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Adolescent Mothers' Experiences, Perceptions, and Decision-Making Regarding Subdermal Implants and Injectables in Northern Thailand: A Qualitative Grounded Theory Study

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DECLARATION

I hereby declare that the work presented in this thesis is entirely my own and has been conducted by me. To the best of my knowledge and belief, no part of this work has been submitted for any degree or academic qualification at this or any other institution of higher education or learning. This work has not been previously published, in whole or in part, in any form.

Furthermore, this thesis adheres strictly to the ethical standards and guidelines set forth by the University of Nottingham. All research methodologies and procedures employed in this study have been conducted in compliance with the ethical principles pertinent to academic research, ensuring the integrity and confidentiality of the data sources and participants involved.

In addition, this declaration affirms that any required permissions for the use of copyrighted or otherwise protected materials have been duly obtained. The results and findings presented in this thesis are a truthful representation of the research conducted, and any potential conflicts of interest have been disclosed and managed in accordance with university guidelines.

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ABSTRACT

Background: Adolescent repeat pregnancies remain a significant public health concern in low- and middle-income countries. In Thailand, only 37.6% of postnatal adolescents use modern contraception following childbirth or abortion (Health Data Centre, 2025). While national policies promote subdermal implants and injectables before hospital discharge, uptake remains limited. The reasons for non-use and early discontinuation—particularly within Thai sociocultural contexts—are underexplored. Although global research on postpartum contraceptive use is extensive, few studies have focused on Asian settings, which limits contextual relevance of international findings for the Thai setting.

Aims and objectives: This study explored the factors influencing postpartum contraceptive decision-making among adolescents in Northern Thailand, with specific attention to subdermal implants and injectables.

Method: A constructivist grounded theory approach was employed to explore the contraceptive experiences of postpartum adolescents aged 15–19. Data were collected through semi-structured, in-depth interviews with participants who had attended a postpartum appointment within one year of giving birth. The study was conducted in two hospitals offering free subdermal implants and injectables. Ethical approval was obtained from the University of Nottingham, Chiang Mai University, and the Health Promotion Centre Region 1. Data collection and analysis followed an iterative, comparative process consistent with grounded theory. Interview transcripts and field notes were analysed concurrently to develop a conceptual model of adolescent contraceptive decision-making.

Findings: Twenty-five adolescent mothers were interviewed between August 2020 and February 2021. Nineteen interviews were conducted in person, and six online due to COVID-19 restrictions. A core category was identified *"Maintaining Social and Bodily Integrity: An Iterative Process of Responding to Situational Dynamics."* Contraceptive decision-making was conceptualised as a fluid, non-linear process shaped by personal priorities, interpersonal relationships, institutional constraints, and sociocultural norms. Four analytical categories underpinned the conceptual model: *(1) Navigating and Interpreting Contraceptive Knowledge; (2) Seeking Balance between Competing Priorities; (3) Contraceptive Care Pathways within the Healthcare System; and (4) Relational and Cultural Influences on Contraceptive Decision-Making.*

Adolescents demonstrated individual agency—defined as the capacity to act, decide, and adapt—through three intersecting and socially embedded pathways. Agency was enacted in ways that reflected autonomy and constraint, shaped by structural and interpersonal dynamics: (1) Proactive (individually initiated), (2) Service-oriented (institutionally shaped), and (3) Relationally mediated (influenced by family and community interactions).

Implications: This study presents a culturally grounded, youth-centred model that emphasises integrated care pathways, continuity of care, shared counselling, and family engagement, while foregrounding adolescents' reproductive autonomy. By theorising agency as dynamic and multi-layered—across individual, institutional, and relational domains—the model offers a transferable framework for understanding adolescent reproductive decision-making. While context-specific, the model remains relevant for similar Southeast Asian settings and advances reproductive agency as a multi-level and context-sensitive process.

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LIST OF ABBREVIATIONS

ACOG	American College of Obstetricians and Gynaecologists
BRH	Bureau of Reproductive Health
CEDAW	Convention on the Elimination of All Forms of Discrimination Against Women
CGT	Constructivist Grounded Theory
CINAHL	Cumulative Index to Nursing and Allied Health Literature
CoC	Continuity of Care
COCs	Combined oral contraceptive pills
CRC	Convention on the Rights of the Child
CSMB	Civil Servant Medical Benefit
DMPA	Depot medroxyprogesterone acetate
DoH	Department of Health
EBP	Evidence-based practice
ESI	Etonogestrel subdermal implant
FBM	Fogg Behaviour Model
FGD	Focus group discussion
FP	Family Planning
FPC	Family Planning Clinic
FPI	Family Planning Initiative
FSRH	Faculty of Sexual and Reproductive Healthcare
HCP	Healthcare provider
HIC	High-Income country

HIV	Human Immunodeficiency Virus
HPC	Health Promotion Centre
IMB	Information-Motivation-Behavioural model
IUD	Intrauterine device
JBI	Joanna Briggs Institute
LAC	Latin America and the Caribbean
LARC	Long-acting reversible contraceptive
LMIC	Low- and middle-income country
MCH	Maternal and Child Hospital
MEDLINE	Medical Literature Analysis and Retrieval System
MNC	Maharaj Nakorn Chiang Mai
MoE	Ministry of Education
MoPH	Ministry of Public Health
NGO	Non-governmental organisation
NHSO	National Health Security Office
NICE	National Institute for Health and Care Excellence
NICU	Neonatal Intensive Care Unit
NSO	National Statistical Office
OCPs	oral contraceptive pills
OKQ	One Key Question
ONET	Ordinary National Education Test
OSCC	One-Stop Crisis Centre
PCC	Patient-centred care
PPE	Personal protective equipment

RCOG	Royal College of Obstetricians and Gynaecologists
RCT	Randomised controlled trial
SARCs	Short-acting reversible contraceptives
SDGs	Sustainable Development Goals
SDM	Shared decision-making
SEA	Southeast Asia
SEU	Subjective expected utility
SRH	Sexual and reproductive health
SSA	Sub-Saharan Africa
SS	Social Security
STIs	Sexually transmitted infections
TTM	Transtheoretical Model of Behavioural Change
UHC	Universal Health Coverage
UMT	University Medical Teaching
UN DESA	United Nations Department of Economic and Social Affairs
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNFPA	United Nations Population Fund
UNICEF	United Nations International Children's Emergency Fund
UNODC	United Nations Office on Drugs and Crime
UoN	University of Nottingham
WHO	World Health Organization
YFHS	Youth-Friendly Health Services

CHAPTER 1

BACKGROUND

1.1. Overview

This doctoral thesis examines the decision-making processes and experiences of postpartum adolescents in Northern Thailand regarding subdermal implants and injectable contraceptives (hereinafter, 'injectables'). The research focuses on these adolescents' perceptions and choices during the postpartum period, specifically concerning these contraceptive methods, which are typically offered prior to hospital discharge. Unlike intrauterine devices (IUDs), which are less commonly provided during this time due to both limited access and prevailing cultural preferences in Thailand, subdermal implants and injectables are more widely used—a trend critically examined in this study.

This chapter provides a comprehensive overview of adolescent pregnancy, with particular emphasis on repeat pregnancies in Chiang Mai and Thailand more broadly. It explores how demographic characteristics, educational challenges, and the broader sociocultural context influence reproductive decision-making in the region. Furthermore, the chapter situates adolescent pregnancy within global and Thai contexts, exploring interrelated issues such as child marriage, early unions, and abortion, which frequently shape adolescent reproductive trajectories.

A detailed review of contraceptive methods is presented, outlining their mechanisms of action, associated side effects, and relevant clinical management guidelines. The chapter also examines the Prevention and Solution of the Adolescent Pregnancy Problem Act B.E.2559 (Thailand National Legislative Assembly, 2016), Thailand's

family planning (FP) policies, and the responsiveness of the Thai healthcare system in delivering sexual and reproductive health (SRH) services. Finally, the chapter synthesises these interconnected themes and provides an outline of the thesis structure.

The significant disruptions caused by the COVID-19 pandemic also had direct implications for the research process. These are examined in Chapter 3. Specifically, Section 3.5.2, *Settings and Study Site Selection,* analyses the logistical and ethical challenges presented by the pandemic and the mitigation strategies employed to ensure participant safety and compliance with public health protocols. Section 3.5.6, *Data Collection,* details how data collection procedures were adapted—including a transition to virtual methods—and reflects on the associated impacts on participant recruitment and the methodological limitations introduced by these adaptations.

1.2. Adolescent Pregnancy in Thailand: Contraceptive Challenges, Trends, and Policy Responses

Addressing adolescent pregnancies is a priority in global and national health agendas. The Sustainable Development Goals (SDGs) for 2030 reaffirm commitments to improve maternal health, ensure universal access to SRH services, protect reproductive rights, and promote gender equality. Specifically, Target 3.7 aims to provide universal access to FP, SRH education, and to integrate reproductive health into national policies and programmes (United Nations Department of Economic and Social Affairs, 2022a; United Nations General Assembly, 2015). In line with these commitments, Thailand's Family Planning Initiative (FPI) focuses on reducing both first-time and repeat adolescent pregnancies by improving access and safeguarding reproductive rights. This study investigates the provision of contraceptive methods to adolescent mothers,

from antenatal to postpartum care, emphasising the importance of consistent contraceptive support during this critical period.

Thailand's demographic profile includes approximately 8 million adolescents aged 10-19 years and 8.5 million aged 15-24 (UNICEF Thailand & World Bank, 2020). The World Health Organization (WHO) categorises adolescent pregnancy by maternal age: early adolescence (10–14 years) and late adolescence (15–19 years), defining adolescent pregnancy as occurring in individuals under 20 years of age (WHO, 2019a, 2023a, 2025).

This research focuses on late adolescent mothers (15-19 years), given their higher birth rate of 26.15 per 1,000 (World Bank, 2025). In contrast, early adolescent pregnancies (aged 10-14 years) are uncommon, with a birth rate of approximately 0.83 per 1,000 (Population Division & UNFPA, 2024). These trends underscore the relative rarity of early adolescent pregnancies and highlight the heightened reproductive risks faced by late adolescents, justifying the study's focus on this age group.

In 2023, Chiang Mai reported 821 adolescent deliveries, including a small number of cases involving extremely young adolescents. Among secondary school students, teenage pregnancies accounted for 33.96% of cases, yet only 45.45% of pregnant students were able to continue formal education (Data Health Centre, 2023). These statistics highlight the social and educational challenges associated with adolescent pregnancies in this region, with implications for individual life trajectories and broader societal development.

During the study period, postpartum adolescents were generally offered two main contraceptive options before hospital discharge: subdermal implants and injectables.

Progestogen-only oral contraceptive pills (OCPs) were typically provided at the 4- to 6-week postnatal visit, while IUDs were generally unavailable due to limited provider capacity and the lack of trained personnel for immediate postpartum insertion (Chunin et al., 2016). Consequently, young mothers often faced restricted choices, typically opting for subdermal implants or injectables—a practice sometimes referred to as a *'hospital commitment,'* reflecting constrained autonomy in method selection.

Despite increased contraceptive service availability, the use of Long-Acting Reversible contraceptives (LARCs) remains low in Thailand. In 2016, only 0.7% of women used contraceptive implants, and 0.2% used IUDs. A 2023 survey by the Health Promotion Centre (HPC), Region 1 Chiang Mai, indicated that 7% of postpartum adolescents adopted subdermal implants, while 27.3% used modern contraceptive methods overall (Data Health Centre, 2023). The Adolescent Pregnancy Act (2016) and the FPI aim to prevent repeat pregnancies by offering free subdermal implants to adolescent mothers, aligning with SDG Target 3.7 (BRH, 2021).

The Department of Health (DoH), under the Ministry of Public Health (MoPH), promotes contraceptive use among women under 20 by offering a range of free methods, including subdermal implants, at public institutions affiliated with the National Health Security Office (NHSO) (BRH, 2017). Since May 1, 2014, the Bureau of Reproductive Health (BRH) has actively provided implants to women under 20, particularly those in the postpartum, post-abortion, or pregnancy spacing stages. Adolescents in the postnatal period are encouraged to use 3-year and 5-year implants to prevent repeat pregnancies (BRH, 2021). For those hesitant about subdermal implants, injectables are offered as an alternative.

At the 4 to 6-week postnatal visit, various contraceptive options may be available, including OCPs, IUDs, subdermal implants, and injectables—depending on the hospital's resources, provider availability, and institutional policies (Chunin et al., 2016). The introduction of subdermal implants immediately before hospital discharge aimed to enhance accessibility and address low follow-up rates associated with methods requiring regular clinical visits, which contribute to high discontinuation rates (BRH, 2017). Although the programme targeted 80% utilisation of modern contraceptive methods in the immediately postpartum period, data from 2023 indicate a rate of only 67.83% (Data Health Centre, 2023).

Despite these initiatives, repeat pregnancies among adolescents remain a concern. As of 2022, the national repeat pregnancy rate was 14.3 per 1,000, while Chiang Mai reported a higher rate of 15.2 per 1,000—exceeding the national target of 13.5 per 1,000. Although the implementation of the FPI has led to a steady decline from 18 per 1,000 in 2016 (Data Health Centre, 2023), the current rate remains above target and thus problematic.

Short interpregnancy intervals—often associated with inconsistent contraceptive use—pose risks to maternal and child health, including pregnancy complications and developmental challenges (Hassen et al., 2024). Legislative initiatives, such as the Adolescent Pregnancy Act (2016), and programmes by the BRH, promote immediate postpartum contraception to mitigate these risks and improve long-term health outcomes for young mothers and their children.

1.3. Sociodemographic Context of Chiang Mai Province

To understand adolescent pregnancy in Chiang Mai, it is essential to consider the unique sociocultural and educational contexts that shape reproductive health outcomes and public health strategies. These regional characteristics influence the adolescent-focused health interventions.

1.3.1. Demographic Characteristics

Chiang Mai province, located in northern Thailand, is the largest in the region and the second largest in the country after Nakhon Ratchasima. Approximately 80% of its land is mountainous and unsuitable for agriculture, consisting primarily of forested watersheds. The province is home to 1,785,791 people, comprising 922,418 females and 863,373 males across 840,721 households (Chiang Mai Provincial Office, 2022).

Chiang Mai consists of 25 districts (see Figure 1), with Mueang Chiang Mai being the most populous (228,443 residents), followed by San Sai (139,173) and Fang (122,538). The least populous districts include Galyani Vadhana (6,164), Mae On (10,632), and Doi Lo (12,920). The population is predominantly of working age, with 1,079,753 adults (60.46%); 340,203 are elderly (19.05%), and 120,278 are teenagers (6.74%) (Chiang Mai Provincial Office, 2022).

In terms of nationality, the majority—1,628,250 individuals—are Thai nationals, followed by 7,190 Chinese nationals and 150,351 individuals of other nationalities. Chiang Mai also has a significant ethnic minority population of 359,752 people (20.15%), including Karen (152,967), Lahu (46,264), Hmong (27,388), Lisu (19,726), Akha (10,349), Lua (3,756), and Mien (1,835). In addition, 97,467 individuals did not specify their ethnicity (Chiang Mai Provincial Office, 2022).

The demographic profile of adolescents in Chiang Mai for 2023 shows that 33,793 boys and 31,439 girls aged 10-14 years (total 65,232; 5.52% of the population). For those aged 15-19, there were 37,043 boys and 34,210 girls, (total 71,253 individuals; 6.03%). Combined, these 10-19 year-olds comprised 136,385 individuals (11.55% of the total population of 1,180,951 (Health Data Centre, Provincial Public Health Office, Chiang Mai, 2023, unpublished data).

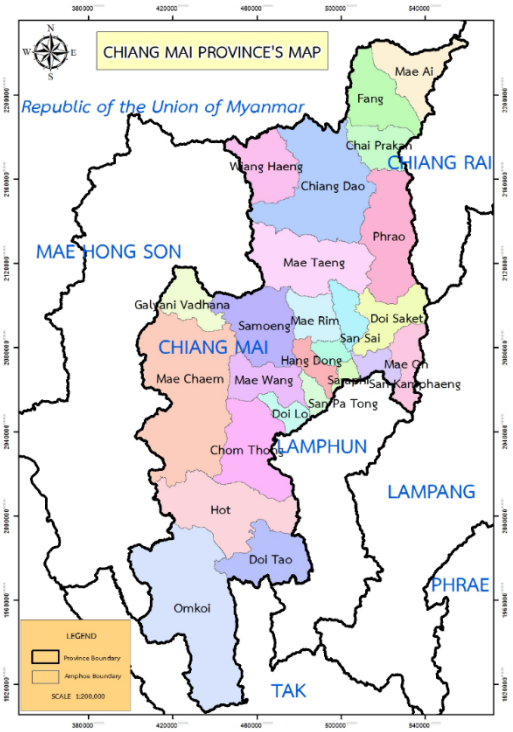

Figure 1: Map of Chiang Mai Province

Source: Chiang Mai Provincial Government. (n.d.). *Chiang Mai: Gateway to Northern Thailand.* https://www.chiangmai.go.th/english/index.php/welcome/information

Chiang Mai, known for its diverse adolescent population, is a hub for educational institutions, tourism, and entertainment. This urban setting presents unique sociocultural characteristics that may contribute to heightened risks of teenage pregnancy. The city's numerous educational institutions attract young people from various regions, fostering a vibrant youth culture. However, this environment also

exposes adolescents to increased social pressures and peer influences (Libisch et al., 2022).

Entertainment venues, including nightclubs, bars, and other social spaces, provide opportunities for adolescents to engage in leisure activities, potentially increasing the likelihood of risky behaviours such as unprotected sex. Greater social autonomy, reduced parental supervision, and the availability of substances such as alcohol further heighten the risk of unintended pregnancies and sexually transmitted infections (STIs) (Keto et al., 2020). Additionally, ethnic minority youth are particularly vulnerable: they are often employed in service-related roles within these venues, sometimes dressed prevocational and subjected to inappropriate physical contact (Chiang Mai Provincial Office, 2022; Safe Child Thailand, 2017a). These conditions significantly elevate the risk of SRH issues, including unintended pregnancies and STIs, particularly among adolescent groups.

Human trafficking in northern Thailand remains a serious public health and human rights concern, often manifesting as sexual exploitation and prostitution of minors. Reports indicate that children aged 5-15 are increasingly vulnerable, especially in venues such as karaoke bars, pubs, and spas, where such exploitation is often concealed (Patton, 2019; Safe Child Thailand, 2017b). In urban areas, these practices are frequently masked by ostensibly lawful businesses, where minors may be coerced into explicit performances or sexual services.

In conclusion, Chiang Mai's distinct sociocultural, demographic, and economic factors significantly influence adolescent outcomes, particularly in relation to teenage pregnancy and human trafficking. While the province serves as an educational hub and a centre for youth engagement, these opportunities are accompanied by social

vulnerabilities and public health risks. Addressing these challenges requires comprehensive public health initiatives and culturally informed, adolescent responsive educational programmes that consider the unique dynamics of the region.

These demographic characteristics—particularly the ethnic diversity and age distribution—provide critical context for understanding reproductive health behaviours and the delivery and accessibility of youth-friendly services in Chiang Mai.

1.3.2. Educational Inequalities and Adolescent Sexual Health

Building on the sociocultural and demographic complexities of Chiang Mai, it is essential to examine the educational context, which plays a crucial role in shaping adolescents' health outcomes and life trajectories. Understanding Chiang Mai's educational landscape is crucial for addressing persistent challenges such as adolescent pregnancy, limited access to comprehensive SRH education, and the broader social determinants that influence adolescent well-being in the region.

In the academic year 2020, Chiang Mai province hosted 2,063 educational institutions across primary, vocational, and higher education sectors. A total of 29,876 teachers served 389,525 students, yielding an average teacher-to-student ratio of 1:13. The distribution includes 2,033 basic education schools with 17,773 teachers and 280,856 students; 18 vocational institutions with 1,613 teachers and 23,124 students; and 12 higher education establishments with 10,490 faculty members supporting 85,545 students Chiang Mai Provincial Education Office, 2020, unpublished internal report).

By 2021, access to educational services reached 441,945 individuals—approximately 24.75% of the province's population. This figure includes formal students as well as participants in alternative and non-formal education programmes, underscoring the

region's effort toward inclusive and accessible educational opportunities (Chiang Mai Provincial Education Office, 2020, unpublished internal report).

In response to persistent educational inequalities and youth disengagement, Thailand introduced the Thailand Zero Dropout policy, officially endorsed by the Cabinet on 28 May 2024. This national campaign reflects a broader policy shift aimed at eliminating dropout rates and ensuring inclusive, equitable access to education across all age groups (Equitable Education Fund Thailand, 2024; Southeast Asian Ministers of Education Organization Secretariat, 2024). The initiative introduces four core measures:

1. Early identification and intervention for at-risk students;
2. Targeted support for reintegration;
3. Expanded access to alternative and flexible learning models; and
4. Promotion of local governance in education

Aligned with SDG 4 (UNESCO, 2022), the Zero Dropout initiative underscores Thailand’s commitment to a whole-of-society approach in dismantling structural barriers to school retention. In the context of adolescent pregnancy, the policy holds particular relevance, as many young mothers fall into dropout categories and experience long-term educational disruption (UNFPA, 2020). Accordingly, the framework presents a timely and strategic opportunity to integrate targeted SRH education and postpartum re-entry pathways into national policy responses to support adolescent well-being and educational continuity.

