja wapo za swali hizo, ni za kipekee. Hata hivyo, jibu zako, zita tusaidiya ku juwa zaidi kuhusu hali na uk*	
1201	*Some people think that violence is a way to punish a person who did something that is considered wrong. What is your opinion concerning the following statements:* There are times when a woman deserves to be beaten *Il y a des gens qui pensent que la violence est une façon de punir une personne qui a fait quelque chose qui est considérée comme mal. Quelle est votre opinion sur les affirmations suivantes :* Il y a des situations quand la femme doit être battu Kuna watu ambao wana waza kama ubakaji ni njia ya ku sahihisha mtu ambaye alifanya kitu fulani yenye ina kamatika sawa iko mubaya. Ni nini maoni yako kuhusu hali hizi: Kuna wakati mwanamuke anastahili kupigwa	Y/N
1202	A woman should tolerate violence to keep her family together Une femme doit tolérer la violence pour préserver l'unité de sa famille. Mwanamke anapashwa vumiliya ubakaji ama uvurugu ju ya ku chunga ustawi wa jamii ao kitengo cha jamii.	Y/N
1203	It is normal that a man beats his wife if she is unfaithful C'est normal qu'un homme batte sa femme si elle lui est infidèle. Ni kawaida mwanaume kumpiga bibi yake kama haiko mwaminifu kwake.	Y/N
1204	It is normal if a parent beats a girl if she is getting pregnant outside of marriage C'est normal qu'un parent batte une fille si elle tombe enceinte hors du mariage. Ni kawaida mzazi a pige binti yake kama ana beba mimba inje ya ndoa.	Y/N
1205	It is normal if a man beats his wife if she doesn't want to have sex with him	Y/N

	Un homme peut battre sa femme si elle ne veut pas avoir de rapports sexuels avec lui. Mwanaume anaweza piga bibi yake kama hapendi kufanya kitendo cha ndoa naye.	
1206	If someone insults a man he must defend his reputation using violence if needed Si quelqu'un insulte un homme, il doit défendre sa réputation par la force si nécessaire. Kama mtu fulani anatukana mwanaume, ana pashwa kuteteya sifa zake kwa kingufu iki wezekana.	Y/N
1207	If a person wastes money it is normal that he/she is beaten Si une personne gaspille de l'argent, c'est normal qu'elle soit battue. Kama mtu ana tumikisha vibaya pesa, ni kawaida apigwe.	Y/N
1208	If a man beats his wife it is a private matter that should not be discussed outside of the couple Le fait qu'un homme fasse usage de violence contre sa femme est une question privée qui ne doit pas être discutée hors du couple. Ukweli ni kwamba, kama mwanaume ana tumikisha ubakaji yani ngufu zidi ya bibi yake nyumbani, ile ni swala la kipekee ambalo haliwezi ku husisha wa inje ya ndoa.	Y/N
1209	It is normal that a man beats his wife if she goes out without telling him Un homme peut battre sa femme si elle sort sans lui dire Mwanaume anaweza piga muke wake kama ametoka bila kumuelezeya	Y/N
1210	It is normal that a man beats his wife if she argues with him Un homme peut battre sa femme si elle discute avec lui Mwanaume anaweza piga muke wake kama anamujibiya	Y/N
1211	It is normal that a man beats his wife if she neglects the children Un homme peut battre sa femme si elle néglige les enfants Mwanaume anaweza piga muke wake kama aangaikiye watoto	Y/N
1212	It is normal that a man beats his wife if she burns the food Un homme peut battre sa femme si elle brûle la nourriture Mwanaume anaweza piga muke wake kama analunguza chakula	Y/N
1213	Since you were 15 years old has anybody slapped, beaten, kicked you or did anything else to hurt you physically? Depuis l'âge de 15 ans, quelqu'un vous a-t-il tapé(e), giflé(e), donner des coups de pieds ou fait quelque chose d'autre pour vous faire mal physiquement ? Tangu miaka 15, kuna mutu yeyote ambaye alikupigaka, kupigwa kofi, mlati ao kuzulumu ya vibaya mwilini?	Y/N
1214	Who did hurt you? Qui vous a battu de la sorte ? Nani aliweza kupiga kama hivyo?	|____________|

	1	*Current partner (f)*	*Partenaire actuelle / femme / copine (f)*	*Mcumba wa leo aobibi wa sasa*
	2	*Current partner (m)*	*Partenaire actuel / mari / copain (m)*	*Mcumba wa sasa ao mume*
	3	*Former partner/spouse (f)*	*Ancien partenaire / femme / copine (f)*	*Mcumba/bibi wa zamani*
	4	*Former partner/spouse (m)*	*Ancien partenaire / mari / copain (m)*	*Mcumba/mume wa zamani*
	5	*Mother/mother in law*	*Parent /beau-parent (f)*	*Mama*
	6	*Father/father in law*	*Parent /beau-parent (m)*	*Baba*
	7	*Sister*	*Soeur*	*Dada*
	8	*Brother*	*Frère*	*Kaka*
	9	*Other family member (f)*	*Autre membre de la famille (f)*	*Mwingine mama wa jamaa*
	10	*Other family member (m)*	*Autre membre de la famille (m)*	*Mwingine baba wa jamaa*
	11	*Religious sister*	*Soeur religieuse/leader religieux (f)*	*Mapera ao mama mchungaji*
	12	*Religious leader (m)*	*Prêtre/leader religieux (m)*	*Padiri ao mwingine mkubwa wa kanisa*
	13	*Neighbour (f)*	*Voisine (f)*	*Jirani muke*
	14	*Neighbour (m)*	*Voisin (m)*	*Jirani mume*
	15	*Friend, family friend (f)*	*Amie de la famille (f)*	*Rafiki wa jamaa mwanamuke*
	16	*Friend, family friend (m)*	*Ami de la famille (m)*	*Rafiki wa jamaa mwanaume*
	17	*Mother in-law*	*Beau-parent (parent de votre époux/se) (f)*	*Mamukwe*
	18	*Father in-law*	*Beau-parent (parent de votre époux/se) (m)*	*Bamukwe*
	19	*Unknown*	*Inconnue*	*Mwanamuke mwingine mwenyi aujuwi*
	20	*Unknown*	*Inconnu*	*Mwanaume mwingine mwenyi aujuwi*
	21	*Other in-law (f)*	*Autre membre de votre belle- famille (famille de votre époux/se) (f)*	*Mwingine mwanamuke ndugu ya muke ao mume wako*
	22	*Other in-law (m)*	*Autre membre de votre belle- famille (famille de votre époux/se) (m)*	*Mwingine mwanaume ndugu ya mume ao muke wako*

