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Embodied Choices, Cultural Realities: Socio-Cultural Contexts of LARC Uptake and Early Implant Removal in Rural Nepal

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Abstract

Long-acting family planning methods have begun to be developed in modern times. Influenced by the government and other institutional promotional activities, women go for these contraceptive measures as an effective means for both controlling population growth and birth spacing. An ethnographic account from a village in Dhading district, Nepal, among the 30 implant user women from the 18 to 45 years of reproductive age group shows that there is a large tendency to discontinue usage in these long-acting family planning methods. This paper shows that the adoption or abandonment of biomedical technologies is largely based not on their mere efficacy but on their rootedness in social and cultural realms, which, in turn, reinterpret that efficacy. Therefore, in this paper, we argue that for the acceptance and adoption of any biomedical technology, it is imperative to consider the local cultural and social context.

Keywords: long-acting family planning methods, social determinants, discontinuity in use, side effects

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Since the beginning of the modern international system, population size has been regarded as an important determinant of national power (Tellis, 2001). The larger a population, the greater a country's potential power (Eberstadt, 2019). However, technological advances have largely invalidated this thesis, leading to the adoption of population policies aimed at reducing fertility rates and thereby slowing population growth (Mauldin & Sinding, 1993).

Among biomedical technologies, people and governments across modern societies now consider contraceptive use a critical determining factor of fertility (Ezeh et al., 2012). With the rising use of contraceptives in developing countries since World War II, there has been a notable decline in family size, reflecting changes in reproductive behaviors and social structures (Darroch, 2013). Family planning programs aim to enable people to decide freely on the desired number and spacing of their children (WHO, 2025). This right to information and means directly contributes to Sustainable Development Goal (SDG) 3.7: ensuring universal access to sexual and reproductive health care (UN, 2015). Indeed, as Manderson and Liamputtong (1996) explore, the success of such programs often hinges on how birth and contraception are culturally managed within specific patrilineal social structures.

In line with SDG 3.7, family planning remains a priority for the government of Nepal, valued both as a key driver of economic growth (Coale & Hoover, 2015) and a marker of social progress (Coale, 1984; Caldwell, 1982). Nepal's formal family planning journey began early, with the establishment of the Family Planning Association of Nepal (FPAN) in 1959. By 1968, the government became actively involved via the Nepal Family Planning and Maternal Child Health (NFP/MCH) project (Pathak, 1986). Initially separate, these services were fully integrated into the broader national health system by 1990.

In the twenty-first century, family planning has been recognized as an essential component of healthcare within the Nepal Health Sector Programs (Dulal, 2023; MoHP, 2015). Today, a mix of government programs, NGOs, and international development partners work to deliver services. Ultimately, these national and collaborative efforts aim to reduce unmet contraceptive need and empower women. However, as Manderson (2012) argues the delivery of these services must contend with the "materiality" of birth control—where technologies are not just clinical tools but objects that intersect with a woman's identity and sexual health.

Modern contraceptive methods are broadly divided into short-acting and long-acting methods (Stonehill, 2020). Long-acting reversible contraceptives (LARCs), which include intrauterine contraceptive devices (IUCDs) and subdermal implants, are the most effective reversible methods available. An implant, for example, releases progesterone for up to 5 years, boasting a user failure rate of less than 1% (Sudha et al., 2022). Despite their efficacy, De Zordo (2012) notes that the use of such biomedical technologies is often a negotiation between “pleasure and respect,” as women seek methods that do not compromise their social standing or sexual satisfaction.

Despite their high efficacy and the Nepali government's provision of free access, the utilization of LARCs remains paradoxically low. According to the Nepal Demographic and Health Survey (MoHP et al., 2022), only 6% of married women use implants. Sapkota et al. (2017) attribute this low uptake to limited awareness and fear of side effects. This “fear” often manifests as what Sargent and Kotobi (2012) describe as “body battles,” where the physical presence of a contraceptive device becomes a site of domestic or personal conflict, sometimes leading to “contraceptive secrets” if the technology is perceived as a threat to traditional values and roles.

