***Rag waa shaah, dumarna waa sheeko:* Men are like tea, women are like conversation.**
Culturally Congruent Somali Perinatal Care in Seattle, WA - A Feasibility Study

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Abstract

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Southeast Seattle has among the highest rates of preterm/low birth weight babies, cesarean births, women receiving inadequate perinatal and unmet maternal mental health needs in the state of Washington. Somali immigrant and refugee women in this area are medically underserved and face significant challenges accessing and utilizing perinatal care services. The Mama Amaan (safe motherhood, Somali) Perinatal Care Model was developed as an intervention to improve maternal perinatal (prenatal, birth, and post-natal) experiences and outcomes through the development of seamless, culturally congruent care for these vulnerable Somali refugee and immigrant households. Cultural congruence refers to increasing provider quality of services by situating patient needs within their broader, dynamic, and relevant cultural context. This thesis assesses the feasibility of Mama Amaan and evaluates the success of this culturally congruent model. We conducted focus groups, interviews, participant observations, and collected survey data. This thesis uncovered a paradigm shift in the culturally congruent model, which contributed to the feasibility of this project. A community congruence framework allowed us to employ a dialectical approach to change and illuminated how the lives of our participants are dynamic and necessary to take into account. As participants' lives changed, their priorities changed. This shifted our priorities for the project. Adaptations to community realities through constant communication, the research team's visibility in the community, trust-building, and forging connections determined the ultimate success of the project and are factors that mediate our conceptualization of feasibility. The Mama Amaan model of perinatal care depends on who is leading it, the active centering of maternal community-making, and the bundling of services. Ongoing capacity for transformations and modifications contributed to the success and feasibility of the project.

Keywords: perinatal, Somali community, congruence, immigrant, refugee, feasibility

INTRODUCTION

It is well established that the United States has the highest maternal and infant mortality rates compared to other Global North countries (Kamal et. al 2019). Despite some success in national, state, and county initiatives to decrease maternal and infant outcomes inequalities across racial/ethnic groups, wide gaps in specific geographic and socio-economic populations continue to persist (CDC 2010). Southeast Seattle has among the highest rates in the state of preterm and low birth weight babies, cesarean section rates, and women experiencing less than adequate prenatal care (King County DOH 2015). It is recognized that barriers to care and socio-economic risk factors lead to high rates of maternal stress. This has been linked to negative birth outcomes, especially for minority women (Paul et al., 2008; Mullings & Wali 2001). Regardless of income and education, Black women are dying from preventable pregnancy-related complications at three times the rate of non-Hispanic White women (CDC April 2022). Access to extensive, reasonable, and high-quality care is critical in the actions to eradicate racial disparities in infant and maternal mortality. Previous research recommended identifying "women's experiences, developing and implementing evidence-based, women-centered approaches" (Novick 2019). Clinicians and providers must inquire about women's felt needs and appropriately transform care. Congruent care - care that situates the needs and wants of patients within their broader, dynamic, and relevant cultural context - must also involve clinicians and providers advocating for institutional changes that diminish barriers to care and create health equity. This is especially true as that care pertains to refugee and immigrant communities in the United States.

The United States is known as one of the world's most multicultural countries with changing migration patterns. In terms of Somali immigration, once the 1991 civil war broke out in Somalia, Somalis began to flee and resettle in countries primarily in Europe, North America, and Australia. "Between 1990 and 2015, the total number of people born in Somalia but living outside the country more than doubled, from 850,000 to 2 million" (Pew Research Center, 2016). The UN estimates that the total number of Somalis living in the U.S. was approximately 2,500 in 1990, but since then has grown to between 140,000 to 150,000 by 2015. In all, the United States houses about seven percent of the world's Somali migrant population. The Somali population has contributed to the dramatic shift in the racial makeup of South King County within the past two decades. The 2010 Census reveals that King County is the home to approximately 30,000 East African refugees,

including many people from Somalia (Somali Community Services of Seattle, 2009). Immigration is a pertinent topic in the United States, and pregnancy is known to be the first encounter immigrant women have with the healthcare system. (Winn et al. 2017). If perinatal care becomes more appealing and more accessible, women's experiences and pregnancy outcomes may improve. Therefore, to improve perinatal care outcomes among South Seattle's most vulnerable communities and reduce reproductive health discrepancies, we needed to uncover, identify, and explore crucial barriers for increasing "accessible, adequate, appropriate, acceptable and effective perinatal care to high-risk population" (Chapman & Mugambi, 2017).

The *Mama Amaan* Project (safe motherhood in Somali) emerged from a series of community relationships and advocacy efforts resulting in the development of a culturally congruent, community-centered perinatal care-service model transforming the traditional Group Perinatal Care (GPC) model. Group Prenatal Care (GPC) has been proposed as a model to promote cultural congruent and social support (Sultana et al. 2017). GPC started in 1994 as an innovative model of prenatal care delivery in which small groups of pregnant women of similar gestational age receive the same components as individual prenatal care check-ups (except confidential or private matters), but in a group setting with a health care provider (McDonald et al 2014). Significant evidence supports the promotion of GPC as a potential method to improve perinatal outcomes (Thielen 2012). GPC has been associated with improved birth outcomes, decreased health disparities, and lower healthcare costs. GPC has been shown to reduce maternal anxiety, increase knowledge of healthy practices and foster a sense of ownership in one's health (Ickovics et al.2007). Recent research suggests that GPC efficacy is derived from such elements as additional time for education, skill-building, patient navigation support, and the opportunity to discuss and learn from the experience of peers, as well as more facetime with caregivers (Ickovics et al. 2007).

