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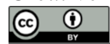

Acceptability of group antenatal care by women in selected facilities in Burkina Faso

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Abstract

Background: Antenatal Care (ANC) models have been evolving over the years as programs seek to increase uptake and utilization of maternal and child health services especially in low to medium-income countries. Antenatal care encompasses services provided to a pregnant woman to ensure a good outcome of the pregnancy for both the mother and the newborn. During the last twenty years, WHO has issued several guidelines for antenatal care, the last one being the ANC guidelines for a positive experience of pregnancy. In recent years, a new approach to ANC service delivery has emerged and it is called group ANC (G-ANC). In G-ANC, cohorts of pregnant women with approximately the same gestational age are followed regularly until the end of their pregnancy. G-ANC has been reported to increase utilization of care, uptake of recommended health practices, patient satisfaction and reduce maternal morbidity and mortality rates in high-income countries G-ANC implementation in terms of its acceptability by pregnant women has not yet been assessed in Burkina Faso.

Objective: The study's objectives were to assess whether G-ANC is acceptable to pregnant women at six pilot sites where it has been introduced in Burkina Faso and to identify challenges to address in order to scale-up of this approach.

Methods: This was a qualitative study conducted in six pilot health facilities in Burkina Faso with 58 women who attended G-ANC sessions in the selected sites. Pregnant women who have attended at least one G-ANC session were the study participants. The study used simple random sampling to select six facilities out of the twelve pilot sites, and a purposive sampling technique was used to recruit pregnant women. A semi-structured questionnaire was used to conduct 6 Focus Group Discussions (FGDs) with 8-12 pregnant women. The discussions lasted for an average of one hour. Informed consent was obtained from pregnant women participating in the study, and ethical approval was obtained from UGHE and Burkina Faso IRBs. FGDs were recorded by the data collectors fluent in the local languages and French. Thematic analysis was used to develop themes from the narratives. The textual passages were coded using N-VIVO software. Emerging themes were summarized in table format.

Results: Six main themes emerged from the analysis of the data from the FGDs: Overview of women's overall experience of group ANC, advantages and difficulties of group ANC, relations between beneficiaries and the healthcare workers as well with their husbands/partners, changes brought about by group ANC, suggestions and proposals for improving group ANC. Pregnant women are satisfied with G-ANC as it has allowed them to learn new skills and build better relationships with healthcare workers and among themselves. They identified some challenges with G-ANC, such as the duration of the session and inadequate space for group meetings. One of made their main leading suggestions was to conduct G-ANC during the weekends, so their husbands/partners could attend.

Conclusion: The study results revealed that G-ANC is highly accepted by pregnant women in Burkina Faso. Tapping on this low-cost high-impact initiative is likely to pay more dividends for the pregnant women of Burkina Faso and those from other low to medium-income countries.

Key words: Acceptability; Group Antenatal Care; Benefits, challenges

Capstone Practicum Report

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Declaration

We, Blami Dao and Konlobe Yvette Ouedraogo, hereby declare that the practicum capstone thesis has been written by us without any external unauthorized help and that it has been neither presented to any institution for evaluation nor previously published in its entirety or parts. Any parts, words, or ideas, of the thesis, however limited, which are quoted from or based on other sources, have been acknowledged as such without exception.

Signature: Konlobe Yvette Ouedraogo_ Date: 10th February 2024

Signature: Blami Dao Date: 10th February 2024

Dedication

I'd like to dedicate this document to my daughter, Raïnah Rebecca LINGANI, you who have sometimes been deprived of your mother's warmth, may this work console you and cultivate in you a taste for effort and hard work, and encourage you to do better! Courage to you in your studies! God bless you!

Konlobe Yvette Ouédraogo

I would like to dedicate this work to all the pregnant women in Burkina Faso who attend antenatal care with the hope of a better outcome for themselves and their babies to be born.

Blami Dao

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To our spouses and children, who have put up with our long absences at times when they needed us, and with any prejudice we may have caused them during this period, may this memoir be their reward.

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Abstract

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List of abbreviations

ANC	Antenatal care
BMI	Body Mass Index
FBC	Full Blood Count
G-ANC	Group antenatal care
HBLSS	Home-based Life Saving Skills
HCW	Healthcare Workers
IPTp	Intermittent Prophylactic Treatment
IFA	Iron and Folic Acid
LMICs	Low to Middle-Income Countries
MoH	Ministry of Health
UGHE	University of Global Health Equity
SMA	Shared Medical Appointments
SRH	Sexual and Reproductive Health
STI	Sexually Transmitted Infections
TFA	Theoretical Framework of Acceptability
WHO	World Health Organization
WPAG	Women’s Participatory Action Groups

CHAPTER ONE: INTRODUCTION

1.1 Introduction and Background

Antenatal care (ANC) is the integrated package of healthcare services offered to a pregnant woman during the gestation period, from conception to childbirth. ANC involves monitoring critical health indicators of both the mother and fetus and providing essential health services such as nutrition counseling, micronutrient supplementation, vaccination, screening, and treatment of STIs/HIV (WHO, 2016). Although mainly delegated to midwives, pregnancy monitoring is an essential component of reproductive health that has evolved over the years, with additional care components being added to the practice. When delivered according to the recommended (WHO) guidelines, ANC has been proven to improve the health of mother and baby, manage infections and illnesses during pregnancy, reduce complications during pregnancy, and reduce stillbirths and perinatal deaths (Sharma, 2018).

The most recent WHO guidelines provide for at least eight ANC visits during the gestation period (WHO, 2016). Most perinatal deaths are caused by avoidable causes, such as congenital abnormalities, prematurity, and intrauterine growth restriction which can be identified during ANC visits (EBCOG Scientific Committee, 2015). Late initiation of ANC, which is defined as starting ANC either in the second or third trimester (after the 13th week of pregnancy), has shown a correlation with elevated childbirth risks, thereby exposing pregnant women and their families to higher out-of-pocket expenditures (Melkamsew et al., 2021) that could have been prevented by access to and better SRH services (Mori et al., 2020).

According to WHO standards, specific ANC services should be provided for at least 8 ANC contacts. The first ANC contact should occur no later than 12 weeks of pregnancy. In the first ANC visit, women are booked and have baseline examinations conducted, such as measures of Body Mass Index (BMI) and checking vital signs (including urine dipstick). Several blood tests, including full blood count (FBC), blood grouping, and screening for STIs, thalassemia, and sickle cell (WHO, 2016), were performed. At the 12th week, Aspirin is prescribed for pregnant women at risk of pre-eclampsia.

The second ANC contact is scheduled at 20 weeks of pregnancy. Services are focused on determining gestational age and detecting multiple pregnancies through an ultrasound scan (USS). A third ANC contact is recommended at 26 weeks.
At the 30th week of gestation, women are recommended to have their 4th ANC contact. The key services provided in addition to the routine ones are Ultrasound scan tests to screen for anomalies and determine placental location. At 34 weeks of pregnancy, women have their 5th ANC contact, and healthcare providers measure symphysis-fundal height and monitor fetal movements. The 6th

ANC contact is scheduled for the 36th week of gestation. Rhesus-negative women receive Anti-D. Healthcare professionals recheck FBC, blood group, and antibody levels. Healthcare providers discuss birth plans and the postnatal period.

In the 38th week of gestation, the 7th ANC contact is recommended. Abdominal palpation is performed to identify breech presentations and delivery options, which include external cephalic version, breech vaginal delivery, and cesarean section. The 8th ANC contact is recommended for the 40th week. Services provided include induction of labor for mothers with poorly controlled conditions or high risk of fetal demise at term. Healthcare providers also assess pregnant women for gestational diabetes or diabetes. A pregnant woman >41 weeks is often scheduled for induction of labor. In all the ANC appointments, pregnant women are checked for blood pressure and urine dipstick (pre-eclampsia), assessed for maternal well-being, and screened for domestic violence.

Access and coverage rates in Africa are still lower than global averages despite the widely available evidence on the importance and effectiveness of ANC in reducing prenatal, perinatal, intrapartum, and postnatal complications and mortality in both mother and child. Globally, up to 88% of women will seek ANC from a trained provider at least once during their pregnancy. However, only 66% will honor the recommended four minimum ANC appointments. In most Western and Central African countries, the "four ANC visits" rates were as low as 53% and 55% respectively. In the East African countries of Kenya, Tanzania, and Uganda, the ANC4+ coverage rate was 50 - 70% (Macharia et al., 2020). The situation in Burkina Faso is even worse, with ANC4+ rate at 38%, with only 39.1% of women attending ANC in their first trimester (MS, 2020).

Group ANC (hereafter, G-ANC) is an alternative group-based care approach to delivering ANC services that is remarkably different from individual facility-based check-ups. The assessment and delivery of health education is group-based with deliberately designed peer support structures incorporated into the process whose main aim is to improve pregnancy outcomes (WHO, 2016). In G-ANC, eight to twelve pregnant women with similar gestation periods (cohort) are enrolled into a group of peers who will attend ANC services together throughout their pregnancy. During this time, they will receive group health education and prenatal services together and offer each other psychosocial support (Vandermorris et al., 2021; Gaur et al., 2021).

Group antenatal care (G-ANC) was initially developed in the US and was known as "Centering pregnancy" (Rising, 1998). In recent years, piloted studies took place in some low and middle incomes countries (LMICs) such as Bangladesh (Sultana et al., 2017), Rwanda (Musabyimana et al., 2019), Malawi and Tanzania (Jeremiah et al., 2021), Kenya and Nigeria (Grenier et al., 2019), and Senegal (McKinnon et al., 2020). Group Antenatal care (G-ANC) was introduced in Burkina Faso a year ago in certain health facilities for a pilot phase.

There are several models of G-ANC such as Shared Medical Appointments (SMA), Centering Pregnancy, Women's Participatory Action Groups (WPAG), and even Home-based Life Saving Skills (HBLSS). Since its introduction into the mainstream healthcare structure, process fidelity seems to be critical in achieving the desired outcomes. Fuentes et al (2020) in Mexico developed a checklist to assess the fidelity to the G-ANC process. Using an 11-item questionnaire with a scoring of each item from 0 to 5, Butrick et al (2020) reported a process fidelity of 80% in a study conducted in Rwanda. Another study conducted in rural Nepal also turned in a fidelity score of 80% (Bangura et al., 2020). The average reported fidelity scores across several studies turned in an average of 82% leading to the conclusion that G-ANC is not difficult to implement, whichever model is chosen.

Pilot studies conducted in Kenya and Nigeria revealed that women enrolled in G-ANC were more likely to attend at least four ANC visits than those who were subjected to normal ANC (Grenier et al., 2019). A similar study targeting adolescents and adult women in Senegal revealed that 95.8% of the women and 93.1% of the adolescents reported a preference for G-ANC, saying they felt respected and acknowledged. However, the adolescents were less comfortable sharing ideas and reported lower levels of comfort (55%) as opposed to the adult women at 81% (Vendermorris et al., 2021). In a randomized group antenatal care study in Malawi and Tanzania 70% of the women who attend the G-ANC reported having open communication with their partners on matters of sexual and reproductive health (SRH); while only 45% of the women attending individual ANC reported talking openly with their partners about SRH issues (Jeremiah et al., 2021). Effective and quality ANC is critical in improving maternal and newborn health outcomes and reducing chances of maternal and infant morbidity and mortality. Quality ANC implementation will contribute towards the attainment of the Sustainable Development Goals.

1.2 Problem statement

Despite the availability of ANC services in Burkina Faso, access and utilization are still well below the global average at 38% (MoH, 2020) against a global average of 88% (Macharia et al. 2020). The main barriers to the uptake of ANC in Burkina Faso are related to poverty, living far from a health center, and poor quality of care (Badolo, 2022; Mwase, 2018). Niang (2015) also pointed out the lack of autonomy of pregnant women, who must seek permission from their husbands or mothers-in-law before attending ANC services. This is explained by the fact that Burkina Faso is a very feudal and male-dominated society (McFadden, (1985); Maïzi, (1995)).

Efforts by the government of Burkina Faso, in conjunction with partners like Jhpiego, are aiming to address the barriers to the utilization of ANC services. G-ANC was introduced in Burkina Faso in July 2022 at 12 facilities as a pilot phase through a USAID-funded project led by Jhpiego (an international NGO affiliated with Johns Hopkins University, based in Baltimore, USA and working in Burkina Faso since 1995). Twelve facilities were selected from three regions and six districts using several criteria, including providing care for 50 to 150 ANC clients per month, out

of which at least 15 are ANC 1 clients, availability of at least three healthcare workers at the facility who can deliver ANC and finally space to organize the G-ANC meetings. Two healthcare workers (primarily midwives) were selected from each of the twelve facilities and trained during a five-day workshop in facilitating and documenting G-ANC. At the end of the training, each facility received small medical equipment (BP machines, Pinard stethoscope, fetal heart Doppler device, scale, measurement tape, proteins dipstick), G-ANC facilitation job aids, and G-ANC register to record the attendance of the sessions. Some of the facilities that had no space for group meetings received tents to use for group meetings.

Studies in high-income countries revealed that, compared to individual ANC, G-ANC is more likely to increase care utilization, uptake of recommended health practices, patient satisfaction, and reduce maternal morbidity and mortality rates (Catling et al. , 2015). Grenier et al. reported that in Nigeria, G-ANC has led to a significant increase in health promotion behaviors among women attending G-ANC when compared to those attending traditional ANC; completion of birth planning action (85% versus 48%), choosing a post-partum family planning method before birth (76% versus 32%), taking Iron and Folic Acid (IFAs) the day before the survey (37% versus 18%). It was also noticed that the mean number of intermittent preventative treatments in pregnancy (IPTp) was higher in G-ANC (3.45 versus 2.14) (Noguchi, 2020).

Despite the proven effectiveness of the G-ANC intervention in other countries, there is a lack of a comprehensive understanding of the acceptability of G-ANC in Burkina Faso. This gap has not been explored in available publications on the subject. This study aims to shed light on women's perspectives regarding the Group ANC services. Understanding the acceptability of this model of care is crucial for identifying potential barriers that might hinder its uptake and effectiveness in the scale-up phase. For this study, we have chosen to focus on the acceptability of this new type of service offered to pregnant women.

1.3 **Research question**

What are pregnant women's perceptions at six pilot sites in Burkina Faso on the acceptability of G-ANC?

