Promoting contraceptive uptake to reduce the unmet need for family planning during the postpartum period in Ethiopia
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Chapter 7

General Discussion
Chapter 7: General Discussion

Aim
This thesis looks into how postpartum family planning (PPFP), or the use of modern contraceptives during the postpartum period, could be improved and promoted in Ethiopia. It then aims to recommend approaches and strategies that can improve and promote the PPFP in the Ethiopian context, which can also be adopted in other similar settings.

This thesis was designed to address five different research questions, each of which was dealt with in a separate study. Each research question was approached utilizing a different research methodology in accordance with its nature. The conceptual framework shown in Figure 7 (Chapter 1) served as the framework for the entire thesis project, in which we aimed to uncover multiple factors that influenced the usage of modern contraceptives in Ethiopia during the postpartum period. The PPFP uptake rate and its service quality could both be increased by manipulating these factors, as most of the factors are modifiable.

This section provides a comprehensive discussion of the findings from all five papers and is presented in four main topics. All of them must be considered to get the whole picture about the influencers of PPFP uptake in Ethiopia.

Integrating PPFP into Health Structures at the Community Level Improves PPFP use
The objective of the first paper, which is presented in chapter 2, was to determine whether integrating PPFP counseling and services into health system structures at the community level increased adoption of modern contraception during the extended postpartum period. We employed a quasi-experimental study with a controlled trial design in two woredas/districts to address this research question, randomly assigning primary health care units (PHCUs)—a health center and nearby health posts—to intervention and comparison arms.

The study revealed that women who delivered at home in the intervention arm were more likely to adopt contraception over the first year postpartum compared to women who delivered at home in the comparison arm. Women
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who delivered at a facility were more likely to adopt contraception than women who delivered at home, with no difference by arm. This suggests integrating PPFP into existing community-level health system structures along the pregnancy-to-extended-postpartum continuum is promising for improving uptake in populations with high rates of home delivery. PPFP should be seen as an essential component of the maternity care women receive at home and in facilities since postpartum contraceptive use can dramatically improve the health of women and their children.

This finding is in agreement with the PPFP programming strategies developed by the WHO in 2013, which aim to reach women at points of contact within the health system for PPFP information and services that should be made at the community level [1]. USAID, in its maternal and child survival programme, also strongly recommended the integration of PPFP counseling with ANC services offered at facility and community levels in Sub-Saharan Africa and Asia [2]. Postpartum women need to receive PPFP information and services in their homes, communities, workplaces, and health facilities [3]. Experimental trial studies done in rural Bangladesh demonstrated that it is feasible and effective to integrate FP services into a community-based Maternal Newborn and Child Health (MNCH) care programme for improving PPFP use and lengthening birth intervals [4, 5]. Orientation on PPFP improved the PPFP knowledge of female community health volunteers (FCHVs), which in turn improved the coverage and quality of their community-based counseling [6].

Integrating PPFP information and service with the existing MNCH contacts will be more effective if it is supported by standard working tools. An interventional study conducted in Ethiopia discovered that the use of integrated tools with specific PPFP nudges, which is made possible through modification of the existing Integrated Maternal and Child Health (IMCH) card, enhances HEWs' capacity to provide integrated FP information and services during pregnancy and in the extended postpartum period at the community level [7]. The same approach was recommended by another study conducted in Afghanistan [8].

Studies showed that persistent quality and system gaps prevent many postpartum women from receiving effective PPFP counseling and services in low-resource settings [9, 10]. The delivery of PPFP counseling and services to this group of women with significant unmet needs can be improved by strengthening the health system [1, 9]. Regular shared learning across sites and monitoring quality measures at different levels of health systems—
community, facility, district, regional, and national—can help accelerate improvements in the provision of PPFP services [9]. Monitoring and evaluating the PPFP implementation programme is crucial for determining how well the set goals and objectives are being achieved using a clear PPFP key performance indicators [1]. To achieve this, PPFP indicators need to be incorporated into the country’s HMIS, and health facilities need to get support to continue providing service and maintaining records and reports [11].