A culturally congruent, pilot, perinatal care-service model was developed to support immigrant and refugee women given their challenges. "Cultural congruence" refers to a standard of care that is viable when "providers and clients create an appropriate fit between professional practice and what patients and families need and want in the context of relevant cultural domains (Schim & Doorenbos 2010:260). This framing of care adapts to the patient's desires and appropriately addresses their unique needs through informed provider interactions. As this new program has

been launched into the community, its acceptability, implementation, and demand need to be carefully assessed and evaluated. This thesis evaluates whether the parameters of the Mama Amaan Perinatal Care Model align with the needs of Somali immigrant and refugee communities in South King County area of Washington State. The main objective of this thesis is to assess the feasibility of the pilot care-service model in terms of fidelity to implementation, assessment of initial and emerging indicators, providers' experiences, and participant retention.

METHODS

This pilot project implemented a perinatal care-service model in four community and clinic sites in South King County. We analyzed the experiences and perceptions of participants and of the implementation team to assess the feasibility and overall acceptability of the care-service model.

Site Description

The pilot intervention and feasibility analysis were carried out in four sites across South King County. The pilot established four ongoing pop-up community meeting sites including one clinic and three community sites. These sites were selected because they all were frequently visited and easily accessible to the East African immigrant and refugee communities, particularly the Somali communities, who were the focus population. The community site included a local library, educational center, and an office of a local non-profit organization, who directly connected the communities they served with the Mama Amaan project and participated in the pilot study.

Mama Amaan Perinatal Care Model

This pilot project developed from a formative ethnographic study with the Somali community to determine the existing barriers, gaps, and needed support for women from Somali communities accessing perinatal services in South King County and the surrounding areas (Egal 2020). The Mama Amaan Care Model is based on this extensive formative research to address the elevated negative maternal/infant outcomes among reproductively vulnerable women and families in South King County's prominent immigrant and refugee communities. The original logic model to design the pilot (Figure I), lays the foundation of the care model, illustrates the intervention's core components along with their inputs, outputs, and ultimate outcomes.

Figure I: Mama Amaan Original Project Logic Model January 25, 2019

Intervention Component	**Inputs**	**Outputs**	**Project Outcome**	**Ultimate Outcome**
9 Education Modules ● Rights ● Knowledge ● Resources	Knowledge and awareness	Provider choice	Prenatal Care ● Number of visits ● Quality ● Cultural congruence ● Language ● Materials Resources	Improved birth outcomes in Somali community of Seattle
Doula (umuula) Home Visits ● Pre-labor ● During labor ● Postpartum	Understanding and implementing Doula services	Adherence to visits	Maternal Services (Labor and delivery) ● Quality ● Socio-medically appropriate c-section decision making (negotiation)	Improved overall maternal and perinatal health in Somali community of Seattle Ubalbalaadhi Hoyoo WhatsApp group? Intro video
Social Media ● Facebook ● Snapchat ● WhatsApp	Social support ● Doula support ● Peer support ● Partner support	Trust the providers	Post Natal Services ● Quality ● Number of visits ● Home visits ● Immediate visits	Improved awareness of perinatal and maternal services
Consistent Program ● Meets mothers where THEY are	Continued, ongoing access to information	Reduce loss to follow-up	Maternal Empowerment ● Number that continued with all the modules	Improved trust of community interventions
Holistic person-centered integrated services ● Mother's receiving services and knowledge THEY want	Connecting mothers to resources and answering questions they may have	Empowered Informed Decision Makers	Individual Autonomy and Empowerment ● Quality ● Number connected to resources	More accountable and responsive healthcare systems

The pilot project worked with local doulas, nurses, and midwives to assist East African immigrant and refugee communities to access, navigate, and bridge community and provider-identified perinatal health service gaps.

Core Components

We took a care bundle approach establishing a set of interventions used together to notably improve patient outcomes (McCarron 2011). The Mama Amaan perinatal Care Model was

developed to deliver four core components. The design "bundled" these services so that pregnant women had access to and received robust care.

1. Provide Culturally Congruent Pop-Up and Group Antenatal Peer-to-Peer Perinatal Ed Classes with Mama AMMAN curriculum;
2. Provide participating women with free certified doula and/or postpartum doula (in Somali, *Umuula* care) home visiting services up to one year postpartum
3. Connect pre- and post-partum mothers to other Somali women and resources through social media including WhatsApp, live Facebook feeds, and Snapchat; and
4. Assist women in the Mama Amaan groups to directly access relevant resources including, but not limited to WIC, mental health screening and referral, and Fresh-Bucks.

The pop-up, peer-to-peer perinatal education classes bundled with doula service and utilization of social media for resource referral and access became the core of the Mama Amaan Perinatal Care Model. The Mama Amaan curriculum was grounded in culturally congruent and relevant framing for the East African immigrant and refugee community. As defined above, cultural congruence refers to a quality of care that is possible when the patient-provider relationship is based on mutual understanding and set against a rich knowledge of salient cultural context. Therefore, participants' desires are addressed in interactions with providers to adapt care to meet patients where they are at.

Perinatal Education Curriculum

The educational curriculum for the pop-up sessions was developed by Somali and Ethiopian doulas in partnership with Parent Trust, a state-wide non-profit network of support, education, and leadership programs, which provided birth education training for healthcare professionals. The doulas took the birth education training course, which was a week-long course with the goal of constructing a more culturally appropriate and congruent course for our partnering communities. After completing the course, the doulas worked closely with the research and implementation team to develop a curriculum that included the established birth education modules along with additional modules that were unique to the Somali immigrant and refugee communities. Furthermore, the themes uncovered during the formative phase of the project were also incorporated into the curriculum. The final Mama Amaan Perinatal Education Curriculum included nine modules, which reflected the traditional nine months of gestation.