1.4 **Study objectives**

This study sought to:

1. Assess the acceptability of G-ANC to pregnant women at six pilot sites where it has been introduced in Burkina Faso by June 2024
2. I Identify challenges to be addressed for G-ANC scale up in Burkina Faso

1.5 Conclusion

This chapter focused on the study introduction. In this chapter, we profiled the background of Antenatal care, the benefits of G-ANC over individual ANC, the problem statement, the research question, and the research objectives. In chapter two, we will analyze and discuss relevant literature on the subject matter. In chapter three, we will profile the study methodology. In Chapter 4, we will present the study findings and analysis. Chapter 5 will be a discussion of the study results and their implications for the current program and world of research. Chapter 6 is the study's conclusion and recommendations.

1.6 Organization of the report

The organization of this report is as follows:
Chapter One: Introduction
Chapter Two: Literature Review
Chapter Three: Methods
Chapter Four: Results
Chapter Five: Discussion
Chapter Six: Conclusion and Recommendations

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

In this chapter, relevant literature related to the subject of research has been reviewed. The literature review and analysis focused on the evolution of Antenatal Care models over time. Acceptability of G-ANC and recommendations that have been made on the implementation of G-ANC for better maternal and newborn outcomes.

2.2 Evolution of Antenatal Care

Antenatal care (ANC) is providing a package of health services to a pregnant woman from the beginning to the end of pregnancy, e.g., labor and childbirth, to achieve a positive outcome for both the mother and the newborn. ANC provides preventive and health promotion services, including birth planning, screening and diagnosis, and disease prevention services relevant to a particular woman's gestational age, health status, and geographic context (WHO, 2016). These interventions address maternal morbidity and mortality since they are effective in promoting the overall well-being of women and children. This can only happen when women are retained in care.

Organized antenatal care has been put in place in the United Kingdom and the US only in the 1900s (Maloni et al, 1996). In 2000, the World Health Organization (WHO) came up with the four-visits model of antenatal care, which it called focused antenatal care, yet women in low to medium-income countries (LMICs) continued to receive ANC of inadequate quality, which was coupled with reduced ANC attendance (Preparer, 2005). Only 62% of Sub-Saharan Africa and South Asia pregnant women attend 4 ANC visits (Preparer, 2005).

In 2016, WHO published the eight visits model of ANC, aiming to provide a positive pregnancy experience for the mother (Tunçalp et al., 2017). This new recommendation emphasized improved health and well-being, communication, and support function as key facets to comprehensive ANC. These attributes can only be fully addressed through an approach such as G-ANC, which was recommended after rigorous research.

G-ANC is structured as follows (Grenier et al., 2019). The first ANC visit is done individually; then, the pregnant woman is assigned to a group of 8–12 women who share similar or almost similar due dates. The group meets monthly for an hour and a half for four months, then bi-weekly for the rest of the pregnancy. The total number of visits varies between 4 and 10 (Sharma et al., 2018), (Fuentes-Rivera et al., 2020). The ritual of G-ANC follows three main steps at each group visit ((Sharma et al., 2018). The healthcare provider welcomes the pregnant women; then a physical assessment is done by the women themselves (only blood pressure and weight) and by the healthcare provider, then a learning and education part (healthy lifestyle, danger signs during pregnancy, nutrition) takes place and finally peer support through group discussion. G-ANC has

been adopted and piloted in several high-income countries and a few Low to Medium Income Countries (LMICs).

2.3 Benefits of G-ANC

One of the biggest issues about G-ANC is whether it improves or not health outcomes for both the mother and her newborn. Health outcomes that could be assessed include completion of all group visits, uptake of intermittent preventive treatment during pregnancy (IPTp) of malaria, use of insecticide-treated bed net (ITN), iron and folic acid, deworming, facility-based delivery, newborn outcomes, attendance of postnatal care and use of family planning during the postnatal period.

Grenier (2019) in a study in Nigeria and Kenya found that women attending G-ANC in both countries are likely to attend four ANC visits or more when compared to women coming for individual visits and G-ANC was also associated with a higher rate of facility-based delivery. Data from the same study showed that a mean number of IPTp doses received was higher in the G-ANC group than in the individual ANC visits group, with no difference regarding the use of ITN the night before the survey (Noguchi et al., 2020). Currently, there seems to be weak evidence about the impact of G-ANC on maternal and newborn outcomes. This is confirmed by an Iranian study (Jafari et al., 2010) and by a Cochrane systematic review (Catling et al., 2015). The main reason is the nature of studies which are limited in terms of size and duration as they are almost all pilot studies.

In general, postnatal care is neglected in many African countries (Gresh et al., 2021) but G-ANC could contribute to increased postnatal care attendance (Sayinzoga et al., 2021), as well as postpartum family planning uptake as noted by Lori(2018).

Male participation in maternal and child healthcare particularly in antenatal care has been studied extensively in different settings (Suandi et al., 2020), showing a positive effect on services uptake. In a randomized control trial on fathers/partners' attendance of group antenatal care versus traditional ANC done in Sweden, Anderson et al (2017) found that fathers who took part more in G-ANC and have a more positive impression of that model of care when compared to traditional ANC. To explore further men’s participation in G-ANC, Deibel et al (2018) designed an only fathers group antenatal care session to give an idea to men about how G-ANC looks like; the involvement of husbands/partners in G-ANC has not been explored in the context of low- and middle-income countries, particularly in Africa.

When issuing new recommendations on antenatal care for a positive experience in 2016, the WHO advised studying further group antenatal care (WHO, 2016). It outlined several research questions that need to be addressed including assessing the effects of group ANC on maternal and perinatal health outcomes, coverage outcomes (ANC contacts and facility-based births), and women’s and providers’ experiences.

It is also noticeable that most of the research done on G-ANC in Africa is concentrated in Anglophone countries except Senegal (McKinnon et al., 2020, Vandermorris et al., 2021). Obviously, between those two parts of Africa, there are social and cultural differences that may influence how G-ANC is perceived by pregnant women, their families, and healthcare workers. In Francophone Africa, attending ANC rarely happens during the first trimester, mothers-in-law have a lot of say in how a woman should care about her pregnancy (authorization to go to a facility), polygamy is more prevalent, and contraceptive use is very low. Furthermore, the Senegal studies were conducted at the lowest level of the health system (health posts found in rural areas). We intend to work at medical and primary health center levels in both rural and urban settings. Very few research has assessed both client's and providers' perspectives as well as the health outcomes. Available studies were mainly systematic reviews that did not focus on the benefits of the model to women, babies, and health systems in LMICs.

The studies recommended robust evaluations of group antenatal care programs in specific contexts. Our study will focus on the contextual perceptions of the acceptability of G-ANC in Burkina Faso. Our findings will be helpful for policymakers, health care providers, and program managers in designing and implementing group antenatal programs that promote women's centered care in Burkina Faso.

2.4 Limits and challenges of G-ANC

G-ANC implementation is relatively recent in most LMICs, so it seems complicated to identify any downside of this approach. The concerns are not related to the model per se but to health system challenges related to shifting from routine individual ANC (which pregnant women and healthcare workers are familiar with) to accommodate the group care model.

From women's perspectives, some issues have emerged, such as privacy and time management, as individual care was quickly done (without quality).Some women have raised the risk of divulging personal information (Gaur, 2018).

Group ANC requires additional effort from healthcare workers to set up a scheduling process for the different groups. Facilities must train providers and dedicate a space for group meetings (Pekkala,2020; Ibanez, 2020).

Maternal outcomes of G-ANC need more data (Andrade-Romo et al., 2019). According to Carter et al. (2016), G-ANC has failed to improve newborn outcomes regarding prematurity, Newborn Intensive Care Unit (NICU) admission, or breastfeeding initiation. The lack of strong evidence on the impact of G-ANC may be related to the fact that most of the studies are pilot and limited in their geographic coverage.

2.5 Acceptability of G-ANC

Acceptability has always been a concept that has been too difficult to fully understand in literature in terms of meaning and how it can be measured. Many studies concur that the acceptability of health interventions is ill-defined, under-theorized, and poorly assessed (Sekhon et al., 2018).

Acceptability in some circles has been defined as the pleasure to the receiver, satisfactory, capable of being endured, tolerable, and bearable (Dictionary.com, 2017). Yardley et al. (2015) define an acceptable intervention as being "credible, comprehensible, usable, and engaging". Acceptability has also been conflated with terms like feasibility, enjoyment, satisfaction, and uptake.

Acceptability has often been inferred from participants' behavior manifested as a willingness to participate in a study, level of uptake, adherence, or active participation (in the intervention), the extent of retention or drop-out with an assumption that low intervention acceptability translates to low participation rates and high dropout rates in clinical trials (Sekhon et al, 2018). This notion has also been challenged in other studies, the argument that behavioral factors may not fully explain participant withdrawal and ignore the value of participant-reported evaluations of acceptability.

Very few systematic review studies have assessed acceptability using direct self-report measures such as satisfaction with intervention or treatment, participants' attitudes towards the intervention, or completion of interviews to explore participant experiences and perceptions of the intervention. There remains no clear conceptual definition of acceptability nor shared theoretical understanding of the nature of acceptability (Sekhon et al., 2018). Acceptability research must have a theoretical framework and associated methods to evaluate cognitive and affective components of acceptability.

Several scholars have attempted to conceptualize acceptability in diversified ways. Pechey et al. (2014) defined the 'public acceptability' of interventions as an attitudinal construct. Yardley et al. (2015) presented a person-centered approach to enhancing intervention acceptability, and this approach proposed the use of qualitative methods to investigate the "beliefs, attitudes, needs and situation" of intervention participants. Perceptions and purpose (of the behavior) and compatibility with personal identity have been widely used to denote the acceptability of healthcare interventions (McGowan et al., 2017). These varying dimensions profile acceptability as a multi-faceted construct.

A mixed study to determine effects on trauma symptoms, mood states, and cortisol reactivity equated the acceptability of an intervention to the absence of harm linked to participation. In this case, distress to one participant was considered by the authors to be acceptable (Smyth et al., 2008). A qualitative study by Dennison et al. (2010) on cognitive behavioral therapy and psychoeducation for chronic fatigue syndrome in young people assessed acceptability using semi-structured interviews to explore views and experiences. An intervention was deemed acceptable if enjoyable. Acceptability is a function of the positive effect while experiencing the intervention. Morrisson et al. (2014), compared self-assessment with and without tailored feedback using a mixed methods approach to optimize engagement with internet-based health behavior interventions. The authors established a link between acceptability and perception of personal benefit.

A summary from several studies on acceptability reflects that an acceptable intervention or model should meet several dimensions which include patient's views, perceptions or experiences and feedback about the intervention (Dennison et al, 2010). Satisfaction with the intervention delivery (Humphris & Ozakinci, 2008) and the absence of harm linked to participating in the intervention (Smyth et al., 2008) have also been reported to be key concepts to measure intervention acceptability. In addition to that, positive affect linked to participating in the intervention and behavior (drop-out or failure to complete participation in the intervention), have all been generally acknowledged to be measures of acceptability. Perception of personal benefit from participating in the intervention (Morrison et al, 2014) and perception of the usefulness of the intervention (Powell et al, 2015) have all been accepted as key measures of acceptability of health intervention.

Several dimensions of G-ANC have been assessed including the fidelity (adherence to the key components of the approach) of the model, women and healthcare providers' perspectives, the outcomes for both the mothers and the newborns, and the cost of its implementation. One of the major goals of the implementation of G-ANC is to provide a positive experience of ANC for women who are engaged in that form of ANC. Several studies reported that pregnant women are satisfied and even enthusiastic about G-ANC (Jolivet et al, 2017, McKinnon et al., 2020). Areas of satisfaction include increased health knowledge and skills (taking their own weight and blood pressure) (Hunter et al., 2019, Musabyimana et al., 2019) including danger signs during pregnancy (Thapa et al., 2019).

Some studies have reported satisfaction levels as a proxy measure of the acceptability of G-ANC. Factors associated with women's satisfaction with G-ANC have been identified (Nsaba Uwera, 2019), such as being unemployed with enough time to spend at the health facility, short duration of G-ANC when compared to a long waiting time for individual ANC, being treated with respect and kindness by the health workers. Another key element of women's satisfaction is the communication established with providers. (Grenier et al., 2022) which allows them to speak freely and feel comfortable asking questions as well as interacting with their peers (Jafari et al., 2010a, Adaji et al., 2019, Hunter et al., 2019). Interaction between pregnant women during the 5 to 7 visits they attend together may lead to the development of friendship and social networks. (Jafari et al., 2010b).

Providers who facilitate G-ANC sessions appeared to be satisfied with delivering that kind of approach (Lazar et al., 2021). Reasons for being satisfied included empowering women ((L. Hunter et al., 2018), building better rapport with them (Ibañez-Cuevas et al., 2020), giving them what they want in terms of more time, more personal care, and more support (Grenier et al., 2022, Teate et al., 2013, Nsaba Uwera, 2019), and finally breaking the hierarchy between the providers and the pregnant women (Lundeen et al., 2019).

However, some issues have been raised by the providers such as the possible increase in workload with G-ANC (McNeil et al., 2013), anxiety around the facilitation, and challenges regarding how to organize G-ANC at the facility level (Lori et al., 2016, Novick et al., 2013); those concerns need to be explored more, particularly in the context of low resources settings.

Our perspectives on the acceptability of a health intervention are that it should include elements such as satisfaction with the intervention, adherence to the intervention without any incentive, willingness to recommend the intervention to a friend or a family member, and willingness to pay for the intervention.

2.6 Theoretical framework

To assess the acceptability of G-ANC among pregnant women in Burkina Faso in the sites where G-ANC is being piloted, this study will use the Theoretical Framework of Acceptability (TFA), which seems to capture most of the dimensions of acceptability. This model was developed by Sekhon et al. (2017) and describes the multiple facets of acceptance: Affective attitude, burden, perceived effectiveness, ethicality, intervention coherence, opportunity costs, and self-efficacy. The TFA was developed by inductively synthesizing findings from systematic reviews and applying deductive reasoning to theorize the concept of acceptability Sekhon et al., (2017) define acceptability of a health intervention as 'a multi-faceted construct that reflects the extent to which people delivering or receiving a healthcare intervention consider it to be appropriate or experienced cognitive and emotional responses to the intervention".

Table 1 below summarizes the TFA.

Table 1: Components constructs in the TFA (Sekhon, Cartwright & Francis, 2017)

Construct	**Definition**
Affective Attitude	How an individual feels about the intervention
Burden	The perceived amount of effort that is required to participate in the intervention
Ethicality	The extent to which the intervention has a good fit with an individual's value system
Intervention coherence	The extent to which participant understands the intervention and how it works
Opportunity costs	The extent to which benefits, profits, or values must be given up to engage in the intervention
Perceived effectiveness	The extent to which the intervention is perceived to be likely to achieve its purpose
Self-efficacy	The participant's confidence that they can perform the behavior(s) required to participate in the intervention

This framework facilitates the assessment of intervention acceptability from the perspectives of participants who are recipients of healthcare interventions and healthcare providers of such interventions. Sekhon et al. (2017) further proposes that the acceptability of an intervention can be assessed from 3 temporal perspectives (prospective, concurrent, or retrospective) depending on the timing of engagement with the intervention. Since the G-ANC sessions are already ongoing, our study will determine concurrent and retrospective acceptability.