This contraceptive behavior cannot be understood in isolation; it is deeply embedded in local socio-economic and cultural realms (Dahal, 2007; 2023b). As Manderson (2009) notes, socio-cultural constructions of the “sexual body” often create invisible barriers that prevent women from fully utilizing available technologies. For instance, rural women’s understanding of fertility is often filtered through cultural beliefs, as highlighted by Bennett (1989) a bit long ago, such as associating the fertile period directly with menstrual blood.

Furthermore, structural factors play a major role in contraceptive choice and behavior. Women engaged in non-farming occupations show a higher contraceptive prevalence rate than those in farming (Ukwubile & Adeyi, 2026), and households facing economic instability are far less likely to use contraceptives consistently (Sharp et al., 2025). Knowing this socio-cultural context is vital to understanding not just contraceptive continuity, but how these choices impact overall women's empowerment (Jejeebhoy & Sathar, 2024).

To explore these dynamics at the grassroots level, this paper focuses on the catchment area of the Thakre Health Post. The general aim of this paper is to portray the concerns, knowledge, attitudes, and practices regarding family planning services among implant-using women (aged 15–49). Specifically, we investigate user experiences with implant side effects and the factors leading to early discontinuation. Given that reproductive decisions are deeply personal, an engaged and informal anthropological investigation is uniquely positioned to

build trust and yield genuine insights into why women discontinue these methods.

Axiologically, this study is value-laden; we believe that providing evidence-based knowledge on reproductive rights and experiences will directly improve women's health, assist policymakers, and support the broader academic domain of reproductive healthcare.

Methods and Materials

Data for the study were collected through ethnographic fieldwork conducted at Thakre Health Post in Dhading, Nepal, during 2015-16. Using a holistic approach and the art and science of ethnography, we aimed to provide a comprehensive picture of women who use implants. Participant observation by TN, an Auxiliary Nurse Midwife (ANM) at the same health facility, enabled her to gain an insider's perspective on why these women discontinued use of the long-acting family planning method. The health facility provides counseling on different kinds of family planning services, including condoms, pills, implants, and Depo. On top of her three-year-long service in the same health facility, the ethnographic fieldwork- the heart of the research design (Fetterman, 2008)-allowed her to systematically comprehend these women's experience of the implant, interactions with the service providers, and family support after implant use.

TN had worked for over 2 years as an Auxiliary Nurse Midwife (ANM) in the same health facility. She had acquired knowledge and skills in implant insertion and removal as part of her job training in Kathmandu. Her typical insider positionality (Dahal, 2023a) as a health worker at the same health facility, which allowed her to interact frequently and conveniently with local women, facilitated her in carrying out the research. The first author, the dissertation supervisor, collaborated with her and led the article's development. In this sense, this collaborative paper has emerged as part of the ongoing process of enhancing students' critical thinking and writing capacities (Dahal, 2021). All authors collectively contributed to developing the paper.

The primary qualitative data were generated through interactions with women who use the selective service. Among the 70 service users, the researcher interviewed 30 women implant users (18-45 years) who visited for implant services and follow-up during the fiscal year 2073-2074 B.S. However, the research participants were from strata of society, including the new users, current users, and those who have been using for more than 10 years, satisfied women and unsatisfied women, from various caste and ethnic backgrounds, and the women who live near the health facility, as well as those who spend almost the whole day taking the service.

During the interview, the researcher used a mobile recorder to capture audio, which allowed her to maintain constant eye contact with participants in conversation, enabling her to read participants' faces for information reliability (Morgan & Guevara, 2008). Each conversation was preceded by informed consent from the participant. During the research, maintaining a personal diary helped her reflect on the information and experiences she had acquired to date.

In addition to information obtained from the implant-user women themselves, information was also obtained through key informants, with 6 female community health volunteers (FCHVs) in the municipality. Information drawn from them helped the study to relate socio-economic and cultural factors affecting the utilization of modern contraceptive methods among the implant-user women. The researcher also observed the surroundings of the health post and the availability of instruments and proper medicines, which helped determine the quality of services. Likewise, two cases (Blatter, 2008) enriched the study through the "process tracing" and "case-centered" approaches.