Modules mirrored pivotal points during pregnancy, such as how to develop a birth plan, what to include in it, lifestyle choices to ensure a healthy pregnancy, stages of labor, and the importance of informed consent. Various other modules were reconstructed or added to the educational curriculum as part of the bundled care-service model. For example, the third module of the curriculum (*Anatomy and Female Genital Cutting during Birth*) was supplementary to the traditional birth education curriculum as it reflects the experiences of the community we are working with on this project. The eight modules on postpartum or *umuula* (postpartum in Somali) Care reviewed topics on postpartum depression and doula care specifically, postpartum doula care. In Somali, *umuul* refers to the first forty days after birth which is a critical period of healing. Therefore, the term *umuula* care was adopted for the doula care provided to participants throughout the course of the project.

Table I: Mama Amaan Perinatal Education Curriculum

Module #	***Title***	***Topics***
1	Introduction/ Birth Plan Creation	Family Support, Immunizations, Doulas
2	Pregnancy Overview	Empowerment, Rights, Roles
3	Anatomy During Pregnancy & Birth	Female Genital Cutting, How does your body change during pregnancy and after birth
4	Healthy Pregnancy/Lifestyle Choices	Nutrition, Prenatal Care, Exercise
5	Routine Prenatal, Labor & Delivery Procedures	Virtual Tour of Birthing Rooms, Informed consent
6	Stages of labor & Pain Management	Epidurals, Birth Support, Comfort & Pain Reduction Techniques
7	Interventions when Birth Complications Arise	Cesarean Section, Vaginal Birth After Cesarean, Informed choice-making
8	Postpartum Care/Umuula Care	Mental Health, Contraception, Doula Care
9	Perinatal Care Resources/Evaluation	Referrals, informed consent, empowerment

Empowerment and informed choice-making were continued topics of discussion throughout the pop-up sessions. These points were directly incorporated into the curriculum as participants voiced the direct impacts of institutionalized racism. Participants reported the mistreatment and dissatisfaction they experienced with healthcare providers.

Most of the pop-up educational sessions consisted of facilitated and open discussions with healthcare providers leading the sessions. The nine-module curriculum was implemented for the duration of nine months across four sites. Each site had one session every month facilitated by either a midwife, OB nurse, or nurse practitioner alongside a doula. Participants used this time as an opportunity to ask questions they usually do not have the time or confidence to ask their own medical provider. It was during these sessions that pregnant mothers were offered birth and postpartum doula care services. Some participants were not able to attend all sessions, but utilized the bundled doula care, particularly the postpartum doula care. Furthermore, participants in the Mama Amaan groups were assisted to access relevant resources including directly, but not limited to WIC, mental health screening and referral, home lead testing, and Fresh-Bucks, a healthy food program that helps Seattle residents afford fruit and vegetables.

The lack of systematic support is exacerbated by the little support for accessing perinatal resources difficult for Somali women in the greater Seattle area. Group prenatal education contributed to the establishment of various networks of support systems while both receiving [perinatal] care and participating in education" (Byerley & Haas 2017). The active work of centering the community's needs and resilience was essential to the project. As the implementation team, we acknowledged that the US healthcare system functions in a white supremacist society and operates under those violent ideals, which are not well-matched with the needs of Black/Immigrant/Refugee women. Incorporating the experiences of the participants led to the construction of a model that is congruent with their wants and needs.

Participants

The pilot project participants were Somali immigrant and refugee mothers, soon-to-be mothers, and their support circles. Initially, women between the ages of 18-41 who were pregnant were considered eligible to participate in this study. Participants were residents of various cities across South King County's urban and suburban areas, which have an increasing refugee resettlement population. The pilot was specifically tailored to the Somali community and run by Somali nurses, midwives, and doulas.

Outreach and recruitment for the project took on many forms. First, interested participants from the formative phase of the project were invited back to take part in the pilot study and inform qualified individuals who met the inclusion criteria from their life circles. Second, our collaborating partners affiliated with various clinics and hospitals across the South King County area including HealthPoint, NeighborCare, and Swedish, connected us with their patient populations from which we recruited for this project. Overall, participants who met the inclusion criteria for the project were given information about the pilot project and the opportunity to participate.

We took an asset-based approach centering on the community to identify resources already available to strengthen, optimize, and engage with participants' needs regarding their health and healthcare options. The project began and continues with the community in the lead of implementing the project. The community set the priorities and provided regular input regarding its structure. Mama Amaan is developed from the experiences of a diverse community population, which is the driving force that influences and modified the structures during the course of the project.

Participants at sites were recruited through mass communication strategies building connections with community mobilizers and other well-known community organizations exclusively working with the East African immigrant and refugee communities in South King County. During the early months of the pilot project, the number of participants in the pilot study was extremely low. As part of the process evaluation and including participants in the design process, participants communicated the need for their support circles to be included in the pilot study, specifically in the pop-up educational sessions. We expanded our inclusion criteria to include female relatives, friends, and children of pregnant participants, which contributed to the increase of participants in the pop-up educational classes.