This is a relatively new framework, which is a multi-component framework and can be used to identify the source of specific problems with acceptability thereby fostering the process of suggesting intervention refinement to enhance acceptability. Sekhon et al. (2017) proposed further research to evaluate whether acceptability is conceptually distinct from related constructs such as tolerability or whether these constructs would make useful additions to the proposed TFA.

Some studies have used this framework with good effect. A study by Timm et al. (2022), on the application of the TFA to assess a telephone-facilitated health coaching intervention for the prevention and management of type 2 diabetes studied multiple facets of acceptance inclusive of affective attitude, burden, perceived effectiveness, ethicality, intervention coherence, opportunity costs, and self-efficacy. The study aimed at developing and assessing psychometric properties of a measurement scale for acceptance of a telephone-facilitated health coaching intervention and determining its acceptability among diabetics or those at high risk among the poor in Stockholm. The study concluded that telephone-facilitated health coaching intervention was perceived as acceptable by the study population using a questionnaire based on Sekhon's TFA. There was a wider variation in perceived burden perceived among high-risk and younger participants.

A similar descriptive qualitative study was conducted in 2021 in the Phalombe District of Malawi to assess the perceptions on the acceptability of the 2016 WHO ANC model among pregnant women. The TFA was used to guide the development of study objectives, and tools and to guide data analysis (Nyumwa, et al, 2023). The study used purposive sampling to recruit 21 pregnant women, postnatal mothers, a safe motherhood coordinator, and midwives for in-depth interviews (IDI) and 2 Focus Group Discussions. The study results showed that the model is acceptable among most pregnant women and the women believed that it would help reduce maternal and neonatal deaths. Husband support, peer and health care worker support facilitated the acceptability of the model. The increased number of ANC contacts which resulted in fatigue and increased transportation costs incurred by the women was a deterrent (Nyumwa et al, 2023). The study recommended the strengthening of enabling factors and addressing bottlenecks in the implementation of the model.

Using the TFA framework, Brookfield (2019) reported that healthcare workers did not find any barrier to the acceptance of G-ANC by Aboriginal and Torres Strait Islander women in Australia.

No studies have yet been published that have used the TFA in low- to medium-income countries to assess the acceptability of G-ANC. This study will create new knowledge that can inform the scaling up of G-ANC and context-specific implementation modalities.

2.6 Conclusion

In chapter two, we reviewed the existing literature on the subject matter, starting with the evolution of ANC and comparing different models of ANC. The literature review also analyzed the existing literature on the acceptability of G-ANC and gaps in its operationalization. Chapter three will now focus on the research method used for this study.

CHAPTER THREE: METHODS

3.1 Introduction

This chapter focuses on the research methodology used for this study. It is sub-divided into study setting, study, design, sampling, measures, data collection procedures, data collection tools, data collectors, data management, data analysis, ethical considerations, and conclusion.

3.2 Study setting

This study was conducted in Burkina Faso, a landlocked country situated in West Africa. The country covers an area of 274 200 square kilometers bordering Mali to the northwest, Niger to the northeast, Togo and Ghana to the south and Ivory Coast in the southwest region. The population of Burkina Faso is estimated to be above 20 million, and according to the report by World Bank in 2021, the fertility rate for Burkina Faso is 4.87 births per woman. Burkina Faso has a GDP growth rate of 6.9% (World Bank, 2021).

Group ANC has been introduced in Burkina Faso in 12 facilities from 3 regions (out of thirteen), the Center West, Center East, and Southwest regions, through the USAID-funded project Integrated Health Services (IHS) implemented by Jhpiego (Johns Hopkins University-affiliated international NGO, based in Baltimore, Maryland, USA) in partnership with the ministry of health (MoH) of Burkina Faso. In each region, 4 facilities have been selected from 2 health districts; those facilities are medical centers or primary health centers (PHC).

The pilot started in July 2022 with a training of 24 healthcare workers from the 12 implementation facilities, the first cohort of pregnant women was enrolled in August 2022 and by the end of December 2022, a total of 43 cohorts, each comprising 445 pregnant women have been recruited at the 12 facilities.

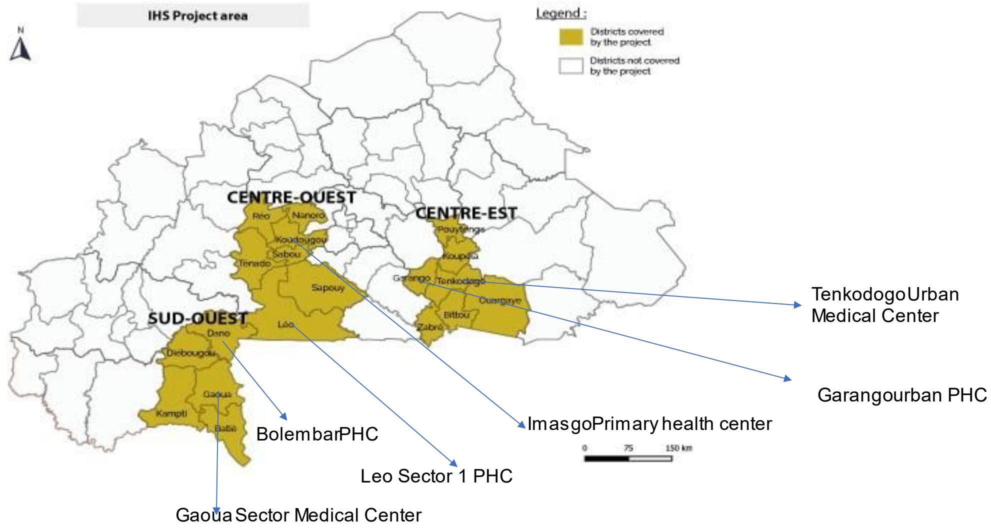
The study took place at six facilities out of twelve where G-ANC has been introduced. In each region, a primary health facility and a medical health center have been selected randomly by drawing, to be included in the study, giving a total of 3 primary health centers and 3 medical centers, which are listed in Table 2.

Table 2: Facilities where the study took place by regions and health districts.

Regions	Health Districts	Facilities
Centre East	Tenkodogo Garango	Tenkodogo Urban Medical Center Garango urban Primaty Health Center

Center West	Koudougou Leo	Imasgo Primary Health Center Leo Sector 1 Medical Center
South West	Gaoua Dano	Gaoua Sector 2 Urban Medical Center Bolembar Primary Health Center

Figure 1. Study sites' location on the Burkina Faso map



Source Jhpiego 2021

3.3 Study design

This study used a descriptive qualitative study design. This design allowed us to accurately describe events, populations, and phenomena being studied. A descriptive qualitative study involves transcription of data transcription and sorting, including observation, interviews, and documentary analysis for effective data analysis (Doyle et al., 2020). We conducted six Focus Group Discussions with pregnant women who have experienced G-ANC. Key questions were related to what women perceived as benefits of G-ANC, how women have perceived their interaction with the providers and their peers, what they have learned during the sessions, whether G-ANC has changed their ability to discuss reproductive health issues with their husbands/partners, challenges with participating in G-ANC, and what are their suggestions to improve G-ANC.

3.4 Sample

Our target population was pregnant women and postpartum women who participated in six G-ANC sessions. The accessible population were pregnant women and postpartum women who attended G-ANC sessions in the sampled pilot sites. For the Focus Group Discussion (FGD) with women who are taking part or who have taken part in G-ANC, 8 to 10 women who consented at each site were included in the study to be part of the FGD. Using purposive sampling for maximum variation, a total of 58 women were selected and they participated in 6 FGD sessions. Purposive sampling for maximum variation proved to be the best sampling technique as it would allow one to explore perceptions of the sampled women in multiple dimensions. It is an acknowledged scientific fact that pregnant women are not a homogenous group even if they live in the same context. Their perceptions on the acceptability of G-ANC are likely to differ by age, level of education, distance to the nearest health facility, socio-economic status, parity, and marital status among other possible causes of variability. Six FGDs were selected on the basis that findings from these 6 groups would mirror perceptions of women in 50% of the pilot sites for G-ANC (One FGD per site) and would increase the chances for reaching theoretical saturation. Similarly, according to the guidelines on FGDs by Guest and his team (Guest et al, 2016), three to six groups reach 90% of themes in a homogenous study population when one is using a semi-structured discussion guide.

The factors that were considered for maximum variation were the age of pregnant women, distance traveled to the nearest health facility, and level of education. These factors were chosen since similar studies in literature had also considered the same factors to be a common source of variability in access to ANC among women in LMICs. We could also have considered socio-economic status, however, we found it very difficult to use a valid tool to differentiate these rural women by wealth index, since they almost exhibited similar traits in terms of economic status. Each of the 6 FGDs had at least one woman who walks for at least 30 minutes to get to the nearest health facility, one young woman (15-24 years), one middle-aged woman (25-30 years), and older women > 30 years. Inclusion and exclusion criteria are listed in Table 2.

Table 2: Inclusion and exclusion criteria for pregnant women:

	Inclusion criteria	Exclusion criteria
Pregnant women	• Participating or have taken part in at least one session of G-ANC • Willingness to participate in the study	• Women taking part or have taken part in G-ANC and who refuse to give their informed consent

3.5 Measures

This study sought to assess the acceptability of G-ANC in Burkina Faso. The characteristics of acceptability that were evaluated included, satisfaction with the G-ANC model, perceptions of session content and frequency of meetings, perceived relevancy of topics, consistency in group attendance by members, consistency of group composition and organization, and perceived quality of service which include friendliness of health care service providers. Measures were guided by the Theoretical Framework of Acceptability.

3.6 Data collection tools

For this study, a semi-structured focus group discussion interview guide/schedule was developed to assess women's experiences with G-ANC. Questions were about women's experience, how they were treated by the healthcare workers, what they thought of the duration of each session (1 and half hours to 2 hours), and their willingness to participate in G-ANC during their next pregnancy. There were also questions on their likelihood of recommending G-ANC to their relatives or friends, difficulties in participating in group antenatal care, what they liked the most with GANC, what they did not like, and what their biggest takeaway from that experience was.

All data collection tools were developed in English and translated into French by a professional translator. The French translation was then translated back into English by a professional translator. Translations were checked by the study team members who were fluent in both languages.

The focus group guide was pre-tested at one of the G-ANC sites which has not been selected for the study. The focus group discussions were organized with a group of women who are in a cohort of G-ANC and who have finished all their visits and have delivered. Based on the lessons learned from the pre-testing, the tools were refined before the data collection began.

3.7 Data collection procedures

The data collection took place from May 24th to June 30th, 2023, and was carried out by the two students, assisted by six data collectors, who visited the six selected target health facilities to conduct the FGDs. Depending on the facility where the study took place, the FGDs were conducted in four local languages, Bissa, Dagara, Dioula, Gourounsi, Lobiri, and Mooré. To ensure a rigorous and ethical approach, the objectives of the study were explained to the participants before the start of each interview, as well as the information notes on the study. The informed consent form, in which we undertake to guarantee and respect the anonymity and confidentiality of the data collected, was presented and administered to the participants to respect their rights and dignity. Most of the interviews took place at the health center.

With the participants' consent, we used a tape recorder to record the focus groups. Although this was a recording, the interviewer had to listen attentively and actively to avoid any digressions and to guide the participants towards the aspects to be investigated, if necessary, as well as to take notes in the logbook (gestures, tone, pause, posture, expressions, etc.).

3.8 Data collectors

Study team members and hired data collectors handled collecting the data. The data collectors were social scientists who were familiar with conducting FGDs and who were not from the study sites. Their training took two days comprising the field testing of the tools. The training included ethics in conducting research with human subjects, a thorough review of study instruments, the use of the local languages to conduct the FGDs, and the management of study data. Data collectors were three women, and three men so pregnant women felt comfortable speaking openly during FGDs.

3.9 Data management

Audio recordings of FGDs were translated into French, then, they transcribed the recording in French after listening to them. Transcription of the recording was checked for accuracy by someone fluent in both the local language and French. Then transcriptions were translated into English by a professional translator; that translation was checked for accuracy and validated by the study team members who are fluent in both French and English. Audio recordings and transcripts are stored on investigators' computers which are protected by a password.

3.10 Data analysis procedure

Initially, all recordings were transcribed in full by the data collectors, then repeated readings of the verbatim enabled the researchers to proceed with deductive coding till saturation. It was necessary to make repeated iterations between the interviews and the verbatim to better transcribe and understand certain terms. We drew up a preliminary thematic framework comprising the themes and sub-themes constructed for this purpose. The themes were then embedded within the study's theoretical frame constructs which are Affective Attitude, Burden, Ethicality, Intervention Coherence, Opportunity Costs, Perceived Effectiveness, and self-efficacy.

FGDs were recorded by the data collectors who were fluent in the local language and French. The coding of textual passages was done in N-VIVO software. Emerging themes were summarized in table format. Audio recordings were destroyed after all analysis was completed. The thematic analysis grid thus developed comprised six main themes and eleven sub-themes. This framework is presented as follows:

This framework was supplemented by the themes that emerged during the reading and rereading of the transcripts, to address the issue in all its aspects and enrich the work. At this stage, the interview verbatims were read and reread, then qualified by assigning adjectives, expressions, or short descriptive phrases (Blais et al, 2006). As we went along, each new interview was transcribed and then meticulously codified, as in the grounded theory that Paillé (1994) explains in the following terms: coding consists of extracting as faithfully and concisely as possible the testimony given during the interview, while avoiding repetition of the verbatim itself. The use of words, expressions, or very short sentences will adequately fulfill this function. The aim is simply to identify, name, summarize, and thematize, almost line by line, the statements made in the corpus under analysis (Paillé, 1994).

The verbatim transcript was proof-read by our supervisor to improve the confirmability of the study since one of the limitations of all qualitative research is the subjectivity of the researcher, who analyzes the data from his or her perspective and through his or her own "*mise en scène*" (Olivier de Sardan, 1995).