The extensive educational infrastructure in Chiang Mai supports a large and diverse adolescent population. However, access to formal education alone is insufficient to

address the risks adolescents face. A study by Settheekul et al. (2019) found that male adolescents were more likely to engage in pre-coital and sexual behaviours. Key predictors of these behaviours included age, sexual refusal self-efficacy, relationship status, parenting style, and peer norms. While Chiang Mai's educational system is robust, addressing adolescent sexual risk behaviours necessitates context-specific, multi-sectoral interventions that extend beyond traditional schooling frameworks.

Educational disparities are particularly pronounced among Chiang Mai's ethnic minority communities. Language barriers, inequitable school quality, and elevated dropout rates limit adolescents' access to comprehensive SRH education, thereby increasing vulnerability to early pregnancy and exploitation. In response, community-based initiatives—led by non-governmental organisations (NGOs) and local governments—seek to bridge these gaps by delivering culturally sensitive SRH education in remote and underserved areas.

In summary, the convergence of sociocultural and structural factors contributes to heightened sexual risk behaviours, STIs, and unintended pregnancies in Chiang Mai. Limited access to SRH services increases the likelihood of unprotected sex and pregnancy. While inadequacies in school-based curricula and persistent socioeconomic inequality continue to exacerbate these public health challenges.

1.3.3. Gender, Culture, and Adolescent Sexual Health Risks

Understanding adolescent pregnancy in Northern Thailand requires a closer examination of Chiang Mai's unique sociocultural landscape. This section explores key sociocultural factors influencing adolescent life and sexual behaviour, offering insights into the dynamics contributing to teenage pregnancy in this urban-provincial context.

Cultural norms play a critical role in shaping contraceptive choices and fertility rates among Chiang Mai's diverse population. The teenage delivery rate for girls aged 15-19 declined from 35.1 per 1,000 (1,597 cases) in 2018 to 22.5 per 1,000 in 2022. For girls aged 10-14, the rate decreased from 2.03 to 1.77 per 1,000 over the same period (Health Data Centre, Provincial Public Health Office, Chiang Mai, 2023, unpublished official meeting presentation). Fertility practices influenced by traditional values—particularly among ethnic minority and non-Thai populations—often result in lower contraceptive use. A subdistrict-level analysis of adolescent mothers aged 15–19 revealed birth rates ranging from 40 to 100 per 1,000, underscoring the need for culturally sensitive SRH education and services (Health Data Centre, Provincial Public Health Office, Chiang Mai, 2023, unpublished official meeting presentation).

Historically, public discussion of sexual matters in Thailand was considered taboo, reinforcing parental expectations of premarital virginity. However, societal norms are gradually evolving, with cohabitation without marriage becoming increasingly accepted among Thai adolescents. This shift has contributed to earlier sexual activity, unplanned pregnancies, and abortions (Ounjit, 2015). Ounjit's (2015) also identified mutual trust as a key factor in consensual adolescent sexual relationships, particularly within stable partnerships. Conversely, non-consensual experiences—often driven by power imbalances and coercion—remain prevalent yet are rarely disclosed due to stigma and shame.

Building on this, Panitsara et al. (2021) examined pregnant adolescents' experiences with sex, contraception, and decision-making. Key themes included premarital cohabitation, male dominance in contraceptive decision-making, and the influence of parental authority on adolescent sexual behaviours. The study also highlighted missed

educational and career opportunities and advocated for improved communication and negotiation skills related to SRH.

Evolving societal norms, family expectations, and entrenched gender dynamics in Chiang Mai continue to shape SRH outcomes. Settheekul et al. (2019) found that while male sexual freedom is often socially tolerated, female sexuality remains heavily regulated. These norms contribute to unequal power relations and risky behaviours among adolescents. Peer pressure and the need for social conformity also influence adolescent choices, particularly regarding unprotected sex. Other contributing factors include limited parental communication, inadequate school-based sex education, and persistent structural barriers to accessing SRH services. Adolescents from lower socioeconomic backgrounds are especially vulnerable due to reduced access to education, healthcare, and psychosocial support—conditions that heighten the risk of unsafe sexual practices.

Cultural attitudes toward contraception significantly influence contraceptive uptake. Limited access to comprehensive sexual education and healthcare services leaves many adolescents uninformed about safe sex practices and available contraceptive options. Socioeconomic factors—such as poverty and limited educational opportunities—further elevate the risk of teenage pregnancy in Chiang Mai.

A study by Thepthien and Celyn (2022), which assessing risky sexual behaviours among 872 sexually active adolescents in Bangkok (mean age = 15.6 years), found that 69.5% of participants engaged in behaviours such as inconsistent condom use, having multiple sexual partners, transactional sex, and experiencing non-consensual sex. Significant factors associated with these behaviours included substance use (e.g., cigarette smoking, cannabis consumption, and gambling), unprotected sex, and a

history of childhood sexual abuse. These findings highlight the urgent need for targeted, multi-pronged interventions to address substance use and promote safe sexual practices among adolescents. Although the study was conducted in Bangkok, its sociocultural parallels with Chiang Mai—particularly in urban adolescent contexts—make its insights highly relevant.

Similarly, a study by Srijaiwong et al. (2017) conducted by the Population and Social Research Institute, employed a cross-sectional survey to explore factors influencing the sexual behaviours of Thai adolescents aged 15–19. Adolescents with higher levels of sexual knowledge and strong family relationships were more likely to engage in safer sexual practices. The study underscores the importance of comprehensive sexual education and robust familial involvement in promoting healthy adolescent sexual behaviours.

In summary, adolescent sexual risk behaviours in Chiang Mai are shaped by a complex interplay of cultural norms, gender roles, socioeconomic pressures, and limited access to comprehensive SRH education and services. Key risk factors include substance use, peer pressure, and inadequate family communication. Addressing these challenges requires culturally responsive, comprehensive interventions that enhance SRH knowledge, promote gender equity, and support vulnerable populations to reduce teenage pregnancy and improve long-term reproductive health outcomes.

1.4. Child Marriage and Early Unions

Child marriage, defined as any formal marriage or informal union in which at least one partner is under the age of 18, remains a global concern with profound social, economic, and health consequences (UNICEF, 2023). The practice is particularly

prevalent in low- and middle-income countries (LMICs), where legal loopholes, cultural norms, and economic hardship sustain its persistence (UNICEF, 2023). Major international instruments, including the *Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW) and the Convention on the Rights of the Child* (CRC), recognise child marriage as a violation of fundamental human rights (United Nations, 1979; United Nations General Assembly, 1989). Despite these legal frameworks, progress remains slow due to weak enforcement, entrenched socioeconomic inequalities, and deeply rooted cultural traditions (Girls Not Brides: The Global Partnership to End Child Marriage, 2022). Addressing child marriage requires a comprehensive, multi-sectoral approach that integrates legal reform, equitable education policies, and community-based action to mitigate its long-term effects on health, autonomy, and development (UNICEF, 2023).

In Thailand, nearly six million women were married as children, with one in five adolescents entering marriage before the age of 18 over the past 25 years. Approximately 20% of girls marry before 18, and 3% before age of 15. Child marriage is most prevalent in northern and northeastern Thailand, particularly in rural areas where informal unions are more common (UNICEF, 2024). These statistics underscore the enduring prevalence of child marriage in Thailand and highlight the intersecting socio-cultural and economic conditions that sustain this practice.

1.4.1. Underlying Drivers of Child Marriage

Child marriage in Thailand is driven by a combination of interrelated factors. Gender inequality and entrenched perceptions of female inferiority remain significant contributors. Educational attainment also plays a crucial role: 32% of women without formal education marry before 18, compared to only 3% of women with higher

education (UNICEF, 2024). Adolescent pregnancy is another key driver, often linked to inadequate access to comprehensive sexuality education and FP services, especially among indigenous communities. Unlike in South Asia, where early marriage often precedes socially sanctioned sexual activity and subsequent pregnancy, unplanned pregnancies in Thailand frequently lead to early marriage due to societal stigma and moral expectations (UNICEF, 2024).

Economic disparities further exacerbate the issue. The 2015-16 Multiple Indicator Cluster Survey found that 30% of women from households in the lowest income bracket married before 18, compared to 10% from wealthier households (UNICEF & National Statistical Office of Thailand, 2018). In many rural areas, young girls are married to secure bride wealth and alleviate family financial burdens. Traditional practices reinforce this trend, as rural communities often view domestic responsibility and caregiving as an indicator of readiness for marriage. Furthermore, weak enforcement of sexual violence laws permits girls aged 13–15 to marry their perpetrators, enabling them to avoid criminal prosecution, thereby perpetuating harmful practices (UNICEF Thailand, 2022). These interconnected factors underscore the complexity and persistence of child marriage in Thailand, highlighting the critical need for multi-sectoral interventions that address gender inequality, poverty, legal loopholes, and the social normalization of early unions.

1.4.2. Legal and Policy Frameworks

Thailand has made significant commitments to eliminating child marriage, in alignment with SDG Target 5.3. The country is a signatory to CRC and the CEDAW, both of which mandate the protection of children from early and forced marriage. These instruments require Thailand to ensure full and free consent to marriage and to

enforce a minimum legal marriage age of 18 years (United Nations, 1979; United Nations General Assembly, 1989).

Despite these commitments, national laws and their enforcement remain inconsistent. The Committee on CEDAW (2017) raised concerns about the prevalence of child marriage in rural areas and among ethnic minorities, particularly the practice of underage girls marrying their abusers. The committee urged Thailand to strengthen enforcement of the minimum legal marriage age and close existing legal loopholes. During its 2016 Universal Periodic Review, Thailand expressed support for establishing the minimum marriage age at 18 for both genders. The country also reaffirmed its commitment to promoting girls' education and gender equality at the 2019 Nairobi Summit on the International Conference on Population and Development (UNICEF, 2024).

Under the *Civil and Commercial Code of Thailand* (Kingdom of Thailand, n.d.), the legal minimum age for marriage is 20. However, the law permits individuals under this age to marry with parental consent or court approval, reflecting a degree of legal flexibility intended to accommodate socio-cultural practices and familial expectations (Chaiyajit, 2024). In practice, enforcement is often inconsistent, contributing to the continued prevalence of early marriage, particularly among vulnerable groups. In addition to marriage legislation, Thailand's *Child Protection Act* (Kingdom of Thailand, 2003) establishes legal safeguards against the exploitation and abuse of minors, including provisions relevant to child marriage. However, these protections are frequently under-enforced, especially in cases involving informal unions or parental consent (Sriwiset, 2024; UNICEF Thailand, 2022).

Recent data from UNICEF Thailand (2022) reveal that millions of girls in Thailand marry before the age of 18, underscoring the disproportionate impact of legal leniency on at-risk populations. This phenomenon highlights critical gaps between statutory protections and their implementation—gaps exacerbated by entrenched social norms and economic inequalities. Addressing these inconsistencies requires targeted legislative reform and strengthened enforcement mechanisms to bridge the divide between legal standards and prevailing community practices.

1.4.3. Impact of Child Marriage

Child marriage has both immediate and long-term consequences, particularly for young brides. Women married as children face heightened risks of domestic violence, reduced educational attainment, and adverse health outcomes, including complications from early pregnancies, increased maternal mortality, and long-term reproductive health issues (UNICEF, 2021). Teenage pregnancy is a significant outcome of child marriage, as many adolescents marry to avoid societal stigma. This practice is especially prevalent in rural and indigenous communities, where socioeconomic disparities intensify risk. The highest rates of adolescent pregnancy occur in the poorest population quintiles, underscoring the strong correlation between poverty and early unions (UNFPA, 2018).

The SDG 5 emphasises achieving gender equality and empowering all women and girls. In alignment with this goal, Thailand is committed to several key objectives: ending all forms of discrimination against women and girls; eliminating violence in both public and private spheres, including trafficking and sexual exploitation; and eradicating harmful practices such as child, early, and forced marriage (United Nations General Assembly, 2015). Despite progress in various child-related indicators,

substantial efforts are still required to achieve full gender equality and effectively address violence against women and girls (UNICEF, 2025).

Ethnicity also plays a crucial role in child marriage rates. Indigenous and ethnic minority girls—such as the Hmong and Malay Muslims—are disproportionately affected due to limited access to education, financial disempowerment, and adherence to customary or religious legal frameworks. Taesilapasathit (2024) identifies cultural norms, patriarchal structures, and religious doctrines as key determinants of early marriage in both northern Hmong and southern Muslim communities. For instance, Islamic Family Law in Thailand's southern provinces, girls may be permitted to marry upon reaching puberty. These sociocultural norms, combined with weak legal protections, contributed to the persistence of early unions among vulnerable populations (UNICEF Thailand, 2015; 2022).

The COVID-19 pandemic has further undermined progress toward gender equality, heightening risks of domestic violence, abuse, and sexual exploitation. Increased isolation, economic hardship, and other stressors have intensified the likelihood that these issues will persist—and potential worsen—in the post-pandemic period (UNICEF, 2021b).

1.4.4. Disparities in Adolescent Pregnancy and Child Marriage in Chiang Mai

Data from the Maternal and Child Hospital (MCH) in Chiang Mai (collected between October 1 and December 30), 2022, highlight significant disparities in adolescent pregnancy rates across different demographic groups. Among girls under the age of 15 receiving antenatal care, 63.64% were from ethnic minority communities, 27.27% were Thai nationals, and 9.09% were non-Thai individuals (Health Data Centre, Provincial Public Health Office, Chiang Mai, 2022). This disproportionate

representation among ethnic minority adolescents underscores the structural vulnerabilities they face, including limited access to SRH education and healthcare services. During the same period, 24 girls under the age of 15 gave birth, with 50% identified as non-Thai, 37.50% as Thai nationals, and 12.50% as ethnic minorities (Health Data Centre, Provincial Public Health Office, Chiang Mai, 2022). These figures reflect a disproportionately high prevalence of early pregnancies among non-Thai girls, likely influenced by language barriers, discrimination, socioeconomic exclusion, and cultural practices that limit access to essential SRH resources.

Additionally, 287 deliveries were recorded among adolescents aged 15–19. Of these, 45.64% were Thai nationals, 26.83% were from ethnic minority groups, and 27.53% were non-Thai individuals (Health Data Centre, Provincial Public Health Office, Chiang Mai, 2022). While Thai nationals constituted the largest group numerically, the substantial proportion of pregnancies among ethnic minority and non-Thai adolescents reflect persistent structural inequalities. These include community-specific beliefs regarding sexuality, early motherhood, and contraceptive use—factors that often hinder the effective uptake of SRH service.

Demographic disparities in adolescent pregnancy rates stem from a combination of cultural, economic, and systemic barriers. Limited access to reliable contraceptive methods remains a persistent barrier. Many adolescents receive insufficient or inconsistent SRH education and face social stigma surrounding contraceptive use. In some communities, early marriage perpetuates intergenerational cycles of early childbearing, educational discontinuation, and economic vulnerability.

In alignment with SDGs 3 and 5—which aim to ensure healthy lives and promote gender equality—UNICEF has prioritised efforts to prevent and respond to child

marriage and adolescent pregnancy. This includes support for comprehensive legal and policy reforms that acknowledge adolescent sexuality, expand access to SRH services, improve educational and employment pathways, and deliver of comprehensive sexuality education. UNICEF also promotes adolescent empowerment and seeks to transform harmful gender norms to prevent sexual and gender-based violence (UNICEF East Asia and Pacific Regional Office, 2019).

Child marriage in Thailand is deeply rooted in socioeconomic, cultural, and legal structures. While the country has made notable progress through international and national commitments, significant disparities persist, particularly among ethnic minorities and non-Thai populations. Addressing these disparities requires a coordinated, multi-sectoral approach that empowers girls, enforces protective legislation, and ensures equitable access to education and SRH services.

1.5. Global Trends and Challenges in Adolescent Pregnancy

This section provides a comprehensive overview of global adolescent pregnancy trends, including relevant statistics, regional disparities, and key factors influencing adolescent pregnancy. By examining the complexities of adolescent pregnancy at a global scale, the discussion highlights its health, social, and economic implications.

1.5.1. Global Trends and Regional Disparities

Adolescent pregnancy continues to be a significant global public health issue, particularly in LMICs, where it brings profound health and social consequences. Approximately 21 million adolescent pregnancies occur annually in LMICs, nearly 50% of which are unintended, resulting in about 12 million births and a high rate of

unsafe abortion—indicative of subsequent gaps in healthcare access and reproductive rights.

Annually, over 16 million adolescent pregnancies occur in LMICs, with nearly half being unintended, leading to 12 million births (Neal et al., 2012; Darroch et al., 2016; Sully et al, 2020). Unsafe abortions, frequently underreported, remain a major consequence, reflecting gaps in healthcare access (Sully et al., 2020).

Globally, adolescent birth rates have declined over the past two decades, from 64.5 births per 1,000 women aged 15-19 in 2000 to 41.3 in 2023 (UN DESA, 2023). However, significant regional disparities persist. Sub-Saharan Africa (SSA) and Latin America and the Caribbean (LAC) continue to report the highest adolescent birth rates, with 99.4 and 52.1 births per 1,000 women aged 15-19, respectively, as of 2022. In contrast, Southern Asia has experienced the most substantial reductions, while Southeast Asia (SEA) generally reports lower rates, averaging approximately 33 per 1,000. However, Thailand, remains an exception within SEA. Although the country has made considerable progress—reducing its adolescent birth rate from 51 per 1,000 in 2013 to 27.41 in 2022—it continues to rank among the highest in Asia (WHO, 2025).

The global trend of declining adolescent birth rates is supported by various studies (Lindberg et al., 2016; Ottawa Public Health, 2014; Santelli et al., 2007; WHO, 2023a). Nevertheless, these improvements vary significantly by region. Higher rates are consistently observed among individuals with limited education or lower socioeconomic status, which exacerbates inequalities and limits progress in reducing first-time adolescent births (Chung et al., 2018; WHO, 2023a). Vulnerable groups continue to face substantial barriers to accessing effective SRH care.

Teenagers are increasingly delaying sexual activity and using more effective contraception, contributing to the global decline in adolescent pregnancies. However, within SEA, adolescent birth rates remain disproportionately high in specific countries, such as Thailand. Despite achieving significant reductions (from 51 to 27.41 per 1,000 women aged 15–19 between 2013 and 2022), Thailand still ranks as the third highest in Asia, following Nepal and Bangladesh (WHO, 2018a; WHO, 2023b).

1.5.2. Health Risks Associated with Adolescent Pregnancy

Adolescent pregnancy poses heightened risks for both mothers and infants. Adolescent mothers face significantly higher rates of complications such as eclampsia, puerperal endometritis, and systemic infections compared to women aged 20–24 (WHO, 2024). Infants born to adolescent mothers are also at increased risk of low birth weight, preterm delivery, and severe neonatal complications (WHO, 2023a).

Repeat pregnancies are particularly common among adolescents, often occurring within two years of a previous birth. These pregnancies are associated with increased risks of miscarriage, stillbirth, and abortion (Fleming et al., 2015). Contraceptive failure rates are also higher among adolescents using short-term methods, such as pills, patches, and rings (4.55%), compared to LARCs, which have a significantly lower failure rate of 0.27% (Winner et al., 2012).

Postpartum behaviours further exacerbate these risks. American College of Obstetricians and Gynecologists (ACOG) (2017a) highlights that 40–57% of women engage in unprotected intercourse before the routine six-week postpartum visit, underscoring the importance of timely postpartum contraceptive counselling. However, there is limited research on postpartum sexual activity among adolescents,

representing a critical gap in understanding and addressing their reproductive health needs.

McDonald and Brown (2013) conducted a comprehensive study involving 1,507 nulliparous women recruited in early pregnancy (≤24 weeks). Their findings revealed that sexual activity, including vaginal intercourse, often resumed early, with 53% of participants resuming by six weeks postpartum. The method of delivery significantly influenced timing: women with spontaneous vaginal births with an intact perineum resumed earlier than those who experienced episiotomies, sutured perineal tears, assisted vaginal deliveries, or caesarean sections.

To prevent adverse maternal and neonatal outcomes, it is essential to promote adolescent-responsive postnatal care and ensure access to high-quality contraceptive counselling. This aligns with global efforts to improve adolescent maternal health outcomes and reduce intergenerational health risks.

1.6. Adolescent Pregnancy in Thailand: Trends, Policies, and Health Challenges

This section examines the context of adolescent pregnancy in Thailand, focusing on sexual behaviours, local statistics, and comparisons to global trends. Recent data indicate a rise in risky sexual behaviours among Thai adolescents, including engaging with multiple sexual partners and casual relationships. These trends significantly increase their vulnerability to unintended pregnancies and STIs (Sridawruang, 2016). Female adolescents in Thailand face an increased risk of unplanned pregnancies and abortions due to a lack of contraceptive awareness and limited negotiation skills, which hinder their ability to protect themselves during sexual encounters (UNFPA, 2005).