	23	*Teacher (f)*	*Enseignante (f)*	*Mwalimu mwanamuke*	
	24	*Teacher (m)*	*Enseignant (m)*	*Mwalimu mwanaume*	
	25	*Employer/ other employee/worker (f)*	*Employeur / quelqu'un au travail (f)*	*Mkubwa wa kazi ao mutu mwingine kukazi(mwanamuke)*	
	26	*Employer/ other employee/worker (m)*	*Employeur / quelqu'un au travail (m)*	*Mkubwa wa kazi ao mutu mwingine kukazi(mwanaume)*	
	27	*Police (f)*	*Police (f)*	*Polisi(mwanamuke)*	
	28	*Police (m)*	*Police (m)*	*Polisi(mwanaume)*	
	29	*Soldier (f)*	*Soldat/ personne armée (f)*	*Jeshi ao mutu mwenyi kuwa na silaa(mwanamuke)*	
	30	*Soldier (m)*	*Soldat/ personne armée (m)*	*Jeshi ao mutu mwenyi kuwa na silaa(mwanaume)*	
	31	*Community leader (f)*	*Leader communautaire (f)*	*Mkubwa mu mungin i wamwanamuke*	
	32	*Community leader (m)*	*Leader communautaire (m)*	*Mkubwa mu mungini mume*	
	33	*Other woman:*	*Autre femme :__*	*Mwengine mwanamuke (taja) :__*	
	34	*Other man:*	*Autre homme :__*	*Mwangine mwanaume*	
	35	*Other pupil at school (f)*	*Autre élève à l'école (f)*	*Mwanafunzi binti*	
	36	*Other pupil at school (m)*	*Autre élève à l'école (m)*	*Mwanafunzi kijana*	
1215	Other (specify) Autre (préciser) Ingine (eleza)				|____________|
1216	Did this happen in the past 12 months? Cela s'est-il produit dans les 12 derniers mois ? Je imepitikana katika miezi 12 zilio pita?				Y/N
1217	What exactly happened: someone… Qu'est-ce qui s'est vraiment passé: quelqu'un vous a… Je nini ime pitikana kabisa: ulemutu ame… (multiple answers possible)				|____________|

	1 *Slapped you* | *Giflé* | *Amekusukuma* 2 *Pushed or shoved you* | *Poussé ou bousculé* | *Kupiga ngumi ama nakitu kya nguvu* 3 *Hit you with a fist or something hard* | *Frappé avec son poing ou quelque chose de dur* | *Kipasi* 4 *Kicked you* | *Donné coups de pied* | *Amakukota nyele* 5 *Hurt you by pulling your hair* | *Blesser en tirant vos cheveux* | *Pima kuku funga pumuzi* 6 *Slammed you against something* | *Claquée contre quelque chose* | *Kukupiga mubaya* 7 *Tried to hurt you by choking or suffocating you* | | *Kukulunguza* 8 *Beat you.* | *Battu* | *Ku tumiya kisu ama*	
1218	In the past 12 months, how many times did this happen? Au cours de 12 derniers mois, combien de fois cette / ces personne(s) vous ont-elles battu(e)? Je, mambo kama haya, yali kutokeya mwa hii miezi 12 zilizo pita ? 1 *Often* | *Souvent* | *Mara mingi* 2 *Sometimes* | *Parfois* | *Wakati mwengin* 3 *Only once* | *Seulement une fois* | *Mara moja*	|__________|
1219	Last time this happened, did you talk to someone about it? La dernière fois que cela est arrivé, en avez-vous parlé à quelqu'un ? Je, uliwayi yi eleza kwa mtu yoyote?.	Y/N
1220	If yes, with whom? Si oui, à qui? Kama "ndiyo", kwa nani? 1 *Current partner* | *Partenaire actuel / mari / copain ou copine* | *Mcumba wa leo* 2 *Former partner/spouse* | *Ancien partenaire / mari / copain ou copine* | *Mcumba wa zan* 3 *Parent* | *Parent* | *Mzazi ao* 4 *Sister/brother* | *Sœur / frère* | *Dada ao kaka* 5 *Son/daughter* | *Fille / fils* | *Mtoto muke ao mume* 6 *Other family member* | *Autre membre de la famille* | *Mwingine mtu w jamaa* 7 *Religious leader* | *Prêtre/leader religieux* | *Padiri ao mwing mkubwa wa kan* 8 *Neighbour* | *Voisine /voisin* | *Jirani* 9 *Friend, family friend* | *Ami / ami de la famille* | *Rafiki wa jamaa*	|__________|

	10	*Parent in-law*	*Beau-parent (parent de votre époux/se)*	*Wamukwe*	
	11	*Unknown*	*Inconnu*	*Mwingine mutu mwenyi aujuwi*	
	12	*Other in-law*	*Autre membre de votre belle- famille (famille de votre époux/se)*	*Mwingine ndugu wa muke ao mume wako*	
	13	*Teacher*	*Enseignant*	*Mwalimu*	
	14	*Employer/ other employee/worker*	*Employeur / quelqu'un au travail*	*Mkubwa wa kazi ao mutu mwingine kukazi*	
	15	*Police*	*Police*	*Polisi*	
	16	*Soldier*	*Soldat/ personne armée*	*Jeshi ao mutu mwenyi kuwa na silaa*	
	17	*Community leader*	*Leader communautaire*	*Mutu mkubwa mu mungini*	
	18	*Friend, girl-/boyfriend*	*Ami(e) /copain (ine)*	*Rafiki*	
1221	Other (specify) Autre (préciser) Ingine (eleza)				|____________|
1222	What were you advised to do by this person? Qu'est-ce que cette ou ces personne(s) vous a (ont) conseillé de faire ? Mtu huyu uliye elezeya, shauri gani amekutoleya ?				|____________|
	1	*Do nothing*	*Ne rien faire*	*Kusitofanya kitu*	
	2	*Go to the health facility*	*Aller au centre de santé/aller voir un professionnel de santé*	*Kuenda kukituo y afya ama mutumikiyaji mu*	
	3	*Go to see chw*	*Aller voir l'agent de santé communautaire*	*Kuenda kuona rel communautaire*	
	4	*Go to the police*	*Aller à la police*	*Kwenda ku polisi*	
	5	*Go to an organisation/ngo*	*Aller à une association/ ong*	*Kwenda ku mukut ao ong*	
	6	*Go to see family elders*	*Aller voir les anciens de la famille*	*Kwenda ona washamuka wa jamaa*	
	7	*Go to see village headman*	*Aller voir le chef du village/le leader local*	*Kwenda ona chef kijiji*	

No.	Code	English	French	Swahili	
	8	*Go to see a priest/religious leader*	*Aller voir un prêtre/leader religieux*	*Kwenda ona padiri ao mkubwa wa kanisa ingine*	
	9	*Go to see family of perpetrator*	*Aller voir la famille de l'auteur*	*Kwenda ona jamaa ya mwenyi alitenda ayo*	
	10	*Go to see my family*	*Aller voir ma famille*	*Kwenda ona jamaa yangu*	
	11	*Go to see my family*	*Aller voir mes amis*	*Kwenda warefiki yangu*	
1223	Other (specify) Autre (préciser) Ingine (eleza)				|__________|
1224	Where did you to to get help, support or care? Ou êtes-vous allé pour recevoir de l'aide ? Je, uliwayi endeya wapi ili upate msada yoyote kwa hii jehuri?				|__________|
	1	*None*	*Nulle part*	*Akuna fasi*	
	2	*Go to the health facility*	*Aller au Centre de santé/aller voir un professionnel de santé*	*Kuenda ku kituo k afya ao kwa munganga*	
	3	*Go to see CHW*	*Aller voir l'agent de santé communautaire/le relais communautaire*	*Kuenda kuona rel communautaire*	
	4	*Go to the police*	*Aller à la police*	*Kwenda ku polisi*	
	5	*Go to an organisation/NGO*	*Aller à une association/ ONG*	*Kwenda ku mukut ao ONG*	
	6	*Go to see family elders*	*Aller voir les anciens de la famille*	*Kwenda ona washamuka wa jamaa*	
	7	*Go to see village headman*	*Aller voir le chef du village/le leader local*	*Kwenda ona chef kijiji*	
	8	*Go to see a priest/religious leader*	*Aller voir un prêtre/leader religieux*	*Kwenda ona padi ao mkubwa wa ka ingine*	
	9	*Go to see family of perpetrator*	*Aller voir la famille de l'auteur*	*Kwenda ona jama ya mwenyi alitend ayo*	
	10	*Go to see my family*	*Aller voir ma famille*	*Kwenda ona jama yangu*	
	11	*Go to see my family*	*Aller voir mes amis*	*Kwenda warefiki yangu*	