The systematic observations in the logbook, the notes taken during the interviews, and the literature review on the theme made it possible, through triangulation, to increase the validity and quality of the information gathered (Mays & Pope, 2000), as the main methodological bias of the qualitative study relates to the limit of the declarative. To increase the objectivity of our results, we systematically compared the information obtained from the interviews with the evidence.
To prevent our feelings, emotions, or preconceived ideas from interfering with the analysis (reflexivity), we resorted to data triangulation, which lends qualitative approaches not only validity but also, and above all, rigor, breadth, and depth to the research (Apostolidis, 2006). In short, "beyond enriching our understanding of phenomena, triangulation ensures the stability of certain observations and the reliability of conclusions reached by different means" (Gowman 2008). Triangulation was achieved by cross-checking the data from the interview, the previously analyzed literature review, and the notes taken in our logbooks. This is one of the major components of methodological rigor in qualitative research (Mays & Pope, 2000), and contributes to the credibility, confirmability, and reliability of the study.

3.11 Ethical considerations

To ensure a rigorous and ethical approach, before the start of each discussion, the objectives of the study were explained to the participants, along with the study information note. The informed consent form, in which we undertake to guarantee and respect the anonymity and confidentiality of the data collected, was presented and administered to the participants to respect their rights and dignity. We also got two IRB approvals of the protocol, one from UGHE (UGHE-IRB/2023/030) and the other from the Burkina Faso Ethical Committee for Health Research (IRB No.1969).

Finally, the Burkina Faso MoH provided authorization to conduct the study at the selected facilities (Appendixes 3, 4, 5).

3.11.1 Positionality

Our qualitative design method for this study is considered feminist research because it fulfills the 3 elements that define a feminist research method according to Harding (1987). Those elements are capturing and analyzing women's experiences, research on problems that concern women, and valuing women's knowledge held by the participants.

In the feminist research method, describing positionality is an important aspect, as it helps put the findings in context, so people who read them have the full picture of the study.

There are two authors for the current study, a female midwife and a male obstetrician and gynecologist who both grew up in Burkina Faso and are familiar with the socioeconomic and cultural context of Burkina Faso. Both have been engaged in clinical practice for many years in Burkina Faso, in rural and urban areas. They are experts in antenatal care. The two authors equally contributed to the selection of the study topic, the study protocol development, and the collection and analysis of the data as well as the interpretation and implications of the study findings. It may be possible that our backgrounds influence our interpretations of the data. To avoid any biased interpretations of the data, both authors tried to put aside any preconceptions about the study population, during data collection and the analysis process.

3.11.2 Vulnerable populations

The study targeted pregnant and lactating women, and these are potentially vulnerable. Owing to their condition, pregnant women are vulnerable to emotional and economic imbalances, imbalanced power dynamics, and systematic exclusion from society. Women's voices on issues of accessing quality ANC according to standard recommendations are often silenced. Communities prioritize other household activities at the expense of visiting health facilities for ANC as they do not see the value of visiting the health center when one is not 'sick'.
In this study, the privacy and confidentiality of participants were maintained. Participant's information was securely kept, and access was limited to people directly involved in the study.

3.11.3 Assessment of risks to participants

The study posed a low risk to participants. From the discomfort of pregnant women to talk about their pregnancy to peers. Focus group discussion have confidentiality issues, particularly where the participants give real life examples. The effects may occur even long after the FGDs. The effects could be pronounced for women from the same G-ANC group. The risk did not materialize since all women had taken part in G-ANC sessions during which they got used to discussing with their peers and sharing their experiences of pregnancy. In FGDs, women who felt uncomfortable

to respond on certain matters were allowed to remain silent. Assurance was given to participants that the information they provided would remain confidential and anonymous.

3.11.4 Medical or psychosocial support

No medical or psychological support was needed for the participants.

3.11.5 Information and consent process:

Pregnant women were informed about the study by a healthcare worker who is not one of those facilitating G-ANC visits. This happened just at the end of a G-ANC session. Women interested in participating provided their names and contact details. Some of the women who had already finished the G-ANC visits and who had already delivered were called by the same healthcare workers to invite them to participate in the study. The day before the FGD, all women who said they were interested were called by the healthcare worker who had registered their details and were informed that the FGD would take place the next day and given the location and the time of the FGD. On the day of the FGD, the facilitator obtained the informed consent of each woman, using the information sheet and the script developed for that purpose, before starting the FGD. All consent forms were kept in a secure place and handed over to the study team. Only oral consent was needed from pregnant women. In the consent form, it was clearly explained to the women, that the FGD will be recorded for fidelity of what they will say during the FGD and for transcription; then their permission is required before that can be done. For study participants who do not speak French, the facilitator provided the content of the consent form in their native language. However, the FGDs were conducted in the local language of the area, language that all women speak.

For healthcare workers, the study team approached them during a break or at the end of the day to seek their informed consent to take part in the study. A study information sheet was provided to each of them as well as a consent form. After reading the information sheet and the informed consent form, healthcare workers were encouraged to ask questions about the study and the study team answered those questions. If a healthcare decides to take part in the study, she/he then signs the consent form and hands it over to the study team.

3.11.6 Protection of privacy and confidentiality

De-identification of data

No personal identifiers leading to individual participants were collected, so there was no need for de-identification. At the beginning of each FGD, a number was given to each participant, with her age, level of education, marital status, and parity recorded on a blank sheet

Safekeeping of data

Data collected at study sites was brought to the Jhpiego office in Ouagadougou. It was locked in a cabinet in one of the study team members' offices, and only the study team and their preceptor had access to it.

CHAPTER FOUR: RESULTS

4.1 Introduction

This section presents the results of a study carried out with 58 women in six focus groups held in six health facilities providing group antenatal care in three regions of Burkina Faso. The first part describes the socio-demographic profile of the participants, while the second presents the results of the analysis of the categories that emerged from the verbatim.

4.2 Socio-demographic profile of study participants

The sample consisted of fifty-eight (58) women, 56(96.6%) of whom were pregnant and two breastfeeding mothers 2(3.4%) who had given birth, and all of whom had attended G-ANC during their pregnancy at one of the study sites. The ages ranged from 18 to 39 years. In terms of marital status, six (10.3%) were unmarried and living with their partners. With regards to the level of education, seven women had secondary education, 11(19.0%) had primary education, 5(8.6%) had attended madrassa school, and 35(60.3%) did not attend school. The gestational age of those currently pregnant was between four and nine months.

4.3. Focus group themes

The following six main themes were generated from the data and discussed with women: Overview of women's overall experience of group ANC, advantages and difficulties of G-ANC, social relationships, relations between beneficiaries and their husbands/partners, changes brought about by group ANC, suggestions and proposals for improving group ANC. These themes were embedded within the 7 constructs of the TFA, which are Affective Attitude, Burden, Ethicality, Intervention Coherence, Opportunity Costs, Perceived Effectiveness, and self-efficacy.

Table 3: Themes and sub-themes emerging from data analysis.

Themes	Sub Themes
Overview of women's overall experience of group ANC	• Level of knowledge of group ANC • Acceptance and adoption of group ANC • Assessment of group ANC
Advantages and difficulties of group ANC	• Specific benefits (individual experiences) • Practical difficulties of group ANC • Strategies for stimulating benefits and overcoming difficulties
Social relationships	• Group formation and experience-sharing among beneficiaries

	• Social relations between midwives and beneficiaries • Relations between beneficiaries and non-beneficiaries
Relations between beneficiaries and their husbands/partners	• Husbands' perceptions of group ANC • Exchanges between husbands and beneficiaries
Overall changes brought about by group ANC	• What changes G-ANC has brought in th
Suggestions and proposals for improving group ANC	• What should be done to improve G-ANC

4.3.1 Affective Attitude

This construct describes how individuals feel about an intervention. We asked the women participating in the G-ANC sessions how they felt about the G-ANC model. Most of the women from the 6 FGDs were contented with the frequency of sessions and felt these were optimal for effective monitoring of the pregnant mother and the fetus. One pregnant woman clearly said "*We love and enjoy G-ANC sessions and are benefiting a lot." (FGD6, P4).* This was believed to contribute significantly to early detection of danger warning signs and early intervention which would ultimately improve maternal and newborn outcomes.

Perceived benefits of G-ANC to pregnant women

When asked about their general appreciation of G-ANC, most women were positive about this new approach to pregnancy monitoring. Participants reported high acceptability of the G-ANC model by the women in their community which was evidenced by their willingness to participate in all G-ANC sessions. Even those who were experiencing pregnancy for the first time expressed their preference for G-ANC and said that it had advantages for them. One primigravida at initial contact narrated:

"There are so many benefits because there are many things that we did not understand in the individual ANC that we understand in G-ANC. For example, how to maintain pregnancy until childbirth. There is plenty of time to explain everything to us and we ask any possible questions" (FGD2; P5)

Through G-ANC, women felt capacitated to do things they could not do before. One of the FGD participants had this to say:

"*I know one thing, but since my participation in these visits, I now know many things that I did not know" (FGD1; P1).*

The feeling of learning new skills was reinforced by this woman who said:

The midwives we were given (assigned to us) helped us a lot with the advice; previously, we could not take the blood pressure, but now we know how to do it, and we can take the temperature and weight. Some in the group did not know how to write, but thanks to the G-ANC, they managed to note their weight in the notebooks. To tell the truth, it helps us a lot (FGD3; P2).

Perceived Benefits for the family and community

In addition to the benefits for the pregnant women themselves, the focus group discussions revealed that the women who participated in at least one G-ANC were much more likely able to discuss the care they received, including the content of the educational talks, with their husbands, mothers-in-law, and co-wives, thus avoiding certain harmful traditional practices and behaviors, such as force-feeding babies with herbal tea. They also mentioned information on the danger signs of pregnancy, which was well explained and shared with other family members. One participant said:

I remember once, the midwife told me to stop force-feeding my babies and to only breastfeed until they were 6 months old. When I gave birth, my mother-in-law wanted to force-feed with herbal teas and my husband said no, because I had told him about this talk during the G-ANC. I was so happy (FGD6; P9).

This testimonial sums up the advantageous aspects of group ANC: "*The advantages are good health and uncomplicated childbirth because we followed the advice, they (midwives) gave us, and we gave birth without worries and in good health, in any case, it was beneficial for us". (FGD 4, P3)*

Through G-ANC, participants confessed that the barrier of long waiting hours to get ANC services at the health center was now becoming a thing of the past as they could easily be addressed as a group by healthcare professionals and find more time to do home chores.

It should be noted that group ANC is a learning space for women on all issues related to the well-being of the child and the mother. These range from the savings a woman needs to make before giving birth, the layette to prepare before coming on the day of delivery, and advice on family planning. As one beneficiary puts it: "*There are things you don't understand, but when it's in a group, you get clarification on how to manage your pregnancy right up to the birth, without any problems.*" (FGD 2 P1)

Despite all the benefits mentioned by the women, they also brought up some difficulties and challenges they have faced in the course of ANC.

4.3.2 Burden

The burden is the perceived amount of effort to participate in the intervention (Sekhon et al., 2018). The interviewed women presented their views under this construct as mainly challenges they face participating in the G-ANC activities.

Challenges in participating in G-ANC

Women participating in G-ANC have reported some difficulties during the sessions, one of them being the duration of the sessions. This is expressed by one of the participants in the FGD through this statement:

In my opinion, the difficulty is in terms of the time taken. Not all pregnant women come at the same time, which means that the times of the meetings are extended. When you only have a pregnant woman who will come to stay for a long time, it is very tiring. Most of the time, we exceed the time allotted for the meeting because they come late. We are not all in the same village (FGD5; P7).

Some interviewed women complained that there was a lack of adequate and conducive physical spaces for the G-ANC sessions. On the same note, some FGD participants cited long waiting time before receiving services as a burden and disincentive, since they have many other home chores that require a woman to take care of. Those who stayed a little bit far from the health centers cited transport costs and a few cited fatigue due to the increased number of ANC visits. One of the FGD participants narrated this:

"We love and enjoy G-ANC sessions and are benefiting a lot. However, the ANC visits have increased, and our husbands complain that we are taking advantage of health center visits to avoid working in the fields" (FGD6, P4).

Some of the interviewees mentioned time constraints. The delays experienced by some members during consultation sessions meant that they were sometimes obliged to go beyond the time agreed in advance. For example, one respondent gives an anecdote on this subject: "*We were told to be there at 8 a.m. that day and we're so far away; she left Kouonpla (a nearby village) and she arrived at around 8:30 a.m. and we told her to get out of the room*" (FGD 1, P2).
This creates frustration for both the midwives and the other beneficiaries, who are obliged to stay until certain hours. According to the interviewees, this situation leads to other misunderstandings in the households, because of the household duties that some of them must perform daily.

4.3.3 Ethicality

This construct refers to the extent to which an intervention fits with an individual's value system (Sekhon et al., 2018). In this study, ethicality was assessed in terms of cultural values and norms.

Both pregnant and postnatal mothers concurred that the G-ANC model meets their cultural values and expectations. From all the 6 FGDs, women were happy with the way the G-ANC model promotes equality and values every woman's perspectives and contribution. Sessions were reported to be participatory, and in-laws and husbands could be invited. Another woman confirmed that the traditional and religious leaders, in-laws, and husbands were in full support. This is a narration from one of the interviewed participants:

My husband is looking forward to joining some of the sessions. The feedback I always give him from the sessions is helping him provide more support. My mother-in-law wanted me to give complementary foods and herbs to my newborn. But my husband insisted that I should exclusively breastfeed my child, as this is the best food for my child, who is two months old (FGD2, P3).

Relationships among pregnant women

Women's empowerment and social cohesion

G-ANC was noted to promote trust and cohesion among women, enabling service providers to reach saturation coverage. It was also reported to cultivate a sense of commitment and belonging among group members.

Unlike ordinary prenatal consultations, which women are accustomed to attending, group ANC is first and foremost about communication and sharing experiences. As one respondent put it:

"Before we start all this, they tell us that it's a family we have to form, and everyone has to know each other's names" (FGD 3, P7).

This premise shows how the group ANC philosophy aims to structure social relationships. The women claim to have good links within the groups, and to continue exchanging good practices concerning the well-being of pregnant women and newborns, even outside the discussions, as the beneficiaries have also exchanged telephone contacts. They do each other favors. As this woman testified:

"Because we're a family, if we see each other at the market or naming ceremonies, we can sit down together again to talk about anything and everything and remind each other of G-ANC". (FGD 1, P5).

Women interviewed in the FGDs enjoyed the participatory nature of the sessions and sitting in a circle gave them a sense of oneness and equality as opposed to lecture sessions where one facilitator dominates everyone. The reports from the interviewed women revealed that relationships between pregnant women are critical in sustaining the attendance of ANC and improving their general satisfaction with ANC services. Pregnant women in FGD 2 and 4 reported that G-ANC was empowering to them.