Recent trends highlight an alarming rise in adolescent pregnancy rates accompanied by declining contraceptive use (UNICEF, 2016). Thailand faces a unique demographic landscape, characterised by an ageing population with low fertility rates, yet a persistently high incidence of unintended adolescent pregnancies. While the proportion of people aged over 60 has increased, the number of young people has declined. Despite this demographic shift, adolescent pregnancies continue to pose significant challenges to the nation's social and economic development (UNFPA Thailand, 2016). In response, Thailand enacted the *Prevention and Solution of the Adolescent Pregnancy Problem Act* (2016) to address adolescent childbearing and unintended pregnancies (UNFPA, 2016).

The Thai government views adolescent pregnancy as a societal challenge, emphasising a multifaceted approach rather than a narrow health issue (Prutipinyo, 2023). However, a major concern remains the high prevalence of unsafe abortions following unintended pregnancies. Official records from 2016 documented 20,481 hospital admissions for abortion-related complications, with 11 maternal deaths. This data excludes unsafe and illegal abortions not resulting in hospitalisation, which are likely underreported in national statistics. Unsafe abortions pose severe health risks and place significant financial burdens on the state healthcare system.

Although teenage pregnancy rates in Thailand have decreased significantly since 2013, they remain higher than the national objectives for 2026, which aim to reduce the rate to below 25 per 1,000 for adolescents aged 15–19 and below 0.5 per 1,000 for girls aged 10–14 (Strategy and Planning Division, 2020). While some progress has been made in reducing adolescent pregnancies, the rising prevalence of STIs remains a pressing issue. Among adolescents aged 15–24, STI prevalence rose from 80.8 per

100,000 in 2010 to 189.5 per 100,000 in 2018, more than doubling over eight years (Department of Disease Control, 2017).

To address these challenges, the Thai government, through the BRH in collaboration with the NHSO, launched the FPI in 2014. This initiative, later incorporated under the Adolescent Pregnancy Act (2016), provides free access to all contraceptive methods, including LARCs such as 3- or 5-year implants and IUDs, as well as injectables. Initially targeting teenage mothers under 20 before hospital discharge, the programme was later extended to include all adolescents at public medical facilities registered under the universal health coverage (UHC) system. The UHC system also offers free access to general medical care, rehabilitation services, high-cost treatments, and emergency care, as part of its comprehensive healthcare coverage (Tangcharoensathien et al., 2018). The initiative aims to reduce teenage pregnancy by 50% compared to its 2016 level by 2026 (MoPH, 2020).

A study by Chunin et al. (2016) investigated contraceptive services in government and private hospitals in Thailand. The findings revealed that while contraceptive services were widely available, the range of options—particularly IUDs—varied due to supply shortages and a limited availability of skilled practitioners. Most hospitals procured contraceptives directly from pharmaceutical companies, with decisions guided by their board of directors. Following implementation of the Act, there was a reported increase of 16.3% and 21.4% in the use of IUDs and implants, respectively (Chunin et al., 2016).

1.7. Adolescent Abortion in Thailand: Barriers, Legal Reforms, and Public Health Implications

In Thailand, the rate of adolescent pregnancy is significantly underreported due to instances of illegal terminated pregnancies (UNFPA, 2013b). Official reports include only those adolescent patients admitted to public hospitals for abortion complications, which totalled 10,564 (aged 15 to 19) in 2011 (UNFPA, 2013b). Unplanned teenage pregnancies were heavily imbued with social stigma, leading to a lack of support for pregnant adolescents from their partners, families, peers, communities, schools, and even healthcare services (UNICEF, 2015). Among 129,451 Thai teenagers (aged under 20) who gave birth in 2012, 11% experienced repeated pregnancies (UNFPA, 2013b). Alarmingly, 2.88% of adolescent mothers under the age of 15 gave birth for the second time, and 0.68% gave birth for the third time (UNFPA, 2013b).

The cost of treating abortion-related complications was estimated at 112 million Thai Baht (THB) (MoPH, 2020). Many teenagers resort to illegal abortions due to limited access to sexual and reproductive education, as well as safe abortion services. This issue is further compounded by social, economic, legal, and healthcare barriers (WHO, 2022), significantly limiting their ability to make informed reproductive choices. Cultural stigma surrounding premarital sex pressures many adolescents into viewing pregnancy termination as their only option, driven by fear of ostracism and familial rejection (WHO, 2007a; 2022). As a result, adolescents face a disproportionately high incidence of unsafe abortion practices.

Several factors contribute to the unmet need for safe abortion services among teenagers. Despite advancements in healthcare, significant gaps persist in comprehensive SRH education, leaving adolescents without accurate information

about contraception and safe abortion methods (Ministry of Education Thailand & UNICEF Thailand, 2017; Chainok et al., 2022). Stigmatisation and misconceptions surrounding abortion further inhibit informed decision-making. Although abortion is legally permitted in Thailand under certain circumstances, practical barriers such as insufficient access to confidential, affordable, and non-discriminatory services—remain prevalent (United Nations Human Rights, 2020). Healthcare providers' attitudes and knowledge also play a crucial role in shaping adolescents' decisions. Fear, lack of awareness, and economic constraints drive some teenagers to unsafe abortion methods, while underreporting continues to obscure the true scale (NHSO, 2024).

To address these challenges, the NHSO in Thailand supports safe abortion through its UHC. This includes providing medications such as Misoprostol and Mifepristone for medical abortions. As of 2022, 144 certified health units across 23 provinces legally provide these medications. In 2022, over 12,500 pregnant women accessed safe abortion services under the UHC (NHSO, 2024). The UHC also offers a wide range of services to prevent unintended pregnancies, including free FP consultations, condoms, OCPs, injectables, IUDs, and contraceptive implants.

Thai MoPH data indicates that the pregnancy rate among Thai teenagers aged 15 to 19 decreased from 31 per 1,000 in 2019 to 25 per 1,000 in 2021. This decline is attributed to enhanced access to contraceptives and collaborative prevention efforts by multiple stakeholders (NHSO, 2024). Addressing these issues aligns with the SDGs, particularly SDG 3.7, which focuses on improving health and well-being through universal access to SRH services. Providing safe abortion empowers women and girls

to make informed decisions, advancing gender equality and improving reproductive health outcomes (UN DESA, 2023; WHO, 2022).

In 2021, Thailand amended its Criminal Code (Sections 301 and 305) to enhance access to safe and legal abortion (Chaturachinda & Boonthai, 2020). Previously, abortion was permitted only if the pregnancy posed significant health risk or resulted from sexual crimes. The amendment to Section 301 removes criminal penalties for women terminating pregnancies up to 12 weeks of gestation. Furthermore, Section 305 exempts healthcare providers (HCPs) from liability when performing abortions under specific conditions, including risks to woman's health, severe foetal abnormalities, pregnancies resulting from sexual crime, and pregnancies between 12 and 20 weeks of gestation when the woman insists on termination after consulting medical consultation (Thailand, 2021).

Achieving SDG 5, which focuses on gender equality and women's empowerment, is pivotal for improving access to maternal health and abortion services. This goal is closely linked to SDG 3, particularly Target 3.1, which aims to reduce maternal mortality. Preventing unintended pregnancies through access to comprehensive reproductive health services, including contraception and safe abortion, is essential for safeguarding women's lives and well-being (UN DESA, 2022; 2023).

In Thailand, public hospital data report that approximately 30,000 abortions occur annually. However, the majority are carried out in private facilities, unregulated clinics, or through self-induction. Estimates suggest that the actual number of abortions may range from 300,000 to 400,000 annually (Arnott et al., 2017). This significant discrepancy not only reflects chronic underreporting but also underscores

the impact of a restrictive legal framework, limited public provision of services, and pervasive abortion-related stigma.

1.8. Advancing Adolescent Reproductive Rights in Thailand: The 2016 Pregnancy Act and Family Planning Initiatives

This section examines key developments in Thailand's adolescent reproductive health policy, with particular focus on the formation of the national FP strategy to address teenage pregnancy in 2014. A major milestone was the enactment of *the Prevention and Solution of the Adolescent Pregnancy Problem Act* in 2016, which established a comprehensive legislative framework to support and institutionalise these initiatives. These policy advancements reflect Thailand's commitment to the SDGs, particularly those aimed at enhancing SRH services and comprehensive sexuality education for adolescents.

The Thai government launched an FP initiative aimed at reducing rates of unintended teenage pregnancies, with a particular emphasis on the widespread promotion and increased accessibility of LARCs. Under the UHC scheme, individuals under the age of 20 have access to contraceptive services at any registered medical facility nationwide. This initiative was further reinforced by *the Prevention and Solution of the Adolescent Pregnancy Problem Act,* which reflects Thailand's commitment to reducing adolescent childbearing and addressing unintended pregnancies. The Act codifies five fundamental SRH rights for young people:

1. The right to autonomous decision-making;
2. The right to access accurate information and education;
3. The right to comprehensive reproductive healthcare service;

4. The right to privacy and confidentiality.
5. The right to equitable social welfare without discrimination.

The Thai government's commitment to achieving the UN's SDGs, particularly SDGs 3 and 5 have driven its efforts to reduce adolescent childbearing and prevent unintended pregnancies. These actions from part of a broader strategy to ensure universal access to SRH services, which are essential for improving the health of women, children, and adolescents. *The Prevention and Solution of the Adolescent Pregnancy Problem Act* aligns with SDG 3, specifically Indicator 3.7.1, which tracks the proportion of women of reproductive age (15-49 years old) whose FP needs are met using modern methods (UN, 2019c). The Act also supports SDG 5, notably Indicator 5.6.1, which measures the proportion of women can autonomously make informed decisions about sexual relations, contraceptive use, and reproductive healthcare (UNFPA and Hera, 2019).

Thailand's FP initiatives initially targeted high-risk adolescent groups, including those who had already given birth, those who had undergone an abortion, or those seeking to adopt contraception. The initial focus was to provide free subdermal contraceptive implants to adolescent mothers aged 10-20 prior to hospital discharge (The Prevention and Solution of the Adolescent Pregnancy Problem Act, 2016). Subsequently, the initiative was expanded to all adolescents accessing services at public medical facilities registered under the UHC scheme, which offers free services, including general medical care, rehabilitation, high-cost medical treatments, and emergency care (Tangcharoensathien et al., 2018).

The Thailand National Strategy Plan (2017 - 2026), enacted under the relevant Act, outlines targeted strategies to address teenage pregnancy. Strategy Plan 3 specifically emphasises ensuring adolescents' access to youth-friendly SRH services.

The first goal aims to reduce overall teenage pregnancy among those aged 10 to 19 to less than 50% of the 2016 level (14.2%) by 2026 (BRH, 2017). According to the recent data, there were 72,566 cases of teenage pregnancies in 2018, accounting for 11.5% of all pregnancies (MoPH, 2020).

The second goal targeted a reduction in repeat teenage pregnancies to below 10% by 2021. This goal was successfully achieved, with repeat pregnancies among teenagers aged 10 to 19 accounting for 9% of teenage pregnancies in 2018 (MoPH, 2020).

The third goal aims that over 80% of postpartum or post-abortion teenagers receive LARCs by 2021 and more than 90% by 2026 (BRH, 2017). Within three years of implementing initiatives to promote contraceptive implants among teenage mothers, 70% had received subdermal implants to prevent subsequent pregnancy (BRH, 2017).

1.9. Contraceptive Choices for Adolescents

Ensuring access to contraceptive methods is essential for promoting adolescent reproductive health, preventing unintended pregnancies, and supporting adolescents' autonomy in decision-making. Contraception refers to the use of various methods to prevent pregnancy, allowing individuals to plan and space childbirth according to their personal needs and life circumstances.

Young people face unique challenges in accessing and using contraception, such as social stigma, lack of knowledge, and barriers to healthcare services. This section

provides an overview of global contraceptive prevalence, the mechanisms and side effects of different methods, and key management guidelines issued by professional bodies. It also highlights the importance of dual method use (i.e., combining contraceptive methods and STI protection) and the specific considerations for postnatal contraceptive use among adolescent mothers.

This section begins by examining global contraceptive prevalence, followed by a discussion of the mechanisms, advantages, and suitability of different methods for young individuals. Information is based on evidence from authoritative sources such as the Faculty of Sexual and Reproductive Healthcare (FSRH), ACOG, and WHO.

1.9.1. Global Contraceptive Prevalence

Promoting contraceptive uptake and ensuring access to preferred contraceptive methods are crucial for improving women's health, well-being, and reproductive autonomy. This objective aligns with SDG 3.7, which aims to ensure universal access to SRH services. FP enables individuals to achieve their desired number of children and determine the spacing of pregnancies (WHO, 2019a).

Globally, contraceptive prevalence—the proportion of women or their partner currently using at least one method of contraception—was approximately 64% in 2015 (WHO, 2015a). However, significant regional disparities remain, with rates as low as 33% in Africa and over 70% in Europe, Latin America, and the Caribbean. Middle and Western Africa report the lowest rates, at around 25% (UN, 2017). Modern contraceptive methods dominate global usage, with 57% of married or in-union women relying on them in 2015 (UN, 2015).

Contraceptive methods are broadly categorised into four groups (UN, 2019a):

1. Permanent methods: Sterilisation for males and females
2. Long-Acting Reversible Contraceptives (LARCs): subdermal implants and IUDs, which are reversible and allow fertility to return soon after discontinuation
3. Short-Acting Reversible Contraceptives (SARCs): Injectables, pills, and male and female condoms
4. Traditional methods: Rhythm and withdrawal methods.

Data from 1,247 surveys across 195 nations indicates that the use of modern contraceptives varies with age and marital status. The highest prevalence of modern contraceptive use is generally observed among women aged between 30 and 39. In contrast, the lowest prevalence is among adolescent women aged 15 to 19. The proportion of unmarried women using modern methods or seeking FP correlates with levels of sexual activity, being higher in Malawi and lower in Indonesia (UN, 2019b).

According to the *World Contraceptive Use by 2019* report, progress in meeting FP demands is measured using three universal indicators:

1. Overall levels and trends in contraceptive prevalence
2. Unmet need for FP
3. Diversity and types of methods of contraception used.

Globally, as of 2019, an estimated 44% of reproductive-age women used modern contraceptive methods, whereas only 4% used traditional methods (UN, 2019a).

Internationally, the most common contraceptive methods are female tubal ligation (24%) and male condoms (21%). SARCs and LARCs are used by 46.1% and 19% of

contraceptive users, respectively. Within LARCs, IUDs are the most prevalent (17%), while only 2% of reproductive age women use implants (UN, 2019a).

In Eastern and South-Eastern Asia, IUDs are the most commonly used method, accounting for 18.6% of contraceptive use among women, followed by OCPs (17.8%) and male condoms (14.6%) (UN, 2019a). Globally, the use of most modern contraceptive methods has steadily increased, with the exception of male sterilisation and traditional methods such as rhythm and withdrawal, which have shown the sharpest declines in Europe and North America. In contrast, the prevalence of implants, injectables, and male condoms has risen rapidly. Over the past 25 years (1994–2019), the number of IUD users increased from 133 million to 159 million, while implant users grew from 2 million to 23 million (UN, 2019a).

However, regional variations are evident in the uptake of both traditional and modern contraceptives. In LAC, Cuba (69%) and Brazil (63%) exhibit the highest rates of modern contraceptive use. In Europe and North America, Finland, Canada, and the United Kingdom lead in modern contraceptive use. Countries with the lowest rates of modern method usage include Haiti (25%) in LAC and Albania (5%) in Europe and North America. Notably, Albania has the highest proportion of women using traditional methods. In Asia, modern contraceptive prevalence stands at 46%, accompanied by a 10% unmet need for FP (UN, 2019b).

1.9.2. Mechanisms of Action and Potential Side Effects of Contraceptive Methods

As adolescents and young adults explore their SRH options, comprehensive knowledge of available contraceptive strategies becomes essential. Contraceptive practices empower individuals by granting autonomy over reproductive decisions,

contributing significantly to broader health and societal benefits in line with the SDGs targets on health, gender equality, and reproductive rights. This section outlines various contraceptive methods, with particular emphasis on their mechanisms of action and potential adverse effects. The aim is to equip young individuals with the necessary information to make well-informed decisions that best suit their health requirements and personal circumstances (FSRH, 2019).

1.9.2.1. Hormonal Contraceptive Methods

Hormonal contraceptives represent central component of reproductive health policy and practice, particularly for young people seeking reliable and reversible methods of birth control. These methods use synthetic hormones to prevent pregnancy by mimicking or altering natural hormonal fluctuations involved in the menstrual cycle and ovulation (FSRH, 2019). The efficacy, ease of use, and reversible nature of hormonal contraceptives make them particularly appealing for adolescents and young adults. This section presents several commonly used hormonal contraceptive methods including OCPs, injectables, implants, patches, and rings, focusing on their mechanisms of action and common side effects, as outlined in Table 1.

Table 1: Hormonal Contraceptives: Mechanisms and Side Effects

Hormonal Contraceptive Method	**Mechanism of Action**	**Side Effects**
Combined Oral Contraceptive Pills (COCs)	Suppress ovulation, thicken cervical mucus, and alter the endometrial lining.	Nausea, headache, weight gain, breast tenderness, mood changes, menstrual irregularities, increased risk of blood clots.
Progestin-only Pills	Primarily thicken cervical mucus and thin the endometrium; some types also suppress ovulation.	Irregular bleeding, amenorrhea, acne, mood changes, minimal risk of cardiovascular effects in predisposed individuals.

Hormonal Contraceptive Method	Mechanism of Action	Side Effects
Injectable Contraceptives	Administered every three months; inhibit ovulation by suppressing gonadotropins and alter cervical mucus and endometrium.	Irregular or absent menstruation, weight gain, decreased bone mineral density, delayed return to fertility.
Contraceptive Implants	A subdermal rod releases a steady dose of progestin over several years, preventing ovulation and thickening cervical mucus.	Irregular bleeding, headache, breast tenderness, insertion site reactions (pain, bruising, infection).
The Patch	Transdermal absorption of oestrogen and progestin; inhibits ovulation and alters cervical mucus and endometrial lining.	Breast tenderness, skin irritation, similar side effects to COCs due to oestrogen.
Vaginal Ring	Inserted into the vagina; releases oestrogen and progestin locally to inhibit ovulation and modify cervical mucus.	Vaginal irritation or discharge, headache, nausea, systemic side effects similar to COCs.

Building on the preceding analysis of mechanisms and side effects, Table 2 presents a comparative analysis of the advantages and disadvantages of various hormonal contraceptive methods. This comparison facilitates the identification of the most appropriate contraceptive options tailored to individual needs and lifestyle considerations.

Table 2: Advantages and Disadvantages of Hormonal Contraceptive Methods

Hormonal Contraceptive Method	Advantages	Disadvantages
Combined Oral Contraceptive Pills (COCs)	Facilitates regulation of menstrual cycles, reduces acne, and alleviates menstrual pain.	Necessitates daily administration, associated with an elevated risk of thromboembolic events, contraindicated for smokers aged over 35 due to cardiovascular risks.

Hormonal Contraceptive Method	Advantages	Disadvantages
Progestin-only Pills	Lacks oestrogen, which makes it suitable during breastfeeding; less impact on hormonal balance.	Requires strict adherence to timing for optimal effectiveness, may lead to irregular menstrual bleeding.
Injectable Contraceptives	Requires administration only once every three months, offers high contraceptive efficacy.	May alter menstrual patterns significantly, potential for delayed return to fertility post-discontinuation.
Contraceptive Implants	Offers prolonged protection up to three years, exhibits high efficacy.	Involves a minor surgical procedure for insertion and removal, potential for irregular menstrual bleeding.
The Patch	Simple weekly application, effectively controls menstrual cycle.	Can be conspicuous, may induce skin irritation, decreased efficacy in individuals weighing over 198 pounds.
Vaginal Ring	Monthly application ensures a consistent release of hormones.	Requires user familiarity and comfort during application, potential for displacement, shares oestrogen-related risks with COCs.

The table provides a detailed comparison of several hormonal contraceptive methods, each with specific benefits and limitations. Contraceptive pills regulate menstrual cycles and are effective against acne but pose risks like blood clots, especially for smokers over 35 (FSRH, 2019). Injectable contraceptives and implants offer long-lasting protection but may cause menstrual irregularities and require procedures for insertion and removal. The patch and vaginal ring offer convenience but necessitate comfort with their application and carry similar risks to other oestrogen-based methods. Choosing the right contraceptive method involves balancing these factors with individual health needs and lifestyle preferences, ideally in consultation with HCPs (ACOG, 2017a).

1.9.2.2. Barrier Contraceptive Methods

Barrier methods of contraception, such as male and female condoms, diaphragms, and copper IUDs, provide significant advantages, particularly in terms of non-hormonal protection and STIs. Each method allows for immediate contraceptive effects and varying degrees of reversibility. However, these methods also come with disadvantages that can affect user experience and satisfaction, such as the potential for allergic reactions, discomfort, and in the case of the copper IUD, procedural risks. When choosing a barrier method, it is essential to consider both personal preferences and health factors in consultation with a healthcare provider to ensure optimal protection and minimal adverse effects (FSRH, 2020). The mechanisms of action of barrier contraceptive methods and their associated side effects are detailed in Table 3.