The field notes, interviews, observations, and case studies were compared and contrasted, sorted, and grouped into those that are alike and separate at the item level of analysis. Then, these items were put together to draw patterns and a consistent set of meanings. At the structural level, as more and more chunks of patterned pieces are assembled, the entire modern contraception implant using women's experience came together through the reflexive thematic analysis (Campbell et al., 2021).

Given the sensitivity of personal data of experience of implant use, whenever informants were stated in the text, a pseudonym (Lahman et al., 2023) was used to protect their identities. This study does not cover various aspects of family planning and men's perspectives on it. Similarly, the researchers did not conduct home visits to consult the women, so the voices of those who did not seek care at the local health facility are not included in the paper.

All research procedures were conducted in accordance with the ethical standards and adhered to the principles outlined in the Helsinki Declaration, ensuring compliance throughout the study involving human participants. We received verbal informed consent from all participants to join this study, who had the opportunity to withdraw at any point in time. We also received verbal informed consent from all participants to publish the results of this study.

Knowledge of Family Planning Methods

The participants' comprehensive awareness of modern contraceptive technologies—spanning short-acting, long-acting, and permanent methods—reflects a significant engagement with what can be called “reproductive modernity” in Nepal. While nearly all of the 30 respondents recognized clinical methods, the marked absence of knowledge about “natural” methods suggests that reproductive health has become increasingly medicalized, shifting away from local/indigenous bodily rhythms toward standardized biomedical interventions (MoHP et al., 2022; Van Hollen, 2003).

A critical ethnographic insight is the linguistic transition from functional vernacular to standardized clinical terminology. Participants eschewed descriptive terms such as *kanthi* (nail) for implants or *bacha nahune sui* (injection for fertility control) in favor of biomedical names. This shift illustrates what has been characterized as the “social lives of medicines” (Whyte et al., 2002), in which the adoption of institutional language signifies a claim to modern health citizenship and the “embodiment” of global biomedical categories within local identities (Hardon & Harries, 2001). This move from functional to formal labels indicates that these technologies are no longer viewed merely as tools but as symbols of a “modern” reproductive life (Van Hollen, 2003).

Furthermore, the dissemination of contraceptive knowledge is profoundly “embedded in social context” (Dahal, 2007). Rather than being a solitary clinical choice, reproductive knowledge is mediated through dense kinship and community webs. The fact that 47% of women learned about implants from relatives—specifically female kin like mothers-in-law and sisters-in-law—underscores how social determinants and familial hierarchies shape health perceptions (Dahal, 2023b; Ojo et al., 2025). The FCHVs function as “insider” mediators who bridge the gap between the state's health infrastructure and the private domestic sphere (Dahal, 2023a; MoHP, 2015). Finally, the emergence of digital spaces such as TikTok and Facebook (7%) as sources of information suggests a new ethnographic frontier in which reproductive discourse is decoupled from traditional physical proximity yet remains deeply rooted in the spousal and social communication dynamics that define the contemporary Nepalese experience (Zelalem et al., 2022).

How long have they been using the implant?

Among the interviewed women, 40% (12) were new users under 1 year of implant use. They used another family planning method earlier than the implant, such as Depo and pills. The largest category was 43% of women who used the implant 2 times or for more than 5 to 10 years, whereas 17% used the implant 3 times or for more than 10 years. They did not

want a permanent method or minilap, and they did not have any side effects of the implant except for irregular menstruation. The following detailed story of Daya Magrati shows what makes women continually use implants for a long period of time:

I was born in 1974 to my mother, Nisha Thapa, and father, Shiva Thapa, in the present Thakre municipality. I grew up in a middle-class family in the hills of Nepal and spent my childhood fetching grass and caring for my younger siblings. My family did not allow me to attend school, saying that “as a girl child, you do not need to study; you should learn household work. One day, you have to go to your husband’s home after marriage. I was married off at the age of 16.”