Relationship between women and midwives who facilitate G-ANC

Through group ANC, there is a closer relationship between beneficiaries and midwives, according to the various testimonies in the interviews. This closeness comes from the fact that during group ANC, the midwife or the healthcare worker trained to facilitate the session gives

the women the latitude to raise the questions they wish to have answered. Women insist on the familiarity that exists between the midwife, whom they affectionately call "tantie" (Auntie). A woman said:
"*I can say that the midwives and we have become like a family. We used to have difficulty approaching them, but now we can reach them easily"* (FGD 6 P 8).

According to the women, this ease of communication is something that encourages them to come to antenatal consultations and also to exchange information with the midwife by telephone.

Relations between beneficiaries and husbands

Among the focus group respondents were beneficiaries whose husbands had participated at least once in a group ANC session. This question aimed to gather the views of husbands who have participated and those who have not, through their wives.

Husbands' perceptions of group ANC

As group ANC is a new format and a specific framework for exchange and learning for women, husbands were invited to participate.
One respondent admitted: "*Our husbands came. When they came, they took part, and they found it interesting too*". (FGD 2, P8).
This was an opportunity for the husbands to discover the content of the group ANC sessions. For this category of husbands, it helped change the way they look at antenatal consultations in general. This is the example that stands out:
"*It was my case, my husband came to listen and I think it was useful".* (FGD 5, P2)

In the focus groups, we found that husbands' perceptions of group ANC were divided into two categories: those who viewed husbands' involvement positively and attached importance to group ANCs, and another category who were sometimes indifferent and didn't realize their importance. This attitude, although nuanced by the women, does not encourage their participation in group ANC.

However, according to some women, some husbands find it difficult to take part in an exchange on antenatal consultations because, for them, it's a strictly female world, and husbands have nothing to do with it. As one respondent put it:
"*You know our parents, woo (laughs), they said that if a pregnant woman calls her husband at the hospital, the husband shouldn't go, because our meeting there is weird*". (FGD 2, P6).

These perceptions are based on prejudices linked to socio-cultural realities. For the latter, group ANC sessions are discussion sessions that include parameters other than the pregnant woman's well-being. The professional conditions of some husbands force them to believe that group PNWs are yet another opportunity to get their wives away from farm work.

Exchanges between women and their husbands/partners

Exchanges between husbands and beneficiaries also parallel perceptions and are divided into two categories. For those who participated together with their wives in group ANC, the discussion continued at home, as this woman asserts:

"As he was able to exchange with the midwives, he learned a lot (...). He said it was very interesting". (FGD 3, P7).

The women affirm that their husbands' participation in group ANC helps to break certain taboo topics such as sex during pregnancy and family planning, and the husbands' direct contact with the midwives provides topics for discussion at home.

On the other hand, husbands who did not participate still have preconceived ideas, as this respondent put it:

"Those who didn't accept, that the pills will stop the woman from getting pregnant, that it would change their blood did not participate". (FGD 4, P1).

This stance sometimes fosters doubt. However, it is clear from the responses that a total refusal to discuss issues relating to the condition of pregnant women and reproductive health does not exist, even among husbands who refuse to take part in group ANC. According to this respondent:

"*My husband didn't come but he communicates with those here, he appreciates what we do because in his opinion it's something good."*

4.3.4 Intervention coherence

Intervention coherence is a function of a participant's understanding of an intervention and how it works. In this study, women were asked with regard to their understanding of how the G-ANC model works. There was a generally good understanding of the purpose of the G-ANC approach and how it helps pregnant women and postnatal mothers to improve their health outcomes and those of the newborn children. There was a variation in the intensity and depth of comprehensive knowledge of the essence of the G-ANC approach but all the interviewed women in the FGDs had optimal understanding as also evidenced by the correct verbalization of the benefits of G-ANC sessions.

One of the participants made this narration:

"I am a woman aged 36 and this is my 3rd pregnancy. I had an opportunity to attend ANC in my previous pregnancies but the way of attending ANC was not the same. You had no peer support and learning sessions were individualized and not very effective since the nurses had a lot of us to attend to individually. I thank the organizers for bringing this new way that intends to bring us women with similar characteristics in groups so that we can support each other, encourage each other, and learn from each other on how to manage pregnancy and how to take care of our newborns. I have learned a lot through participating and through peer experiences" (FGD6, P3).

For the interviewees, group ANC is defined more by its practice than by its concept. They say they are involved in the consultations, i.e. that through the formation of groups and the monitoring of midwives, pregnant women can carry out self-consultations. Involving women in the consultations means teaching them how to take their blood pressure, their weight, and their good manners as pregnant women, as well as giving them advice. According to the women, this is a new method of empowerment that differs fundamentally from their past experiences of prenatal consultations. In the words of one interviewee,
"*Group care has been interesting because when we come to be weighed, we're well taken care of, we sit down and talk, we're shown what to do and what not to do, so we've learned a lot of things". (FGD6, P5).*

4.3.5 Opportunity cost

Opportunity cost refers to the extent to which benefits, profits, or values must be given up to engage in an intervention. In this study, we asked the pregnant and postnatal mothers about competing needs and interests that they must forgo to attend G-ANC. Participants highlighted that they often do a cost-benefit analysis in making decisions to come to G-ANC, especially given the fact that sessions are many until delivery. The women acknowledged that the short duration of G-ANC sessions is the fact that keeps them attending.

Competing needs that were highlighted included care of the older children, farming activities, and household chores. Women in the FGDs also cited competing socio-economic activities such as the need to go and sell at the markers to fan for the family. One woman narrated:

"I am a woman aged 25, and I am currently the breadwinner for my family. My husband, who is 30 years old, is jobless and spends most of his time drinking with friends. I must plan my day carefully to make ends meet. I travel 5 km to come to the health center and sometimes wait for others to come for group sessions and receiving services and the time I need to travel back home, means that on all G-ANC session days, I am not able to sell my farm products to earn an income. However, when I then compare the time lost for business with the benefit of the knowledge that not only saves my life but also that of my unborn child, I always find it worth value to make this sacrifice every time" (FGD2, P7).

Women also cited myths, cultural beliefs, and traditional experiences as some of the causes for missed opportunities to fully benefit from G-ANC sessions. Influential in-laws who never valued modern medicine still do not appreciate the need to go to the health facility. They continue to force their daughters-in-law to visit traditional midwives and ultimately deliver there. Some also prepare concoctions for their daughters-in-law who are pregnant which they say are useful to sustain pregnancy and this in some cases may cause complications during pregnancy. Delays in attending

these useful sessions for some women were due to cultural beliefs and social norms around pregnancy.

4.3.6 Perceived Effectiveness

Perceived effectiveness is the extent to which the intervention is perceived as likely to achieve its purpose (Sekhon, et al, 2018). It was almost a unanimous consensus that the G-ANC model is effective in reducing maternal and child morbidity and mortality through amplifying the prevention mechanisms that come through proper knowledge to learn early warning signs and to avoid risk factors. There was a consistent agreement among the interviewed women that G-ANC sessions harness the social capital to improve outcomes and working relationships and binding with health care providers which is needed for open communication and trust-building.

Relationships with healthcare workers

The participant echoed sentiments that ANC provides an opportunity for pregnant women to build some relationships with healthcare workers beyond clinical care, to get some respect, and be able to ask questions. One of the women said:

"*With individual ANC, we are examined, we are not considered, we are not spoken to properly, whereas with G-ANC, we are spoken to and new knowledge is transmitted effectively"(FGD4; P4)*

Another woman added: *"Thanks to the good welcome, you dare to ask all the questions and they (healthcare workers) give you clear answers. With my previous visits, I had not been allowed to familiarize myself with their faces and ask questions."*

The interviewed women perceived their relationship with healthcare providers to be warm and friendly. They also believed that through G-ANC, they had full access to quality, adequate expert care, as opposed to what was happening in individual ANC, where individual women had to compete for the same available time to get attention, and services were provided hurriedly to finish the queue.

4.3.7 Self-efficacy

Self-efficacy is the confidence that participants can perform a recommended behavior or practice. In this study, we assessed this by assessing whether women were completing the scheduled activities in the G-ANC sessions, their verbal reports on whether they felt they could continuously attend G-ANC sessions in their next pregnancy, and how they felt interacting with their peers in G-ANC sessions.

Most of the women interviewed showed high levels of self-efficacy. They had much enthusiasm to participate in practical sessions to check their vital signs, use a fetoscope to hear fetal sounds

and assess movements. G-ANC sessions were reported to provide opportunities for women to spend time together and talk about their common situations such as pregnancy, and sharing experiences between women. The participants said the G-ANC sessions are an opportunity to strengthen the relationship between them, and hence social cohesion. One of the participants told us:

"*I'm not Bissa (one ethnic group of Burkina Faso), so it wasn't easy at first, but with G-ANC I made friends and gradually learned the language. Now I don't feel like a stranger in my husband's family, and I can articulate and do all the things we are taught in G-ANC sessions*" *(FGD6; P3).*

Most women described the existence of very good relationships built from these group meetings that they magnify and enjoy while hoping for a lasting relationship. A participant in one of the focus groups said, talking about another woman in her group care:

Ground rules on the operationalization of G-ANC were found to be very useful in bringing equality and encouraging active participation by all participants. All these interactions have increased the perceived self-efficacy to participate within groups and have improved self-esteem and confidence.

4.4 Participants' recommendations to improve G-ANC

Another constraint that was raised frequently by G-ANC attendants was related to the lack of adequacy of the space allocated for the sessions. As reported by one of the FGD participants:

"*What I don't like is when the other patients pass by and watch us measuring weight or blood pressure; it would be better if it were inside, but the room is small" (FGD2; P10).*

The sub-themes that emanated from this theme were women's perspectives on G-ANC and partner involvement.
When asked about how G-ANC can be improved, women suggested improving communication between them via WhatsApp or involving their husbands/partners in the sessions. A participant in the FGD said:

"*As we have phones with WhatsApp, if we could make the group with our midwife, it will allow us to stay in touch and contact her quickly if there is a problem*" (FGD6; P9).

Some women proposed that the current scheduling of G-ANC during working days which exclude the weekends, should be revised accordingly, thus allowing more men to attend: One participant said:

"*It's because the days of G-ANC are Mondays and Fridays; otherwise, my husband would come. Can we do it on Saturday night? That way they can come and listen too and help us with the mother-in-law [laughs]*"(FGD4; P1).

The participants also recommended that there is a need to come up with more innovative ways of motivating more men to participate in G-ANC activities so that they are not left out and for their buy-in.

4.5 Conclusion

Chapter four presents the findings of the study. The findings were reported under five themes, namely, perceived benefits of G-ANC, relationship with health care workers, relationship among pregnant women, challenges in participating in G-ANC, and participants' recommendations to improve G-ANC.

CHAPTER FIVE: DISCUSSION

5.1 Introduction

This chapter discusses the study's findings in line with the study objectives. The study sought to assess the acceptability of the G-ANC among pregnant women in six pilot sites in Burkina Faso and make further recommendations on how the model can be contextualized for expansion in more health centers in Burkina Faso. This chapter will profile the discussion of the findings and recommendations.

5.2 Discussion of findings

The major purpose of WHO 2016 guidelines on ANC was to guide the process of delivering ANC and ensure that its implementation would result in a positive pregnancy experience and outcome (WHO, 2016). Group Antenatal Care (G-ANC) is a model that could deliver better ANC outcomes compared with individual ANC but very few studies have assessed its acceptability and modalities for operationalization in low and middle-income countries.

We will discuss the findings of the study using the seven dimensions of acceptability according to Sekhon's TFA (2017).

Affective attitude

Several studies have assessed women's satisfaction with G-ANC (Nsaba, 2019; Anderson, 2013, Teate, 2011; Hunter, 2019) and they all found that women were positive about G-ANC for several reasons. The satisfaction with G-ANC was loudly expressed by one woman in this study, who said "*We love and enjoy G-ANC sessions and are benefiting a lot" (FGD6, P4).* Several reasons have been put forward by women to explain their satisfaction with G-ANC. One of them is the fact that G-ANC allows them to conduct some of the ANC checks like weight and blood pressure measurements, which is seen as a way of empowering them (Hunter, 2019). Another reason reported in Tanzania and Malawi is the breakdown of the barriers between pregnant women and providers seen in G-ANC sessions (Patil et al, 2013). Satisfaction is also evidenced by the high retention rates of group members. According to Cunningham (2017), the more women attend the sessions, the more they are satisfied.

Burden

Participation in G-ANC comes with its burden such as spending at least sixty to ninety minutes for ANC visits and attending six to seven sessions in total instead of four. Another complaint by

some women is the lack of adequate space for group meetings. Novick's (2009) findings on long waiting times (before receiving services) closely mirror those of our Burkina Faso study, where several women participating in G-ANC complained about delays and long waiting periods as a major bother to them though they acknowledge an improvement in the waiting duration as opposed to individual ANC sessions. Additionally, not all women participating in G-ANC were comfortable with the length/extended duration of their sessions. Musabyimana et al (2019) also discussed the matter and the women suggested improvement in time management not only by fellow G-ANC beneficiaries but also with the service providers. The study recommended the development of a reminder system for scheduling appointments. The same study also recommended the provision of G-ANC services at community outreaches as a viable alternative that would alleviate the problem of time management.

Ethicality

In a society like Burkina Faso where traditions have a strong impact on women's life (Maizi, 1995), the introduction of G-ANC did not seem to have encountered any resistance from the pregnant women and the community gatekeepers (community leaders, husbands/partners, mothers in-laws). Pregnant women at the pilot sites have embraced G-ANC almost without a second thought. As one of the pregnant women said ". *I thank the organizers for bringing this new way that intends to bring us women with similar characteristics in groups so that we can support each other, encourage each other, and learn from each other on how to manage pregnancy and how to take care of our newborns. I have learnt a lot through participating and also through peer experiences".* In Botswana, Nyumwa (2023) found that the WHO eight contact model of ANC which is comparable to G-ANC in terms of the number of visits, fit well in women's value and they accept it. An issue related to ethicality is the use of culturally appropriate education materials during G-ANC sessions (Brookfield, 2019), which was not raised by the women of this study, but that needs to be kept in mind as G-ANC is scaled up in the country.

Intervention coherence

One of the major reasons why women in this study were satisfied with the G-ANC is the new knowledge and skills that the approach has allowed them to acquire. This is a testimony that pregnant women understand the content of G-ANC and how it works. There is enough evidence from the literature that G-ANC improves knowledge levels, increases adoption of healthy behaviors, enhances self-efficacy, and high satisfaction with the experience and quality of care. A similar quantitative study reported that G-ANC sessions tripled the knowledge on danger signs of complications during pregnancy from 7.1% at baseline to 26.4% at the end line. Similarly, the percentage of women who could identify three or more ways to improve their health and that of their baby increased from 30.4% to 37.5% (Somji et al., 2022). In another study by Musabyimana et al. (2019) in Rwanda, most of the women participating in the G-ANC focus group discussions acknowledged a marked improvement in health-related and self-care knowledge because they

participated in group care. These positive changes were attributed to spending significantly more time per visit with the midwife, therefore learning more. They also reported having benefited and gained more knowledge through their interactions with more experienced mothers in their groups who freely shared information on pregnancy care. Finally, Lori (2017) has reported that women who attended G-ANC have improved health literacy with a greater understanding of how to operationalize health education messages, taught to them during the sessions.