Table 3: Barrier Contraceptives: Mechanisms and Side Effects

Barrier Contraceptive Method	**Mechanism of Action**	**Side Effects**
Male Condoms	A sheath worn over the penis that creates a physical barrier preventing sperm from entering the cervix.	Potential for allergic reactions to latex, possible irritation from lubricants or spermicides, risk of breakage or slippage.
Female Condoms	A pouch inserted into the vagina that prevents sperm from reaching the egg.	Similar to male condoms: allergic reactions to materials, irritation from lubricants, lower risk of breakage compared to male condoms.
Diaphragms	A silicone cup inserted to cover the cervix, used with spermicide to block sperm entry.	Risk of urinary tract infections, irritation or allergic reactions to the diaphragm material or spermicide.
Copper IUD	A T-shaped device placed in the uterus that releases copper ions, which are toxic to sperm.	Increased menstrual bleeding, more severe menstrual cramps, small risk of uterine perforation during insertion, possible infection

1.9.2.3. Natural Methods

Natural contraceptive methods offer non-invasive options for birth control without the use of hormones or physical devices (FSRH, 2019). Fertility awareness methods require diligent tracking of fertility indicators, offering a more personalised approach to contraception. However, its effectiveness is highly dependent on consistent and accurate monitoring. Table 4 focused on natural contraceptive methods, specifically fertility awareness and the withdrawal method, providing an overview of their mechanisms of action and effectiveness. The withdrawal method, while immediately reversible and convenient, requires considerable self-control and is less reliable due to the potential presence of sperm in pre-ejaculate. These methods are best suited for individuals or couples who are willing to accept a higher risk of pregnancy and are seeking a hormone-free contraceptive option. Consultation with an HCP is essential for effectively planning and using these methods to enhance their reliability.

Table 4: Natural Contraceptive Practice

Natural Method	**Mechanism**	**Effectiveness**
Fertility Awareness	Involves tracking fertile periods through methods: temperature monitoring, cervical mucus observation, and calendar calculations to avoid intercourse during fertile windows.	Varies significantly based on method and adherence; generally, about 76-88% effective.
Withdrawal Method	Involves withdrawing the penis from the vagina before ejaculation to prevent sperm from entering the uterus.	Around 78% effective with typical use but can vary widely with technique and discipline.

Natural methods, especially fertility awareness, require an understanding of the menstrual cycle and diligent tracking of various fertility indicators such as basal body temperature and cervical mucus. For young individuals, who may have irregular cycles

and less experience managing such detailed tracking, this can pose a significant challenge (FSRH, 2019; 2020). These methods generally have a lower effectiveness rate compared to hormonal or barrier methods. The withdrawal method, in particular, relies heavily on the male partner's ability to withdraw before ejaculation, a process prone to error especially among less experienced individuals. Neither fertility awareness nor the withdrawal method offers any protection against STIs, which is a crucial consideration for sexually active young people.

Given their lower effectiveness and the high level of discipline required, these methods carry a higher risk of unplanned pregnancy compared to other contraceptive methods. This is a significant concern for young people, who may not have the resources or support to handle such situations. Effective use of natural methods requires comprehensive sexual education and access to resources that many young people may not have. Without proper guidance, the risk of misuse and consequent failure increases (ACOG, 2022).

For young people considering natural contraceptive methods, it is crucial to weigh these concerns carefully. While these methods provide a hormone-free alternative, they require a high level of understanding, discipline, and regular monitoring, which may be challenging for younger individuals. Additionally, the lack of STI protection and lower effectiveness rate make these methods less suitable for those who are not in long-term monogamous relationships or are not prepared for the potential of unplanned pregnancy. Consulting with an HCP can help young individuals make more informed choices and explore other more reliable contraceptive options (ACOG, 2022).

1.9.3. Management guidelines and Recommendations

Many authoritative professional bodies have issued contraceptive management guidelines noting that LARCs (comprising IUDs and contraceptive implants) are more effective than SARCs (ACOG, 2017a; NICE, 2019; Population Reference Bureau, 2021). LARCs require less frequent administration compared to SARCs, and progestogen-only injectable contraceptives are included in this category (NICE, 2019). Fertility can rapidly return after LARC discontinuation (ACOG, 2017a). LARC use among adolescents has become increasingly accepted (ACOG, 2018; Mestad et al., 2011; NICE, 2019) and has been shown to reduce unintended pregnancies and abortions in adolescents (Biggs et al., 2015; Secura et al., 2014). However, LARC use among adolescents or adolescent mothers has been found to be relatively low in the US, with only 15% usage among women aged 18 to 29 (Kavanaugh et al., 2015). In LMICs, limited contraceptive use has been linked to healthcare workers' negative attitudes and opinions towards young and unmarried clients, posing a significant barrier to contraceptive access in healthcare settings (Chandra-Mouli et al., 2014; Nalwadda et al., 2016; Tumlinson et al., 2015).

National Institute for Health and Care Excellence (NICE) (2019), in collaboration with the FSRH of the Royal College of Obstetricians and Gynaecologists (RCOG), produces evidence-based practice (EBP) guidelines on contraceptive choices, which are accredited by NICE. According to these guidelines, LARCs are defined as contraceptives administered less frequently than once per cycle or month. This category includes: (1) copper IUDs; (2) progestogen-only intrauterine systems; (3) progestogen-only injectable contraceptives; and (4) progestogen-only subdermal implants.

The ACOG (2018) recommends that the immediate postpartum initiation of LARCs results in more optimal spacing between subsequent pregnancies. Following a live birth, technical consultations, such as those by ACOG (2019) and WHO (2007b), recommend a minimum pregnancy interval of 24 months, to mitigate adverse maternal and infant outcomes. Significantly reducing repeat pregnancies can be achieved through early LARC use, as evidenced in a prospective cohort study that evaluated the rate of repeat pregnancy among adolescent mothers in Australia (Lewis et al., 2010). This study compared a group receiving subdermal implants with peers receiving OCPs or DMPA. Implant users experienced pregnancy later compared to other contraceptive groups, and their use continued for up to 24 months postpartum. However, the adoption of various contraceptive methods varies according to contexts such as patient and partner preferences, cultural factors, and the availability of healthcare resources.

LARC methods have become increasingly acceptable for use in adolescents (Chandra-Mouli et al., 2014; Nalwadda et al., 2016; Tumlinson et al., 2015) and have demonstrated effectiveness in reducing unintended pregnancies and abortions among adolescents (Biggs et al., 2015; Secura et al., 2014). However, the prevalence of LARC usage among adolescents or adolescent mothers remains relatively low, as evidenced by a mere 15% usage rate among women aged 18 to 29 in the US (Kavanaugh et al., 2015). In low and middle-income countries, limited contraceptive use have been linked to healthcare workers' negative attitudes and opinions towards young and unmarried clients, acting as a barrier to contraceptive access in healthcare settings (Meade & Ickovics, 2005).

1.9.4. Assessment of Contraceptive Unmet Needs

A significant number of women of reproductive age in developing regions, who wish to avoid pregnancy, are not using modern contraceptive methods. However, it is estimated that the use of modern contraceptives has prevented approximately 308 million unintended pregnancies worldwide in 2017. While an estimated 15 million adolescents use modern contraceptives, approximately 23 million still face an unmet need for such methods, increasing the risk of unwanted pregnancies (WHO, 2019a). Women with an unmet need for FP include those who are fertile and sexually active but who are not using any contraceptive methods, and who either do not want more children, or wish to delay their next child (UN DESA, 2022). This concept of 'unmet need' highlights the discrepancy between women's reproductive intentions and their contraceptive behaviours. The highest unmet contraceptive needs are observed among adolescents and postpartum women (Pillai & Nagoshi, 2023; UN DESA, 2022).

The proportion of unmet needs for FP has remained relatively constant at 10% since 2000. In contrast, the percentage of women whose FP needs are met with modern methods (SDG indicator 3.7.1) increased from 74% to 76% between 2000 and 2019. However, a significant global gap persists in meeting the demands for FP. The data indicate that disparities in FP provision continue to be a challenge across various nations and regions; in 42 countries, less than half of the need for FP is met with modern methods (UN, 2019c). A broader range of contraceptive choices could encourage women of reproductive age to protect themselves against both unwanted pregnancy and STIs, including Human Immunodeficiency Virus (HIV). Furthermore, the availability of modern contraceptive options could better meet the varied

preferences of women and their partners, accommodating those who wish to discontinue a current method in favour of an alternative.

A significant proportion of women in developing countries who intend to avoid pregnancy do not currently use modern contraceptive methods. These women, numbering over 220 million, are considered to have an unmet need for contraception, in developing countries (WHO, 2017). It was estimated that in 2015, 18% of married or in-union women worldwide had an unmet need for modern contraceptive methods, although specific data on adolescents were lacking (UN, 2015). Some women discontinue contraceptive methods despite not wanting to become pregnant, commonly due to side effects, misconceptions, contraceptive failure, and the service environment. Barriers to accessing contraceptive services include poor quality of service and limited options for contraception (FP2020 & Population Council, 2015).

1.9.5. Dual Contraceptive Practices in Adolescents

Correct and consistent use of contraceptive methods plays a significant role in preventing unintended pregnancies and transmission of STIs. Dual contraceptive methods are defined as the combined use of condoms for STI protection and another contraceptive method for pregnancy prevention (Raidoo et al., 2020). The primary motivation for adolescents and adolescents to utilise dual-method contraception is to prevent pregnancy and STIs (Lemoine et al., 2017). Additionally, previous studies have identified relationship status as another determinant influencing the use of dual-method contraception (Bastow et al., 2018; Raidoo et al., 2020; Thompson et al., 2017).

A primary concern among adolescent LARC users is the increase in STI acquisition, attributed to lower rates of condom use (McNicholas et al., 2017). This perceived risk

is often considered a barrier to LARC uptake. An analysis of secondary data of 422 adolescents, tested post-method initiation, revealed no statistically significant difference in chlamydia incidence between LARC and non-LARC users. While the risk of chlamydia infection justified condom use, this concern has not deterred recommendations for LARC use among adolescents (Mendoza et al., 2020). Consequently, the dual-use contraceptive strategy emerges as an option for both STI and pregnancy prevention. However, adolescents using LARCs may be less inclined to use condoms compared to those using SARCs. A qualitative study in Georgia, categorising condom use motivations by contraceptive methods among adolescents, found that over 80% of participants (25/30) used a dual method (condom and another method), with nearly 50% (11/25) reporting consistent use. Users of OCPs expressed concerns about method efficacy, thereby being motivated to use condoms for additional pregnancy prevention. Conversely, users of LARCs cited STI prevention as a more significant motivation (Steiner et al., 2019).

LARC methods are highly effective for pregnancy prevention but do not offer protection against STIs, including HIV. Kortsmit et al. (2019) conducted a cross-sectional analysis comparing condom use between two groups of postpartum teenagers: those using LARCs and those using non-LARCs. Despite the high uptake of LARC among postpartum teenagers in the US, this group reported lower condom use compared to their counterparts using non-LARCs. This reduction in condom use among LARC users may inadvertently increase STI transmission, highlighting the need for integrated contraceptive counselling that emphasises dual protection (Kortsmit et al., 2019).

The choice of contraception for young people can be influenced by various factors. Lack of awareness and poor knowledge about contraceptive methods can limit access for adolescents. Educating young people about available options and their effectiveness is crucial (Dombola et al., 2021). Concerns about potential side effects may influence contraceptive choices. Some methods have perceived side effects, such as weight gain, mood changes, or irregular bleeding, which can impact decision-making (Dombola et al., 2021). Adolescents may consider the effectiveness of different methods. LARCs, such as IUDs and implants, are highly effective but may not be widely known or accessible (Claringbold et al., 2019).

Additionally, safety concerns play a role in contraceptive decisions. Young people may prefer methods with minimal health risks and complications (Say & Mansour, 2009). Affordability is a significant factor. Adolescents may choose methods based on their financial situation and whether the method is covered by insurance or available for free (Ezenwaka et al., 2020). Cultural beliefs and societal norms can shape contraceptive choices. Some methods may be more socially acceptable or align with cultural practices (Claringbold et al., 2019). Adolescents may prefer methods that allow privacy and discretion. Methods like the contraceptive patch, vaginal ring, or injectables offer convenience and confidentiality (Say & Mansour, 2009). The disconnect between education and SRH policies can impact contraceptive use. Harmonising policies and providing comprehensive education can motivate adolescents to make informed choices (Dombola et al., 2021).

1.9.6. Contraceptive Choice for Postnatal Adolescent Mothers

Adolescent mothers' contraceptive decisions and practices are influenced by their own personal knowledge, experiences, and preferences (Sanchez et al., 2021), as well as

those of their partners and families (Bangoura et al., 2021; Mukanga et al., 2023). Effective contraceptive use can significantly reduce the risk of repeat pregnancies among first-time teenage mothers, yet less than 50% of them habitually use contraceptives (Machira & Palamuleni, 2017). Consequently, adolescent mothers are at a high risk of repeat pregnancies due to suboptimal contraceptive practices.

While some post-delivery women have initiated the use of highly effective methods, high rates of contraceptive discontinuation and method switching have been observed (Meade & Ickovics, 2005). The main barriers to sustained postpartum contraceptive use identified by key informants included insufficient information, a lack of parental support, and disruptions in medical coverage and continuity of care (CoC) (Wilson et al., 2011). Prior research by Hall et al. (2017) suggests that teenage pregnancy may predict future sexual risk behaviours and adverse outcomes, highlighting the necessity for interventions promoting the dual use of condoms and hormonal contraception among parenting teenagers. This period represents a crucial 'window of opportunity' for sexual risk reduction and pregnancy prevention. Pre-conception contraceptive use is also essential for optimising, planning, and supporting pregnancies (Hall et al., 2017).

Contraceptive practices among adolescent mothers are influenced by their personal knowledge, experiences, and preferences, as well as by the perspectives of their partners and families (Institute of Medicine, 1995). Effective contraceptive use has the potential to significantly reduce the risk of subsequent pregnancies among first-time teenage mothers, of whom less than 50% consistently use contraceptives (Machira & Palamuleni, 2017). Consequently, due to inadequate contraceptive practices, adolescent mothers face a high risk of subsequent pregnancies. Despite the initiation

of highly effective methods post-delivery by some, there are high rates of contraceptive discontinuation (Meade & Ickovics, 2005) and method switching among these individuals (Wilson et al., 2011).

According to recommendations from the ACOG (2018), initiating LARCs early in the immediate postpartum period leads to optimal spacing time between subsequent pregnancies. After live birth, technical consultations recommend a pregnancy interval of at least 24 months to reduce adverse maternal and infant outcomes (WHO, 2007b). Early use of LARCs has been shown to significantly reduce repeat pregnancies. This was evident in a prospective cohort study conducted in Australia, which evaluated the rate of repeat pregnancies among adolescent mothers aged 12-18 (Lewis et al., 2010). In this study, a group receiving subdermal implants was compared to peers receiving OCPs or Depot Medroxyprogesterone Acetate (DMPA). The study found that implant users became pregnant later than those in other contraceptive groups, with continuous use lasting up to 24 months postpartum.

Contraceptive choices are crucial in empowering young people to take control of their reproductive health. Understanding the range of available contraceptive methods, their mechanisms, and potential side effects is essential for making informed decisions. This section aims to provide comprehensive insights into several popular and effective contraception methods suitable for young individuals. Additionally, it addresses the specific considerations for postnatal contraception, which is a critical aspect of FP and health management after childbirth.

Incorporating an understanding of the UN SDGs, particularly SDG 3 *(Good Health and Well-being)* and SDG 5 *(Gender Equality)*, is crucial for promoting adolescent health and well-being and ensuring equitable access to SRH. SDG 3 highlights the

importance of providing a range of contraceptive methods and related services to support healthy lives across all age groups, while SDG 5 focuses on empowering women and girls to make informed choices, free from discrimination and coercion. Aligning comprehensive contraceptive options and sexual health education with global targets places adolescent health and well-being at the forefront, contributing to broader efforts to reduce adolescent pregnancy, advance gender equality, and enhance reproductive rights.

The 2019 Thailand Multiple Indicator Cluster Survey by the National Statistical Office (NSO) reveals that 54.1% of sexually active girls aged 15-19 used contraception. The primary sources of contraception for this demographic were public health facilities (47.1%) and private sector outlets (48.1%), including private clinics, pharmacies, and commercial venues. Several barriers to contraceptive use among Thai adolescents have been identified, including stigma, lack of knowledge, and the difficulty of accessing contraception discreetly, particularly in rural areas. Many adolescents opted to purchase contraception over the counter from pharmacies to avoid recognition at public health facilities (UNICEF, 2023).

Reports from the International Planned Parenthood Federation and the Guttmacher Institute highlight the need for improved access to comprehensive SRH services for adolescents in Thailand. These reports emphasise the importance of youth-friendly service delivery, community engagement, and addressing social and cultural norms that hinder access to contraception for adolescents (UNICEF, 2023). The findings underscore the necessity of targeted interventions to improve contraceptive access and education among Thai adolescents. This includes enhancing the confidentiality and

availability of services, particularly in rural areas, and fostering a supportive environment that mitigates stigma and promotes informed decision-making.

The importance of contraception after childbirth is critical for young people to manage health risks associated with closely spaced pregnancies and to support planning for future pregnancies. This period requires careful consideration of contraceptive options that are compatible with breastfeeding and individual health conditions. The RCOG (2021) recommends offering contraception information during the antenatal period to support informed decision-making, recommending that effective contraception should be discussed and provided before discharge from maternity services. The guidance also highlights ensuring accessibility and continuity of contraceptive care, tailored to individual needs, to prevent unintended pregnancies and support women's reproductive health postnatally (RCOG, 2021).

The rapid return of fertility after childbirth necessitates the use of effective contraception to prevent unintended pregnancies. It is recommended to initiate contraception by three weeks postpartum if no further immediate pregnancy is desired (ACOG, 2020). Various contraceptive methods are suitable after childbirth, including LARCs, which are highly effective and offer extended protection. Hormonal methods, such as the contraceptive patch and vaginal ring, are generally safe to use after the initial postpartum period and can be started from as early as 21 days after birth if not breastfeeding (FSRH, 2017). Certain contraceptives, such as progestin-only pills, are preferred during breastfeeding because they do not affect milk production. The choice of contraception should consider its impact on breastfeeding (The Breastfeeding Network, 2019).

Selecting the appropriate contraceptive method after childbirth depends on individual preferences, medical history, and specific health needs. Health professionals play a critical role in advising young mothers on suitable methods based on their conditions. It is essential for healthcare providers to discuss these options during antenatal visits and shortly after childbirth to ensure that young mothers are fully informed and can make decisions that align with their health and family planning objectives (FSRH, 2017; FSRH, 2019).

1.9.7. Contraceptive Choices for Adolescents in Thailand

FP initiatives in Thailand have been established to address the contraceptive needs of adolescents. This section examines the range of contraceptive options available for adolescents, highlighting two main sources: over-the-counter purchases and services provided by the Thai government. FP initiatives cater to young people under 20 and reproductive women aged over 20 who have undergone safe and legal abortions, offering LARCs at no cost in hospitals within the NHSO network. Eligible women can access a 24-hour helpline for information and advice (DoH, 2021). Consequently, contraceptive services are readily accessible, including at drug stores where prescriptions are not required (WHO, 2015b). A survey on contraceptive services has revealed the availability of LARCs. However, there is a marked preference for subdermal implants over IUDs among adolescent mothers. Usage statistics from 2016 demonstrate this trend, showing a significantly higher number of implant users (23,408) compared to those opting for IUDs (300 users) (BRH, 2021). Notwithstanding the availability of these services, the percentage of adolescents under the age of 20 utilising LARCs post-birth or post-abortion in 2021 was reported at

40.01%, a figure considerably below the national target of 80% set for 2023 (Data Health Centre, 2023).

In the past decade, adolescents in Thailand have faced significant obstacles to accessing SRH services. However, there have been considerable improvements in contraceptive services in recent times. A report by the Management of Family Planning System in Thailand analysed potential reasons why teenagers might struggle to access contraceptive services (Phachareewan, 2010; UNICEF, 2016). The report identified several factors, including limited-service delivery and the inability to meet young people's needs. Additionally, it was found that only 36.6% of all hospitals had LARCs available in clinics. Moreover, the report highlighted those teenagers and unmarried women experienced stigmatisation from service providers when seeking pregnancy-related care (Phachareewan, 2010; UNICEF, 2015).

Data presented in Table 5 illustrates a significant increase in the availability of LARC services in hospitals from 2010 to 2015. Overall, the number of hospitals offering these services rose from 36.6% in 2010 to 71.4% in 2015, reflecting a 95.1% increase. Specifically, community hospitals saw the most substantial improvement, with an increase from 30.8% to 69.7%, marking a 126.3% rise. General hospitals and central hospitals also experienced notable increases in service availability, enhancing access to contraceptive care across various hospital types.

Table 5: Availability of LARC Services in Hospitals (2010-2015)

Hospital Type	Number of Hospitals (2010)	Services (2010)	No Services (2010)	Number of Hospitals (2015)	Services (2015)	No Services (2015)	Percentage Change in Services Provided
Central Hospitals	18	13 (72.2%)	5 (27.8%)	12	11 (91.7%)	1 (8.3%)	+27.0%
General Hospitals	61	41 (67.2%)	20 (32.8%)	41	34 (82.9%)	7 (17.1%)	+23.4%
Community Hospitals	438	135 (30.8%)	303 (69.2%)	419	292 (69.7%)	127 (30.3%)	+126.3%
Total	517	189 (36.6%)	328 (63.4%)	472	337 (71.4%)	135 (28.6%)	+95.1%

Source: Survey of Contraceptive Services Provision, 2010 and 2015, BRH, MoPH.