We quickly learned that trusted words had to travel by individuals trusted in the community resulting in a significant increase in participation. We altered our outreach design to include community mobilizers who were tasked to spread the word about our pilot project. Efforts taken by the community mobilizers included engaging in social media forums regularly utilized by the

community population such as WhatsApp and Facebook, by placing information about the Mama Amaan project and the pop-up educational sessions. Mobilizers also visited neighborhood spaces frequently utilized by the community populations to relay information to potential participants. This mechanism of outreach further fostered a stronger relationship between the implementation team and the community.

Study Design

The evaluation framework was developed using community-anchored qualitative research methods that engaged participants, stakeholders, and implementers in the design and data collection of the evaluation. The Mama Amaan pilot project was an involved endeavor that included various periods and phases throughout an 18-month timeline. The thesis analysis evaluates the pilot project throughout the course of its implementation and a year after the project concluded.

The Mama Amaan project included two periods: a formative period and an implementation period. This thesis analysis focuses on the implementation period but takes into account the formative period as it contributed to implementation of Mama Amaan.

The formative period included two phases:

1) Document perceptions, preferences, practices of perinatal health-seeking, forms of resilience and resources among women in five populations carrying heaviest burdens of negative reproductive outcomes in Seattle's most diverse and underserved neighborhoods; and identify barriers and facilitators to perinatal and birth care-seeking and service-utilization;

2) Draw on qualitative data to adapt group perinatal, birth educator, and doula training curricula to develop core components for community-based East African pop-up group, mother-to mother perinatal care services.

The implementation period included four phases:

1) Develop Mama Amaan intervention core component including the Perinatal Education Curriculum;

2) Train doulas, midwives and nurses in culturally congruent perinatal care, birth education and doula care, and train doulas to mobilize and sustain pop-up group perinatal mother-to-mother care. Curriculum includes training for perinatal group care, home visits, and patient referral and navigation. Doula training also includes a component on confidential short lay mental health screening for referrals;

3) Implement intervention: Convene and monitor monthly pop-up group perinatal mother-to mother care in 5 community settings and track indicators; and

4) Present findings and proposed core components to University of Washington partners, community organization collaborators, and community research participants.

This thesis is a feasibility analysis that takes a mixed method approach to evaluating the feasibility of the Mama Amaan Perinatal Care Model and its bundled core components. Quantitative data was also collected through pre- and post-surveys of participants to measure the impact of the pilot project. Qualitative data was collected through taking observational notes during pop-up sessions, and conducting informal interviews with participants at pop-up sessions, and semi-structured interviews with implementation team members.

Surveys

A preliminary intake survey was developed and given at each initial meeting across the four pop-up educational meeting sites across South King County. This intake survey served as a baseline to gather data on participants' access and utilization of perinatal services, and their connection with a regular doctor or clinic. Demographic information was also recorded to gain a sense of the population taking part in the program. Surveys were developed by the research and implementation team that was composed of both researchers and clinicians. The survey was only developed in English. The survey was introduced at the beginning of the meeting and spent the first twenty minutes of the meeting for participants to complete the survey. As participants were completing the survey, the implementation team helped and verbally translated the survey to Somali for participants. Every participant will complete the intake survey at their first session of the pop-up meeting site. Participants had the right to refuse to complete the intake but take part in the educational sessions.

A final/exit survey was developed by the research team that was completed by participants and community members at Mama Amaan celebration/community report back in February 2020. The final survey was two tiers. The first tier was for all attendees of the celebratory event regardless of engagement with the Mama Amaan project to gather demographic and qualitative information of their perceptions of their community needs/gaps. The second tier was specifically for Mama

AMMAAN participants who took part and utilized the educational and doula care services to assess their level of engagement with the program and what participants perceived as benefits from the program. The survey was developed in English and verbally translated for participants to Somali whose first language was Somali.

Participant Observation

During the pop-up educational session, participant observation was conducted to record the level of engagement of participants during the sessions. Also, to evaluate the acceptability of participants regarding the Mama Amaan core components. Finally, we documented participants' exchanges with one another as well with the facilitators to assess their perceptions of the perinatal educational model.

Interviews/Focus Group

A focus group with the implementation team took place to assess the perceived successes, challenges, and transformation of the pilot study. The core implementation team consists of 5 Black, Somali women, including the conductor of this thesis project. All members of the implementation teams have been part of the MAMA Amaan program prior to the creation of the program and part of the developments from the beginning. A focus group guide/script was developed with an introduction, consent and six open ended questions to gather data on the perceived challenges, changes, successes of the MAMA Amaan program from the implementers of the program. The focus group guide is in English, and the focus group was over Zoom conducted primarily in English aside from a few phrases stated in Somali because it was difficult to seamlessly translate. The focus group discussion included four of the five members of the implementation team.

A separate interview was conducted with the fifth member of the implementation team because of scheduling conflict and was unable to take part in the initial focus group discussion. The interview utilized the same question guide from the focus group and was conducted over Zoom. Prior to starting recording at the focus group discussion and interview, a consent statement was read, and each attendee repeated the statement and agreed to it. The saved recording was placed in a secure password protected space until transcription and analysis was completed.

Measures

Feasibility

Feasibility was determined by attendance numbers, retention in the pilot project, and participation in the bundled services. Data on recruitment along with demographic and health characteristics information was collected by various members of the implementation team at each initial pop-up session. Attendance and retention data were collected by members of the implementation team during each session. The implementation team tracked who attended more than one session each month to collect the levels of individual engagement.