Opportunity costs

It appears that the opportunity cost of group antenatal care has rarely been explored by other authors. This study was conducted in settings where women are engaged in farming, socio-economic, and household activities and those activities could be competing with G-ANC attendance (Nyumwa 2023). Time spent on G-ANC sessions impacts on those activities. However, women are ready for that trade-off as a woman in one of the FGDs said: "*when I then compare the time lost for business with the benefit of the knowledge that not only saves my life but also that of my unborn child, I always find it worthwhile to make this sacrifice every time".* It seems that husbands sometimes complain about the competition between G-ANC, probably ANC in general, and farming activities, arguing that G-ANC with its numerous visits, is an opportunity for women to dodge farming activities. In a study conducted in the USA, Stringer et al (2005) reported that despite personal costs, women still attend postnatal care. There is a need to explore more, the opportunity cost of G-ANC.

Perceived effectiveness

One of the major themes that emerged from the FGDs is the effectiveness of G-ANC in terms of a positive learning experience for mothers. As one woman puts it, *"There are so many benefits because there are many things that we did not understand in the individual ANC that we understand in G-ANC".* Studies have shown *that* G-ANC has enhanced women's experience of pregnancy (Hunter et al, 2019), which is the main goal of WHO new guidelines on ANC (WHO, 2016). It is reported that G-ANC has improved knowledge of danger signs during pregnancy (Thapa et al., 2019) and has been a source of social support based on the format of the model (Sharma et al., 2018). In this study, a G-ANC cohort has gone beyond socializing during the sessions to set up a tontine. Participants in G-ANC had a sense of security regarding the outcome of the pregnancy (Nyumwa, 2023). One participant in this study said, "*The advantages are good health and uncomplicated childbirth because we followed the advice, they (midwives) gave us, and we gave birth without worries and in good health, in any case, it was beneficial for us" (FGD 4, P3, a postnatal woman).* Despite being implemented in settings with low literacy levels, G-ANC tends to improve women's health literacy (Lori et al, 2024). One woman in this study reported that "*Some in the group did not know how to write but thanks to the G-ANC they manage to note their weight in the notebooks, to tell the truth, it helps us a lot" (FGD3; P2).*

Self-efficacy and empowerment

Exploring self-efficacy, McKinnon et al (2020) were able to show that G-ANC improves maternal self-efficacy. Using a pregnancy-related empowering scale (PRES), Patil et al (2017b) in Malawi found that G-ANC empowers pregnant women when compared to the traditional ANC. In Senegal, it was shown that G-ANC has allowed pregnant women to gain voice (McKinnon et al, 2020). Through G-ANC women were able to carry out some ANC tasks such as blood pressure and weight measurement. Jeremiah et al (2021), in a study conducted in Malawi and Tanzania, reported an improvement in partner communication. This was also noted in this study, where a woman reported that G-ANC had empowered her to discuss sensitive health issues with her husband and to negotiate for the abandonment of some harmful traditional practices in childcare. In all the groups interviewed, group leadership was maintained throughout ANC sessions which is a sign of stability. The use of participatory approaches to facilitate sessions was highly effective in making women open to discussing their issues and challenges. Similar studies have also reported that the use of a facilitative leadership style ensures that G-ANC groups remain women-centered and interactive (Arnold et al., 2014).

Based on the findings of this study, G-ANC was found to strengthen the relationship between midwives and pregnant women and promote social cohesion between pregnant women. Building intra-group relationships among pregnant women was one of the key reasons cited for their satisfaction with the G-ANC approach (Jafari et al., 2010, Adaji et al., 2019). Similarly, McKinnon et al. (2020) also reported that women place a premium on the friendships and relationships they build with other women during the G-ANC process. These relationships often transcend the ANC process and pregnancy period, effectively creating strong social networks in their communities. Anecdotally, a participant at one of the FGDs mentioned that village members belonging to her G-ANC cohort formed a tontine (table-banking group) because of the trust and friendships that emerged during their group interactions. Generally, these findings highlight the relevance of the community-oriented G-ANC approach and its obvious benefits in promoting positive relationships among pregnant women and health workers, which ultimately contribute to better overall pregnancy outcomes for both the mother and child.

Several challenges associated with attending G-ANC must be analyzed from both the pregnant women and the service providers' perspectives. The lack of adequate and conducive physical spaces for the G-ANC sessions, as reported by respondents in this study, is corroborated by sentiments of pregnant women participating in a similar study in Canada (Donald et al., 2014) and mentioned by healthcare workers in a comparable study in Mexico (Ibañez-Cuevas et al., 2020). The lack of adequate and conducive physical spaces for G-ANC meetings gives rise to concerns about clients' privacy as reported here and in an analogous study in Senegal (McKinnon et al, 2020).

Novick's (2009) findings on long waiting times (before receiving services) closely mirror those of our Burkina Faso study, where a few women participating in G-ANC complained about delays and long waiting periods as a major bother to them though they acknowledge an improvement in the

waiting duration as opposed to individual ANC sessions. Additionally, not all women participating in G-ANC were comfortable with the length/extended duration of their sessions. Musabyimana et al (2019) also discussed the matter and the women suggested improvement in time management not only by fellow G-ANC beneficiaries but also with the service providers. The study recommended the development of a reminder system for scheduling appointments. The study also recommended the provision of G-ANC services at community outreaches as a viable alternative that would alleviate the problem of time management. Nonetheless, Gaur et al. (2021) came to a different conclusion. His study revealed that the time spent waiting for other group members in most cases decreased, especially when compared to the time spent at separate appointments, which resulted in longer waiting times.

In a Bangladesh study, in which women participants were especially keen on discussing family planning, WhatsApp groups were suggested as viable options for shortening waiting times and improving communication between the clients and service providers (Saltana et al., 2019. However, due to the differences in settings, the recommendations of this study may not be directly assignable to the suggestions by Burkinabe women regarding the use of digital tools for the improvement of G-ANC processes. Misago et al. (2023) measured the perception and acceptability of digital intervention for antenatal care in Burundi. The study reported that while 86.3% actively participated in the intervention, a significant 77.1% reacted positively to automated reminders while another 70.2% expressed willingness to participate in the intervention. Conversely, approximately half of the mothers reported that participation in the program significantly affected their time management. Acceptability of the digital intervention was higher among mothers who owned a personal mobile phone, with 21.4% of the mothers accepting the intervention.

Although not directly related to the mobile platform intervention (WhatsApp) suggested by the Burkinabe women to enhance communications, the study showed that digital platforms portend a lot of promise as viable tools for improving pregnancy monitoring even in rural areas. It should still be noted that the acceptability of the intervention was still quite low among mothers without a mobile telephone handset. Other challenges relating to the implementation of such an intervention would include inadequate user technical skills, affordability of airtime, limited network coverage, and access to electricity.

During the COVID-19 pandemic, a study was conducted in the United Kingdom to test the efficacy of providing G-ANC via virtual platforms. The virtual G-ANC sessions included women-led discussions and break-out rooms for one-to-one checks. The participants expressed gratitude for the opportunity to interact, saying that it reduced the depressing sense of isolation and bridged the barrier of physical distance among friends who lived far apart (Wiseman et al. 2022). From this example, it is evident that online G-ANC presents promising opportunities that need to be explored especially in low-income settings. However, implementers of such a program will need to innovate around the inherent challenges of implementing a digital program in low-income settings, such as

accessibility to mobile telephone solutions, leadership and coordination, and how confidentiality will be maintained on the virtual platforms.

Currently, all G-ANC sessions are conducted only during weekdays. Women respondents in Burkina Faso recommended revising this schedule to include a few hours during the weekends to allow their male partners to escort them for services and possibly listen/sit in during the G-ANC sessions. These recommendations closely mirror those of a South African study which revealed that employment/work-related challenges and financial constraints were formidable barriers to male participation in ANC. The study recommended shorter waiting times to incentivize men to escort their partners. It also recommended that service providers should consider conducting weekend clinics as a possible option for increasing male involvement in ANC. The service providers, however, urged that implementing the above-mentioned measure may stigmatize the male partners (Yende et al., 2017).

Although Macdonald et al. (2014) established that the presence of male partners in G-ANC meetings was valued, women participants expressed caution, claiming that the presence of men in their sessions would stifle conversations on sensitive topics (e.g., constipation). It was therefore suggested that sensitive topics should be slotted for women-only G-ANC sessions and the males invited on scheduled days when the topics of discussion were less sensitive.

5.3 Limitations of the study

This study, which assessed the acceptability of G-ANC as an approach in the pilot phase of implementation, focused exclusively on the opinions and views of pregnant women. It, therefore, had some limitations, which can be summarized as the fact that it did not consider the opinions of care providers and spouses, who are key players in pregnancy management and G-ANC. Also, in the perspective of advocating for the scaling-up of this new approach to care, it would be essential to know the added value of G-ANC in terms of health outcomes and cost. A study along these lines could provide further evidence that G-ANC is an efficient approach to pregnancy monitoring for the promotion of women's health and the reduction of maternal mortality in Burkina Faso.

5.4 Strengths of the study

Despite the limitations described above, the study has some very important strengths, namely the wealth of data collected during the six focus group discussions, which yielded qualitative data whose analysis reveals the point of view of women from six health facilities in three different regions, with different social and demographic realities in Burkina Faso.

CHAPTER SIX: CONCLUSION AND RECOMMENDATIONS

6.1 Conclusion

The conclusion of this study is based on the findings and their discussion. In summary, it could be said that the results of this pilot study demonstrate that G-ANC is a promising model in the Burkinabe context to promote positive experiences of women during ANC, in line with the new WHO guidelines on routine antenatal care through the use of the seven constructs of the Theoretical Framework of Acceptability namely Affective Attitude, Burden, Ethicality, Intervention Coherence, Opportunity Costs, Perceived Effectiveness, and self-efficacy, the study was able to show that to a great extent that the G-ANC model is acceptable among pregnant and postnatal women in Burkina Faso. Focus group discussion analysis has provided data in favor of each of the 7 dimensions of the Theoretical Framework of Acceptability.

The acceptability of G-ANC is an essential element in scaling up the approach, in addition to the implementation cost. Additionally, other studies will be necessary to demonstrate the effects of this modality of ANC delivery on pregnancy outcomes.

6.2 Recommendations

Based on the results of our study, we make the following recommendations to the preceptor and the Burkina Faso Ministry of Health:

To Jhpiego, the organization leading G-ANC implementation in Burkina Faso, we recommend addressing the following issues, ensuring all facilities implementing G-ANC have adequate space for a group meeting, availability of ANC commodities namely sulfadoxine-pyrimethamine and IFA. Before any scale-up, a rigorous assessment of the pilot phase focusing on key issues such as the health outcomes of G-ANC should be done. Finally, Jhpiego should envisage introducing group postnatal care after discussing it with the Ministry of Health.

To the Ministry of Health of Burkina Faso, we suggest that the ministry in collaboration with Jhpiego carry out a study on the implementation cost of G-ANC in Burkina Faso, develop a scale-up plan which should comprise the inclusion of G-ANC in the national maternal and newborn health guidelines and preservice education curriculum.

Future further advances of the project

The next step of this research could be to assess healthcare workers' and pregnant women’s husbands/partners’ perspectives on G-ANC. It will also be important to undertake a study on the health outcomes of G-ANC and its implementation cost.

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Appendices

APPENDIX 1: Information and consent form for pregnant women

Participant ID: ______________________

Project title: Acceptability of group antenatal care by women in selected facilities in Burkina Faso

Study population:
Pregnant women who are attending or who have attended group antenatal care at the study sites.,
Version date: Version 1, March, 6, 2023

Principal Investigators:

Konlobe Yvette Ouedraogo, Midwife, MS in midwifery, Master in GBV
Blami Dao, MD, OB/GYN, FWACS, FRCOG

[Describe the context of your project (e.g., MGHD program), and how it has received the required ethical approvals and complies with international ethical standards]

We are both students at the University of Global Health Equity in Butaro, Rwanda, pursuing a master's degree in gender and sexual and reproductive health. One of the requirements of that master's degree is to conduct research on a health topic. This research has been approved by the both the authorities of our University and those of the Health Research Ethics committee of Burkina Faso and also the ministry of health of Burkina Faso.

About this consent form

” Dear participant,
You are being asked to participate in a research project about group antenatal care. This consent

form explains the research study and your part in this research. We are recruiting participants for an interview, which is one way we are using to collect data for the study. You must read carefully the content of this form and take as much time as needed because it contains important information to help you decide whether to participate or not in the study. If you agree to participate, you will be asked to sign this form, then you will receive a copy of the signed form and a copy will be kept in the study records.

Participation is voluntary.
Your participation in this research is voluntary. So, you can decide whether to participate or not. If you accept you may change your mind at any time during the research. If you refuse to participate, that will not affect the health services you receive at this facility.

What should you know about this research study?

If you agree to be part of the study, you will participate in a discussion with other women who are or who have participated in group antenatal care like yourself. The discussion is related to your experience in receiving group antenatal care. Before the group discussion, a study team member will provide details about the study.

What is the purpose of this project?

Group antenatal care has been implemented in a few countries in Africa and rarely in Francophone Africa. Only 12 facilities have introduced this approach in Burkina Faso. The goal of this research is to assess pregnant women and providers' experience as well as health outcomes of group antenatal care in in the context of Burkina Faso. By collecting that data, the study will help the ministry of health decide if the approach can be extended to other facilities and what is the best way to do that.

How many people will take part in this research?

Approximately 60 pregnant women who have participate in group antenatal care

What is the procedure for participation in this project?

Your participation in this research will require that you participate in a group discussion with 8-10 other women. That group discussion will be facilitated by a study team member, and it will be conducted in your native language. The group discussion will last approximately 60 to 90 minutes.

What are the possible risks or discomforts related to taking part in this project?

There is no foreseeable risk or discomfort from your participation in this research. However, you may feel uncomfortable speaking about the care you have received during G-ANC in front of other participants. But that may not be the case as you have been doing that during G-ANC sessions. We give you the assurance that any information shared during the group discussion will remain confidential and anonymous. However, if you feel uncomfortable with any question, you can skip it. **What are the possible benefits of taking part in this project?**

There will be no personal benefits to you for participating in the study. However, by sharing your experience, you will contribute to provide better care to pregnant women who choose group antenatal care.