“Upon my marriage, my responsibilities became household work, raising cattle, and preparing food for the family. At the age of 17, I became pregnant. I gave birth to my first girl child. I gave birth to my second child at the age of 19 and to a third child when I was only 21. I was not aware of any means of family planning until then. Again, at the age of 24, I became pregnant. At that time, my husband used to work in road cleaning. We both decided to abort this pregnancy. We went to a private clinic in Kathmandu for the abortion. A service provider at the clinic counseled us to use a family planning method. With the consent of my husband, I took a Depo, which used to work only for 3 months for child spacing. I began receiving Depo at the local health facility and continued for the next 8 years; there were no side effects. Later on, I learned about the long-acting family planning method, i.e., the Implant. I went to a clinic in Kathmandu along with my husband to take an implant, which I removed after 8 years in Thakre Health. Again, I inserted two rod implants (Jadelle) in the same site. After two years, my husband died. After his death, I removed the implant at the health post, which had been in use for more than 10 years. I am satisfied with the implant for family planning.

Daya Magrati’s narrative serves as a profound ethnographic illustration of how reproductive health is “embedded in social context” (Dahal, 2007). Her early life demonstrates how structural barriers, such as the denial of education, directly impact a woman’s fundamental “power to plan” her family (Carr et al., 2012). The lack of early contraceptive awareness and the resulting rapid succession of pregnancies highlight how social determinants, rather than just clinical availability, dictate reproductive outcomes (Dahal, 2023b).

The pivotal shift in Daya’s life—from “unawareness” to a twenty-year contraceptive journey—highlights the transformative power of “balanced counseling” during critical healthcare encounters (Sapkota et al., 2017). Her story follows the “social lives of medicines”

framework, in which the contraceptive device shifts from a clinical intervention to a stable social companion that supports her domestic stability (Hardon, 1992). This transition from short-acting Depo-Provera to long-acting implants also reflects broader trends in contraceptive shifts toward more effective, long-term methods (Darroch, 2013).

Crucially, Daya's experience emphasizes that contraception is a negotiated domestic practice. Her repeated references to her husband's consent and their joint clinical visits confirm that spousal communication and partner support are primary drivers in selecting and maintaining a family planning method (Ojo et al., 2025; Zelalem et al., 2022). Finally, the removal of her implant following her husband's death provides a striking anthropological insight: the technology's utility was tied specifically to her social identity as a wife.

Within the cultural framework of widowhood and suffering, reliance on the medical device diminishes once the social role it was intended to serve ends. This illustrates that reproductive technologies are deeply embedded in and shaped by social structures and the "habitus" (see Bourdieu, 2008 [1977])—embodied dispositions and social practices—rather than existing solely as standalone biological interventions. The device's relevance is thus contingent on the ongoing social and marital configurations that sustain the habitus, showing that reproductive technologies are inextricably intertwined with the social and cultural fabric that governs gender, kinship, and embodied dispositions (Dahal, 2010).

Contraceptive Trajectories and the Transition to LARCs

The transition to long-acting reversible contraceptives (LARCs) in this cohort typically followed extended use of short-acting methods. More than 73 percent of respondents had used other family planning methods, primarily Depo-Provera, before "landing" on the implant. The dominance of the three-month injection, locally known as Tin Mahine Sui, suggests it has a more established "social life" within the community than newer technologies (Hardon, 1992). Most women reported that their initial reproductive health knowledge was limited to the injection; knowledge of the implant emerged only during subsequent clinical encounters. This delayed awareness highlights how social determinants of health and limited initial information can narrow a woman's "power to plan" her family toward a single, familiar method (Carr et al., 2012; Dahal, 2023b).

Furthermore, adoption of the implant was often hindered by somatic fears and a lack of trust in biomedical explanations. Respondents expressed initial anxieties about potential side effects and arm pain. There was also a notable period of skepticism about the device's composition; it took significant time for women to believe health workers' assertions that the implant's hormonal mechanism was identical to that of the familiar injection. This hesitation

reflects the complexities of “insider/outsider” dynamics in health communication, where the clinical authority of the health worker must compete with local perceptions of bodily integrity and the “embodiment” of hormonal side effects (Dahal, 2023a; Hardon & Harries, 2001).