The continued rate of LARC use among adolescents in Thailand has not yet been extensively investigated. A recent study by Assavapokee et al. (2019) focused on determining the continuation rate and associated factors of using etonogestrel subdermal implants (ESIs). This study was based on a review of the medical records of 431 cases from 2014 to 2015. Notably, approximately 43% of ESI users in the study were adolescents. The findings revealed high retention rates after implant insertion, with continuation rates of 95.4%, 88.4%, and 83.1% at 1, 2, and 3 years, respectively. Significantly higher continuation rates were observed in two specific groups: users below 20 years of age and those over 40 (while women in the age group of 20-40 years had lower continuation rates).

The primary reason for discontinuing implant use was unscheduled bleeding, with 16.9% of participants reporting increased unusual bleeding as a cause for discontinuation. (Assavapokee et al., 2019) concluded that the high continuation rate over three years reflects the acceptability of implant use across all age groups. However, it is important to note that the data collection period preceded the

implementation of the Act, and the study participants were not specifically adolescent mothers. There is a need for further research to explore the experiences and perceptions influencing low contraceptive uptake and continuation, specifically among teenage mothers' post-implementation of FPI.

1.10. Thai Healthcare System and Contraceptive Services for Adolescents

This section explores the organisation of healthcare systems in Thailand and their provision of contraceptive services to adolescents, including Youth-Friendly Health Services (YFHS). It examines both the availability and accessibility of contraceptive option for young people within the country.

1.10.1. General Overview of Healthcare Systems in Thailand

Over the past four decades, Thailand's healthcare system has undergone significant expansion, and it now covers all Thai nationals nationwide. The healthcare sectors in Thailand are regulated and administered by the MoPH, which serves as the central authority for health system governance. The Thai healthcare infrastructure encompasses three main components: government, NGOs, and the private medical sector. Government health facilities are directly financed by the Department of Medical Services under the MoPH and offer free treatments to Thai citizens holding a UHC card issued by the NHSO. MoPH hospitals provide for approximately 70% of the hospital beds in Thailand, with distribution based on population density.

The Thai government has been implementing a plan under the UHC scheme to establish a healthcare centre in every subdistrict (Tambon) and district (Amphur). These centres aim to provide healthcare services to vulnerable groups and individuals

living below the poverty line (Sumriddetchkajorn et al., 2019). Hospitals in Thailand are classified based on the complexity of services provided, ranging from primary, secondary, tertiary, and super-tertiary care. Health centres primarily offer basic primary healthcare services, while secondary and tertiary care are provided at provincial and local hospitals, respectively. In cases where local hospitals cannot provide the required care, patients are referred to higher-level hospitals (WHO, 2015b). There are three main insurance schemes in Thailand: the UHC, the Social Security (SS) Scheme, and the Civil Servant Medical Benefit (CSMB) scheme. Thai citizens have the option to select any health service they can afford, including services covered by private insurance (WHO, 2015b).

The Thai policy on UHC has seen considerable progress since its initiation in 2001. Since then, Thai citizens have been able to access essential health services throughout all stages of life (Health Insurance System Research Office, 2010). The UHC scheme, as the primary source of public health funding, ensures the provision of standard public health services with a primary healthcare focus, as guaranteed by the Constitution of Thailand ((WHO, 2015b). All Thai nationals are covered by the UHC scheme, which evolved from the '30 Baht scheme' launched in 2002, whereby patients paid a nominal fee of THB 30 per visit. However, comprehensive benefits are not fully covered under this scheme, and fees are still applicable for certain medical items such as instruments, canes, glasses, and crutches (Sumriddetchkajorn et al., 2019). The scheme, financed through general tax revenue, is implemented by provincial and local administrative agencies (Tangcharoensathien et al., 2002). It allows over 60 million Thai citizens to access essential health services and major benefits at a very affordable cost or even for free. Registration with providers is required at the first point of contact, typically a hospital (WHO, 2015b).

Individuals engaged in full-time taxable employment are eligible for the SS scheme in Thailand, which covers approximately 24% (16.5 million) of the population. The financial support for the SS scheme is derived from contributions by employees, employers, and 2.5% from the government. Participants in the SS scheme contribute up to 5% of their wages, but the maximum rate is THB 750 a month for full health coverage. The scheme covers medications, treatments, surgeries, and care, except for drugs on the 'important drug list', which includes newly released and experimental drugs. Thai citizens enrolled in the SS scheme must choose one hospital as their primary service provider, but in emergency situations, they can be admitted to any hospital. In such cases, the contracted hospital is responsible for setting the bills with the emergency hospitals (Social Security Office, 2025).

Nearly 50 years ago, the Thai government established the CSMB scheme as a comprehensive health insurance programme for civil servants. This initiative was introduced to support civil servants, whose earnings were relatively low compared to those in the private sector, by providing them with essential health care benefits. The scheme was designed to attract individuals to work in public services. The CSMB scheme extends healthcare benefits to government officials and their dependents, which include parents and up to three children. Its payment mechanism operates on a retrospective, unlimited fee-for-service basis. The CSMB scheme covers approximately 10% of Thailand's total population (The Comptroller's General's Department, 2020).

1.10.2. Sexual and Reproductive Health Services in Thailand

Thai government hospitals under the MoPH established Youth Friendly Health Services (YFHS) in 2006, following WHO recommendations (2018b). At present,

YFHS are available across all Thailand provinces. Each healthcare facility offering YFHS is allocated a special budget by the government, which includes reimbursement to cover costs of service and supplies (BRH, 2021). This funding encompasses GBP 68 for subdermal implants, and GBP 25 for IUDs. Additionally, the MoPH provides training in IUD and implant insertion for over 100 nurse-midwives annually (BRH, 2021).

Previously, SRH services tailored for adolescents were scarce in Thailand, and often failed to meet their specific needs. In response, the first National Policy and Strategic Plan on Reproductive Health Development (2010-2014) was implemented by the MoPH to enhance the availability and quality of SRH services, targeting at-risk adolescents (MoPH, 2020). However, the prevalence of LARC usage among reproductive women in Thailand remains relatively low. Based on a 2016 survey, only 0.7% used implants and 0.2% used IUDs among the total number of reproductive-aged women (UN, 2019a).

According to a 2023 survey by the HPC, Region 1 Chiang Mai, contraceptive implantation services were available in 23 out of 25 (92%) secondary-level hospitals across 25 districts. The majority of providers are trained nurse-midwives, followed by general practitioners and obstetricians. The data also reveals that out of 684 postpartum adolescents, 187 adopted new modern contraceptive methods, with 48 opting for subdermal implants (HDC, 8 November 2022).

Available statistics on reproductive health among Thai adolescents indicate that around 70% reportedly used condoms during sexual encounters, and a substantial majority—about 80%—reported using reliable contraceptive methods, encompassing condoms, injectable contraception, OCPs, and emergency pills (Department of

Disease Control, 2017). The use of modern contraception among girls under 20 accounted for 37.8 percent (Data Health Centre, 2023). Despite the high uptake of SARCs, correct and consistent usage among adolescents is not guaranteed. In 2021, the live birth rate for girls aged 15-19 was 24.4 per thousand, with a target for the 2022 fiscal year to keep this rate at no more than 25 per thousand. Historically, the highest rate in this age group was 53.4 per thousand in 2011, and it has steadily decreased since then. Similarly, for girls aged 10-14, the live birth rate in 2021 was 0.9 per thousand, with a target to maintain this rate at no more than 0.9 per thousand for 2022. The highest recorded rate for this younger age group was 1.8 per thousand in 2012, and it has also shown a consistent decline, reaching 0.9 per thousand in both 2020 and 2021 (Data Health Centre, 2023).

The MoPH, in collaboration with the NHSO, provides contraceptive services, including the provision of subdermal implants and IUDs, as part of a programme designed to broaden teenagers' access to reproductive health services. Public-sector facilities, including pharmacies, are major suppliers of contraceptive methods. Modern contraceptive prevalence in Thailand is relatively high, covering 77.20% (range 75.82-78.52%) of reproductive women aged 20-49, and 68.32% (range 61.76-74.23%) of girls aged 15-19 (WHO, 2020). Despite the high uptake of contraceptives and equitable access to reproductive health services, there remain unaddressed challenges, particularly in meeting the contraceptive needs of unmarried young couples (WHO, 2015b).

FP initiatives in Thailand offer a range of contraceptive options for adolescents. However, for those under 18, parental consent is required for invasive procedures such as subdermal implants or IUD insertion. This requirement limits adolescents'

autonomy in making informed decisions about contraception, especially if their parents do not support the use of LARCs. Thai hospitals adhere to policies that do not permit adolescents to independently decide on LARCs (Jensarikorn et al., 2019). Consequently, legislation and policies mandating parental permission may impede adolescents' access to their preferred contraceptive methods (UNFPA, 2013a). Additionally, societal challenges in Thailand, such as traditional customs, social norms, and family values, exert a significant influence on attitudes towards contraception. Thai culture typically disapproves of pregnancy during school age, and sexual matters are generally considered taboo for open discussion (Jensarikorn et al., 2019).

Thailand has demonstrated notable achievements in establishing a robust primary healthcare system, bolstered by a well-developed district health infrastructure and a competent workforce, which formed the cornerstone for SRH service delivery. The implementation of UHC ensured financial risk protection, thereby facilitating access to SRH services while mitigating out-of-pocket expenditures and financial impediments. Moreover, the comprehensive SRH package offered within the UHC framework, encompassing contraception, maternal care, and HIV/AIDS prevention and treatment, markedly enhanced accessibility, and health outcomes (Panichkriangkrai et al., 2020).

However, challenges persist in addressing teenage pregnancy. Despite advancements, Thailand's adolescent birth rate surpasses the average for upper-middle-income countries. This paper (Panichkriangkrai et al., 2020) acknowledges deficiencies in meeting adolescents' contraceptive needs, particularly in terms of information dissemination and education. Furthermore, constraints in accessing LARCs are

evident. Although the availability of LARCs is cited as a positive development, barriers such as inadequate training of personnel for administration and limited device stocks hinder their widespread adoption.

1.10.3. Youth Friendly Health Service (YFHS) in Thailand

Thailand has a substantial youth population, including approximately 8 million adolescents aged 10-19 and 8.5 million youth aged 15-24. Addressing the health needs of this demographic is crucial for the country's development. In 1997, Thailand adopted a policy to promote YFHS and has since established 855 facilities, primarily in public health settings. National standards for YFHS were implemented in 2013 (UNICEF, 2023).

In 2019, the MoPH, with support from UNICEF, UNFPA, and WHO, assessed YFHS to evaluate alignment with global standards, provider perspectives, adolescent needs, and to provide recommendations for improvement. The assessment of YFHS in Thailand revealed that while the national standards generally align with global benchmarks, there are notable gaps. Specifically, 44% of adolescents lack awareness of YFHS, community support for these services is not well-defined, and providers require improved communication and data management skills. Additionally, adolescent participation in the design, implementation, and monitoring of YFHS is inadequate. Despite these challenges, 85% of YFHS facilities comply with national standards, demonstrating substantial progress. Recommendations have been made to further enhance the quality and sustainability of YFHS to better serve the youth population in Thailand (UNICEF, 2023).

Despite this progress, utilisation remains low, with only 27% of adolescents using these services, and 44% lacking awareness of them. Notably, out-of-school

adolescents, particularly girls, are more aware of YFHS compared to those in school. The brief recommends enhancing adolescent health literacy, community support, provider skills, and adolescent participation to improve the quality and usage of YFHS in Thailand (UNICEF, 2023).

The policy brief on the enhancement of YFHS in Thailand underscores the importance of addressing the health and well-being needs of the nation's adolescents and youth. This includes tackling mental health challenges, substance abuse, and violence, which are directly pertinent to SDG 3: ensuring healthy lives and promoting well-being for all. A significant finding of the policy is the disparity in awareness of YFHS between in-school and out-of-school adolescents, with out-of-school girls, in particular, being more informed about these services. This disparity highlights the necessity to improve access to YFHS within the school environment, thereby aligning with the objectives of SDG 4: ensuring inclusive and equitable quality education and promoting lifelong learning opportunities. Enhancing health literacy and service utilisation among all young people, regardless of their educational status, is essential for achieving this SDG (UNICEF, 2023).

1.10.4. Legal and Policy Context: Implications for Adolescent Reproductive Health

Thailand’s legal and policy framework plays a crucial role in shaping reproductive health outcomes, particularly for adolescents facing systemic vulnerabilities. The 2015 amendments to the Penal Code and the national policy guidelines on reducing unintended pregnancies represent significant efforts to protect and support adolescents. Nevertheless, contradictions between legal protections and policy implementation continue to hinder equitable access to SRH services. Although well-intended, age-

related capacity inconsistencies, provider discretion, and structural barriers often prevent adolescents from making autonomous reproductive decisions.

Legal Protections Under the 2015 Penal Code

The 2015 amendment to the Penal Code strengthened legal protections for adolescents against exploitation, coercion, and sexual abuse. It introduced stricter penalties for crimes against minors, criminalised the possession and distribution of exploitative materials, and reinforced legal safeguards against reproductive coercion (United Nations Office on Drugs and Crime [UNODC], 2015). These measures are especially relevant for adolescents in vulnerable situations, such as those lacking stable housing, who face heightened risks of unintended pregnancies due to exploitation and limited healthcare access.

However, while these protections offer a strong legal foundation, they remain largely punitive rather than preventive and lack mechanisms to ensure proactive SRH access.

The 2015 Policy Guidelines: Expanding Contraceptive Access for Adolescents

The 2015 policy guidelines aimed to expand sexual health education by integrating comprehensive sexuality education into school curricula and outreach programmes, allowing adolescents to obtain contraception in public facilities without parental consent, and to improve postnatal contraceptive care through LARC counselling. These policies sought to align with international best practices, advocating for informed reproductive choices and barrier-free access to contraceptive services.

Nevertheless, implementation remains uneven, particularly among marginalised groups. Discretionary decisions by HCPs, parental influence, and bureaucratic inefficiencies continue to undermine their effectiveness.

Three major barriers hinder the realisation of adolescent reproductive rights in practice. First, many unhoused or unaccompanied adolescents lack official identification, excluding them from the national health coverage system (NHSO, 2024). Second, studies show that healthcare providers often discourage adolescent contraceptive use, particularly among unmarried youth, based on cultural or religious objections (Tangmunkongvorakul et al., 2022). Third, adolescents from ethnic minority communities in Northern Thailand experience language and cultural barriers, which dissuade them from seeking care even when policies ensure access (WHO, 2015b).

Age-Related Capacity and Contradictions in Contraceptive Access

For adolescents aged 10-14, who are legally classified as minors, access to contraception is restricted, as they are unable to consent to sexual activity, thus preventing them from obtaining contraception independently (Tangmunkongvorakul et al., 2022). However, unintended pregnancies still occur in this age group, particularly among vulnerable populations who experience sexual exploitation or coercion (WHO, 2022). Despite progressive policy guidelines, these legal barriers hinder early intervention and leave this group without viable pregnancy prevention options.

Adolescents aged 15-17 are legally able to consent to sexual activity, but still face provider discretion, implicit parental consent requirements, and societal stigma when

seeking contraception. Many adolescents in this group are denied SRH services based on healthcare provider judgment, rather than legal restrictions. In the absence of clear enforcement mechanisms, many turn to informal or unsafe alternatives (Sedgh et al., 2015).

Although adolescents aged 18-19 face no legal restrictions, socioeconomic barriers, limited outreach programmes, and stigma continue to prevent effective SRH utilisation. Adolescents from ethnic minority groups, low-income backgrounds, or transient living situations remain underserved, highlighting the disconnect between policy intent and real-world accessibility.

Healthcare provider discretion remains one of the most persistent challenges. Many adolescents, particularly unmarried individuals, report being denied contraception due to provider bias, moral beliefs, or misconceptions about adolescent sexual behaviour. Research indicates that some HCPs actively discourage contraceptive use among adolescents, citing personal or religious objections rather than adhering to established legal and policy guidelines (Tangmunkongvorakul et al., 2022). This bias reinforces stigma, misinformation, and barriers to access, deterring adolescents from seeking necessary reproductive healthcare services.

Similarly, adolescents without formal identification remain systematically excluded from public health entitlements. Many cannot enrol in Thailand's UHC system, which requires official ID documentation for free healthcare access (NHSO, 2021). Despite policy provisions advocating universal contraceptive care, bureaucratic obstacles continue to exclude some of the most vulnerable adolescents from receiving essential reproductive health services.

Countries such as the Netherlands and Sweden have successfully reduced adolescent pregnancy rates by guaranteeing universal access to SRH services regardless of age, training healthcare providers to offer non-judgmental, confidential contraceptive counselling, and providing school-based contraceptive services, thereby reducing reliance on parental involvement. In contrast, Thailand's fragmented legal environment, coupled with stigma and provider discretion, continues to treat contraception as a privilege rather than a right (Sedgh et al., 2015).

1.11. Stakeholder Analysis in Adolescent Reproductive Health

The success of any intervention addressing adolescent pregnancy and contraceptive uptake depends on the active involvement of multiple stakeholders. These actors play pivotal roles across four key areas: policy development, healthcare service delivery, community engagement, and familial support. This section examines the stakeholders involved in reproductive health interventions in Northern Thailand, analysing their roles, influences, and interdependencies. By situating this analysis within a broader sociocultural and policy framework, it highlights the need for a collaborative, multi-level approach to addressing the specific challenges faced by adolescent mothers.

1.11.1. Direct Stakeholders

Adolescent mothers are central to this study as both the primary beneficiaries and active participants in reproductive health interventions. Many young mothers in Northern Thailand have limited contraceptive options, with the most commonly offered methods being subdermal implants and injectables due to availability and immediate postpartum protocols. Cultural stigma surrounding premarital sex and contraceptive use further influences their decision-making (Ounjit, 2015). Economic

constraints frequently necessitate reliance on free services under the FPI, where subdermal implants are provided at no cost (BRH, 2021). The postpartum period presents a critical opportunity to introduce effective contraceptive methods; however, insufficient counselling and restricted contraceptive choices impede informed decision-making. As key stakeholders, adolescent mothers are not merely recipients of healthcare services but also pivotal decision-makers whose choices impact long-term reproductive health outcomes and overall contraceptive uptake.

Healthcare providers, including obstetricians, midwives, nurses, and FP counsellors, play a critical role in ensuring the adolescent-friendly, accessible contraceptive services. Their responsibilities extend beyond service provision to include education and contraceptive counselling, particularly in the immediate postpartum period. However, barriers such as limited training in postpartum implant insertion and provider biases compromise service effectiveness (Chunin et al., 2016). The lack of adequate t capacity-building programmes hinders providers' ability to deliver culturally appropriate care. Effective communication, cultural sensitivity, and nonjudgmental counselling are essential to creating a safe healthcare environment for adolescent mothers. Ultimately, healthcare providers serve as key intermediaries translating policy initiatives into practical contraceptive uptake strategies.

1.11.2. Indirect Stakeholders

Policymakers and government bodies, such as the MoPH and the BRH, shape reproductive health policy by establishing legal and operational frameworks. The Adolescent Pregnancy Act (2016) aims to enhance contraceptive access and reproductive healthcare services, aligning national efforts with global commitments such as the SDGs 3 and 5 (UN, 2015). However, systemic barriers—including

inconsistent policy enforcement, rural healthcare disparities, and resource limitations—hinder the effective implementation of these initiatives. Policymakers must address broader structural inequalities, such as educational disparities and socioeconomic factors, that exacerbate adolescent pregnancy risks.

Families and communities exert a profound influence on adolescent reproductive choices. In Northern Thailand, deep-rooted cultural norms often discourage open discussions on sexuality and contraception. Families serve as the primary source of support for adolescent mothers, but their level of involvement varies depending on social and cultural contexts. Parental encouragement fosters informed decision-making; while stigmatising environments can deter adolescents from seeking necessary healthcare services (Panitsara et al., 2021). Furthermore, peer networks and community attitudes significantly impact contraceptive behaviours, reinforcing the need of community-based interventions that address misconceptions and stigma.

NGOs help bridge healthcare gaps, particularly in rural and ethnic minority communities. By providing culturally tailored education programmes, outreach services, and advocacy, NGOs support reproductive health awareness among underserved populations (Libisch et al., 2022). They frequently collaborate with government agencies and HCPs to strengthen service delivery, ensuring that vulnerable groups—including ethnic minorities and low-income adolescents—receive comprehensive reproductive healthcare. For instance, NGOs often conduct reproductive health workshops and partner with local leaders to improve contraceptive awareness in rural communities.

The dynamic interactions among these stakeholders determine the effectiveness of adolescent reproductive health interventions. While policymakers establish legal

mandates, success ultimately depends on healthcare providers' ability to implement these policies and on community engagement to encourage contraceptive use. For example, the Adolescent Pregnancy Act (2016) provides free contraceptive options, but its impact is contingent on culturally sensitive service delivery and supportive community environments. A multisectoral, integrated approach—incorporating family engagement, grassroots education, and culturally sensitive interventions—is critical to overcoming existing barriers and ensuring long-term, sustainable reproductive health outcomes.