Figure 1: MNCH Indicators (including the PPFP) Dashboard in the Hetosa Wereda Health Office, Ethiopia, 2023

Source: The picture was taken on April 25, 2023, during the visit I and my supervisor, Prof. Dr. Jelle Stekelenburg, made to the woreda.
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**Promoting Women’s Contact with Health Professionals and Integrating PPFP Information and Service with the Existing MNCH Services at the Health Facility Increases PPFP Adoption**

In the second and fourth studies of this thesis, we examined the effect of women’s contact with health professionals during MNCH contacts that included a discussion of family planning use during the postpartum period using a cohort study design: the second study during the extended postpartum period (within 12 months after childbirth) and the fourth during the postnatal period (the first 6 weeks after childbirth) (Chapters 3 and 5, respectively). In addition, in the second research question, we identified which specific maternal, neonatal, and child health (MNCH) contacts were more important to increase PPFP uptake. In both the second and fourth studies, we used a cohort design to evaluate these research questions. The third paper of this thesis was also aimed at identifying the pooled variables influencing the use of modern contraceptives in Ethiopia during the first year following childbirth (Chapter 4). In the paper, we carried out a systematic review and meta-analysis of observational studies published in English before April 16, 2021.

Findings from the second paper showed that each additional MNCH contact where family planning was discussed increased the likelihood of PPFP uptake. In this cohort, family planning discussions during pregnancy and child immunization contacts were found to have an impact on PPFP uptake for women who delivered at home, and family planning discussions during postnatal care were important for women who delivered in health facilities. In the same way, the fourth paper revealed that contacts with health professionals for MNCH services that included family planning discussions increased the likelihood of modern contraceptive uptake during the six weeks after childbirth. The findings from the third paper also demonstrated that PPFP counseling during ANC and having contact with the health professionals at the health facility for PNC and childbirth influenced PPFP uptake. These analyses found benefits of FP discussions at different points on the continuum of care from pregnancy through the first year postpartum. Understanding the role of repeated conversations at different stages highlights the importance of applying a continuum of care lens to primary care. This is consistent with reports of other studies from LMICs, including SSA [3, 4, 8, 10-19]. The immediate aftermath of childbirth seems particularly
opportune for discussing healthy timing and spacing of pregnancies and the use of PPFP for women who deliver within facilities [20]. This shows that prior to being discharged from the health facility, providing contraceptive counseling and services as part of facility-based childbirth care can greatly enhance adoption of immediate PPFP [20,21]. This may also suggest that increasing facility birth will enhance the usage of PPFP, as was already found in a study done in SSA [22].

An important window of opportunity to reach women with effective FP is the postpartum period. During pregnancy, childbirth, and the year following childbirth, women are more likely to engage with the healthcare professionals. Each of these interactions is an opportunity for healthcare professionals to integrate FP into their existing counseling and services to better meet the needs of postpartum women [23]. Given the high unmet need for FP in the postpartum period and the potential to prevent adverse maternal and child health outcome through effective FP in LMICs, it is essential to integrate FP information and services into every interaction with women at MNCH contacts [9]. The World Health Organization designed the PPFP programmes and interventions to reach women at one or more specific contacts with the health system for information and services, including ANC, labor and delivery/pre-discharge, PNC, immunization, and child health care visits [1,2].

In addition to integrating FP information and services with MNCH services, it is critical to continuously identify and address the main obstacles preventing the delivery of effective PPFP services, such as issues in the health facility and community level and weaknesses in underlying health system functions [9]. Policies and strategies must be developed that address the integration of FP with MNCH services, particularly facility births and child immunizations [3, 24, 25]. In conclusion, the dose-response effect of integrated FP discussions along the continuum of care has policy and program implications for Ethiopia and elsewhere. Health workers should systematically ask their clients about their intentions for birth spacing or limiting during pregnancy, in the immediate postpartum, postnatal period and when they encounter mothers seeking immunization for their infants.
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Improving Women’s FP Literacy and Promoting the Recommended Healthy Timing and Spacing of Pregnancy (HTSP) Increases PPFP Uptake

The fifth study was tasked to assess the short inter-pregnancy intervals and related characteristics among Ethiopian women of reproductive age (Chapter 6). We used a community-based cross-sectional study in three woredas (Dodota, Ziway Dugda, and Dugda) located in the same lowland ecology of Arsi Zone and East Shoa Zone, Oromia Regional State, Southeast Ethiopia.