1225	Other (specify) Autre (préciser) Ingine (eleza)	|____________|
1226	Has anybody ever embraced or touched you or made you touch him/her in a way that you didn't want? Quelqu'un vous a-t-il déjà embrassé ou touché ou vous a fait le/la toucher d'une manière que vous ne vouliez pas? Je, uliwayi gusiwa, busiwa ama kumbatiwa kwa hali isiyo kufurahisha?	Y/N
1227	Has anyone ever forced you physically or threatened you in order to have sexual intercourse with you when you didn't want? Quelqu'un vous a-t-il déjà forcé physiquement or using intimidation à avoir des rapports sexuels alors que vous ne le vouliez pas? Kuko mutu mwenye alishaka kukaza kimwili ku fanya kitendo cha ndoa ijapokuwa hauku kuwa na itaka?	Y/N
1228	Who forced you in this way? Qui vous a forcé(e) de cette façon? Nani mwenye alikukaza kwa namna ile?	|____________|

1	*current partner (F)*	*Partenaire actuelle / femme / copine (F)*	*Mcumba wa leo a wa sasa*
2	*current partner (M)*	*Partenaire actuel / mari / copain (M)*	*Mcumba wa sasa mume*
3	*Former partner/spouse (F)*	*Ancien partenaire / femme / copine (F)*	*Mcumba/bibi wa*
4	*Former partner/spouse (M)*	*Ancien partenaire / mari / copain (M)*	*Mcumba/mume w zamani*
5	*mother/mother in law*	*Parent /beau-parent (F)*	*Mama*
6	*father/father in law*	*Parent /beau-parent (M)*	*baba*
7	*sister*	*Soeur*	*Dada*
8	*brother*	*Frère*	*Kaka*
9	*Other family member (F)*	*Autre membre de la famille (F)*	*Mwingine mama jamaa*
10	*Other family member (M)*	*Autre membre de la famille (M)*	*Mwingine baba w jamaa*
11	*religious sister*	*Soeur religieuse/leader religieux (F)*	*Mapera ao mama mchungaji*
12	*religious leader (M)*	*Prêtre/leader religieux (M)*	*Padiri ao mwingi mkubwa wa kanis*
13	*neighbour (F)*	*Voisine (F)*	*Jirani muke*

	14	*neighbour (M)*	*Voisin (M)*	*Jirani mume*	
	15	*Friend, family friend (F)*	*Amie de la famille (F)*	*Rafiki wa jamaa mwanamuke*	
	16	*Friend, family friend (M)*	*Ami de la famille (M)*	*Rafiki wa jamaa mwanaume*	
	17	*Mother in-law*	*Beau-parent (parent de votre époux/se) (F)*	*Mamukwe*	
	18	*Father in-law*	*Beau-parent (parent de votre époux/se) (M)*	*Bamukwe*	
	19	*unknown*	*Inconnue*	*Mwanamuke mwingine mwenyi aujuwi*	
	20	*unknown*	*Inconnu*	*Mwanaume mwingine mwenyi aujuwi*	
	21	*Other in-law (F)*	*Autre membre de votre belle- famille (famille de votre époux/se) (F)*	*mwingine mwanamuke ndugu ya muke ao mume wako*	
	22	*Other in-law (M)*	*Autre membre de votre belle- famille (famille de votre époux/se) (M)*	*mwingine mwanaume ndugu ya mume ao muke wako*	
	23	*Teacher (F)*	*Enseignante (F)*	*Mwalimu mwanamuke*	
	24	*Teacher (M)*	*Enseignant (M)*	*Mwalimu mwanaume*	
	25	*employer/ other employee/worker (F)*	*Employeur / Quelqu'un au travail (F)*	*Mkubwa wa kazi ao mutu mwingine kukazi(mwanamuke)*	
	26	*employer/ other employee/worker (M)*	*Employeur / Quelqu'un au travail (M)*	*Mkubwa wa kazi ao mutu mwingine kukazi(Mwanaume)*	
	27	*police (F)*	*Police (F)*	*Polisi(mwanamuke)*	
	28	*police (M)*	*Police (M)*	*Polisi(mwanaume)*	
	29	*soldier (F)*	*Soldat/ personne armée (F)*	*Jeshi ao mutu mwenyi kuwa na silaa(mwanamuke)*	
	30	*soldier (M)*	*Soldat/ personne armée (M)*	*Jeshi ao mutu mwenyi kuwa na silaa(mwanaume)*	
	31	*Community leader (F)*	*Leader communautaire (F)*	*Mkubwa mu mungin I wamwanamuke*	

	3 2 Community leader (M) / *Leader communautaire (M)* / *Mkubwa mu mungini mume* *3 3 Other (specify):* / *Autre (préciser svp):_____* / *Mwengine mwanamuke (taja) :__* *3 4 Other pupil at school (F)* / *Autre élève à l'école (F)* / *Mwanafunzi binti* *3 5 Other pupil at school (M)* / *Autre élève à l'école (M)* / *Mwanafunzi kijana*	
1229	Other (specify) Autre (préciser) Ingine (eleza)	|___________|
1230	How many times did this happen? Combien de fois cela est-il arrivé? Jambo kama hilo, lilikufikiya namna gani ama mara ngapi? *1 Often* / *Souvent* / *Mara mingi* *2 Sometimes* / *Parfois* / *Wakati mwengin* *3 Only once* / *Seulement une fois* / *Mara moja*	|___________|
1231	Was this in the past 12 months? Cela s'est-il passé au cours des 12 derniers mois? Ile ili pitikana katika miezi 12 ilio pita?	Y/N
1232	At what age did this happen to you for the first time? Quel âge aviez-vous la première fois que cela vous est arrivé? Je, ulikuwa na myaka ngapi wakati iliyo kufikiya?	|___________|
1233	When it happened the first time, did you talk to someone about it? La première fois que cela vous est arrivé, avez-vous parlé à quelqu'un de ce qui s'est passé ? Wakati ulio ufikia mara ya kwanza uliongeya na mutu fulani kuhusu byenye bilipitikana ?	Y/N
1234	Last time it happened, did you talk to someone about it? La dernière fois que cela s'est passé, avez-vous parlé à quelqu'un ? Ni miaka ngapi ulikuwa nayo kwa jehuri hilo la kwanza ya mambo kama hiyo?	Y/N
1235	If yes, with whom? Si oui, avec qui ? Si oui, ni nani? *1 current partner* / *Partenaire actuel / mari / copain ou copine* / *Mcumba wa leo* *2 Former partner/spouse* / *Ancien partenaire / mari / copain ou copine* / *Mcumba wa zama*	|___________|