1.12. Chapter Summary and Thesis Structure

This chapter provides a comprehensive overview of the study context, focusing on adolescent pregnancy within the sociocultural landscape of Thailand. It examines key influences on adolescent contraceptive behaviour, including child marriage, issues of consent and contraceptive decision-making, and broader determinants shaping adolescent contraceptive choices. The chapter also explores the availability of contraceptive services and systemic barriers to access, alongside policy and health system responses. These discussions are framed within the SDGs, particularly those related to universal access to family planning and gender equality.

Chapter 2 presents a narrative review of global and regional literature on adolescent contraceptive practices, unmet needs, and access barriers. It identifies critical gaps in existing research, particularly regarding postpartum contraception among adolescent mothers in LMICs, thereby establishing the rationale for the present study.

Chapter 3 outlines the qualitative methodology, grounded in Constructivist Grounded Theory (CGT). It details the research design, ethical protocols, and procedures for data

collection and analysis, including adaptations made in response to COVID-19. The chapter also reflects on the researcher's positionality and the importance of reflexivity, translation, and ethical sensitivity when conducting research with adolescent populations.

Chapter 4 introduces participant characteristics and presents the core and analytical categories developed through the analysis. It illustrates how adolescent mothers navigate sociocultural expectations and personal autonomy in contraceptive decision-making.

Chapter 5 situates these findings within the broader literature, highlighting structural and interpersonal dynamics such as access to contraceptive information, bodily autonomy, institutional influences, and relational factors.

Chapter 6 concludes the thesis by outlining its contributions to knowledge and implications for policy, practice, and future research. It also reflects on the study's strengths and limitations, offering considerations for methodological and ethical practice in adolescent SRH research.

CHAPTER 2

LITERATURE REVIEW

2.1. Literature Review Introduction

The previous chapter thoroughly examines adolescent pregnancy and contraceptive use, focusing on the influence of sociocultural factors and the accessibility of contraceptive services, both globally and in Thailand. The analysis in chapter 1 highlights the challenges adolescents face in accessing and utilising contraception, shaped by cultural norms such as familial and gender roles, societal stigma around adolescent sexual health, and gaps in reproductive health services availability. Building on this foundation, the current chapter presents a narrative literature review to systematically explore these dynamics, identifying key gaps and trends. By doing so, it establishes a critical framework for addressing the complexities surrounding adolescent contraceptive use, thereby informing the study's objectives.

2.2. Review Methodology: Narrative Review

A narrative review synthesises existing research, of multiple types and sources, on a specific topic, employing a descriptive approach to identify key themes, trends, and research gaps within the literature (Ferrari, 2015; Grant & Booth, 2009). It contrasts somewhat with systematic reviews by offering methodological flexibility, enabling a broader exploration of complex issues (Baumeister & Leary, 1997). However, incorporating structured search strategies and explicit inclusion criteria strengthens transparency and mitigates potential bias (Greenhalgh et al., 2018). This chapter

employs a narrative review approach, adopting some of the principles of systematic review to enhance methodological rigour (Greenhalgh et al., 2018; Popay et al., 2006).

The proposed study aims to develop a substantive theory on perceptions, experiences, and decision-making regarding postpartum contraceptive injectables and subdermal implants, using Constructivist Grounded Theory (CGT). The narrative review serves as a foundation for this, offering a nuanced understanding of the sociocultural and systemic factors influencing contraceptive use among postnatal adolescents. This synthesis is crucial for generating grounded theories that are robust and grounded in the real-world contexts (Ferrari, 2015). By critically engaging with the literature, the study highlights key sociocultural and systemic factors shaping adolescent reproductive behaviours, including cultural norms, healthcare accessibility, and societal pressure. These insights justify the methodological choices of CGT while establishing the study's academic foundation.

The narrative review approach supports CGT's iterative nature, synthesising diverse perspectives while allowing theoretical constructs to emerge through interaction with data (McGhee et al., 2007). This approach is preferred over other potential review types such as scoping reviews which prioritise breadth over depth, mapping research without the critical synthesis required for substantive theory development (Lockwood et al., 2019; Tricco, Antony, Soobiah, Kastner, Cogo, et al., 2016a; Tricco, Antony, Soobiah, Kastner, MacDonald, et al., 2016b). Their static and descriptive nature makes scoping reviews less suitable for CGT's iterative approach, where theory develops dynamically through interaction with data (Khalil et al., 2016).

GT benefits from an inductive approach as it allows theories to emerge directly from the data rather than imposing pre-existing frameworks (Wolfswinkel et al., 2013). By

maintaining a broad and flexible approach, the review incorporates diverse methodologies, capturing a wide range of factors influencing decision-making without constraints from a fixed theoretical lens (Floersch et al., 2010).

In conclusion, the traditional narrative review is suitable for CGT studies by offering a flexible, comprehensive method for exploring complex topics like postpartum contraceptive use. By avoiding interpretive frameworks and embracing an inductive approach, it ensures that theoretical constructs are grounded in the data, allowing for nuanced and contextually rich theories.

2.3. Review Aim and Objectives

The purpose of this narrative review is to systematically analyse existing evidence on adolescent pregnancies, postnatal contraceptive practices, and decision-making processes, with a specific focus on the factors influencing contraceptive use. This review aims to identify and explore gaps in the literature and provide a comprehensive understanding of the sociocultural, psychological, and economic elements shaping contraceptive choices among adolescent mothers.

The central research question guiding this review is:

> *"What factors, including barriers and facilitators, influence adolescent mothers' decision-making processes when choosing contraceptive methods, particularly subdermal implants and injectable contraceptives?"*

The review is guided by the following key objectives:

1. **Identify the primary factors influencing contraceptive choices:**

Explore the socio-cultural, psychological, and economic factors that impact adolescent mothers' decisions to use or not use subdermal implants and injectable contraceptives. This includes understanding the interactions between personal, familial, and environmental influence.

2. **Assess barriers and facilitators affecting contraceptive use:**

Investigate the specific barriers and facilitators that hinder or encourage the use of subdermal implants and injectable contraceptives. This objective covers barriers at individual, community, and systemic levels, while also examining facilitators such as educational interventions, peer and family support, healthcare provider engagement, and access to services.

3. **Analyse adolescent decision-making processes:**

Examine how adolescent mothers make decisions regarding contraceptive use, with particular attention to the roles of family, peers, healthcare providers, and personal beliefs. This analysis centres on how internal and external factors interact to shape postnatal contraceptive decision-making.

2.4. Review Methods

2.4.1. Literature Searching

The search strategy for this narrative review followed a comprehensive three-step process to locate both published and unpublished studies from 2000 to October 2024.

First, initial searches were conducted across multiple electronic databases, including Cumulative Index to Nursing and Allied Health Literature (CINAHL), ProQuest, Medical Literature Analysis Retrieval System (MEDLINE), and Web of Science, chosen for their extensive coverage of medical and health-related research. Second, more detailed search strategy was developed using the key terms from the titles and abstracts of key articles, as well as the index terms assigned to them. This detailed search strategy, incorporating all identified keywords and index terms, was adapted for each database. Third, the reference lists of all included sources were thoroughly screened for additional studies. After the viva examination, additional searches were conducted between April and July 2024 to ensure no relevant studies were overlooked. This process followed the constant comparative technique integral to CGT, enabling an iterative and evolving examination of the literature.

To ensure comprehensive coverage, the search strategy was applied across multiple electronic databases and used both keywords and Medical Subject Headings (MeSH). Specific MeSH terms, such as "Adolescent Mothers," "Contraceptive Implants," "Decision Making," and "Postpartum Period" were included to capture the most relevant studies. Table 6 provides a summary of the key concepts, synonyms, and related terms used in this review, while Appendix 1 details the complete search strategies, including Boolean operators and final search strings.

Table 6: Key Concepts and Search Terms

Key Concepts	Search Terms (Synonyms/related terms/alternative terms for keywords)
Population: Adolescents, adolescent mothers, adolescent pregnant women	Adolescent* or teenager* or youth or young women or girl* or adolescent mother*or teenage mother*or young adult mother* or young mother* or nulliparous adolescent* or multiparous adolescent* or postpartum adolescent* or parenting adolescent*
Phenomenon of Interest: Influencing factors, decision-making, barriers, facilitators	decision-making or decision-making process* or decision* or choice* or barrier* or facilitator* or enabler* or benefit* or factor* facilitating or influencer* or determinant*
Context: Postpartum contraceptive methods, LARC	contraceptive* or contraception or LARC* or contraceptive method* or birth control* or inpatient LARC* or postnatal contraceptive* or postpartum contraceptive* or implant* or IUD* or Intrauterine device* or injectable contraceptive* or hormonal contraception

In addition to published literature, grey literature sources such as Google Scholar, WHO reports, and guidelines were reviewed. All identified articles were imported into EndNote, where titles and abstracts were screened for relevance, followed by Full-text reviews to ensure that selected studies met all inclusion criteria and aligned with the review's aims. To address potential duplication, the de-duplication feature in EndNote was utilised to identify and remove duplicate records before the screening process began.

To enhance transparency and coherence, a detailed flowchart outlining the literature search, screening, and selection process is included in Section 2.5. Results of Literature Search, Screening, Selection. This approach provides readers with a clear

understanding of the methodology, improving the review's reliability and replicability (Baethge et al., 2019).

2.4.2. Study Screening and Selection

Inclusion and Exclusion Criteria

The inclusion and exclusion criteria were developed to align study selection with this narrative review's objective. These criteria define the review's parameters by specifying participant characteristics, phenomenon of interest, context, study designs, and publication timeframe. The structured approach ensures that relevant literature is included while excluding studies outside the review's focus.

Participants:

- **Inclusion:** The review targets adolescent females aged 10-19 years who are pregnant or postpartum, capturing contraceptive decision-making experiences unique to this demographic during these critical periods.
- **Exclusion:** Studies involving only adult women (aged 20 or above) are excluded unless they provide distinct findings on adolescents within mixed-age samples. Non-pregnant participants or studies unrelated to pregnancy or postpartum periods are also excluded. Studies covering a wide rage age of (e.g., 15-49 years) are included only if specific data or subgroup analyses for adolescents are provided. Reasons for exclusions were documented in the systematic report.

Phenomenon of Interest:

- **Inclusion:** Eligible studies must focus on factors influencing contraceptive decision-making among adolescent mothers, specifically regarding subdermal implants and injectable contraceptives, including barriers and facilitators. Studies on other contraceptive methods are included only if they also address implants or injectables among adolescents.
- **Exclusion:** Studies that solely address contraceptive use without examining decision-making processes, or those focusing exclusively on contraceptive methods outside implants or injectables, are excluded. Studies unrelated to adolescent mothers' decision-making during pregnancy or postpartum are also excluded.

Context:

- **Inclusion:** The review includes studies conducted during pregnancy and postpartum periods to capture the distinct physical, emotional, and social factors these life stages. Studies examining contraceptive choices are included from both international and regional contexts, covering diverse settings such as community and clinical environments. This approach ensures a comprehensive understanding of contraceptive decision-making across varied cultural, geographic, and healthcare environments.
- **Exclusion:** Studies focusing on general adolescent health or preconception care are excluded to maintain focus on contraceptive decision-making during and after pregnancy.

Study Design:

- **Inclusion:** Empirical research studies, including qualitative, quantitative, and mixed methods, are eligible to ensure a diverse methodological perspective. Only English language is included.
- **Exclusion:** Non-empirical works, including opinion pieces and editorials, are excluded unless they provide substantial theoretical frameworks or evidence relevant to the topic.

Time Period:

- **Inclusion:** Studies published from 2000 to October 2024 are included to capture recent evidence and changes in contraceptive practices influencing adolescent mothers' decision-making. This timeframe captures changes in healthcare policies, social attitudes, and contraceptive technologies over the past two decades.
- **Exclusion:** Studies published before January 2000 are excluded to avoid outdated data that may not reflect current trends and challenges.

Table 7: Inclusion and Exclusion Criteria

Criteria	Inclusion	Exclusion
Type of participants	Adolescent females aged 10 to 19 years., including pregnant women and postpartum adolescents	Adult women aged 20 years and older.
Phenomenon of Interest	Studies examining factors influencing contraceptive use or decision-making among adolescents	Studies not addressing contraceptive use or c decision-making in adolescents

Criteria	Inclusion	Exclusion
Context	Pregnancy and postpartum period	Studies conducted outside of pregnancy or postpartum contexts
Study design	All empirical study types (qualitative, quantitative, mixed methods)	Non-empirical works (e.g., opinion pieces, editorials)
Language	English	Publications in languages other than English
Time period	Studies published from 2000 to October 2024	Studies published before 2000

2.4.3. Critical Appraisal

While narrative reviews typically lack a formal critical appraisal step, this study addresses this limitation by conducting an appraisal using Joanna Briggs Institute (JBI) critical appraisal tools (Aromataris & Munn, 2020, 2024) This approach ensures the critical evaluation of the quality of the evidence, strengthening the robustness and credibility of the findings (Grant & Booth, 2009). The JBI tools were tailored to various study designs, including randomised controlled trials (RCTs), cross-sectional studies, and qualitative research, enabling a systematic evaluation of methodological quality and facilitating the identification of knowledge gaps for further exploration.

All studies included in this review met the criteria for critical appraisal as per the JBI tools. None of the studies were excluded following the appraisal process, as all were deemed to contribute meaningfully to the aims of the review. This approach ensured that the analysis was comprehensive while maintaining a focus on the methodological rigor of the included studies.

The critical appraisal was conducted independently by the PhD student, following JBI guidelines to ensure methodological rigor and transparency. Supervisory oversight verified adherence to established standards, ensuring consistency and accuracy in the appraisal process. By combining a structured appraisal process with inclusive study selection, this review overcomes the methodological limitations of narrative reviews while contributing valuable insights into adolescent contraceptive decision-making (Ferrari, 2015).

2.4.4. Data Extraction

Data extraction in this narrative review was conducted to systematically capture essential information from each source, ensuring alignment with the research objectives (Aromataris & Munn, 2024). An initial data extraction table was developed, including key fields such as author(s), year of publication, country of origin, aims/purpose, population and sample size, methodology, key findings, and relevance to the review objectives. These fields were chosen to provide a detailed understanding of study characteristics, methodologies, and their contributions to addressing the research questions. Consistency and accuracy in data extraction were maintained by adhering to a systematic process and rechecking entries against the source materials. A summary of the data extraction process, including its role in structuring and analysing the findings, is presented in Appendix 1.

2.4.5. Synthesised Thematic Analysis

The data synthesis in this narrative review employed a thematic analysis approach, as outlined by Thomas & Harden (2008), to comprehensively explore the factors influencing postpartum contraceptive decision-making among adolescent mothers. To

ensure methodological rigour, qualitative and quantitative studies were analysed separately before being integrated into a cohesive synthesis.

Qualitative Analysis: Key concepts were extracted from qualitative studies and organised into descriptive themes, maintaining alignment with the original data. These descriptive themes were then developed into analytical themes to generate novel insights that extended beyond the primary studies, uncovering deeper socio-cultural and psychological influences on contraceptive behaviours.

Quantitative Analysis: Quantitative data were systematically reviewed to identify patterns, associations, and prevalence rates related to postpartum contraceptive use. Key findings, such as uptake rates of contraceptive methods and the influence of healthcare access, were compared across studies to ensure consistency and validity.

Integration of Findings: The final stage of the synthesis involved integrating qualitative and quantitative findings to identify congruencies and discrepancies. This iterative process bridged subjective experiences with statistical evidence, offering a holistic understanding of the research question. By combining empirical evidence with nuanced insights into personal, socio-cultural, and psychological factors, the review provides actionable recommendations for research, policy, and practice (Thomas & Harden, 2008).

The findings were organised into thematic categories, highlighting key influencing factors such as healthcare access, cultural and socioeconomic influences, perceived barriers, and contraceptive knowledge. This thematic framework allowed for a robust comparative analysis, emphasising shared patterns across studies while acknowledging unique divergences arising from methodological and contextual

variations. Each study's outcomes were systematically aligned with the review objectives, contextualised through an examination of population demographics, cultural settings, and study designs.

2.5. Results of Literature Search, Screening, Selection

The study selection process and search results were thoroughly documented to ensure transparency and reproducibility. The PRISMA 2020 checklist and flowchart (Page et al., 2021) were followed to align with current systematic review reporting guidelines.

A PRISMA flowchart was used to visually represent each stage of the study selection, including identification, screening, eligibility assessment, and inclusion (Page et al., 2021). This flowchart provided a structured overview, tracking the number of records identified, included, and excluded, along with documented exclusion reasons, such as duplication or irrelevance (Page et al., 2021).

A total of 1,113 records were identified, including 1,052 records from database searches and 61 from manual searches of reference lists and grey literature. After the removal of 632 duplicates, 481 unique studies remained for the screening process.

The initial screening involved reviewing titles and abstracts to determine their relevance to the research objectives. At this stage, 464 studies were excluded due to criteria such as irrelevant population, inappropriate outcomes, or insufficient focus on postpartum contraception. Consequently, 17 studies proceeded to full-text screening. Following this review, 6 studies were excluded for reasons such as failing to meet inclusion criteria, lacking adolescent-specific findings, or providing insufficient data

for meaningful analysis. The PRISMA flowchart (see Figure 1) provides a detailed summary of the excluded studies and the reason for their exclusion.

Ultimately, 11 studies were included in the final synthesis, consisting of 5 quantitative studies and 6 qualitative studies. These studies were selected based on their alignment with the research objectives and their contribution to understanding factors influencing postpartum contraceptive decision-making among adolescent mothers. These studies represent a range of cultural and socioeconomic contexts, including research conducted in both high- and low-income countries, providing a diverse and rich foundation for thematic analysis. The methodologies used in the included studies, such as qualitative interviews, surveys, and mixed methods, offer comprehensive perspectives on the topic.

The PRISMA flowchart (see Figure 1) illustrates the study selection process, detailing each stage from record identification to the final inclusion. It includes the number of records identified, duplicates removed, studies screened, full-text articles assessed, along with the reasons for exclusion during the full-text review.

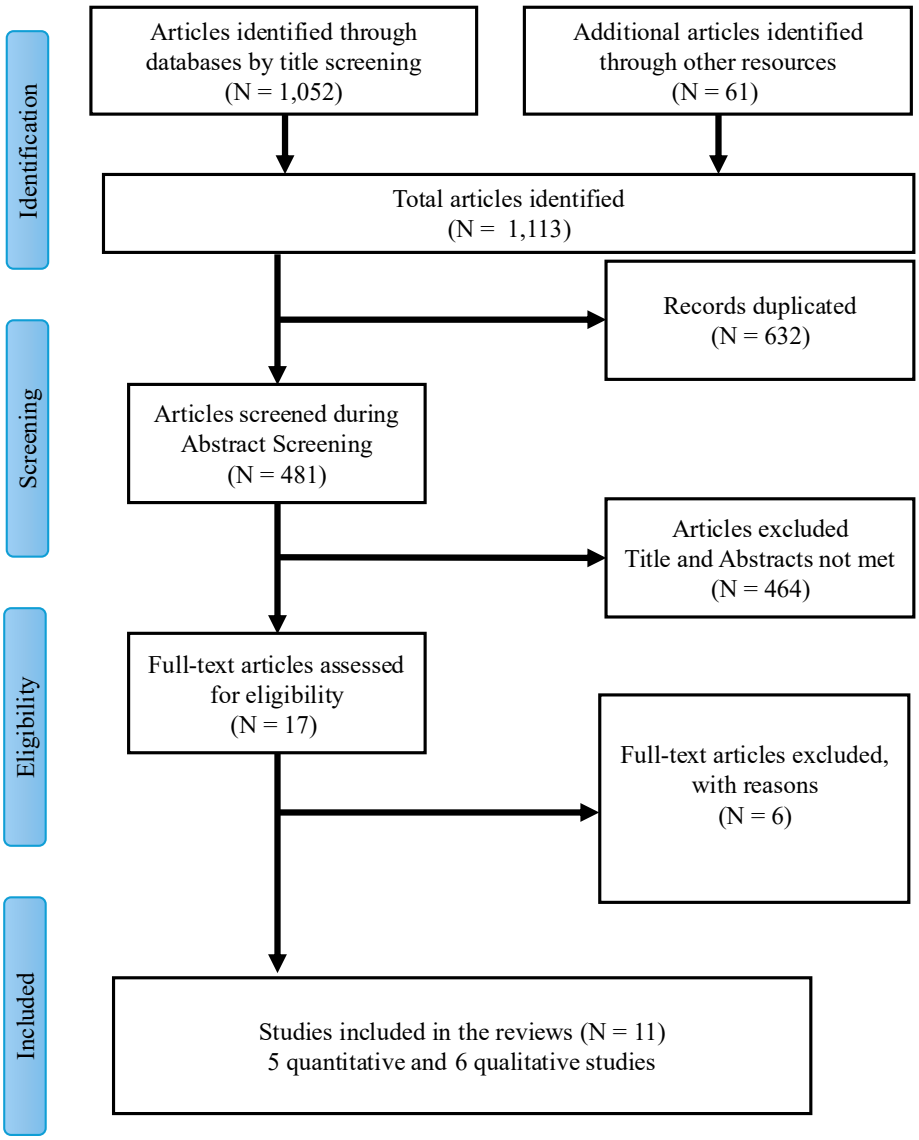

Figure 2: PRISMA Flowchart Depicting the Study Selection Process

2.6. Study Characteristics and Key Features

The review included 11 studies: 5 quantitative and 6 qualitative, conducted across diverse socio-cultural and geographical contexts. The studies originated from countries such as South Africa, the US, Thailand, and Bangladesh, representing both high- and low-resource healthcare settings. These studies collectively explore adolescent postnatal contraceptive use, identifying universal challenges such as low uptake of

LARCs, and uncovering region-specific barriers influenced by cultural norms, healthcare accessibility, and systemic issues. Together, they provide critical insights into socio-cultural and structural determinants shaping contraceptive decision-making among adolescent mothers.