What are my alternatives to participating in this study?
As we said from the beginning, your participation is totally Voluntary. , So the alternative is not to participate.

Will I be compensated for participating in this research?

We will not compensate you for participating in this research. However, we will provide a token of 2 US dollars for transportation to come to the venue of the group discussion.

What will I have to pay for if I participate in this research?
It will not cost anything to participate in this research apart from the time of the group discussion.

What happens if I am injured as a result of participating in this research study?
There is no risk of injury during your participation in the research.

Can my taking part in the research end early?

You may decide to leave the group discussion any time if you feel uncomfortable answering the questions.

If I take part in this project, how will my privacy be protected? What happens to the information you collect?

Names and phone numbers of individual women participating in the group discussion will not be recorded.
The consent form and the Information collected during the group discussion will be kept

confidential and only the research team will have access to them.

Describe confidentiality protections.

Data collected may be seen by UGHE IRB that oversees this research. Audio recordings will be destroyed after data has been analyzed.

If I have any questions, concerns or complaints about this project, who can I talk to?
If you have any questions, concerns, or complaints about this research project, you can talk to the study team (Konlobe Yvette Ouédraogo at +226 70361456, **konkole.ouedraogo@student.ughe.org** or Blami Dao at +2267880244, **blami.dao@student.ughe.org**). You can also contact Dr Maxwell Mhlanga at **mmhlanga@ughe.org** or UGHE IRB at **irb@ughe.org** telephone: +250788316894 or Office of Human Research Administration (OHRA) at Kigali Heights Building, 5th floor, Kacyiru, Kigali, P.O. Box 6955, Rwanda.

This research has been reviewed by the University of Global Health Equity Institutional Review Board. If you wish to speak with someone from the IRB, please contact the IRB at irb@ughe.org, telephone: 0788316894 or Office of Human Research Administration (OHRA) at Kigali Heights Building, 5th floor, Kacyiru, Kigali, P.O. Box 6955, Rwanda, for any of the following:

- If your questions, concerns, or complaints are not being answered by the research team;
- If you cannot reach the research team;
- If you want to talk to someone besides the research team;
- If you have questions about your rights as a research participant, or;
- If you want to get information or provide input about this research.

To contact the research team see their names and contact information above.

Statement of consent
By signing or putting your fingerprint on this consent form, you agree that

- You have understood the content of this form;
- You have had the opportunity to ask questions and received satisfactory answers;
- If needed, you took time to discuss this information with others to help you decide whether to participate;

- You will receive a dated and signed copy of the form;
- You agree to participate in this research project.

☐ I consent to have the group discussion audio-recorded

______________________________ ____________________

Full name and signature of the witness Date and location

______________________________ ____________________

Full name and signature of the person requesting consent Date and location

I have read the information in this consent form including risks and possible benefits. All my questions about the research have been answered to my satisfaction. I understand that I am free to withdraw at any time without penalty or loss of benefits to which I am otherwise entitled.

I consent to participate in the study.

SIGNATURE OR FINGERPRINT

Your signature or fingerprint below indicates your permission to take part in this research

Name of participant

Signature of participant Date

Signature of the person obtaining consent Date

UNIVERSITY OF GLOBAL HEALTH EQUITY

APPENDIX 2: Focus group discussion guide- pregnant women

UGHE IRB Office Use Only	IRB Approval Date: IRB Focus Group Discussion Guide Pregnant Women

Study Title: Acceptability and health outcomes of group antenatal care in selected facilities in Burkina Faso

Principal Investigators: Konlobé Yvette Ouédraogo and Blami Dao

IRB No:

Version 1 February 27, 2023

Instructions for facilitators of Focus Group Discussions

This tool is intended for use in focus group discussions. The team should reassure participants that all information provided during the discussion will be kept confidential; if the note taker is asked to take notes, he/she will not collect any information that would identify individuals or associate people with the answers provided. Some of these questions are sensitive. We considered all potential ethical issues before initiating the discussion, taking into account the safety of the interviewees, ensuring that all participants agreed not to disclose information shared in the discussion outside the group, and obtaining informed consent from participants. The group should be homogeneous, with no more than 10 participants. In addition, the discussion should last no longer than an hour and a half.

To promote acceptance of these discussions and to ensure that participants are not suspected, threatened, or abused by community members, consider the following tips:

If you feel it is unsafe to conduct this discussion, or that it might put participants or staff at risk, do not proceed.

Before mobilizing participants, meet with community leaders and/or local authorities to explain the purpose of the study and the presence of investigators in the community.
Make sure that staff facilitating focus groups do not ask questions that are too specific or private.

Essential steps and information before starting the focus group discussion

- Greet participants according to local customs.

- Introduce all facilitators, rapporteurs, and translators (if any)

Ask participants to introduce themselves (Name and Age). Identify participants by number and write age next to the number. When taking notes refer to these numbers

- **Explain the purpose of the discussion:**
  - ✓ Provide general information about UGHE
  - ✓ The purpose of the group discussion is to assess your opinions and level of satisfaction with group antenatal care. Explain what you will do with this information, and be careful not to make false promises.

- Insist that participation is voluntary
- Women are not required to answer questions if they do not wish to do so
- Participants can stop participating in the discussion at any time
- Participants are not required to share their personal experience if they do not wish to do so
- Where examples or experiments are mentioned, the names of the persons concerned must not be revealed.
- Be respectful when others speak up
- The facilitator can interrupt the discussion, but only to ensure that each participant has the opportunity to speak and to ensure that no one dominates the discussion.
- Let participants know that general information will be shared with the NGO that implements group antenatal care (Jhpiego), the University where the PIs work, and ministry of Health

Agree on confidentiality and privacy principles:

- All discussions must be kept confidential
- Do not disclose details of the discussion afterward, to participants or third parties
- If someone asks you, explain that you are discussing women's and girls' health issues.

Request permission to take notes and to record the discussion:
Ensure participants that

- No identity will appear in the notes
- These notes are intended to ensure the accuracy of the information collected.

- Recording will be used to make sure we have captured all the women have to say about G-ANC, they will be destroyed after that.

Focus Group Discussion Facilitator name:

Notes taker name :

Date: ___

Approximate age groups of participants in the group discussions:

- ☐ 18-24 years
- ☐ 25-40 years
- ☐ Over 40 years

We would like to ask you questions about your experience with group antenatal care

1. Overall experience of group antenatal care: what do you understand about group antenatal care? where / from whom did you learn information about this?

2. Benefits of group prenatal care: do you or your family members benefit from G-ANC? what for? Why not?

3. Difficulties of group antenatal care: in general, are you concerned about this way of monitoring your pregnancy? What concerns do you have?

4. Relationship with the midwife who facilitates the session
5. Relationships between you pregnant women: how has this group prenatal care influenced your relationships with other pregnant women?

6. Personal gains from group antenatal care?

7. Suggestions for improving group prenatal care: how do you think group antenatal care can be improved to better meet your needs?

8. What messages do you have for other women?

9. Those whose husbands have attended at least once, what do they think about group antenatal care

10. Do you want to add anything else?

We are grateful for the information and ideas you have shared with us. We want to allow you to ask questions about your pregnancy monitoring concerns and also share information on how to protect yourself.

Conclude the discussion

• Thank participants for their time and contributions.
• Remind participants that the purpose of this discussion was to better understand the needs and concerns of pregnant women in group antenatal care.
- Remind participants of their confidentiality agreement
- if someone wants to speak privately, give a time and place where the facilitator can meet that woman after the Focus Group Discussion.

APPENDIX 3 : Formulaire d'information et de consentement destiné aux femmes enceintes

ID de la participante : ______________________

Intitulé du projet : Acceptabilité et issues sanitaires des soins prénatals de groupe dans des établissements sélectionnés au Burkina Faso

Population de l'étude :
Les femmes enceintes qui participent ou ont participé aux soins prénatals de groupe, leurs maris/partenaires qui ont participé à une séance de SPN de groupe et les agents de santé qui ont animé des soins prénatals de groupe.

Date de la version : Version 1, 6 mars 2023

Investigateurs principaux :

Konlobe Yvette Ouédraogo, Sage-femme, Maîtrise ès science en soins obstétricaux, Master en VBG
Blami Dao, Docteur en Médecine, OB/GYN, FWACS, FRCOG

[Décrivez le contexte de votre projet (par exemple, le programme MGHD) et la manière dont il a reçu les approbations éthiques requises et respecte les normes éthiques internationales]

Nous sommes tous les deux étudiants à l'Université Global Health Equity (Université pour l'équité de la santé mondiale) à Butaro, au Rwanda, où nous préparons un master en genre, santé sexuelle et reproductive. L'une des exigences de ce master est de mener des recherches sur un sujet de santé. Cette recherche a été approuvée par les autorités de notre université et celles du Comité d'éthique pour la recherche en santé du Burkina Faso ainsi que par le ministère de la Santé du Burkina Faso.

À propos de ce formulaire de consentement

« Cher participante,
On vous demande de participer à un projet de recherche sur les soins prénatals de groupe. Ce formulaire de consentement explique l'étude de recherche et votre rôle dans cette recherche. Nous recrutons des participants pour un entretien, qui constitue l'un des moyens que nous utilisons pour collecter des données pour l'étude. Vous devez lire attentivement le contenu de ce formulaire et prendre tout le temps nécessaire car il contient des informations importantes qui vous aideront à décider de participer ou non à l'étude. Si vous acceptez de participer, il vous sera demandé de signer ce formulaire, puis vous recevrez une copie du formulaire signé et une copie sera conservée dans les dossiers de l'étude.

La participation est volontaire.
Votre participation à cette recherche est volontaire. Vous pouvez donc décider de participer ou

non. Si vous acceptez, vous pouvez changer d'avis à tout moment au cours de la recherche. Si vous refusez de participer, cela n'affectera pas les services de santé que vous recevez dans cet établissement.

Que devez-vous savoir sur cette étude de recherche ?

Si vous acceptez de prendre part à l'étude, vous participerez à une discussion avec d'autres femmes qui, comme vous, participent ou ont participé à des soins prénatals de groupe. La discussion porte sur votre expérience de bénéficiaire de soins prénatals de groupe. Avant la discussion de groupe, un membre de l'équipe d'étude fournira des détails sur l'étude.

Quel est l'objectif de ce projet ?

Les soins prénatals de groupe ont été mis en œuvre dans quelques pays d'Afrique et rarement en Afrique francophone. Seules 12 établissements sanitaires ont introduit cette approche au Burkina Faso. L'objectif de cette recherche est d'évaluer l'expérience des femmes enceintes et des prestataires ainsi que les issues sanitaires des soins prénatals de groupe dans le contexte du Burkina Faso. En recueillant ces données, l'étude aidera le ministère de la Santé à décider si l'approche peut être étendue à d'autres établissements et quelle est la meilleure façon de le faire.

Combien de personnes participeront à cette recherche ?

Environ 60 femmes enceintes qui ont participé à des soins prénatals de groupe et 12 prestataires de soins de santé qui animent des soins prénatals de groupe participeront à la recherche.

Quelle est la procédure de participation à ce projet ?

Votre participation à cette recherche nécessitera que vous participiez à une discussion de groupe avec 8 à 10 autres femmes. Cette discussion de groupe sera animée par un membre de l'équipe d'étude et se déroulera dans votre langue maternelle. La discussion en groupe durera environ 60 à 90 minutes.

Quels sont les risques ou les désagréments éventuels liés à la participation à ce projet ?

Il n'y a pas de risque ou de désagrément prévisible lié à votre participation à cette recherche. Toutefois, vous pouvez vous sentir mal à l'aise à l'idée de parler des soins que vous avez reçus pendant les SPN de groupe devant d'autres participantes. Mais ce n'est peut-être pas le cas, puisque vous l'avez fait pendant les séances de SPN de groupe. Nous vous assurons que toute information échangée au cours de la discussion de groupe restera confidentielle et anonyme. Toutefois, si vous vous sentez mal à l'aise avec une question, vous pouvez l'ignorer.

Quels sont les avantages possibles d'une participation à ce projet ?

Vous ne tirerez aucun avantage personnel de votre participation à l'étude. Toutefois, en partageant votre expérience, vous contribuerez à offrir de meilleurs soins aux femmes enceintes qui

choisissent les soins prénatals de groupe.

Quelles sont les alternatives à ma participation à cette étude ?
Comme nous l'avons dit dès le début, votre participation est totalement Volontaire. L'alternative est donc de ne pas participer.

Serai-je rémunérée pour ma participation à cette recherche ?

Nous ne vous accorderons pas de rémunération pour votre participation à cette recherche. Toutefois, nous offrirons symboliquement 2 dollars US en guise de frais de transport pour vous rendre au lieu de la discussion de groupe.

Que devrai-je payer si je participe à cette recherche ?
La participation à cette recherche ne coûte rien, hormis le temps de la discussion de groupe.

Que se passe-t-il si je suis blessée en raison de ma participation à cette étude de recherche ?
Il n'y a aucun risque de blessure pendant votre participation à la recherche.

Ma participation à la recherche peut-elle prendre fin prématurément ?

Vous pouvez décider de quitter le groupe de discussion à tout moment si vous vous sentez mal à l'aise pour répondre aux questions.

Si je prends part à ce projet, comment ma vie privée sera-t-elle protégée ? Qu'advient-il des informations que vous recueillez ?

Les noms et numéros de téléphone des femmes qui participent à la discussion de groupe ne seront pas enregistrés.
Le formulaire de consentement et les informations recueillies au cours de la discussion de groupe resteront confidentiels et seule l'équipe de recherche y aura accès.

Décrire les protections de la confidentialité.

Les données recueillies peuvent être consultées par le CEI de l'UGHE qui supervise cette recherche. Les enregistrements audio seront détruits après l'analyse des données.

Si j'ai des questions, des préoccupations ou des plaintes concernant ce projet, à qui puis-je m'adresser ?
Si vous avez des questions, des préoccupations ou des plaintes concernant ce projet de recherche, vous pouvez vous adresser à l'équipe chargée de l'étude (Konlobe Yvette Ouédraogo au numéro +226 70361456, **konkole.ouedraogo@student.ughe.or**g ou Blami Dao au +2267880244 , **blami.dao@student.ughe.org**). Vous pouvez également contacter le Dr Maxwell Mhlanga à l'adresse **mmhlanga@ughe.org** ou le CEI de l'UGHE à l'adresse **irb@ughe.org** téléphone : +250788316894 ou Office of Human Research Administration

(OHRA) à Kigali Heights Building, 5th floor, Kacyiru, Kigali, P.O. Box 6955, Rwanda.