Acceptability

Participants provided a verbal report on their level of satisfaction with the pop-up educational session and other bundled services at various pop-up sessions. At various sessions, facilitators regularly ask participants questions to gauge their level of satisfaction with the educational sessions. They recorded these responses and later incorporated them into the model. Participants completed a post-survey at the end of the pilot project collecting data on whether they would continue the project if it was an option and what was the most beneficial aspect of the pilot project.

Implementation

The success of implementation was explored from the perceptions of the implementation team and their view on the intervention's efficacy, fidelity, strengths, and challenges in a focus group discussion and interview. The team also reported on the various changes in the core components and how that impacted the overall trajectory and structure of the project.

Data Analysis

Recording of the interviews from the implementation team members was transcribed with Otter.ai. The transcript was then reviewed to ensure coherence and clarity. Initial analysis was conducted by hand and deeper coding and analysis were performed through NVivo. A codebook was not developed beforehand. An inductive coding strategy was used to interpret raw contextual data to develop concepts and themes through interpretation based on data (Thomas 2006; Boyatzis 1998; Corbin and Strauss 1990). Survey data was analyzed through excel which produced descriptive statistics of participants' demographic information and health characteristics who took part in the Mama Amaan program.

RESULTS

Participant Characteristics

Over the 9-month implementation period of the pilot project, a total of 72 women were recruited across four sites with 22%-40% of whom were returning participants. Of the 72 women who were enrolled and completed the baseline survey, 13 (18%) completed the exit survey. The low number at the exit survey is due to the loss of follow-up with participants, the rapid change in community partnerships, and reflects the complexity that comes with community work. While many participants did not complete the exit survey, they did report that they benefited from the project by attending and engaging in its various components. We discovered that not retaining women throughout the entirety of the project did not impact the overall impact of the project for participants.

Women who participated in the pilot project had a mean age range of 33-45 years and 13.9% were under the age of 26. Nearly all women (94.4%) reported Somali as their primary language and Somalia as their birthplace. Women reported their highest schooling with 61% not completing high school and 39% obtaining a high school diploma of which only 2% pursuing post-secondary education.

The majority of women reported having health insurance coverage with 53% on Medicaid, 22% on Medicare, and eight precent privately insured. The 16% of women who reported being uninsured were provided information and assistance to gain coverage. Over 96% of women reported having a regular doctor and health clinic.

Coverage/Participation

Pop-Up Educational Sessions

Initially, the pilot project's aim was to recruit 60-80 pregnant women (<18 weeks) to participate in the intervention over a nine-month period. This quickly changed to include the support circles of the pregnant women in the intervention contributing to the retention of participants. Pregnant women expressed the need for their mothers, sisters, or daughters to accompany them to the pop-up classes to foster a more comfortable and enjoyable environment. Participants who brought a family member reported that they were more likely to return to subsequent sessions. Due to

community realities and the importance of investing time in trust building, we were unable to go through all nine education session modules. We recruited 72 women to participate in pop-up perinatal education sessions conducted across four sites with many more partaking in the perinatal education activities by membership, questions and answer dialogue, and live streaming of videos on Facebook with 239 tuning in, WhatsApp with 255 interactions, and YouTube project video with 361 views.

Benefits

Participants indicated in the exit services that the most important benefits of attending Mama Amaan's pop-up sessions were: 1) learning about your rights and options in your healthcare, 2) gaining support system, and 3) having fun and relieving stress.

1) Learning about your rights and options in your healthcare

In the formative stage of the project, participants loudly expressed wanting to learn about the various aspects of the healthcare system as it pertains to their own health and well-being (Egal 2020). This was a significant aspect of the pilot project taking form in the various core components of Mama Amaan including the pop-up sessions and doula care. Numerous discussions turned into questions and answers sessions around medical terminology and procedures participants may have encountered. Participants took the time at the pop-up sessions as a chance to gain a deeper understanding to successfully navigate the medical care system and gain tools and resources to advocate for themselves and each other.

2) Gaining a social support system

Participants reported the loneliness felt after giving birth and expressed a need for support. The formative research uncovered the need for support during the pregnancy, but particularly weeks after giving birth (Egal 2020). This desired familial and community support organically fostered an environment where participants were able to naturally create support systems with other participants that went beyond the sessions at the various community and clinic locations. Participants developed social networks of care and support with each other that they were able to phone into when they needed extra help. Social media forums also became part of these systems of support such as Facebook/WhatsApp to communicate with each other as well as the implementation team. At sessions, participants reported that gaining a system of support changed their lives and increased their overall well-being.

3) *Having fun and relieving stress*

For many participants, the pop-up sessions were the only time they were able to do something for themselves. The only time they did not have to worry about the household or work, but only themselves and their well-being. The pop-up session grew to be a space of participants celebrating each other. Zumba, dancing, and poetry circles became regularly incorporated in the pop-up session as the participants saw the need to also bring in joy into the space. The implementation team and participants brought joy, love, and happiness into the discussions which enriched the environment and transferred to the overall project.

Doula Services

The project trained East African doulas, nurses, and health educators in culturally congruent birth education classes. We reworked our expectation of women only contacting doula care through sessions and tried to create opportunities for women who were unable to make it to perinatal educational sessions. Participants were provided free certified birth and postpartum doula care. We delivered doula services to 16 participants who utilized pop-partum doula services which includes 3 who also received birth doula services.