	3 parent — *Parent* — *Mzazi ao* *4 sister/brother* — *Sœur / frère* — *Dada ao kaka* *5 son/daughter* — *Fille / fils* — *Mtoto muke ao mume* *6 Other family member* — *Autre membre de la famille* — *Mwingine mtu wa jamaa* *7 religious leader* — *Prêtre/leader religieux* — *Padiri ao mwingine mkubwa wa kanisa* *8 neighbour* — *Voisine /voisin* — *Jirani* *9 Friend, family friend* — *Ami / ami de la famille* — *Rafiki wa jamaa* *10 Parent in-law* — *Beau-parent (parent de votre époux/se)* — *Wamukwe* *11 unknown* — *Inconnu* — *Mwingine mutu mwenyi aujuwi* *12 Other in-law* — *Autre membre de votre belle- famille (famille de votre époux/se)* — *Mwingine ndugu wa muke ao mume wako* *13 Teacher* — *Enseignant* — *Mwalimu* *14 employer/ other employee/worker* — *Employeur / Quelqu'un au travail* — *Mkubwa wa kazi ao mutu mwingine kukazi* *15 police* — *Police* — *Polisi* *16 soldier* — *Soldat/ personne armée* — *Jeshi ao mutu mwenyi kuwa na silaa* *17 Community leader* — *Leader communautaire* — *Mutu mkubwa mu mungini* *18 Friend, girl-/boyfriend* — *Ami(e) /copain (ine)* — *Rafiki*	
1236	Other (specify) Autre (préciser) Ingine (eleza)	|_____________|
1237	What did this person advise you to do? Qu'est-ce que cette ou ces personne(s) vous a (ont) conseillé de faire? Mtu huyu uliye elezeya, shauri gani amekutoleya? *1 do nothing* — *Ne rien faire* — *Kusitofanya kitu* *2 go to the health facility* — *Aller au Centre de santé/aller voir un professionnel de santé* — *Kuenda kukituo y afya ama mutumikiyaji mu* *3 go to see CHW* — *Aller voir l'agent de santé communautaire* — *kuenda kuona rel communautaire* *4 go to the police* — *Aller à la police* — *Kwenda ku polisi* *5 go to an organisation/NGO* — *Aller à une association/ ONG* — *Kwenda ku mukut ao ONG*	|_____________|

	6	*go to see family elders*	*Aller voir les anciens de la famille*	*Kwenda ona washamuka wa jamaa*	
	7	*go to see village headman*	*Aller voir le chef du village/le leader local*	*Kwenda ona chefu ya kijiji*	
	8	*go to see a priest/religious leader*	*Aller voir un prêtre/leader religieux*	*Kwenda ona padiri ao mkubwa wa kanisa ingine*	
	9	*go to see family of perpetrator*	*Aller voir la famille de l'auteur*	*Kwenda ona jamaa ya mwenyi alitenda ayo*	
	10	*go to see my family*	*Aller voir ma famille*	*Kwenda ona jamaa yangu*	
	11	*go to see my family*	*Aller voir mes amis*	*Kwenda warefiki yangu*	
1238	Other (specify) Autre (préciser) Ingine (eleza)				|____________|
1239	Where did you go to receive support? Ou êtes-vous allé pour recevoir de l'aide ? Je, uliendeya wapi ili upate suluhisho kwa magumu yako?				|____________|
	1	*nowhere*	*Nulle part*	*Akuna fasi*	
	2	*go to the health facility*	*Aller au Centre de santé/aller voir un professionnel de santé*	*Kuenda ku kituo k afya ao kwa munganga*	
	3	*go to see CHW*	*Aller voir l'agent de santé communautaire/le relais communautaire*	*Kuenda kuona rel communautaire*	
	4	*go to the police*	*Aller à la police*	*Kwenda ku polisi*	
	5	*go to an organisation/NGO*	*Aller à une association/ ONG*	*Kwenda ku mukut ao ONG*	
	6	*go to see family elders*	*Aller voir les anciens de la famille*	*Kwenda ona washamuka wa jamaa*	
	7	*go to see village headman*	*Aller voir le chef du village/le leader local*	*Kwenda ona chef kijiji*	
	8	*go to see a priest/religious leader*	*Aller voir un prêtre/leader religieux*	*Kwenda ona padi ao mkubwa wa ka ingine*	

	9 go to see family of perpetrator *Aller voir la famille de l'auteur* *Kwenda ona jamaa ya mwenyi alitenda ayo* *10 go to see my family* *Aller voir ma famille* *Kwenda ona jamaa yangu* *11 go to see my family* *Aller voir mes amis* *Kwenda warefiki yangu*	
1240	Other (specify) Autre (préciser) Ingine (eleza)	|___________|
1241	What additional support/care would you have needed? De quel soutien supplémentaire auriez-vous eu besoin/auriez-vous souhaité ? Uli kuwa na haja ya msaada wanamna gani ya zaidi?	|___________|
	(if responent is a man): *I have some additional questions regarding violence, which could have occurred between you and your partner/wife. Please answer freely, we would like to better understand men's views and actions. Remember that all information is confidential* *(si répondant est un homme* *J'aurais quelques questions supplémentaires par rapport à des violences qui auraient eu lieu entre vous et votre copine, partenaire ou femme actuelle ou ancienne. Répondez librement, nous souhaitons en savoir plus sur les hommes* *(si le répondant est un garcon) :* *tafazali xx*	
1242	Did it ever happen to you that you yourself beat, slapped, kicked, or did anything else to hurt your current or former partner physically? Est-ce qu'il vous est déjà arrivé de battre, de gifler, de donner des coups de pied ou de faire quelque chose d'autre avec l'intention de physiquement blesser votre dernière ou actuelle épouse, partenaire ou même une autre femme ? Je, iliwayi kufikiya piga kofi, ngumi kipasi, mlati ama namna ingine, na ku mu umiza kwa utashi ama bisarani, mpenzi wako wa sasa, kama vile wa zamani ao mama wa ndoa ?	Y/N
1243	Have you ever been physically attacked or threatened by this woman before this happened? Aviez-vous été menacé ou physiquement attaqué par cette femme juste avant que cela se produise? Ni huu bibi ndiye alikushambuliya ama alikuanzishiya ugonvi ?	Y/N
1244	Which consequences did your actions have? Ces actions ont-elles eu des conséquences?	|___________|

	Mambo kama haya, zilikuwa na vinyume vyayo? *1 None — Aucune — Akuna* *2 Compensation payment to the girls'family — Le paiement d'une compensation à la famille de la fille — Kulipa sehemu na kwa jamii ya musi uo* *3 Beatings — Des coups — Ma ngumi* *4 Call or see the police — Appel/visite de la police — Polisi* *5 Court — Cour de justice — Korti kuu*	
1245	Other (specify) Autre (préciser) Ingine (eleza)	|___________|
1246	Thinking about the last time it happened, how could you have avoided the violence? En pensant à la dernière fois que cela s'est produit, comment la violence aurait-elle pu être évitée ? Ikiwa unawaza maraya mwisho hali kamaa iyi imefika namna gani ungovi uu ungeweza kuepukiwa?	|___________|
1247	Have you ever forced your current or former partner to have sex with you when she didn't want? Avez-vous déjà forcé votre partenaire actuelle ou/ précédente ou une autre fille/femme à avoir des rapports sexuels alors qu'elle ne voulait pas ? Je, ulishaka wayi kukaza ki mapenzi muke ama rafiki wako muke wa sasa kama wa zamani kitendo cya ndoa na hafurahishwe wala haitaki?	Y/N
1248	Which consequences did your actions have? Ces actions ont-elles eu des conséquences? Je maneno aya yalikuwa na vinyume? *1 none — Aucune — Akuna* *2 compensation payment to the girls'family — Le paiement d'une compensation à la famille de la fille — Kulipa sehemu na kwa jamii ya musi uo* *3 beatings — Des coups — Ma ngumi* *4 call or see the police — Appel/visite de la police — polisi* *5 court — Cour de justice — Korti kuu*	|___________|
1249	Other (specify) Autre (préciser) Ingine (eleza)	|___________|
	(if responent is a woman):	