The results of this study revealed a significant association between a short inter-pregnancy interval (SIPI) and women's perceptions that low contraceptive use increases the SIPI. The women's belief that SIPI can influence adverse child health outcomes (small gestational ages and birth defects) was likewise linked to SIPI. The third and fourth studies of this thesis similarly found that the PPFP uptake was influenced by women's family planning literacy-related characteristics. Realizing they can get pregnant before menstruation returns, discussing PPFP with a partner, having prior PPFP knowledge, having used modern contraceptives, and knowing and using the advised HTSP have all been linked to increased PPFP uptake (Chapters 4 and 5).

This shows that increasing the literacy of women about family planning at both the community and health facility levels can support the advised HTSP and, as a result, lessen the SIPI we currently see among Ethiopian women. This could be achieved through training CHWs (HEWs) to integrate community education and individual education at home about HTSP and FP methods as a routine part of care\textsuperscript{[1, 2, 9]}. The FP education sessions can be facilitated by preparing and utilizing PPFP informational, educational, and communicational (IEC) materials to use during home visits\textsuperscript{[1, 2]}. Women's FP literacy can also be raised by designating health professionals to regularly provided group education on HTSP and PPFP at the health institution\textsuperscript{[1, 2, 9, 23, 26]}. Additionally, involving women's partners in FP education sessions at the community and facility levels may improve FP awareness and usage and lower pregnancy rates during the postpartum period\textsuperscript{[3, 10]}. 
Addressing the Disparities Caused by Socioeconomic Factors Can help Increase the use of PPFP

Some socio-demographic characteristics of the women also influenced PPFP uptake, both during the postnatal and extended postpartum periods. Women's educational status, marital status, age, and place of residence were all linked to PPFP uptake. Women with better educational levels used PPFP more significantly. Similarly, older women used PPFP more than younger women, married women used it more than unmarried women, and those living in urban areas used it more than those living in rural areas (Chapters 2, 4, and 5). This shows that carefully considering and addressing the inequalities caused by socioeconomic factors can help increase the use of PPFP. This has also been documented in other studies [10, 13, 16, 20, 23, 24, 26].

Social Determinants of Health (SDOH) affect people's lives and have an effect on their health and lifespan [27]. Socioeconomic factors alone may account for 47 percent of health outcomes, while health behaviors, clinical care, and the physical environment account for 34 percent, 16 percent, and 3 percent of health outcomes, respectively [28]. While it is important to advance health equity through accessing affordable health services [27], addressing the ways in which SDOH increase the risk of poor health outcomes is critical to improving women's health and wellbeing [27, 29, 30].

The CDC developed a high-level framework to guide interventions in SDOH. The framework is based on six pillars, which represent functional approaches to SDOH where intervention is needed (see figure 1 below). These are: Understanding existing policies and laws that have an impact on health Infrastructure and capacity to help address SDOH, Community engagement to involve and engage active participation in decision-making by those most impacted by the SDOH, Evaluation and evidence building to gather evidence and advance scientific understanding of effective strategies that have been shown to improve SDOH, Partnerships and collaboration to build linkages between stakeholders and Data and surveillance to collect routinely and analyze SDOH variables [29, 31, 32]. Implementers of PPFP interventions at the community and facility levels should ensure that their interventions, such as individual and group education, are appropriate for illiterate women, older women, and those living in remote areas. Giving due attention to single women can also help improve PPFP uptake. It's also critical to make sure the teaching materials and counseling tools are appropriate for this group of women. All key stakeholders should contribute to this approach so that
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disparities with these social determinants of health can be addressed and, as a result, PPFP uptake will improve in Ethiopia.

**Figure 2:** Centers for Disease Control and Prevention (CDC) social determinants of health (SDOH) Framework (Nelson et al, 2022)

In summary, the new knowledge our thesis contributes to the existing body of literature is that it fills an empirical gap on the efficacy of community-based PPFP programmes, particularly in settings with low facility-based delivery (49.8%) and postnatal care (33.8%) [33]. It demonstrates the benefit of integrating PPFP messages and services into existing community-level services in Ethiopia, which are provided through home visits as well as at health posts. Our findings also add to the growing body of literature aiming to understand the effects of PPFP counseling at various MNCH service visits and which specific MNCH contact is more important for PPFP uptake. The way we designed the study to look at the effect of contact with the health professionals where contraceptives were discussed on contraceptive uptake during the postnatal period (the first 6 weeks after birth), and that we learned the interaction benefits PPFP uptake, is particularly innovative and has not been tried before. A key concern with previously conducted PPFP studies is their generalizability. Blazer’s review of PPFP evidence [3] concluded that the main drawback with previous studies was the lack of generalizability since they drew from women coming to health facilities. In
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our case, however, all studies were community-based and thus generalizable.