Umuula Care

In Somali, *umuul* refers to the women in her first forty days after birth which is a critical period of healing. Therefore, *umuula* care is the postpartum doula care Mama Amaan provided to participants throughout the course of the project. The formative research findings uncovered a great need for support and care immediately following childbirth and up to six weeks to a year postpartum (Egal 2020). We identified Inpatient Post Placental Support (IPPS) as a point where immense healing takes place and an abundant amount of support is needed. Mama Amaan doulas provided this support by accompanying participants to their doctor appointments, being present during labor and delivery, and conducting home visiting services up to one year postpartum. These home visits included breastfeeding education, grocery shopping, and carving for their kids so participants would have some alone time for self-care such as taking a shower.

Change in Knowledge

We found that most participants were unaware of doula services, or the existence of doulas let alone Somali doulas. It was at the pop-up sessions where participants were first exposed to what a doula is and the benefits of doula services.

> *Most of the [participants] did not know about doula services or all the postpartum services they have a right to. But after we worked with them through Mama Amaan, we educated them and explained to them what I do and the meaning of doula services. I informed them there are many organizations where they can get free doula services. So that's the most important opportunity my community got from Mama Amaan.*
>
> Somali Doula/ Mama Amaan Implementer

All participants were exposed to this knowledge and information with a portion of them utilizing the doula services offered as part of the pilot project.

> *Mama Amaan can help out my community, our community. We educate them about the doula services that they need. We educate them on symptoms of postpartum depression, anxiety, treatments, and everything. It is very, very important. My community and I love Mama Amaan.*
>
> Somali Doula / Mama Amaan Implementer

There is more demand for doula services than our team can meet or commit to financially given the end of the project. The service is clearly little known and not used due to the lack of knowledge, resources, and access.

Dynamics of the Model

The Mama Amaan Care Model underwent a few transformations as a result of continued community involvement and input. This change was a product of genuinely centering the community in the project and moving aside for them to take the lead. The bundling of services provided participants the flexibility they needed to utilize the services as they lived their lives. The act of surrendering to the community to take part in the reconfiguration of the project components contributed to the overall sustainability of the project. While the overall outcomes of the model remained the same, the structure of the core components underwent a few cycles of change. The perinatal pop-up sessions became the anchor of the whole project while the other components such as doula care, social media campaigns, and resources referral were extensions of that main core.

> *I felt they [the community] valued that we came in fully. I think they felt it. They saw it. It is like we are meeting with a bunch of family members every time. We adapted a lot. We changed a lot. We didn't say that we could not do it or that it is not possible. We didn't say*

that. We did not even let the lack of funding impact what we were doing toward the end of the project. We took it out on ourselves and adapted and changed for the sake of the community.

Process Evaluator / Mama Amaan Implementer

The model changed because of community input and knowledge. The pop-up perinatal educational sessions became the center of the care-service model. Community members voiced their need to have a space to gain knowledge about their rights when it comes to their healthcare and ask questions, they would not have the opportunity or time to ask their own medical provider. Participants reported that they felt safe with the facilitators and empowered to ask questions that would otherwise be too intimidated to express. We approached the work with an open mind that was keen on the cultural nuances and historical background of our participants. We entered each situation and space during this project with the idea that we are not here to change behavior or even develop an isolated solution, but to center the community in the work. Going beyond community participatory research to community anchored research, which places the community as the key driver of their own solutions.

People were really involved with what we were doing. We were leading the sessions and they naturally turned into question-and-answer sessions at times. It was cool to witness participants open up and share intimate details of their lives right in front of us. This provided us a chance to correct misconceptions that came up

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Our relationship as the implementation team with the community influenced how we were viewed by participants, their level of interactions with us, and their comfort level with the project. Relationality was a core tenet in the foundation we were building with the community. Our cultural and racial identities as Black, Somali, and Muslim women were influencing factors in the level of trust participants had in the project and in the larger community. Throughout the classes, participants reported that the space they were engaged in was something they never saw before in the community. The women constantly expressed that they felt respected, heard, and felt that they had a considerable stake in the orientation of the project. While the implementation teams shared cultural identities with the study population, which drove the success of the project, it also revealed cultural distinctions resulting in various core challenges leading to adaptations of the project.

Core Challenges, Responses, and Adaptations

During this project various challenges emerged, from the logistics of the project to comforting the colonial tendencies of research. This project revealed the complex realities of community work, the traumas that come with short-term research timelines, and the grave need to build time for rapport and relationship building with the study population. Community work requires an immeasurable amount of effort, energy, and collaboration.

> *You have to figure out what works for the community and learn from them. They are the source of solutions. We learned a lot from them. It does take a village. We needed to invest not only money but time. That was so important, especially for this community. This project was as an experimental case study in a way because it showed that what we intended to conduct in a year actually took us three and a half years.*
>
> Somali Nurse Practitioner / Mama Amaan Implementer

The initial plan of the pop-up perinatal educational sessions resulted in various logistical challenges. We observed significantly low numbers at the initial sessions for a myriad of reasons. When we asked participants why they were unable to attend the sessions on a regular basis they stated that the timing of the sessions was not ideal, securing childcare was impossible, and transportation to the session was hard to find. We gathered this information from the participants and incorporated it into our care-service model. We connected with childcare providers to help us provide childcare at the pop-up sessions. Participants brought their children to the sessions to be looked after while they were in the classes free of charge. We adjusted the timing of the sessions and held them at day and time that worked for most of the participants which ended up being evenings during the weekends. We initially recruited prominent members of the community to assist in outreach who also took on the role to provide transportation for the participants that were unable to find transportation for themselves. They saw the need that was there and took it on themselves to bridge the gap. Participants ultimately reported that they knew they were being heard because they witnessed the adaptive measure immediately incorporated by the implementation team.