2.6.1. Quantitative Study Characteristics and Key Features

The five quantitative studies reviewed provide critical insights into adolescent postnatal contraceptive use, highlighting shared challenges within diverse socio-cultural and healthcare contexts. Despite variations in geographic settings, such as South Africa, Thailand, and the US, common barriers to contraceptive uptake include limited access to services, inadequate education, and cultural influences. While awareness and use of contraceptives have improved globally, the uptake of LARCs remains significantly low, especially in low-resource settings. These findings underscore the importance of evidence-based policy and practice to address these barriers and improve contraceptive care among adolescent mothers.

To investigate these issues, the five quantitative studies employed diverse research designs, each contributing unique insights into patterns and predictors of contraceptive use. This included descriptive studies (Mbambo et al., 2006; Wilson et al., 2013), a cross-sectional survey (Chacko et al., 2016), a prospective cohort study (Lanjakornsiripan et al., 2015), and a RCT (Kaewkiattikun, 2017).

Wilson et al. (2013), using multi-state data from the Pregnancy Risk Assessment and Monitoring System (PRAMS), identified limited access to services and inadequate contraceptive education as key barriers to postpartum care. Similarly, Chacko et al. (2016) found that peer dynamics, clinic accessibility, and cultural perceptions significantly influenced contraceptive intentions among minority adolescents, with

only 23% intending to use LARCs. In Thailand, Lanjakornsiripan et al. (2015) reported that 37.5% of adolescents had never used contraceptives, and only 16.8% used them consistently. Additionally, 66% of pregnancies were unintended, with younger age (≤16 years) and low educational attainment emerging as significant predictors of non-use and unintended pregnancies. Kaewkiattikun (2017) demonstrated that immediate postpartum contraceptive counselling significantly increased LARC uptake, with 72% of the intervention group adopting LARCs compared to only 28% in the control group, underscoring the importance of timely interventions in improving postpartum contraceptive outcomes.

Table 8: Key Characteristics and Findings of Quantitative Studies

Author(s)	Year	Country	Study Design	Participants	Key Findings	Recommendations
Mbambo, Ehlers, Monareng	2006	South Africa	Quantitative Descriptive	107 adolescent mothers aged 19 or younger	45.79% believed contraceptives prevented pregnancies; 59.81% used contraceptives postpartum (45.31% used injections); misconceptions about clinic hours and side effects were barriers.	Provide comprehensive contraceptive education to address misconceptions and increase access to services with extended clinic hours.
Wilson, Fowler, Koo	2013	USA	Quantitative Cross-sectional	3207 adolescent mothers aged 15-19	81% used some form of contraception postpartum; LARC usage was low (11% IUDs, 1% implants); prenatal counseling and postpartum checkups increased the likelihood of using more effective methods.	Enhance prenatal and postpartum contraceptive counselling to promote the use of effective methods like LARC and reduce unprotected sex rates.
Chacko, Wiemann, Buzi, Kozinetz, Peskin, Smith	2016	USA	Quantitative Cross-sectional	247 pregnant minority adolescents aged 15-18	23% intended to use LARC, 53% preferred short-/medium-acting hormonal methods, and 24% preferred nonhormonal methods; negative partner influence and perceived ineffectiveness of LARC were key barriers.	Provide targeted education and counselling to address partner influence and misconceptions about LARC effectiveness to increase its uptake.
Lanjakornsiripan et al.	2015	Thailand	Prospective Observational Cohort	200 pregnant adolescents aged 15-19	37.5% had never used contraceptives, and only 16.8% used them regularly; 66% of pregnancies were unintended; age (≤16 years) and low educational status predicted non-use and unintended pregnancy.	Develop comprehensive sex education and contraceptive counselling for younger adolescents and those with lower educational levels to prevent unintended pregnancies.
Kaewkiattikun K.	2017	Thailand	Randomised Controlled Trial	200 adolescent mothers aged 14-19	72% of the intervention group chose LARC (IUD or implant) compared to 28% in the control group; immediate postpartum counseling significantly increased LARC use (aOR = 5.62).	Implement immediate postpartum contraceptive counseling as a standard practice to increase LARC uptake among adolescent mothers.

The participant demographics across the studies reflect the diverse socio-cultural and healthcare contexts in which the research was conducted, highlighting the universal yet context-specific challenges faced by adolescent mothers. Mbambo et al. (2006) conducted a study in South Africa involving 107 adolescent mothers, aged 19 or younger, from predominantly rural, low-income communities, where limited access to healthcare and misconceptions about contraceptives posed significant barriers. Wilson et al. (2013) analysed multi-state data on 3,207 adolescent mothers, aged 15-19, primarily from racial and ethnic minorities, while Chacko et al. (2016) focused on 247 pregnant minority adolescents aged 15-18 in urban clinics in Houston, Texas. Both studies highlighted the impact of systemic inequalities and partner influence on contraceptive use.

In Thailand, Lanjakornsiripan et al. (2015) and Kaewkiattikun (2017) studied adolescent mothers aged 14-19, many of whom had low educational attainment and experienced societal pressure surrounding fertility and motherhood. These studies identified younger age, low educational attainment, and cultural stigma as critical predictors of contraceptive non-use and unintended pregnancies. Additionally, the findings emphasised the limited uptake of LARCs in these contexts, often linked to inadequate counselling and misinformation. Collectively, these studies underscore how socio-cultural, economic, and systemic factors intersect to shape adolescent contraceptive use.

2.6.2. Qualitative Study Characteristics and Key Features

This discussion synthesises the key features of six qualitative studies that explored the diverse factors influencing contraceptive use among adolescents in various socio-cultural settings (Chernick et al., 2015; Coates et al., 2018; Hoopes et al., 2016; Mardi

et al., 2018; Shahabuddin et al., 2016; Wilson et al., 2011). By analysing methodologies, participant demographics, and socio-cultural contexts, this section identifies recurring themes that shape adolescent contraceptive behaviours, including cultural stigma, misinformation, and systemic barriers.

Qualitative methodologies, such as semi-structured interviews and Focus Group Discussions (FGDs), were widely employed across the studies, enabling the exploration of complex and context-specific factors influencing contraceptive behaviours among adolescents. For example, Shahabuddin et al. (2016) used semi-structured interviews to uncover how cultural stigmas, family influence, and misconceptions shaped contraceptive decision-making among married adolescent girls in Bangladesh. Similarly, Chernick et al. (2015) employed semi-structured interviews in emergency department settings to identify barriers such as mistrust, health concerns, and ambivalent pregnancy intentions, emphasising the importance of tailored interventions. These methods proved effective in capturing adolescents' personal beliefs, perceptions of healthcare systems, and the social pressures that quantitative approaches may overlook.

Table 9: Key Characteristics and Findings of Qualitative Studies

Author(s)	Year	Country	Study Design	Participants	Key Findings	Recommendations
Chernick et al.	2015	United States	Qualitative	14 sexually active adolescent females (16-19 years) presenting in an ED setting.	Unique barriers to contraceptive use include mistrust, health concerns, and ambivalent pregnancy intentions. High interest in ED-based contraceptive interventions.	Provide tailored, comprehensive contraceptive counselling and education in the ED, ensuring confidentiality and addressing specific needs of adolescents.
Wilson et al.	2011	United States	Qualitative	21 adolescent first-time mothers (13-17 years) from rural and urban areas.	High postpartum contraceptive discontinuation due to side effects, loss of Medicaid, and limited access to services.	Enhance postpartum counselling, expand Medicaid coverage, and promote parental support to prevent rapid repeat pregnancies and improve contraceptive use consistency.
Shahabuddin et al.	2015	Bangladesh	Qualitative	35 married adolescent girls (12-19 years)	Low autonomy in contraceptive decision-making due to influence from husbands and mothers-in-law, misinformation, and socio-cultural beliefs.	Engage family members in interventions, correct misconceptions through community education, and empower girls with knowledge and communication skills to improve autonomy.
Mardi et al.	2018	Iran	Qualitative	14 married teenage women (13-19 years)	Limited contraceptive use due to pressure to prove fertility, lack of knowledge, and misconceptions about contraceptive methods.	Implement culturally sensitive education and involve the community to support informed contraceptive choices and reduce pressures to conceive early.
Hoopes et al.	2016	United States	Qualitative	30 adolescent females (14-18 years) diverse in race/ethnicity	Preferences for LARC are influenced by misconceptions, social networks, and individual circumstances. Knowledge gaps hinder informed contraceptive decisions.	Use the PRIME framework in counselling to address preferences, provide accurate information, and support personalised contraceptive choices.
Coates et al.	2018	Southern US	Qualitative	15 adolescent females (14-21 years) mostly African American	High awareness of LARC, but low uptake due to concerns about side effects, invasiveness, and social influences. Reliance on short-term methods leads to inconsistent use.	Address misconceptions through comprehensive, patient-centred education and personalised counselling. Use Motivational Interviewing to align choices with reproductive goals.

The included studies represent diverse geographical and cultural contexts, spanning urban healthcare settings in the US and rural communities in Bangladesh and Iran. In the US, Chernick et al. (2015), Hoopes et al. (2016), and Coates et al. (2018) focused on sexually active adolescent aged 14-21 years, predominantly African American or Hispanic, who faced barriers such as mistrust of contraceptives, fear of side effects, and misinformation. These findings underscore how racial disparities, healthcare access issues, and social networks shape contraceptive decision-making in urban contexts.

Conversely, studies in Bangladesh and Iran (Shahabuddin et al., 2015; Mardi et al., 2018) included the married adolescent girls aged 12-19 years, whose reproductive choices were heavily influenced by husbands and mothers-in-law. These participants faced sociocultural pressures to prove fertility, limiting their ability to use contraceptives effectively. Wilson et al. (2011) explored postpartum contraceptive use among adolescent mothers in North Carolina, highlighting challenges such as healthcare access disparities and contraceptive discontinuation due to side effects or loss of Medicaid coverage.

These findings highlight recurring barriers, such as limited autonomy in decision-making (Shahabuddin et al., 2016; Mardi et al., 2018), and knowledge gaps linked to systemic inequalities (Hoopes et al., 2016; Coates et al., 2018). Collectively, these studies underscore the critical role of qualitative methodologies in uncovering the nuanced socio-cultural and systemic barriers adolescents face in accessing and using contraceptives.

2.7. Results of Critical Appraisal

This section synthesises the critical appraisal conducted on the 11 included studies, comprising 5 quantitative and 6 qualitative studies. Given the distinct methodological designs, the appraisal findings are reported separately to ensure clarity and accuracy in evaluating the unique characteristics, strengths, and limitations of each study type.

The quantitative studies were assessed using the JBI Critical Appraisal Checklist for Analytical Cross-Sectional Studies, Randomised Controlled Trials, and Quasi-Experimental Studies (Aromataris & Munn, 2020). These tools evaluated each study's methodological rigor, reliability, and alignment with the research objectives, focusing on criteria such as sampling strategies, validity and reliability of outcome measurements, and control of confounding factors.

The qualitative studies were evaluated using the JBI Critical Appraisal Checklist for Qualitative Research (Aromataris & Munn, 2020). This checklist allowed for a tailored evaluation of each study, focusing on credibility, dependability, and transferability. Across both sets of studies, the JBI tools ensured a standardised and rigorous appraisal process, identifying critical strengths that bolster the review's findings while also highlighting limitations that require caution in interpretation. The quantitative studies generally excelled in measuring outcomes and controlling variables but often faced challenges with sampling and confounding. Meanwhile, the qualitative studies excelled in contextual richness but revealed occasional gaps in dependability and reflexivity.

This comprehensive appraisal process ensures that both quantitative and qualitative studies contribute robust and reliable evidence to the review. By respecting the methodological differences between study types, the appraisal strengthens the

credibility of the findings and provides clear direction for future research to address identified gaps, particularly in sampling strategies and methodological transparency.

2.7.1. Critical Appraisal of Included Quantitative Studies

This section synthesises the results of the critical appraisal conducted on the five included quantitative studies, assessing their methodological quality, reliability, and relevance to the research objectives. Using JBI critical appraisal checklists (Aromataris & Munn, 2020), each study was evaluated based on key criteria such as the clarity of inclusion criteria, the validity and reliability of measurement instruments, the identification and control of confounding factors, and the appropriateness of statistical analyses.

Table 10: Summary of Critical Appraisal Results for Selected Studies

Study ID	Study Type	Sampling Method	Outcome Measurement Validity	Confounding Factors Controlled	Ethical Considerations	Overall Quality
Chacko et al. (2016)	Cross-sectional	Defined inclusion criteria; minority adolescent sample	Validated survey tools for contraceptive intentions	Controlled via multinomial logistic regression	Ethical measures reported	High
Wilson et al. (2013)	Cross-sectional	PRAMS dataset, large sample from multiple states	Standardised, validated questionnaire	Controlled for demographics and healthcare access using multivariate logistic regression	Self-reported data may introduce bias	High
Mbambo et al. (2006)	Descriptive study	Convenience sampling, two clinics	Partially validated; translation issues noted	Not controlled; no confounding adjustment	Ethical standards met, but generalisability limited	Moderate
Lanjakornsiripan et al. (2015)	Prospective observational	Cohort from a single population in Thailand	Structured interviews by trained interviewers	Controlled using multivariate logistic regression	Limited geographic scope: ethical approval reported	High
Kaewkiattikun (2017)	Randomised Controlled Trial	Randomisation and allocation concealment used	Consistent, reliable measurement	Controlled using logistic regression	Blinding not feasible; minor loss to follow up	High

The five quantitative studies demonstrated overall robust methodological rigour, with notable strengths and some variability in quality:

Strengths: Most studies employed well-defined sampling strategies, validated measurement instruments, and appropriate statistical methods, such as multivariate logistic regression, to control for confounding factors and assess relationships accurately.

Limitations: Some studies, such as Mbambo et al. (2006), faced challenges in sampling representativeness, particularly the use of convenience sampling, and inconsistencies in addressing confounding factors. These limitations may affect the reliability and generalisability of the findings.

Key Observations

High-Quality Studies: Four studies (Chacko et al., 2016; Wilson et al., 2013; Lanjakornsiripan et al., 2015; Kaewkiattikun, 2017) met most JBI criteria, demonstrating robust methodological designs and strong statistical analyses.

Moderate-Quality Study: Mbambo et al. (2006) was rated as moderate quality due to limitations in sampling methods and potential biases in data collection and reporting. While offering valuable contextual insights, its findings require cautious interpretation.

Four of the five studies—Chacko et al. (2016), Wilson et al. (2013), Lanjakornsiripan et al. (2015), and Kaewkiattikun (2017)—were classified as high quality. These studies met most JBI appraisal criteria, demonstrating strong methodological designs, with clear identification and management of confounding factors and the application of

statistical analyses that enhance the reliability of their findings. In contrast, Mbambo et al. (2006)—was rated as moderate quality, primarily due to small sample sizes and potential biases in data collection and reporting. Although this study provided valuable context-specific insights, its findings should be interpreted cautiously, particularly regarding their generalisability beyond the study setting.

2.7.2. Critical Appraisal of Included Qualitative Studies

This section synthesises the critical appraisal results of the six included qualitative studies, evaluated using the JBI Critical Appraisal Checklist for Qualitative Studies (Aromataris & Munn, 2020). The studies were assessed on ten criteria, including congruity between research methodology and objectives, appropriateness of data collection methods, clarity in the representation of participants' voices, and the presence of researcher reflexivity.

The findings from the appraisal, summarised in Table 11, highlight methodological strengths across most studies, particularly in their alignment of research methodologies with objectives, ethical considerations, and effective representation of participants' voices. However, certain limitations were noted, particularly in researcher reflexivity—a critical element in qualitative research to address potential biases. Additionally, the use of convenience sampling in some studies may limit the generalisability of findings beyond the specific socio-cultural contexts examined.

Table 11: Summary of Critical Appraisal and Strengths & Limitations of the Qualitative Studies

Study	Congruity with Methodology	Researcher Reflexivity	Ethical Approval	Participant Voice Representation	Data Analysis and Interpretation	Overall Quality	Strengths	Limitations
Coates et al. (2018)	Yes	No	Yes	Yes	Thematic analysis	High	Strong alignment between methodology and objectives; ethical approval; participants' voices well represented	Lacks researcher reflexivity, which limits transparency on potential biases
Hoopes et al. (2016)	Yes	No	Yes	Yes	Thematic analysis	High	Effective use of in-depth interviews to explore adolescent perspectives; ethical approval obtained	Absence of reflexive statement on researcher influence; limited detail on potential biases
Mardi et al. (2018)	Yes	Partial	Yes	Yes	Thematic analysis	High	Comprehensive exploration of cultural and social factors; partial reflexivity with researcher's cultural background	Reflexivity not fully addressed; results may be affected by personal biases not accounted for
Shahabuddin et al. (2015)	Yes	Partial	Yes	Yes	Thematic and content analysis	High	Strong use of local context and cultural insight; multiple methods (IDIs and FGDs) enhance depth	Limited reflexivity: findings might reflect researchers' cultural assumptions due to partial reflexivity
Wilson et al. (2011)	Yes	No	Yes	Yes	Content analysis	High	Robust content analysis; good representation of adolescent mothers' voices; ethical standards maintained	Lack of reflexivity; potential researcher influences on interpretation not discussed
Chernick et al. (2015)	Yes	No	Yes	Yes	Thematic analysis (Health Belief Model)	High	Strong thematic analysis based on Health Belief Model; addresses barriers in ED settings; ethical approvals	No reflexivity statement: reliance on convenience sampling could affect generalisability

Six studies—Coates et al. (2018), Hoopes et al. (2016), Mardi et al. (2018), Shahabuddin et al. (2015), Wilson et al. (2011), and Chernick et al. (2015)—were evaluated as high quality, demonstrating strong methodological rigour and clear alignment between their research questions and qualitative methodologies. These studies provided insights into how social norms, service delivery environments, and provider attitudes shape contraceptive use among adolescents, though consistent limitations in researcher reflexivity and reporting transparency were observed.

Coates et al. (2018) effectively utilised thematic analysis to explore barriers to LARC use among adolescents in the Southern United States. The study presented participants' voices comprehensively, using direct quotes to highlight key themes such as healthcare provider biases and misconceptions about contraceptive side effects. However, the absence of a detailed reflexivity statement limited transparency regarding the potential influence of the researchers on data collection and interpretation.

Similarly, Hoopes et al. (2016) employed robust data collection and analysis methods through in-depth interviews conducted within a school-based health centre. The study proposed a counselling framework tailored to adolescents' needs, supported by thematic findings. However, the researchers did not adequately address positionality or consider how their perspectives may have influenced data interpretation, potentially impacting the credibility of the findings.

Chernick et al. (2015) explored barriers and facilitators to contraceptive use in an emergency department setting. Findings were linked to practical implications, highlighting the potential for emergency department-based interventions while the study demonstrated strong thematic analysis, it lacked reflexivity, which is crucial for enhancing transparency and trustworthiness in qualitative research.

Studies conducted in rural and conservative contexts—Mardi et al. (2018) (Iran), Shahabuddin et al. (2015) (Bangladesh)— examined socio-cultural influences on contraceptive behaviours. Mardi et al. (2018) identified barriers such as cultural pressure to prove fertility, misconceptions about contraception, and community expectations favouring early childbearing. Despite offering rich insights, the study was limited by insufficient reflexivity and a lack of detail on the data analysis process, raising concerns about the transparency of its findings. Similarly, Shahabuddin et al. (2015) provided a nuanced understanding of how traditional gender roles restricted adolescent girls' autonomy over reproductive choices. However, insufficient detail on coding strategies and theme development undermined the transparency of the thematic analysis

Wilson et al. (2011) explored postpartum contraceptive use among adolescent mothers in the US, identifying key barriers such as limited knowledge, loss of healthcare coverage, and disruptions in care continuity. In this study, NVivo software was used to support the systematic organisation, coding, and retrieval of qualitative data, facilitating the management of large datasets. However, it is crucial to emphasise that NVivo does not conduct analysis autonomously; rather, it serves as a tool that enables researchers to structure and categorise data for thematic interpretation. While NVivo enhances efficiency and transparency in data management, the process of thematic development and analytical insight remains entirely researcher driven. The study's credibility was affected by the lack of a detailed explanation of coding strategies and theme validation processes. Additionally, the absence of reflexivity further constrained transparency, limiting the reader's ability to assess potential researcher bias.

2.8. Key Findings Presentation

2.8.1. Key Themes of Quantitative Studies

The analysis of quantitative studies identified two overarching themes that highlight the factors influencing postpartum contraceptive decision-making among adolescent mothers: *Healthcare Barriers and Contraceptive Counselling Gaps and Sociocultural and Socioeconomic Influences on Contraceptive Use.* These themes underscore both systemic and individual-level challenges, providing actionable insights for targeted intervention.