	I have some additional questions regarding violence, which could have occurred between you and your partner/spouse. Please answer freely, we would like to better understand men's views and actions. Remember that all inform *(si répondant est une femme,)* *J'aurais quelques questions supplémentaires par rapport à des violences qui auraient eu lieu entre vous et votre copain, partenaire ou mari actuelle ou ancien. Répondez librement. Souvenez-vous que toutes les informations* *(si le répondant est une femme):* *Tafazali dada, nina swali zingine zinaelekeya mivurugo ama matatizo zilizo fika katiyako na rafiki ao mume wako ama bwana yako wa sasa kama wa zamani. Jibiya kwa ukimya, bila wasiwasi ama wooga yoyote. Jibu zako ni za lazima na zitalindwa kwa siri.*	
1251	Did it ever happen to you that you yourself beat, slapped, kicked, or did anything else to hurt your current or former partner physically? Est-ce qu'il vous est déjà arrivé de battre, de gifler, de donner des coups de pied ou de faire quelque chose d'autre avec l'intention de physiquement blesser votre dernière ou actuelle époux, partenaire ou même un autre homme? Je, iliwayi kufikiya piganisha, ama kupiga kofi, ngumi, mlati, kuluma, ku coma ama namna ingine, na ku mu umiza kwa utashi na mpangiliyo ya kumu komesha "mume" iwe mume wako ama mwanaume mwengine?	Y/N
1252	Have you been threatened or physically attacked by this man before it happened? Aviez-vous été menacé ou physiquement attaqué par cet homme juste avant que cela se produise? Uliwayi shambuliwa ama ku fuatiwa u umizwe kimwili na huyu bwana mbele ibi bitokeye?	Y/N
1253	Which consequences did your actions have? Ces actions ont-elles eu des conséquences? Mambo kama haya, ili kuzaliya vinyume? *1 none — Aucune — Akuna* *2 compensation payment to the man's 'family — Le paiement d'une compensation à la famille du garçon/ homme — Kulipa sehemu na kwa jamii ya musi uo* *3 beatings — Des coups — Ma ngumi* *4 call or see the police — Appel/visite de la police — polisi* *5 court — Cour de justice — Korti kuu*	|__________|

1254	Other (specify) Autre (préciser) Ingine (eleza)	
1255	Thinking about the last time it happened, how could you have avoided the violence? En pensant à la dernière fois que cela s'est produit, comment la violence aurait-elle pu être évitée? Ewe dada, ukifikiriya mara ya mwisho iliyo kufikija, namna gani ujehuri iyo ungeliepukiwa?	
	The interview is now finished. Thank you very much for your time and collaboration. Nous avons terminé l'entretien. Merci beaucoup de nous avoir accordé votre temps et votre collaboration Tunamaliza maongezi	
1256	Do you have any comments, or questions that you would like to pose? Avez-vous vous-même des commentaires à faire ou des questions à poser? Kukoulizo ama bya kuongeza	Y/N
1257	Interviewer's comments: Commentaires de l'enquêteur/ l'enquêtrice : Commentaires de l'enquêteur/ l'enquêtrice :	
1258	GIS Données GIS Données GIS	
1259	Please, provide any additional comments you would like to share Avez-vous des commentaires ou des questions? Tafadhali, ongeza maoni mengine zaidi ungependa tuyajue.	
	Section 13. Wealth ranking by interviewer **Section 13. Classement de la richesse par l'enquêteur** **Section 13. Classement de la richesse par l'enquêteur**	
1301	Housing: Logement Nyumba *1* *Mud house, tin roof ,makuti, grass* — *Maison en boue, toit en tôle, makuti, herbe* — *nyumba ya udongo, paa la bati, makuti, nyasi* *2* *Mud house, iron sheet (mabati) roof* — *Maison en boue, en toit tôle de fer (Mabati)* — *Nyumba ya udongo, paa la mabati* *3* *Brick house, plastered walls, cemented foundation* — *maison de briques, murs en plâtre, fondation cimenté* — *nyumba ya matofali, kuta za simiti, msing wa simiti*	

1302	Security Sécurité Hali ya usalama 1 *Absent or weak doors or windows* — *Absent ou portes faibles ou des fenêtres absents* — *Haina milango au dirisha au ni mabovu* 2 *Wooden doors and windows with broken glass* — *Portes et fenêtres en bois avec verre cassé* — *Milango za mbao na vioo vya madirisha zimepasuka* 3 *Steel door, glass windows, watchman or fence* — *Porte en acier, fenêtres en verre, gardien ou une clôture* — *Milango za chuma, v va madirisha, mlinzi ua.*	|__________|
	Section 14. Remarks **Section 14. Remarques** **Section 14. Remarques**	
1401	Did the respondent become tired or impatient during the interview? Est-ce que l'interviewé devient fatigué ou impatient lors de l'entrevue? Je, muhojiwa alipata kuchoka ao kukasirika wakati wa mazungumuzo ?	Y/N
1402	How reliable do you think is the information given by the respondent? Quelle est la fiabilité de l'information donnée par le répondant? Unafikiria ni kiwango gani majibu ya mhojiwa yalikuwa yakuaminika ? 1 *not at all* — *pas du tout* — *hapana hata kidogo* 2 *somewhat* — *quelque peu* — *kiasi fulani* 3 *very much* — *beaucoup* — *sana*	|__________|
1403	Please, provide any additional comments about the interview S'il vous plaît, fournir des commentaires supplémentaires au sujet de l'entrevue Sema neno chache kuusu maongezi iyo	|__________|
1404	Time survey end Fin de l'enquête Mwisho	|__________|

Annex 4. Qualitative guide

Bonjour….. je suis étudiante entrain de faire mon PhD sur l'implication des hommes dans la santé maternelle et la nutrition des enfants dans le cadre du Projet Mawe tatu, qui a 3 volets : emancipation des femmes à travers les AVEC, sensibilisation et engagement des hommes au travers des Baraza Badirika et l'éducation sexuelle complète. Dans cette étude nous n'allons pas beaucoup nous intéresser à l'aspect des jeunes. Mais nous allons receuillir vos avis et perceptions sur les differents aspects qui entre en jeu lorsqu'on parle du genre, des rôles des hommes et des femmes, de la santé maternelle et infantile… Avant de continuer nous allons vous demander votre autoristation, nous allons lire ensemble ou pour vous le formulaire de consentement afin que chacune/chacun donne son approbation en signant cette feuille.

1. Identité et présentation mutuelle, Age
2. Statut matrimonial ou de relation
3. Etes-vous membre d'une AVEC ? de quoi parlez-vous dedans ?
4. Combien d'enfants avez-vous
5. Pouvez-vous décrire un bon homme ou une bonne femme ici dans votre milieu ?
6. Dans votre société, à la maison, dans la communauté, pouvez-vous nous dire quels sont les rôles spécifiques aux femmes et aux hommes dans votre société ? Quels sont les rôles des femmes et des hommes ? Comment jugez-vous cette répartition des tâches ? Cette répartition est-elle juste, équitable ou bien il y a certains qui sont privilégié en termes de statut, d'énergie à fournir
7. Selon vous quels sont les éléments qui entrent dans la santé de la mère ? santé de la maman ? Comment jugez-vous la santé de la mère en général dans votre communauté ? Selon vous

est-elle bonne ? Si oui, pourquoi / comment ? Sinon, pourquoi pas ? Quels problèmes voyez-vous ?