> *We were listening and hearing how we can change from the community. We took exactly what they [the community] told us and implemented it. We made it happen. We took a very tangible-driven approach by immediately taking what these women told us and making something out of it.*
>
> Somali Doula / Mama Amaan Implementer

This fed into the continued trust and rapport building with the community by the implementation team. A key point that regularly came up in the sessions, discussions with participants, and conversations among the implementation team was the importance of trust.

The community initially questioned our motives, which stemmed from the distrust participants held about university-led research projects. Participants reported that the exhaustive participation in short-term research projects did not consider the needs and wants of the community it was engaging with, contributing to their distrust of our team and the work. From our conversations with participants, we realized that this particular location of South Seattle and the communities that resided here had been overexposed to research projects, particularly led by the University of Washington. This history resulted in massive pushback and challenges for us as we were conducting not only the formative research, but the implementation of the care-service model. Being aware of this history, however, shifted our vision, and our collective goal now included: 1) challenging the traditional ways research is conducted; 2) questioning our own motives; and 3) genuinely centering on the community.

We deliberately spent a great deal of time and effort rebuilding the trust with the community and establishing a clear line of communication.

> *In the beginning, we witnessed hesitation from the community and distrust because they felt that we were like any other university-led project. We were put through the wringer. I remember one participant said, 'so you are just going to come one time like every other research group'. It was hard to digest what we were getting from our own community. However, I witnessed a shift when they [the community] saw us coming back each week or month being consistent with our energy, enthusiasm, and commitment. This shift did not happen immediately. It was a process, but once it started, we could not stop as the demand and need were there. The engagement from the community skyrocketed and I saw the change in comfortability level with us. Participants were taking the time to provide input because they saw the changes incorporated immediately.*
>
> Process Evaluator/ Mama Amaan Implementer

It was critical to be open and honest about the extractive aspects of research, particularly toward Black communities. Naming the colonial tendencies of research and being receptive to the participants' past experiences contributed to a shift in the overall model. The implementation team responded to the challenges by having an open line of communication with participants and

creating a dynamic that allowed community members to provide their input, which resulted in adaptations to the model contributing to an increase in overall participation.

Reframing of Congruency as Community Congruence

The project realities and the community-responsive reworking shaped the project's trajectory, the care-service model, and the ultimate outcomes. Initially, cultural congruency was a core principle to the development and implementation of the Mama Amaan Care Model. However, the community transformed the Schim and Doorenbos (2010) definition of cultural congruence to move beyond the medical encounter and encompass the realities and lived experiences of participants outside of a clinical setting. Participants reported the importance of addressing racism not only in the healthcare field but the larger societal infrastructures while simultaneously developing strategies to combat it. This new framing of community congruence includes three core principles: 1) transformative mutual reciprocity; 2) constant cycle of flexibility, adaptability, and a little chaos; and 3) relational practice of listening, connecting, and building trust. The community congruence framework based on relational dialectics of change emphasizes the iterative process of the Mama Amaan Perinatal Care Model contributing to the sustainability of the project (Baxter & Montgomery 1988).

1) Transformative mutual reciprocity

Many women expressed in the classes and discussions that the space we created with them, that is Mama Amaan, was a place of sisterhood, support, and the only time women were able to do something for themselves. Participants felt heard and were not intimidated to ask us tough questions about the work, but also the larger systematic issues in society as it related to their healthcare. It became a place where they would reflect on their own knowledge and share with each other intimate details of their healthcare experiences.

> *It [Mama Amaan] is a place for communities to come together and benefit from it and we got it with Mama Amaan, and we benefited a lot from it.*
>
> Mama Amaan Participant

Mama Amaan grew and transformed to be a sisterhood of collective communication. Participants reported the importance of having access to women who look like them and are in the healthcare field to answer questions they would otherwise not have the time or language to ask their own medical providers.

*It [*Mama Amaan*] became a simple sisterhood where they [*participants*] really wanted to connect with the community, with each other.*

Somali Nurse Practitioner / Mama Amaan Implementer

Women came to a place in the community to create a sisterhood with each other and with the implementation team. Participants reported that the social aspect of the model influenced their continued engagement in the core components, especially the monthly perinatal educational sessions. Participants expressed their need for the space Mama Amaan created to forge deeper connections with the other participants and the community at large.

2) *Constant Cycle of Flexibility, Adaptability, and a Little Chaos*

This project revealed a continuous cycle of change by responding to community realities which lead to adjusting the core components to better fit the needs and wants of the participants. This iterative practice of rapid change aligns with the relational dialectic theory, specifically, its second assumption. The relational dialectic is a concept under communication theories that focuses on the contradictions in relationships. There are four assumptions under relational dialectics. The second assumption emphasizes that change is a key element in relational life. We realized that the lives of our participants are dynamic and was necessary to consider when implementing this project. As their lives changed, their priorities changed, which impacted our priorities for the project.

The way this works is flexibility. The only way this works is if you keep changing, which is like the opposite nature of an institution. Eventually, it becomes a constant cycle of change. The bundling of services allowed us as the implementation team to be flexible in what we did and how we changed it. There was definitely chaos, but institutions do not like to hear that. They want order, rules, and consistency. However, one thing that was consistent throughout the whole project was the continued and constant communication with participants and the community. We were visible in the community and available to them.

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Rapid change allowed for an opening that was productive for the project. It opens space for real-time evaluation of the project and engagement with participants contributing to the transformation and adaptations of the core components. These transformations mentioned in a previous section resulted in an increase in participants and illustrated the sustainability of the project.