While 17 percent of participants were new users who adopted the implant directly, the remaining minority (10 percent) transitioned from oral contraceptive pills. For these women, the move to a LARC was driven by the “grievance” of daily compliance. Pill users expressed constant anxiety over the possibility of forgetting a dose, a concern that directly mirrors global trends in contraceptive use, where users seek to decouple daily behavior from pregnancy prevention (Darroch, 2013). The lived reality of this “user failure” is best illustrated by Saili Chepang’s lived experience:

I had been taking pills. I already had 5 children, but one day I forgot to take one, so I became pregnant at the age of 43. Despite being weak, I did not abort the child and gave birth to a son. Following this, I decided to consult the ANM and adopt permanent means of family planning. After listening to her, I went for an implant.

Even if the pregnancy was not desired, upon conception, couples preferred not to go for an abortion, considering the would-be baby a gift from God. Nevertheless, the practical difficulties and complexities of having an additional child made Saili Chepang reluctant to endure another round of problems and to consult health personnel.

The Other Side of Implant

Women experienced different negative side effects of implants, which were shaped by various factors, including their health condition and daily habits. The most common complaint of implant use (>83%) was about irregular menstruation, whereas 17% of women had spurting bleeding. On the other hand, 10% of women experienced continual bleeding, which pushed them to get rid of it immediately. In comparison, 13% of women had no menstruation and went to take medicines for regular menstruation from a local pharmacy.

Disturbances from vaginal bleeding were the most common reason for the discontinuation of implant use, which also accounts for up to 45% of all factors in clinical trial settings (Glasier, 2002). They are more common in the initial months of use and tend to decline over time. Although there are individual variations, many women experience prolonged or irregular bleeding or both during the first year of Norplant and Jadelle use (Fraser et al., 2000). In the subsequent years, the bleeding pattern tends to improve. Prolonged amenorrhoea is infrequent. Whilst many women using implants experience prolonged, irregular bleeding or both, a significant proportion experience amenorrhoea and infrequent bleeding (Fraser et al., 1998). One Indonesian study showed irregular bleeding

was common in the first months of use, but by the end of the year, up to three-quarters of women experienced a normal regular pattern (Fraser et al., 1998). Most longitudinal studies, even among women who discontinued use due to bleeding disturbances, showed no changes or slight increases in hemoglobin levels among implant users (Task Force for Epidemiological Research on Reproductive Health, 1998). Such negative side effects have contributed to the discontinuation of implants (Gebeyehu et al., 2022).

Among the research participants, 20% of women complained about weight gain, and 33% of women complained about weight loss, whereas 20 % of them did not experience any effect on their weight, which led them to undergo the implant until their reproductive age.

Weight gain is a frequent complaint among implant users (4-22%), with reported rates of 0.4 to 1.5 kg per year, but discontinuation rates are less than 4% for this indicator (Fraser et al., 1998). However, of the two studies with non-hormonal comparison groups, one reported similar weight increases in both groups (Sivin, 1983), and the other showed a small but statistically significant excess weight gain of 0.2 kg per year in Norplant users (International Collaborative Post-Marketing Surveillance of Norplant, 2001). In this regard, we mention another case study of Sumitra Sanjel:

Forty-two-year-old Sumitra did not have the opportunity to attend school; however, she became literate through non-formal education for 3 months after her marriage at the age of 15. She gave birth to her first child, a girl, at the age of 17. Following the first child, she used the family planning method Depo injection for birth spacing. After 4 years, she stopped it and gave birth to her next baby boy when she was 22. Again, she continued with Depo for 8 years. When the couple realized that two kids were not enough, they stopped contraception and gave birth to the 3rd child at the age of 31. She gave continuity to Depo with the usual minor side effects of some disturbances in the menstrual cycle.

On her visit to the health post to take Depo, she saw two other women using an implant. Sisters working in the health facility also advised her to take an implant. She was convinced to use an implant instead of Depo so as not to have any more children. Without consulting her husband, she adopted an implant. After 7 days of using the implant, she started to have bleeding, as happens during menstruation, which lasted for three more days. She felt weak and had lost weight. For the recovery, she went to a pharmacy and bought some medicines to stop bleeding and vitamins for her strength. It did not stop her bleeding.