Limitations of the studies include the potential for recall bias since women may not accurately recall the number of contacts with the health profession or the exact timing of contraception adoption. We obtained data through the self-report of the interviewed women. As a result, the data accuracy might not be at a level that can be obtained objectively. We, of course, attempted to improve recall on the number of contacts by asking multiple questions tied to points of service, though there has been no validation of these types of questions. It is possible that women who use FP could be more likely to recall FP discussions. Also, we did not exactly analyze the timing of contacts in relation to PPFP adoption, so women may have started contraception before receiving some of the contacts included in the analysis, so those contacts could not have contributed to the woman’s decision to start PPFP. There may also be a social desirability bias on some sensitive issues, like resuming sexual intercourse after birth and similar matters. Nevertheless, women were thoroughly informed about the value of accurate information. In our interventional study, we could also not rule out the possibility of information contamination between women in the study arms, interventional and comparison.

We suggest larger studies with a more robust study designs to elucidate the influence of community-level PPFP programmes and interactions with health professionals during repeated contacts along the continuum of care on PPFP uptake. We also suggest designing studies in a way that recall bias could be avoided, such as by using more validated tools and increasing the frequency of follow-ups with women.

Conclusion

This thesis suggests integrating PPFP into existing community-based care along the pregnancy-to-extended-postpartum continuum is promising for improving uptake in populations with high rates of home delivery. This urges for integrating PPFP into the existing MNCH services particularly at health post and community levels to improve contraceptive uptake during postpartum period in Ethiopia. PPFP should be seen as one essential component of maternity care women receive at community level (and home) since postpartum contraceptive use can dramatically improve the health of
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women. The implementation of the integration has to, of course, be supported by standard working tools.

Findings in this thesis also showed that each additional MNCH contact where family planning was discussed increased the likelihood of PPFP uptake in health facilities. Family planning discussions during pregnancy and child immunization contacts were found to have an impact on PPFP uptake for women who delivered at home, and family planning discussions during postnatal care were important for women who delivered in health facilities. The contacts with health professionals for MNCH services at health facility that included family planning discussions increased the likelihood of Immediate PPFP uptake during the six weeks after childbirth.

The success of the PPFP implementation plan must be regularly monitored and evaluated in order to assess how successfully the goals have been met. In order to do this, PPFP indicators must be included to the country’s HMIS, and health facilities must get assistance in order to continue offering services and keeping records and reports. This requires policies and strategies supporting these activities.

Moreover, increasing women’s FP literacy both at community and health facility levels can support the HTSP and lessen the SIPI we currently see among Ethiopian women. This could be achieved through individual and group education at the community and health facility levels. There should be standardized IEC/BCC tools to support this activity, which also needs policies and strategies.

Addressing social determinants of health (SDOH) that are impacting poor PPFP uptake through already validated approaches is also critical to improving women’s health and wellbeing. The CDC Social Determinants of Health (SDOH) Framework could be a preferred approach.

Recommendations

The results of this thesis have implications that call for collaboration between various stakeholders to increase contraceptive uptake among postpartum women in Ethiopia. Each of the below-listed stakeholders has a vital role to play.

Policy Implications

The Ministry of Health (MOH) and Regional Health Bureaus are recommended to improve the enabling environment that will allow PPFP to
be a routine part of MNCH services both at the community and facility levels. Specific recommendations are listed below:

- Integrate PPFP with MNCH service delivery and quality of care monitoring and evaluation guidelines.
- Include PPFP data in National HMIS. PPFP Key Performance Indicators (KPI) need to be developed for counseling and services.
- Provide job aids that support PPFP counseling during the MNCH contacts.
- Ensure the availability of PPFP methods at all levels.
- Work to improve the competence of MNCH providers and HEWs to ensure they can provide PPFP information and services both at community and facility level.
- Continually assess the PPFP’s level of integration with MNCH services as well as the quality of PPFP counseling and services.
- Integrate PPFP with pre-service education curricula to provide competency-based counseling and skills training.