I believe that working with various community members and being willing to change as part of the framework like rolling with the punches and connecting with our community changes the model itself. We received word back directly from participants that the changes we made increased their engagement in the project and the acceptability of the whole model.

Somali OB Nurse / Mama Amaan Implementer

3) *Relational Practice of Listening, Connecting, and Building Trust.*

Trust was a vital foundational component for the participants regarding the work of Mama Amaan. The iterative process of listening and forging connections contributed to the building of trust. Participants reported the project and the work being done in the name of Mama Amaan was meaningful and trustworthy because they witnessed the commitment of the implementation team, who were constantly returning and listening to what the participants had to say. The constant and continued building of trust was an important aspect and contributor to the feasibility of the project

> *Once they [participants] began to trust us, the doors were opened. We took the information they gave us and did not go anywhere with it from this community. This is our community. I felt that we were very much invested— mind, body, and soul 100% whatever it takes, it was a lot of work. Toward the end of the project, the last three months, it was not only about what we are doing but witnessing the community opening up to us. These women [participants] were sharing the most intimate details regarding their perinatal health. They were so comfortable with us, and it showed how committed they were to us because of their level of engagement. I felt they valued that we came in fully. They felt it. They saw it. I would not exchange it with anything in the world.*
>
> Somali Nurse Practitioner / Mama Amaan Implementer

Participants constantly brought up and highlighted the importance of trust. This was a direct response to the consequences of short-term, extractive research projects mentioned in a previous section. The community loudly expressed their frustrations with past university-led research teams and demanded something different from the Mama Amaan implementation team. The relationship with the implementation team and the fact that the team reflected the community allowed for a deeper understanding and connection for all parties involved in the project.

> *I think that is what made it special, that connection and that sisterhood. For me, I did not know I wanted the sisterhood. But I connected with them [participants] on a different level. Some of them have my phone and texted me. I think that's what made those conversations so much better, which allowed us to be part of their lives. They [participants] kept saying we do not want you [implementation team] to just come and leave. They [participants] were putting in the energy. They were putting in the effort.*
>
> Somali OB Nurse / Mama Amaan Implementer

DISCUSSION

Throughout the course of this project our experience revealed the importance of trust, relationality, and community building. The results indicate that the Mama Amaan Perinatal Care Model was an opportunity for participants to alleviate a significant portion of the stress they experience from navigating the complex, convoluted, and racist health systems. Searching for and finding

community support through Mama Amaan was vital for participants' own health and well-being. They received the support they expressed was lacking from the clinical setting and found tools, resources, and strategies to advocate for themselves and their community contributing to increasing their health capacity.

The dynamics of the community reflected the dynamics of the perinatal care-service model. As the model set out to address the low perinatal health outcomes on the individual level, participants brought in the systematic realities they faced influencing and forming the discussions in the educational pop-up sessions. We found that adaptive change is the methodology. While the implementation team had a concrete outline of the core components, the bundling aspect of the project allowed for a space to shift, transform, and add on to the initial components.

The congruency framework was not simple as the project found itself in an evolving state of incongruence resulting in a new framing of congruency. A community congruence framework allowed us to employ a dialectical approach to change and illuminated how the lives of our participants are dynamic and necessary to take into account. The evaluation of feasibility was not solely based on whether this project can be implemented successfully but emerged to include the community's journey of healing concerning the traditions of research. The implementation team's visibility in the community fostered a foundational relationship that allowed for Mama Amaan to grow into a movement influencing future work within the community. Trust-building and forging connections were pivotal for this community and moved beyond the project. Structuring time in grants to build rapport for the community was a point that came up in this project and became a contributing factor to the success of Mama Amaan.

The feasibility of this project was whole-heartedly a result of the research team being of or in and with the community from the beginning. The community transformed the meaning of feasibility by challenging and continually questioning the genuine motivation behind Mama Amaan. Initially, Mama Amaan was an idea backed by evidence, funding, and a research team; however, the actions and inputs of the community revolutionized it into a movement. Mama Amaan set out to alleviate the suffering immigrant and refugee women experienced due to their poor perinatal health outcomes and lack of access to quality health care. Participants brought their whole selves into this

project, and it became a space for uncovering and working through traumas due to the racist healthcare systems and colonial traditions of research.

CONCLUSION

This project drew on the experiences of a diverse group of women, participants, and community members, which reconfigured and established the visions and goals of Mama Amaan. Challenging the traditional dynamics of community research was vital to ensure the trust and respect the community demanded and deserved. Adaptations to community realities through constant communication, the research team's visibility in the community, trust-building, and forging connections determined the feasibility of this project. The success of Mama Amaan lies in its leadership, the active role of centering the community, and the bundling of services contributing to transitions, transformations, and modifications.

Next Steps

The work of Mama Amaan was a catalyst for another University of Washington Population Health Initiative (PHI) funded community partnership titled Healing Heart and Soul. This study focused on understanding and reversing COVID-19 pandemic-related racial/ethnic health disparities on maternal reproductive and mental health outcomes. Healing Heart and Soul builds upon Mama Amaan's community trust and core components (doula care, culturally congruent education modules and screening tools, social media contacts and patient empowerment focus). Ultimately, the work from both Mama Amaan and Healing Heart and Soul led to a successful proposal to PHI. This funding will support a Tier 3 feasibility pilot to scale the Healing Heart and Soul components in three clinic systems and evaluate its impact on health outcomes. The inclusion of populations beyond the Somali refugee and immigrant communities is crucial to assess the scalability, system applications, and policy implications for broader regions of King County and Washington State.

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