8. Est-ce que les maris ont des responsabilités et/ou un rôle à jouer dans cette santé ? quels rôles ?
9. Selon vous leur implication peut-il ou bien a-t-il un effet positif ou négatif ? dans quel sens/ (si c'est un homme votre implication a-t-il)
10. Comment jugez-vous la santé des enfants en général dans votre communauté. Qui s'en occupe ? (Sondez…)
11. si vous pensez au *Baraza Badirika* avant l'inclusion de votre mari et après son inclusion, remarquez-vous des différences (dans le groupe, dans votre mariage/relation, dans votre ménage, dans la communauté, avec les enfants) ?
12. (Sondez pour spécification/selon les réponses…Si oui, quels types de différence. Est-ce que vous avez des conversations / discussions avec votre époux ? Si oui, quand ? Si vous voulez discuter quelque chose, avez-vous un moment/activité spécifique quand/pendant que vous avez des discussions entre vous ?)
13. Est-ce que vous discutez la santé avec votre époux ? (Sondez : Si oui, la santé de qui ? Les enfants ? Votre époux/épouse ? Des autres membres de la famille ?)
14. Quels sont les sujets de santé que vous discutez normalement avec votre époux ? parlez-vous de votre santé de la PF ou de l'utilisation des services de santé maternelle CPN, CPS, PF, de la santé des enfants ?
15. Pourquoi est-ce que vous discutez la santé de … avec votre époux ? (Sondez : voyez si c'est seulement pour les raisons de l'argent/frais, permission d'aller au centre de santé, opinions sur traitements, etc etc)
16. Lorsque vous êtes enceinte votre mari vous aide-t-il dans certaines tâches ou bien c'est la même chose que vous soyez enceinte ou non ? Comment trouvez-vous son attitude ?

(Sondez : attitudes des autres maris dans la communauté ? Voyez-vous des maris dans la communauté qui se portent différemment ?) Que proposeriez-vous-vous ?

17. Est-ce que vous avez l'opportunité d'exprimer votre avis à la maison? Si oui, sur quels sujets ? Est-ce que votre mari sollicite votre opinion ? Si oui, sur quels sujets ? Sinon, pourquoi pas ?
18. Au cas où il vous arrive d'exprimer votre avis, votre mari le considère-t-il ? en matière de santé ? Qu'est ce qui reste blocage et qu'est ce qui favorise que vous ne soyez écouté Avez-vous l'impression que sa participation au groupe de réflexion (*Bbaraza Badirika*) et vous au VSLA a un effet sur l'évocation des aspects de santé dans votre couple ou l'implication de votre mari (Si oui, sondez pour des exemples spécifiques ; sinon pourquoi pas ?)
19. Ou accouchez-vous souvent ? pourquoi ? Qui décide où vous allez accoucher ? selon vous est-ce bon ou non ? qui devrait décider ou vous devriez accoucher pourquoi
20. Utilisez les centres de santé et autre services (en dehors de la grossesse? qu'allez-vous y chercher
21. Qui décide de quand vous allez y aller ? Votre partenaire vous-a-t-il déjà accompagné un jour ?
22. Qu'en est-il de la PF ? la pratiquez-vous ? quel est l'avis de votre partenaire ? Vous accompagne-t-il souvent ? Prenez-vous la décision ensemble ? si oui pourquoi, si non pourquoi?
23. Quelles sont les sources d'information pour les gens sur la PF (ils/elles ont confiance en qui ?) Rôles / connaissances des vielles mamans de la PF ?
24. Quelle votre propre expérience ou expériences des autres femmes /hommes dans la communauté/famille avec la PF…spécifiquement les effets secondaires ? Ces expériences ont-elles eu, ou ont-elles une influence sur votre opinion ou décision en termes de PF

Annex 5. Information sheet

Note d'informations – Etude de fin Projet M3 – RDC 2018

Evaluation du projet "Mawe Tatu"

Informations générales

Bonjour! Je m'appelle……………………………………………… et je travaille sur une étude dans le cadre du projet «Mawe Tatu». Ce projet est mis en œuvre par l'ONG CARE en collaboration avec d'autres partenaires, ainsi que le Ministère de la Santé Publique.

Nous évaluons l'efficacité des interventions réalisée dans le cadre du projet Mawe Tatu. Ce projet vise à réduire la violence basée sur le genre, à améliorer la gestion économique des ménages et à promouvoir des comportements sexuels et reproductifs plus sains dans huit territoires du Sud et du Nord Kivu. Cette étude menée au début du projet permettra de mieux comprendre les résultats obtenus et les défis rencontrés. A cet effet, cette étude comprend des entretiens avec des femmes et des hommes âgées de plus de 14 ans avec des jeunes filles et garçons âgés de 10 à 24 ans.

Premièrement, nous allons collecter des données de base auprès des membres d'AVEC, afin d'explorer le niveau socio-économique de ménages, l'autonomisation des femmes et leur connaissances sur la santé sexuelle et reproductive et leur perception et choix en ce qui concerne les méthodes de planification familiale. Nous sommes aussi intéressés à connaître la façon dont l'information est transmise dans les AVEC.

Nous allons également peser et mesurer la taille des enfants âgés de 12 à 59 mois et leur appliquer le bracelet MUAC au tour du bras pour l'évaluation. Si nous trouvons un enfant malnutri sévèrement, nous vous conseillerons de l'amener au Centre de Santé.

Deuxièmement, nous voulons collecter des données de base auprès des hommes, époux des membres des AVEC et/ ou auprès des membres de groupe de réflexion afin d'explorer l'engagement des hommes pour une masculinité positive

Troisièmement, nous voulons collecter des données de base auprès des jeunes filles et garçons afin de mesurer les connaissances en matière de santé sexuelle et reproductive.

A travers cette étude, nous allons interroger plus de 1800 personnes au Nord et au Sud-Kivu (RDC).

Confidentialité

Nous ne révélerons votre identité et informations à personne. Tout ce que vous direz sera traité avec une grande confidentialité et vos données seront codées. Toutes les informations identifiables (par exemple, les noms) seront conservées séparément des données. Le lien entre vos informations identifiables et le numéro de code sera gardé confidentiel par le chercheur principal.

Les résultats de cette recherche seront rédigés dans un rapport où aucun nom ne sera mentionné.

La participation à cette étude est entièrement volontaire. De plus, vous pouvez vous retirer de l'étude à tout moment sans préjudice et seulement les données collectées jusqu'au moment de l'abandon de l'étude seront utilisées.

L'équipe des investigateurs

Cette étude est menée par l'Université de Bâle, en Suisse en collaboration avec les partenaires de la RDC.

La responsable de cette étude est Dr. Sonja Merten (Swiss TPH, Bâle)

Les personnes suivantes font partie de l'équipe de recherche:

Wivine Bapolisi (Université Catholique de Bukavu, Bukavu ; Swiss TPH Bâle)

Financement

Cette étude est financée par le Gouvernement Néerlandais.

Note d'informations – Etude de fin Projet M3 – RDC 2018

L'entretien ne durera pas plus d'une heure. Votre participation à cet entretien est entièrement volontaire.

Ne vous sentez vous pas obligé de répondre à une question qui vous rend mal à l'aise.

L'entretien peut soulever des préoccupations de votre côté. Certaines questions vous mettront peut-être mal à l'aise. Si c'est le cas, vous n'êtes pas obligé d'y répondre et nous pouvons passer à une autre question ou arrêter l'entretien.