She narrated the story to her husband, a truck driver, who came back home from long-distance driving. He was worried about her health condition. He beat her for not consulting him before using the implant. He became angry with her and went back to his job,

threatening her that if this bleeding continues and she does not remove the implant, he would marry another woman. She returned to the health post and met with the service provider to have the implant removed. She did not listen to the sisters about taking medicine instead. They removed two rod implants from her upper arm and gave her Depo. Then the vaginal bleeding also stopped, and she regained her vigor as well. She did not like the implant, in her words, “which became an enemy to my life.”

The narrative of Sumitra Sanjel provides a stark ethnographic illustration of how reproductive technologies are not merely clinical tools but are deeply “embedded in social context” (Dahal, 2007; Kleinman, 2007). Her transition from the familiar “social life” of the Depo-Provera injection to the unfamiliar implant reveals the precarious nature of women’s empowerment when it conflicts with patriarchal marital structures (Hardon, 1992; Jejeebhoy & Sathar, 2024).

Sumitra’s decision to adopt the implant without her husband’s consultation represents an assertion of reproductive autonomy, yet the subsequent domestic violence she endured highlights the limits of individual agency. Her experience confirms that contraceptive choice is frequently a negotiated domestic practice; the absence of spousal communication and partner support in this instance led to severe personal suffering and physical assault (Ojo et al., 2025; Zelalem et al., 2022,). For Sumitra, the husband’s role as a mobile truck driver and his violent reaction upon return underscore how gendered hierarchies and the threat of polygamy dictate the boundaries of a woman’s “power to plan” her family (Carr et al., 2012; Ukwubile & Adeyi, 2026).

Furthermore, the clinical complications Sumitra faced—specifically prolonged vaginal bleeding and subsequent physical weakness—align with research identifying menstrual disturbances as a primary driver for the discontinuation of long-acting reversible contraceptives (LARCs) (Glasier, 2002; Gebeyehu et al., 2022). While health providers emphasized the device’s efficacy for five-year birth spacing, the somatic reality of the “enemy” under her arm outweighed the clinical promise (Fraser et al., 2000). When a medical intervention causes both visible bodily disruption and social instability, it is no longer perceived as a tool of reproductive modernity but as a source of suffering (Dahal, 2010; Van Hollen, 2003).

Sumitra’s return to Depo-Provera, a method with which she had a long, successful history, suggests that for many women, the most viable contraceptive is one that meets biological tolerance and social safety. This underscores the necessity for balanced counseling

that accounts for potential domestic backlash and the specific social determinants that define a user's life situation (Dahal, 2023b; Sapkota et al., 2017).

Conclusion

The negative side effects of the LARCs have been found to be the fundamental factor behind the discontinuation of implant use. Their side effects are also embedded in their typical economic and social context, as they face challenges in meeting financial and food security needs. An essential element of implant provision is ensuring excellent counseling before insertion so that women know what potential side effects to expect, how to cope with them, and how to reliably access removal services if and when they are needed. Therefore, it also points out that the mere availability of information and knowledge about the particular method is not a key factor; rather, the social context in which the women have to undergo it holds the upper hand in shaping their decision to discontinue LARCs. Women's use of reproductive technology such as LARCs is not simply related to their individual choice. Rather, it is a matter of family negotiation that is not simply based on biomedical success/failure; it is embedded in the local social and moral world. As a meaningful social event, biomedical outcomes are interpreted in the local cultural context.

This research also points out avenues for future research in new frontiers. In the present context of a declining fertility rate of 1.9, the notions of family planning, contraceptives, and ideal family size may be viewed differently and need further ethnographic investigation across various facets of the population's social life. People's understanding of family planning, ideal family size, and whether to use reversible or irreversible methods may also be changing alongside changes in family size, migration, and the couple's literacy.

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Data Availability

The datasets generated during and/or analyzed during the current study are available from the corresponding author on reasonable request.

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