**MNCH Service Coordinators at Zone, Woreda and Facility Level**

- Rearrange MNCH service delivery points to provide quality PPFP service, including space for private counseling and services.
- Strengthen the capacity of MNCH providers to provide effective PPFP counseling and services to women during MNCH contacts at health facilities.
- Provide MNCH providers with guidelines, updated service protocols, job aids, checklists, and other required materials.
- Continuous supply of PPFP methods, equipment, and consumable supplies.
- Ensure that quality PPFP information, counseling, and services are provided at all MNCH service points. Strengthen supportive supervisions to support providers, including providing routine feedback and updates.
- Assign health workers to routinely provide group health education on PPFP and HTSP during MNCH contacts.
- Ensure that HEWs are trained in counseling skills and interpersonal communication to provide high-quality PPFP information, referrals, and services. Equip them with job aids and contraceptive supplies. Also, ensure that they receive updates and supportive supervision.
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✓ Supply HEWs PPFP information, education, and communication (IEC) materials to use during home visits.
✓ Reinforce routine awareness creation about the optimal inter-pregnancy interval (IPI) and its impact on maternal and perinatal health, and improve PPFP literacy at the community level and throughout the continuum of care.

**MNCH Providers**
MNCH providers should integrate the PPFP information and service during the MNCH contacts at community and facility level.

**At ANC:**
✓ Integrate PPFP information and counseling with ANC services offered at all facilities.
✓ Encourage spouses and other family members to participate in PPFP education and counseling during ANC session. Includes a discussion of a woman's or a couple's PPFP options to strengthen awareness of and demand for PPFP during the ANC period.
✓ Provide contraceptive messages to women and their partners, focusing on pregnancy risks even prior to menses returning, as unprotected sexual intercourse during the early postpartum period can put them at higher risk of pregnancy.
✓ Strengthen continuity of care linkages and referrals between community and facility, as well as ANC and birthing services, whether they are located in the same place or in different facilities.
✓ Strengthen PPFP record-keeping and reporting

**At birthing (pre-discharge) and PNC**
✓ Offer counseling that includes messages about HTSP, returning to fertility, returning to sexual activity, safe modern methods to use while breastfeeding, and when and where to go for return visits. Provide contraceptive messages to women and their partners, focusing on pregnancy risks even prior to menses returning, as unprotected sexual intercourse during the early postpartum period can put them at higher risk of pregnancy.
✓ Give them the appropriate PPFP method before discharge depending on their breastfeeding status.

**At Immunization:**
✓ Immunization providers should screen postpartum women about their FP needs and give them PPFP counseling and the appropriate method or refer them to the FP unit for the service.
At Child health care:
- Integrate PPFP messages and services with child health services, including under-5 clinics and growth monitoring. PPFP Information, counseling, services, and referrals should be provided to postpartum women attending growth monitoring.
- Providers treating a sick infant or child need to assess the postpartum woman's FP needs and provide methods, referrals, or linkages to the FP unit.

Non-governmental Organizations (NGOs), Private Sector and Professional Associations
- NGOs to actively participate in PPFP programmes through capacity building, focusing on quality counselling and service delivery, and strengthening a supply of PPFP commodities in conformity with national policies and programmes.
- Private health facilities make up more than one-third of the health care service provision in Ethiopia. Private health facilities should contribute to expanding access to PPFP and integrating PPFP with MNCH services.
- Professional associations should work on capacity building in PPFP counselling, service provision, and integration. In addition, we also recommend that they strongly work on research and advocacy issues related to PPFP.

Health Extension Workers (HEWs) in the Community
- Offer individual and group education for pregnant women and their partners in the community about HTSP, returning to fertility, safe modern methods to use while breastfeeding, and when and where to go for return visits. Men, families, and communities should be involved in group education to support PPFP intervention. In group education, give focus to pregnancy risks even prior to menses returning, as unprotected sexual intercourse during the early postpartum period can put them at higher risk of pregnancy.
- HEWs are able to provide short-term methods, such as pills, condoms, and injections, to the postpartum woman in her home and health post.
- HEWs should integrate PPFP group education with the immunization campaign that frequently takes place at the community level.
- HEWs screening a sick child in the community should also assess the postpartum woman's FP needs and provide the methods, or refer her for FP services to the Health Post or Health Center.
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✓ HEWs regularly identify, refer, and follow up with pregnant women for ANC services and provide or reinforce PPFP messages.

References


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