Nous ne donnerons pas de compensation financière ou autre pour cette enquête. Il n'y a pas d'avantages directs liés à la participation à cette enquête, mais il peut y avoir des avantages indirects pour votre communauté dans l'avenir. Les informations obtenues via cette étude peuvent aider à identifier les interventions et services à améliorer dans le futur.

Si vous avez d'autres questions au sujet de cette recherche, vous pouvez contacter les personnes suivantes:

Sud-Kivu RDC
Wyvine Bapolisi
Chercheuse Swiss TPH/UCB-ERSP
12A Avenue Mahenge, Ndendere
Bukavu, Sud Kivu, RDC
Tel +243995800961

Suisse
Dr. Sonja Merten
Chef de Projet
Institut Tropical et de Santé Publique Suisse
Bâle, Suisse
Tel: +41 284 83 87
Email: Sonja.merten@unibas.ch

Tathmini ya mradi wa "Mawe Tatu"

Mkuu wa habari

Hello! Jina langu……………niko natumika utafiti "Mawe Tatu". Mradi huu unatekelezwa na CARE NGO kwa kushirikiana na makundi mengine, pamoja na Wizara ya Afya ya Umma.

Sisi tunapenda kuamuwa ufanisi wa hatua kufanyika katika Mawe Tatu. Mradi huu una lengo la kupunguza unyanyasaji wa kijinsia, kuboresha usimamizi wa uchumi wa kaya na kukuza afya tabia ya uzazi na kujamiiana katika nane Kusini na Kivu Kaskazini wilaya. Utafiti huu uliofanywa mapema katika mradi huo kwaajili ya kuelewa matokeo na changamoto. Kwa maana hii, utafiti huu pamoja na mahojiano na wanawake na wanaume na wasichana na wavulana wenye umri wa miaka 15 hadi 24.

Kwanza, sisi kukusanya takwimu za msingi kwa wanachama wa AVEC, kuchunguza kijamii na kiuchumi ngazi ya kaya, kuwawezesha wanawake na ujuzi wao juu ya afya ya uzazi na mitizamo yao na maamuzi yao habari za mbinu za mpango wa uzazi. Sisi pia ni shauku ya kujua jinsi habari ni kupitishwa katika AVEC.

Sisi tuta pima wa watoto wenye umri wa miaka 1 hadi 10 na kuomba MUAC kamba kurejea mkono kwa ajili ya kutambuwa kama kuna bwaki ao apana. Kama tunaona mtoto mwenyi kuwa na bwaki, tunakushauri kumubeba ku kya Kituo cha Afya.

Kisha, sisi kukusanya data za msingi kutoka kwa wanaume, wanandoa wa wajumbe wa AVEC na ao kutoka kwa wanachama vikundi kuchunguza dhamira ya wanume kwa mfumo bwanaume buzuri.

Tatu, sisi kukusanya data za msingi kwa wasichana na wavulana kupima maarifa ya afya ya uzazi. Kupitia utafiti huu sisi tunachunguza zaidi ya watu 600 katika Kivu ya Kaskazini na ya Kusini (DRC).

usiri

Sisi tutauficha utambulisho wako na habari binafsi. Chochote wewe kusema kutaweka na usiri mkubwa na data yako itawekwa kwa siri. Bitu byote binayotambulishaa (mfano, majina) itakuwa kuhifadhiwa tofauti na data. Uhusiano kati ya taarifa yako inazokutambulisha itakuwa siri na mptafutaji mkuu.

Matokeo ya utafiti huu itakuwa imeandikwa katika ripoti hiyo hakuna majina itakuwa zilizotajwa. Kushiriki katika utafiti huu ni hiari kabisa. Aidha, unaweza kuondoka kutoka utafiti wakati wowote bila ya atari na data zilizokusanywa hadi kutelekezwa ya utafiti zitatumika. Timu ya wakaguzi

Utafiti huu ni uliofanywa na Chuo Kikuu cha Basel, Uswisi kwa kushirikiana na wadau wa DRC. mkuu wa utafiti ni Dk Sonja Merten (Swiss TPH, Basel)

Watu wafatao ni sehemu ya timu ya utafiti:

Wyvine Bapolisi (Katoliki Chuo Kikuu cha Bukavu, Bukavu, Basel Uswisi TPH) feza

utafiti unafadhiliwa na Serikali ya Uholanzi.

Kama una swali fulani unaweza zungumuza na watu wafatano

Sud-Kivu RDC
Wyvine Bapolisi
Chercheuse Swiss TPH/UCB-ERSP
12A Avenue Mahenge, Ndendere

Bukavu, Sud Kivu, RDC

Tel +243995800961

Suisse
Dr. Sonja Merten
Chef de Projet
Institut Tropical et de Santé Publique Suisse

Bâle, Suisse

Tel: +41 284 83 87

Email: Sonja.merten@unibas.ch

Annex 6 Consent form

Enquêteur (nom):

Formulaire de consentement

Vous comprenez que votre participation à cette étude ne vous profitera directement, mais il pourra profiter à d'autres dans le futur.

Vous comprenez que votre participation à cette étude est volontaire. Vous êtes libre de refuser si vous le souhaitez. Si vous acceptez de participer, vous pouvez refuser de répondre à certaines questions et interrompre l'entretien à tout moment.

Déclaration de consentement et signature

OUI, j'ai lu entièrement ce formulaire de consentement ou on me l'a lu et toutes les questions ont été répondues à ma satisfaction.

OUI, j'ai été informé par l'enquêteur sous forme orale ou écrite sur les objectifs de cette étude, et sur les façons dont l'information que je vais donner peut être utilisée. J'ai eu assez de temps pour prendre ma décision. Toutes les questions que j'ai concernant l'étude ont reçu une réponse satisfaisante.

OUI, je suis d'accord que les responsables de cette recherche, et les représentants du comité d'éthique peuvent obtenir un aperçu des transcriptions de l'information que je fournis, mais dans la plus stricte confidentialité.

OUI, je confirme de participer à cette étude de ma propre volonté. Je sais que je peux retirer mon consentement à tout temps. Je peux garder une copie de ce formulaire de consentement.

Consentement

Etes-vous d'accord de participer à cette étude ?

Non ☐

Oui ☐

J'ai besoin de plus de temps pour décider, un autre temps de contact a été convenu ☐

Titre de l'étude : «évaluation projet Mawe Tatu».

Lieu d'étude: DRC South-Kivu ☐ ; DRC North-Kivu ☐

Participant à l'étude :

Nom et Signature:

Date de naissance ou Age estimé :

Masculin ☐ Féminin ☐

Participant qui ne sait ni lire ni écrire :

Nom et Signature/ Empreinte digitale : Date de naissance ou Age estimé:

Masculin ☐ Féminin ☐

Témoin du participant qui ne sait ni lire ni écrire/ si personne a <18 ans :

Nom et Signature:

Date de naissance ou Age estimé:

Masculin ☐ Féminin ☐

Pays / Nº Village / Nº Ménage

Jina na namba ya Mtafuti/Muulizaji

Kipawa ya makubaliano :

Tafazali, tambua ya kwamba mchango wako kwa hii utafuti, haina faida lakini ina weza leta faida kwa wengine mu siku zijazo kuusu afya ama maisha ya kilasiku.

Tafazali, ujuwe ya kwamba mchango wako kwa hii utafuti ni kwa utaki wako. Ujisikie huru ku katala kujibu ama kuendelesha ku sherekeya utafuti. Ukipenda, una weza pia kataa kujibu swali ao ku kata mazungumzo i unapoiona ya muhimu.