Cette recherche a été examinée par le Comité d'éthique indépendant de l'Université pour l'équité de la santé mondiale. Si vous souhaitez parler à un membre du CEI, veuillez contacter le CEI à l'adresse irb@ughe.org, téléphone : 0788316894 ou Office of Human Research Administration (OHRA) à Kigali Heights Building, 5th floor, Kacyiru, Kigali, P.O. Box 6955, Rwanda, pour l'une des raisons suivantes :

- Si l'équipe de recherche ne répond pas à vos questions, préoccupations ou plaintes ;
- Si vous ne parvenez pas à joindre l'équipe de recherche ;
- Si vous souhaitez parler à quelqu'un d'autre que l'équipe de recherche ;
- Si vous avez des questions sur vos droits en tant que participant à la recherche, ou ;
- Si vous souhaitez obtenir des informations ou apporter votre contribution à cette recherche.

Pour contacter l'équipe de recherche, voir leurs noms et leurs coordonnées ci-dessus.

Déclaration de consentement
En signant ou en apposant votre empreinte digitale sur ce formulaire de consentement, vous acceptez que

- Vous avez compris le contenu de ce formulaire ;
- Vous avez eu l'occasion de poser des questions et avez reçu des réponses satisfaisantes ;
- Si nécessaire, vous avez pris le temps de discuter de ces informations avec d'autres personnes pour vous aider à décider de participer ou non ;
- Vous recevrez une copie datée et signée du formulaire ;
- Vous acceptez de participer à ce projet de recherche.

☐ Je consens à ce que la discussion de groupe fasse l'objet d'un enregistrement audio.

_______________________________ _________________

Nom, prénom(s) et signature du témoin — Date et lieu

_______________________________ _________________

Nom, prénom(s) et signature de la personne sollicitant le consentement — Date et lieu

J'ai lu les informations contenues dans ce formulaire de consentement, y compris les risques et les avantages éventuels. J'ai obtenu des réponses satisfaisantes à toutes mes questions

concernant la recherche. Je comprends que je suis libre de me retirer à tout moment sans subir de préjudice ou perdre les avantages auxquels j'ai par ailleurs droit.

Je consens à participer à l'étude.

SIGNATURE OU EMPREINTE DIGITALE

Votre signature ou votre empreinte digitale ci-dessous indique que vous acceptez de participer à cette recherche.

____
Nom de la participante

______________________________________ __________________
Signature de la participante Date

______________________________________ __________________
Signature de la personne obtenant le consentement Date

____

APPENDIX 4 : Guide pour les groupes de discussion dirigée pour les femmes enceintes

Titre de l'étude : **Acceptabilité et résultats sanitaires des soins prénatals de groupe dans des établissements sélectionnés au Burkina Faso**

Chercheurs principaux : Konlobé Yvette Ouédraogo et Blami Dao

N° IRB:

Version 1, 24 Février 2023

Cet outil est destiné à être utilisé dans le cadre de discussions en petits groupes. L'équipe doit assurer aux participantes que toutes les informations fournies au cours de la discussion resteront confidentielles ; si le preneur de notes est chargé de prendre des notes, il ne recueillera aucune information permettant d'identifier les personnes ou d'associer des personnes aux réponses fournies. Certaines de ces questions sont sensibles. Nous avons examiné toutes les questions éthiques potentielles avant d'entamer la discussion, en tenant compte de la sécurité des personnes interrogées, en nous assurant que toutes les participantes acceptaient de ne pas divulguer les informations partagées au cours de la discussion en dehors du groupe, et en obtenant le consentement éclairé des participantes. Le groupe doit être homogène, ne pas compter plus de 10 participantes et inclure des femmes qui ont participé au SPN-G. En outre, la discussion ne doit pas durer plus d'une heure et demie.
Pour favoriser l'acceptation de ces discussions et veiller à ce que les participantes ne soient pas suspectées, menacées ou maltraitées par les membres de la communauté, il convient de tenir compte des conseils suivants :

- Si vous estimez qu'il n'est pas sûr de mener cette discussion, ou qu'elle pourrait mettre en danger les participantes ou le personnel, ne la menez pas.

- Avant de mobiliser les participantes, rencontrez les chefs de la communauté et/ou les autorités locales pour expliquer l'objectif de l'étude et la présence des enquêteurs dans la communauté.
- Veillez à ce que le personnel qui anime les groupes de discussion ne pose pas de questions trop spécifiques ou privées.

Étapes et informations essentielles avant d'entamer la discussion de groupe

- Accueillez les participantes
- Présentez tous les facilitateurs, rapporteurs et traducteurs (le cas échéant)
- Demandez aux participantes de se présenter (nom et âge). Identifiez les participantes par leur numéro et inscrivez leur âge à côté du numéro. Lors de la prise de notes, se référer à ces numéros
- Expliquez l'objectif de la discussion :
  - ✓ Fournir des informations générales sur l'étude
  - ✓ Expliquer que l'objectif de la discussion de groupe est d'évaluer leurs opinions et leur niveau de satisfaction à l'égard des soins prénatals de groupe.
  - ✓ Expliquer ce que vous ferez des informations recueillies et veiller à ne pas faire de fausses promesses.
- Expliquez les règles de la discussion de groupe
  - ✓ La participation est volontaire
  - ✓ Les participantes ne sont pas obligées de répondre à une question si elles ne le souhaitent pas
  - ✓ Les participantes peuvent cesser de participer à la discussion à tout moment.
  - ✓ Les participantes ne sont pas tenues de partager leurs expériences personnelles si elles ne le souhaitent pas.
  - ✓ Lorsque des exemples ou des expériences sont mentionnés, les noms des personnes concernées ne doivent pas être révélés.
  - ✓ Il faut être respectueux des opinions des autres

- ✓ Le facilitateur peut interrompre la discussion, mais uniquement pour s'assurer que chaque participante a la possibilité de s'exprimer et pour veiller à ce que personne ne domine la discussion.

- Les informations générales seront partagées avec l'ONG (Jhpiego) qui soutient le ministère de la santé dans la mise en œuvre des soins prénatals de groupe.
- **Se mettre d'accord sur les principes de protection de la vie privée :**
  - ✓ Toutes les discussions doivent rester confidentielles
  - ✓ Ne pas divulguer les détails de la discussion par la suite, aux participantes ou à des personnes tierces.
  - ✓ Si quelqu'un vous pose une question sur l'activité, lui expliquer que vous discutiez des questions de santé des femmes et des filles.
- **Demandez l'autorisation de prendre des notes et d'enregistrer la session :**
  - ✓ Aucune identité n'apparaîtra dans les notes
  - ✓ Ces notes et l'enregistrement audio ont pour but de garantir l'exactitude des informations recueillies.

Questionnaire

Date :

Nom de l'animateur :

Nom du preneur de notes :

Une traduction a-t-elle été utilisée ? Oui ou Non

Si oui, nom du traducteur :

Enregistrer les groupes d'âge des participantes

- 18-24 ans
- 25-40 ans
- > 40 ans

Nous aimerions vous poser des questions sur votre expérience des soins prénatals de groupe.

1. Expérience globale des soins prénatals de groupe : que comprenez-vous des soins prénatals de groupe ? Où et par qui en avez-vous entendu parler ?

2. Avantages des soins prénatals de groupe : bénéficiez-vous des soins prénatals de groupe ? Pour celles qui pensent qu'il n'y a pas d'avantage, pourquoi pas ?

3. Difficultés des soins prénatals de groupe : avez-vous des difficultés à suivre votre grossesse de cette manière ? Comment y remédier ?

4. Relation avec la sage-femme qui anime la session : comment s'est passée la relation entre les sages-femmes et vous pendant les sessions de SPN-G ?

5. Relations entre vous, femmes enceintes : comment ces soins prénatals de groupe ont-ils influencé vos relations avec les autres femmes enceintes ?

6. Perception de la mise en œuvre des SPN-G : pensez-vous que la structure dispose de tous les équipements, médicaments et consommables nécessaires à la mise en œuvre des SPN-G?

7. Suggestions pour améliorer les soins prénatals de groupe : comment pensez-vous que les soins prénatals de groupe peuvent être améliorés pour mieux répondre à vos besoins ?

8. Les maris/partenaires de certaines d'entre vous ont participé à des sessions : Qu'ont-ils pensé des SPN-G-? Leur attitude a-t-elle changé en ce qui concerne la santé maternelle et infantile et le planning familial ? Avez-vous discuté de ces questions à la maison avec eux ?

9. Avez-vous discuté des SPN-G avec d'autres femmes de la communauté ? Que leur avez-vous dit ?

10. Souhaitez-vous ajouter quelque chose d'autre ?

Nous vous remercions pour les informations et les idées que vous avez partagées avec nous. Nous voulons vous donner l'occasion de poser des questions sur le suivi de votre grossesse et de partager des informations sur la manière de vous protéger.

Partager des informations sur les signes de danger :

Il s'agit de saignements vaginaux, de maux de tête sévères, d'une vision floue, de convulsions ou d'une perte de conscience, de douleurs abdominales, d'une disparition ou d'une diminution des mouvements du fœtus.

Partager des informations clés sur les mesures préventives pendant la grossesse : utilisation d'une moustiquaire imprégnée d'insecticide, TPI mensuel après les 12 premières semaines,

utilisation de fer et d'acide folique, vaccination contre le tétanos et vaccination contre la Covid 19.

Concluez la discussion en

- Remerciant les participantes pour leur temps et leurs contributions.
- Rappelant aux participantes que l'objectif de cette discussion est de mieux comprendre les besoins et les préoccupations des femmes enceintes dans le cadre des soins prénatals de groupe.
- Rappelant aux participantes leur accord de confidentialité
- Demandant aux participantes si elles ont des questions.
  Si quelqu'un souhaite s'exprimer en privé, indiquez l'heure et le lieu où l'animateur pourra rencontrer les femmes après la discussion en groupe.

APPENDIX 5: UGHE IRB APPROVAL

University of Global Health Equity Institutional Review Board

Academic Ethics Review

Notification of Approval

Ref: UGHE-IRB/2023/030

May 16, 2023

Protocol Title: Acceptability and health outcomes of group antenatal care in selected facilities in Burkina Faso

Investigator(s): Blami Dao and Konkole Yvette Ouedrago

Protocol #: 239

Funding Source: UGHE
Initial IRB Review Date: April 27, 2023 **Initial Review Type**: Full review
Additional Review Dates: May 15, 2023
I**RB Review Action**: Approved
Effective Date: May 15, 2023
Expiration Date: May 14, 2024

Dear Blami Dao and Konkole Yvette Ouedrago,

On May 15, 2023, the University of Global Health Equity Institutional Review Board (UGHE IRB) approved this resubmission with protocol resubmission. **Please note that the approval for this protocol will lapse after one (1) year and must be renewed according to the procedures of the UGHE IRB.** The IRB reminds you that you are responsible for fulfilling the following requirements:

- Changes, amendments, and addenda to the protocol or consent form (if applicable) must be submitted to the committee for review and approval, before activation of the changes.
- Only approved consent forms are to be used for the enrollment of participants.
- All consent forms signed by subjects must be retained on file, and are submitted for inspection, along with other project materials, during routine onsite visits or audits.

- Failure to apply for continuing review will result in the suspension or termination of the study.
- The UGHE IRB must be notified at the closure of the study.

Please contact the UGHE IRB via email at irb@ughe.org with any questions.
Sincerely,

Daniel Seifu, IRB Chair

APPENDIX 6: Burkina Faso IRB Approval

MINISTERE DE LA SANTE ET DE L'HYGIENE PUBLIQUE

MINISTERE DE L'ENSEIGNEMENT SUPERIEUR, DE LA RECHERCHE ET DE L'INNOVATION

COMITE D'ETHIQUE POUR LA RECHERCHE EN SANTE

BURKINA FASO

Unité - Progrès - Justice

09 MAI 2023

CERTIFICAT ETHIQUE

Le Président du comité d'Ethique pour la recherche en santé

A

Madame Konlobé Yvette OUEDRAOGO
Investigatrice principale
Global Health EQUITY

Je voudrais par le présent porter à votre connaissance que le Comité d'éthique pour la recherche en santé (CERS) par délibération n° 2023-05-121 après examen de votre protocole intitulé : « Acceptabilité et résultats sanitaires des soins prénatals de groupe dans des établissements sélectionnés au Burkina Faso », **a émis un avis favorable.**

Ce certificat est valable pour une durée de un (1) an renouvelable sur demande accompagnée d'un rapport annuel.

Veuillez agréer, **Madame l'investigatrice principale**, l'expression de ma parfaite collaboration.

Pr Fla KOUETA

APPENDIX 7: Burkina Faso Ministry of Health and Public Hygiene authorization

MINISTERE DE LA SANTE ET DE L'HYGIENE PUBLIQUE
SECRETARIAT GENERAL

N02023- 1969

IMSHP/SG

BURKINA FASO

Unité - Progrès - Justice

Ouagadougou, le 22 MAI 2023

La Secrétaire Générale

Mossiours los Directeurs Régionaux de la Santé ot do l'Hygièno publique des régions sanitaires du :

- Centre Est, - Centre Ouest, - Sud-Ouest.

Objet : Autorisation de conduire une enquête sur les soins prénatals de groupe dans des formations sanitaires relevant de vos régions sanitaires.

Depuis bientôt un an le Ministère de la santé et de l'Hygiène publique avec l'appui de l'ONG Jhpiego, met en œuvre l'introduction des soins prénatals de groupe dans des districts sanitaires qui relèvent de vos régions sanitaires.

L'University of Global Health Equity du Rwanda souhaite organiser une recherche sur cette phase d'introduction dans les formations sanitaires où cette nouvelle approche des soins prénatals est en cours. Cette étude vise à évaluer les perceptions des prestataires, des femmes enceintes et de leurs maris sur les soins prénatals de groupe.

Aussi, vous voudrez bien prendre les dispositions pour faciliter l'accès des deux étudiants commis et de leurs enquêteurs aux formations sanitaires conformément au tableau ci-dessous.

Région sanitaire	District sanitaire	Formation sanitaire
Centre Est	Tenkodogo	Centre médical urbain de Tenkodogo
	Garango	CSPS urbain de Garango
Centre Ouest	Koudougou	CSPS de Imasgo
	Léo	CSPS Secteur 1 Léo
Sud-Ouest	Gaoua	Centre médical urbain secteur 2 de Gaoua
	Dano	CSPS Bolembar

Santé ... de l'Hygiène Publique

Dr Estelle-Edith DABIRE/DEMBELE

Cheva/ier de l'Ordre de /'Eta/on