Hakikisko la makubaliano na sahini.

Ndiyo,nime soma kirefu makubaliano huu (ama wameinisomea), na swali zote zime jibiliwa niki tosheka.

Ndiyo, nili julishwa na mtafiti kwa maongezi ama kwa maandiko kuhusu shabaa ya utafiti huu na kuhusu namna habari nina weza pana zina weza kubaliwa ao faidisha. Nili pata muda yakutosha kwa ku cukuwa hakikisho hii. Swali zote kuhusu utafiti huu,zili pata jibu nzuri kwangu.

Ndiyo, nina kubali ya kwamba viongozi wa utafiti hii na wa akilishi wa Kamati ya utekelezaji wanaweza kuwa na mwangaza kuusu uhusiano wa habari ambayo nina towa, lakini kwa siri kama vile ilisemwa.

Ndiyo,na kubali kuhuzuria kwenye utafiti hii kwa kupenda kwangu. Pia na juwa ya kwamba na weza kamata mpango ya kusitosendeleya nasherehekeya kwa wakati yoyote ! Tafazali, na weza cunga sehemu ya maongezi haya ya makubaliano kwenye ki kartasi ?

Makubaliano :

Je, una kubali ku cangiya kwenye utafiti hii ?

Hapana ☐ Ndiyo ☐

Nina lazima ya wakati mingi kwa ku amuwa, muda ingine ya mawasiliyano ime imekubaliwa. ☐

Utafiti inaitwa: «Kuboresha mafanyikiyo ya jamaa».

Mahali ya utafiti DRC North Kivu ☐ ; DRC South Kivu ☐

Muhuzuriaji kwa utafiti : Jina na sahini :

Siku za kuzaliwa ao myaka ina yo waziwa:

Mume ☐ Muke ☐

Muhuzuriaji asiye juwa kusoma wala kuandika :

Jina na sahini :

Siku za kuzaliwa ao myaka ina yo waziwa:

Mume ☐ Muke ☐

Mshuhuda wa ya muhuzuriaji asiye

juwa ku soma wala kuandika : Jina na sahini:

Siku za kuzaliwa ao myaka ina yo waziwa:

Mume ☐ Muke ☐

CURRICULUM VITAE

WYVINE BAPOLISI MD MPH PhD

bawiansi@gmail.com | +27787127999 /+243811316699
Temporarily based in Johannesburg, South Africa

Proactive - Self-motivated, results-oriented and innovative - Good interpersonal skills - Ability to maintain a high level of confidentiality. Doctor, researcher, trainer and educator with more than 10 years of experience with a minimum of 6 years in clinical medicine and 8 years in research (quantitative and qualitative) in particular in sexual and reproductive health and in the capacity building of health systems case of the DRC.

PROFESSIONAL EXPERIENCE

Assistant lecturer

2013- to date

Catholic University of Bukavu, Faculty of Medicine and Ecole Régionale de Santé Publique, Bukavu, RDC

Main responsibilities:

- Demonstrator and tutor for clinical and practical classes at both undergraduate and postgraduate levels.
- Preparation of timetables, recording minutes of meetings, summarizing student attendance and lecturer •Evaluation, and organizing postgraduate journal clubs and seminars.
- Mentoring of undergraduate and postgraduate students.
- Contribution to the research output of the department.

Researcher

2014- 2023

Swiss Tropical and Public Health Institute (Swiss TPH), in the Gender, Sexual & Reproductive Health Unit

Main responsibilities:

- Coordinate overall activities of Swiss TPH (research, monitoring-evaluation, reporting) for the « Mawe tatu » programme aiming at empowering economic households through a gender transformative approach with a comprehensive Sexual Education for youth in North and au South-Kivu.
- Evaluation of health structures within the framework of Institutional Strengthening of Institutions for Evidence-Based Health Policies in the Democratic Republic of Congo (DRC).
- Coordinate/assist in the evaluation and operational research on sexual and reproductive health in North and South Kivu, with the projects « *Jeune S3* », « conditional cash transfer » et « Next generation».

Medical Doctor

2013- to date

Clinician in the Department of Pediatrics at *Hôpital provincial de référence de Bukavu* (HPGRB), Bukavu, South-Kivu, DRC.

Main responsibilities:

- Curative and preventive care services and Organization of daily activities in the Pediatrics Department (morning meetings, visits, etc…).

• Member of the Department Management Team (2015-2016)

Intern in Medicine

2011- 2013

Doctor in professional training at the Department of Surgery, Pediatrics, Gyneco-Obstetrics, Internal Medicine, Neurology-Psychiatry at the Provincial Reference Hospital of Bukavu (HPGRB), Bukavu, Sud-Kivu, RDC.

EDUCATION

Master in Public Health (2016), *Déterminants de l'utilisation des structures des soins et appréciation par rapport aux services offerts dans les centres de santé : étude comparative entre la zone rurale de Walungu et celle de Katana au Sud-Kivu.* Ecole Régionale de Santé Publique de Bukavu, Université Catholique de Bukavu, Bukavu, RDC.

Bachelor in General Medicine, Surgery and Delivery (2013), Catholic University of Bukavu, Bukavu, RDC

State Diploma (2004), Secondary school, biology-chemistry option, Lycée Motema Mpiko, Kinshasa, DRC.

PUBLICATIONS

Bapolisi WA, Bisimwa G, Merten S. Barriers to family planning use in the Eastern Democratic Republic of the Congo: an application of the theory of planned behaviour using a longitudinal survey. BMJ Open. 2023;13(2):e061564

Bapolisi, W. A., H. Karemere, F. Ndogozi, A. Cikomola, G. Kasongo, A. Ntambwe and G. Bisimwa (2021). "First recourse for care-seeking and associated factors among rural populations in the eastern Democratic Republic of the Congo." BMC Public Health 21(1): 1367. https://doi.org/10.1186/s12889-021-11313-7.

Bapolisi W., GiovanFrancesco Ferrari, Ghislain Bisimwa, Sonja Merten, Gendered determinants of food insecurity in ongoing regional conflicts, North and South Kivu, the Democratic Republic of Congo, 2021, 10:13. https://doi.org/10.1186/s40066-021-00285-x.

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Schwarz, J., M. Dumbaugh, W. **Bapolisi**, M. S. Ndorere, M.-C. Mwamini, G. Bisimwa and S. Merten. "So that's why I'm scared of these methods": Locating contraceptive side effects in embodied life circumstances in Burundi and eastern Democratic Republic of the Congo." Social Science & Medicine, (2019) 220: 264-272.

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Kambale, R., A. Maseka, J. Bwija, W. **Bapolisi**, J. Bashi, B. Masumbuko, G. Bisimwa, Facteurs de risque associés à la mortalité néonatale dans un hôpital de niveau des soins tertiaires de Bukavu/ Sud-Kivu, RDC, Annales de Science de la Santé, 2016, vol. 6, vol.1: 4-11, 2016

LANGUAGES

French, English, Swahili, Lingala, Kihavu/Mashi

REFERENCES

Ghislain Bisimwa, Professeur des universités, Université Catholique de Bukavu,
Adresse mail : ghislainbiba@yahoo.fr; Telephone number : +243998088051

Hermès Karemere, Professeur des universités, Université Catholique de Bukavu,
Adresse mail : hkaremere@gmail.com; Telephone number : (1)438-993-2844

Mari Dumbaugh, MSc, PhD, Insight Consulting, Research and training consultant at Insight Impact Consulting
Email address: mari@ii-consulting.com; Telephone number: +17245063823