2.8.1.1. Healthcare Barriers and Contraceptive Counselling Gaps

A recurring finding across studies was the low uptake of LARCs compared to SARCs, primarily attributed to insufficient counselling during prenatal and postpartum care. For instance, Wilson et al. (2013) and Chacko et al. (2016) highlighted that inadequate counselling often left adolescent mothers unaware of the benefits and effectiveness of LARCs, leading to missed opportunities for promoting reliable contraceptive options. In contrast, Kaewkiattikun (2017) demonstrated that structured, immediate postpartum counselling significantly increased contraceptive implant uptake among adolescent mothers, emphasising the postpartum period as a critical window for intervention.

Access to consistent follow-up care also emerged as a key factor influencing contraceptive use. Wilson et al. (2013) found that adolescents who attended postpartum checkups and received prenatal contraceptive counselling were more likely to adopt contraceptive methods postpartum. Limited healthcare access, however, posed a substantial barrier. For example, adolescent mothers who missed postpartum visits were

significantly less likely to use contraception, highlighting the importance of integrated and accessible healthcare services.

These findings indicate the need for healthcare systems to prioritise culturally sensitive, timely, and accessible contraceptive education throughout the prenatal and postpartum continuum. Postpartum visits, in particular, represent a crucial opportunity for HCPs to offer personalised, evidence-based counselling that supports adolescent mother in making informed reproductive choices.

2.8.1.2. Sociocultural and Socioeconomic Influence on Contraceptive Use

Sociocultural and socioeconomic factors profoundly shaped contraceptive behaviours among adolescent mothers, creating barriers at both individual and systemic levels. Cultural beliefs, stigma, and misinformation were prominent deterrents. For example, Mbambo et al. (2006) and Lanjakornsiripan et al. (2015) identified fears of contraceptive side effects and societal misconceptions as key barriers, compounded by limited family support and community stigma in non-Western contexts, such as Thailand.

Economic constraints further restricted access to healthcare and contraceptive services. Wilson et al. (2013) revealed that adolescents from lower socioeconomic backgrounds were less likely to access postpartum care, reflecting the cumulative impact of financial barriers, inadequate education, and systemic inequalities. These challenges perpetuate cycles of poor healthcare access and limited contraceptive uptake, exacerbating disparities in reproductive health outcomes.

Table 12: Thematic Synthesis of Key Findings from quantitative studies

Theme	Study	Key Findings	Implications for Practice and Policy
Prevalence and Pattern Contraceptive Choices	Wilson et al. (2013), Chacko et al. (2016), Kaewkiattikun (2017)	Low uptake of LARCs compared to SARCs due to limited counselling (Wilson et al., Chacko et al.) Immediate postpartum counselling increases LARC adoption (Kaewkiattikun)	Standardise immediate postpartum counselling as a routine practice. -Train healthcare providers to emphasise LARCs during counselling.
Barriers to Contraceptive Use	Mbambo et al. (2006), Lanjakornsiripan et al. (2015), Wilson et al. (2013)	Cultural beliefs and misinformation about side effects hinder contraceptive use (Mbambo et al., Lanjakornsiripan et al.) Lack of healthcare access limits contraceptive uptake (Wilson et al.)	Develop culturally sensitive educational interventions. Increase healthcare access in underserved areas.
Impact of Prenatal and Postpartum Counselling	Wilson et al. (2013), Chacko et al. (2016), Kaewkiattikun (2017)	Prenatal counselling increases postpartum contraceptive use (Wilson et al.) Structured postpartum counselling improves LARC adoption (Kaewkiattikun)	Integrate comprehensive counselling into prenatal and postpartum care. Implement follow-up systems to ensure continued contraceptive use.
Sociocultural and Socioeconomic Influences	Mbambo et al. (2006), Lanjakornsiripan et al. (2015), Wilson et al. (2013)	Family and community attitudes significantly impact contraceptive choices (Mbambo et al., Lanjakornsiripan et al.) Economic barriers reduce access to care (Wilson et al.)	Engage community leaders in educational programmes. Implement policies that reduce economic barriers to contraceptive access.

The thematic synthesis presented in the Table 12 provides s structured and comprehensive overview of the diverse contraceptive factors influencing contraceptive decision-making among adolescent mothers, emphasising the intricate interplay of personal, cultural, and systemic influences. This nuanced understanding highlights the complexity of the issue.

2.8.2. Key Themes of Qualitative Studies

The synthesis of the six qualitative studies provides a nuanced understanding of the factors influencing postpartum contraceptive decision-making among adolescent mothers. Situated within diverse sociocultural and healthcare settings, these studies underscore how cultural norms, family dynamics, psychological factors, and systemic barriers interplay to shape contraceptive behaviours. The findings are synthesised into four overarching themes: *Personal Preferences and Psychological Factors, Knowledge Deficits and Misinformation, Cultural and Societal Influences, and Healthcare Access and Support Systems* (Table 13).

Table 13: Thematic Synthesis of Key Findings from Qualitative studies

Theme	Key Findings	Contextual Analysis	Implications
Personal Preferences and Psychological Factors	- Preference for non-hormonal options due to fear of side effects (Hoopes et al. 2016) - Anxiety about LARC procedures (Coates et al. 2018)	- Prior negative experiences with hormonal contraceptives and healthcare providers influence current choices	- Counselling should be personalised, addressing specific concerns and fears, with a focus on building trust and rapport with adolescent patients.
Knowledge Deficits and Misinformation	- Reliance on anecdotal information (Chernick et al. 2015) - Provider biases against LARCs (Coates et al. 2018)	- Fragmented public health education and misinformation perpetuated by healthcare providers	- Comprehensive education campaigns and provider training programmes are needed to counteract misinformation and biases.
Cultural and Societal Influences	- Pressure to demonstrate fertility (Mardi et al. 2018) - Traditional gender roles and lack of autonomy (Shahabuddin et al. 2015)	- Strong societal surveillance and enforcement of reproductive norms in Iran - - Patriarchal family structures in Bangladesh restrict reproductive choices	- Interventions must target community norms and involve key influencers such as family and community leaders to shift attitudes towards contraceptive use.
Healthcare Access and Support Systems	- School-based health centres as critical access points (Hoopes et al. 2016) - Inconsistent follow-up in hospitals (Wilson et al. 2011)	- Barriers such as stigma and confidentiality concerns limit effectiveness of school-based centres - Fragmented healthcare system in postpartum care	- Policies should ensure confidentiality and build supportive school environments. - Healthcare systems need consistent follow-up protocols.

2.8.2.1. Personal Preferences and Psychological Factors

Adolescents' contraceptive choices are heavily influenced by their preferences and psychological barriers. Hoopes et al. (2016) and Coates et al. (2018) highlight adolescents' preference for non-hormonal contraceptive methods due to concerns about side effects and the perceived invasiveness of LARCs. For example, anxiety about LARC procedures, such as pain during insertion, often deterred adolescents from choosing effective options. These findings underscore the critical need for personalised counselling that addresses adolescents' specific fears and past experiences, while fostering trust between healthcare providers and patients.

Negative experiences with healthcare providers further amplified these psychological barriers. Coates et al. (2018) reported adolescents' fears of judgment and mistreatment, often rooted in anecdotal stories or previous encounters. Addressing these psychological factors requires not only accurate information but also a supportive and nonjudgmental healthcare environment to mitigate fears and encourage contraceptive uptake.

2.8.2.2. Knowledge Deficits and Misinformation

A significant theme across all studies is the widespread lack of accurate contraceptive knowledge, which is compounded by misinformation and provider biases. Chernick et al. (2015), conducted in an emergency department setting in the United States, underscores how adolescents often rely on fragmented and incorrect information obtained from non-medical sources. Many participants expressed confusion about different contraceptive methods, particularly LARCs, with misconceptions about their side effects and suitability for adolescents.

Coates et al. (2018), based in the Southern United States, expands on this by highlighting how healthcare provider attitudes contribute to the perpetuation of misinformation. Adolescents frequently reported encountering judgmental or dismissive behaviours from providers, who often discouraged the use of LARCs due to unfounded concerns about their impact on fertility. This bias not only limits the information available to adolescents but also influences their trust in healthcare systems, leading to avoidance of contraceptive services. The study's context—a region with high rates of teenage pregnancy and limited access to comprehensive reproductive health education—suggests that addressing provider biases is as crucial as educating adolescents.

2.8.2.3. Cultural and Societal Influences

The studies by Mardi et al. (2018) and Shahabuddin et al. (2015) provide a stark portrayal of how cultural and societal norms dictate contraceptive use among adolescents. In Iran, Mardi et al. highlight the pervasive expectation for young married women to demonstrate their fertility soon after marriage, often within highly patriarchal family structures. This pressure to conceive is so ingrained that even when these adolescents are aware of the benefits of contraception, they may choose to avoid it to avoid suspicion of infertility or perceived non-compliance with their societal role. The study situates these decisions within a broader context of social surveillance, where family and community members actively monitor and enforce reproductive behaviours.

Similarly, Shahabuddin et al. (2015) explore the constraints placed on adolescent girls in rural Bangladesh, where early marriage and childbearing are viewed as the norm. The study provides a detailed account of how adolescent girls are often excluded from making their own reproductive decisions, with husbands or elder family members

dictating contraceptive use. This powerlessness is exacerbated by a lack of education and access to healthcare, leaving these adolescents vulnerable to early, repeated pregnancies. Critical analysis of these findings reveals that interventions must go beyond individual education and target broader societal structures, such as community norms and familial authority dynamics, to be effective.

2.8.2.4. Healthcare Access and Support Systems

The theme of healthcare access is deeply intertwined with the quality and consistency of support systems available to adolescent mothers. Hoopes et al. (2016) focus on school-based health centres, which provide a critical entry point for adolescents to access contraceptive care. The study reveals that these centres, when well-supported by school policies and community attitudes, can significantly enhance contraceptive uptake. However, barriers such as stigma, confidentiality concerns, and fear of judgment from peers and adults within the school environment can undermine these benefits. This context-specific analysis indicates that even well-designed healthcare services can fail if they do not adequately address the social dynamics of the adolescent population they serve.

Wilson et al. (2011), conducted in a postpartum hospital setting, illustrates the critical need for continuity of care. The study found that adolescents who missed postpartum appointments were significantly less likely to use any form of contraception, highlighting the systemic barriers to sustained healthcare engagement. The study's context—a fragmented healthcare system with inconsistent follow-up protocols—suggests that systemic reforms are necessary to ensure that adolescents remain fully supported during this crucial period. These findings imply that improving access alone

is insufficient; healthcare systems must also focus on building trust and maintaining engagement to support long-term contraceptive use.

2.8.3. Synthesised Qualitative and Quantitative Findings

This section synthesises the findings from the qualitative and quantitative studies into three overarching themes. These themes— *(1) Cultural and Societal Influences Interacting with Knowledge and Misinformation, (2) Healthcare Access and Limited Contraceptive Counselling, and (3) Psychological and Emotional Barriers*—illustrate the interconnected factors influencing postpartum contraceptive decision-making among adolescent mothers. The relationships between these themes demonstrate how cultural beliefs, systemic healthcare issues, and psychological factors interact to shape adolescent contraceptive behaviours.

The qualitative studies offer rich, in-depth accounts of the personal, cultural, and contextual factors that shape contraceptive behaviours. Studies like Mardi et al. (2018) and Shahabuddin et al. (2015) reveal how deeply embedded cultural norms and societal pressures discourage adolescents from using contraceptives. For instance, fear of infertility and pressure to prove fertility after marriage emerge as prominent themes in settings where patriarchal norms dominate. Such insights underscore how societal narratives extend beyond individual knowledge deficits, creating systemic barriers to contraceptive uptake.

Quantitative studies complement these insights by offering empirical evidence on patterns, trends, and interventions related to contraceptive behaviours. For instance, Wilson et al. (2013) and Chacko et al. (2016) quantify the prevalence of contraceptive uptake and identify demographic factors that influence behaviour. Additionally, Kaewkiattikun (2017) provides robust evidence that structured postpartum counselling

significantly increases the uptake of contraceptive implants among adolescent mothers. Such data demonstrate the efficacy of targeted interventions and provide generalisable information for informing evidence-based policy recommendations.

Merging the thematic findings from both research designs is crucial for capturing the full spectrum of factors influencing contraceptive decision-making among adolescent mothers. While qualitative studies uncover the underlying socio-cultural and psychological factors, quantitative studies provide measurable outcomes and patterns that validate and expand these qualitative insights. For example, the fear of infertility and stigma against contraceptive use identified in qualitative research by Mardi et al. (2018) and Shahabuddin et al. (2015) are corroborated by quantitative findings of Mbambo et al. (2006) and Lanjakornsiripan et al. (2015), which show how cultural disapproval and misinformation are significant barriers to contraceptive use. This integration demonstrates that without addressing the cultural narratives underpinning these fears, standalone educational interventions may be insufficient. The combination of findings reveals critical relationships and interactions between different factors influencing contraceptive use.

Adolescent mothers face interconnected barriers to contraceptive decision-making, shaped by cultural norms, misinformation, healthcare access, and psychological factors. This review synthesises qualitative and quantitative findings, highlighting societal pressures, inadequate counselling, and emotional barriers as key challenges.

2.8.3.1. Cultural and Societal Influences Interacting with Knowledge and Misinformation

Cultural beliefs and societal norms are deeply embedded in the social fabric of communities and significantly shape perceptions of contraceptive use. Mardi et al.

(2018) and Shahabuddin et al. (2015) show that the pressure to demonstrate fertility and the fear of infertility are not just individual concerns but are reinforced by societal and family expectations. This connects to the quantitative findings of Mbambo et al. (2006) and Lanjakornsiripan et al. (2015), which provide empirical data showing that misinformation and stigma lead to reduced contraceptive use. The connection between these studies lies in how cultural narratives perpetuate misinformation, creating a barrier that cannot be addressed solely through education aimed at individuals. Instead, the findings suggest that culturally sensitive interventions that engage community leaders and address societal norms are necessary to change perceptions and behaviours on a broader scale. This integration shows that individual knowledge deficits are part of a larger cultural context, necessitating community-level interventions to address both misinformation and societal pressures.

2.8.3.2. Healthcare Access and Limited Contraceptive Counselling

Access to healthcare is crucial for effective contraceptive use, but access alone is insufficient if the quality of contraceptive care and counselling is inadequate. Both qualitative and quantitative findings illustrate this relationship. Qualitative study by Hoopes et al. (2016) and Wilson et al. (2011) highlight that even when adolescents have physical access to healthcare facilities, the lack of confidential, non-judgmental care discourages them from using contraceptive services. Similarly, comprehensive and unbiased counselling can significantly enhance effective contraceptive use. Quantitative studies, such as those by Wilson et al. (2011) and Chacko et al. (2016), show that inadequate counselling is a significant barrier to effective contraceptive use, even in settings where healthcare access is available. This connection suggests that the impact of healthcare access is closely tied to the quality of counselling provided. If

counselling is judgmental or incomplete, the potential benefits of healthcare access are undermined. Therefore, these findings highlight the need for a dual approach: improving both access and the quality of interactions between HCPs and adolescent mothers. Kaewkiattikun (2017) emphasises that timely, structured counselling significantly improves contraceptive outcomes. This highlights a critical gap that needs to be addressed through systemic training of HCPs and the integration of comprehensive counselling into routine care.

2.8.3.3. Psychological and Emotional Barriers

Research involving early adolescent mothers (aged 10-14) remains scarce due to ethical constraints and their inherent vulnerability. During this critical developmental period, cognitive and emotional development remains in progress, limiting their ability to fully comprehend and apply contraceptive knowledge. Piaget's theory of cognitive development (Piaget, 1972) places early adolescents in the concrete operational stage, which limits abstract reasoning and hinders their ability to conceptualise the risks, benefits, and long-term implications of contraceptive use. Their literal thinking further complicates understanding probabilistic outcomes, such as contraceptive efficacy rates and pregnancy risks.

These cognitive limitations, combined with strong social and familial influences, further restrict their autonomy in health decision-making (Crone & Dahl, 2012). Families and caregivers often act as gatekeepers to reproductive health knowledge, shaping adolescents' attitudes toward contraception through moral, cultural, and social norms. The interplay between developmental immaturity and external influences reinforces barriers to informed contraceptive decision-making, leaving early adolescent

mothers highly dependent on their immediate social environment for reproductive health choices.

Psychological barriers, such as fear and anxiety, are often rooted in previous negative healthcare experiences and misinformation. Hoopes et al. (2016) and Coates et al. (2018) provide qualitative evidence that adolescents' fears of side effects and anxieties about contraceptive methods are linked to past interactions where they felt judged or inadequately informed. This is corroborated by quantitative study from Wilson et al. (2013), which show that these psychological factors contribute to lower contraceptive uptake. These emotional barriers are influenced by broader healthcare experiences and societal narratives. The synthesis underscores the importance of building trust between HCPs and adolescents through consistent, supportive interactions. Addressing psychological barriers requires more than just information; it demands empathetic care that acknowledges and addresses past negative experiences. Interventions must integrate these emotional dimensions into healthcare practices to reduce fear and anxiety effectively.

The synthesis of findings across the reviewed studies highlights significant gaps in both education and systemic healthcare support. Qualitative studies, such as those by Chernick et al. (2015) and Coates et al. (2018), expose the incomplete and often biased information adolescents receive about contraceptives, exacerbated by HCPs' misconceptions or biases. Quantitative studies, including Chacko et al. (2016) and Kaewkiattikun (2017), highlight that structured, unbiased counselling significantly enhances contraceptive uptake. This indicates that both the quality and content of education are crucial for effective decision-making.

Educational interventions must be comprehensive, unbiased, and integrated into prenatal and postpartum care to be effective. Additionally, systemic reforms—such as standardised counselling protocols and continuous HCP training—are necessary to ensure that all adolescents receive accurate and supportive guidance. These findings highlight the need for a coordinated, multi-level effort across healthcare system to address the educational and systemic gaps identified in the studies.

The relationships between cultural beliefs, healthcare access, psychological barriers, and socioeconomic status reveal the complex interplay of factors influencing contraceptive decision-making among adolescent mothers. Grounded in evidence from both qualitative and quantitative studies, these relationships illustrate how broader systemic and cultural contexts shape individual behaviours. This integrated synthesis provides a comprehensive, multi-dimensional understanding of the barriers to contraceptive use, offering valuable insights for developing effective, context-sensitive interventions and policies. Addressing these interconnected factors holistically support adolescent mothers in making informed, autonomous reproductive health decisions aligned with their personal and health goals.

The recommendations emerging from these studies emphasise the importance for tailored, culturally sensitive interventions that address the unique barriers adolescents face in various settings. In the US, there is a clear call for integrating comprehensive contraceptive counselling and education into existing healthcare services, such as emergency departments and school-based health centres. Interventions should be designed to meet the unique needs and preferences of adolescents, using frameworks like PRIME (Preferences, References, Information, Motivators, and Environment) to provide personalised counselling. For postpartum adolescents, ongoing follow-up and

support are crucial to prevent rapid repeat pregnancies and ensure consistent contraceptive use, as suggested by Wilson et al. (2011).

In Bangladesh and Iran, engaging family members and community leaders in reproductive health education is essential for overcoming socio-cultural barriers. Shahabuddin et al. (2015) recommend involving husbands and mother-in-law in educational interventions to improve decision-making autonomy for adolescent girls. Similarly, Mardi et al. (2018) emphasise the importance of community-based education programmes that address misconceptions and promote accurate knowledge about contraceptives. Empowering adolescents with the necessary knowledge and communication skills to advocate their reproductive health rights is crucial for increasing contraceptive use in these settings.

Empowering adolescents with accurate knowledge and fostering supportive healthcare systems can mitigate barriers to contraceptive uptake. Simultaneously, addressing cultural narratives and involving community stakeholders ensures that interventions are sustainable, inclusive, and context-sensitive across diverse settings. These strategies will help align healthcare systems with the needs and goals of adolescent mothers, ultimately improving reproductive health outcomes.

2.9. Narrative Review Strengths and Limitations

A narrative review offers both strengths and limitations, particularly as it was conducted as part of PhD-level research with a single reviewer responsible for appraisal under supervisory oversight. One key strength is its ability to provide a comprehensive synthesis of existing knowledge, enabling a broad and detailed exploration of the topic. This approach has been particularly useful for identifying patterns, gaps, and

relationships within the literature. The flexibility of the review allowed for the inclusion of diverse study designs, methodologies, and perspectives, which was advantageous for addressing complex research questions (Ferrari, 2015; Greenhalgh et al., 2018).

However, this approach presents several limitations. Although conducted by a single reviewer, the process was carried out under regular supervisory guidance to minimise potential bias during study selection, data extraction, and synthesis. The absence of multiple reviewers limited opportunities for cross-validation, potentially compromising objectivity. Such risk is well documented in the literature, particularly where reviewer subjectivity can influence both selection and interpretation of studies (Baumeister & Leary, 1997; Grant & Booth, 2009).

The critical appraisal, carried out by a sole reviewer, may have lacked the depth and rigour of collaborative evaluation, which could affect the reliability of the conclusions. As a result, the absence of diverse perspectives may have led to overlooked nuances or alternative interpretations that additional reviewers might have provided. Transparent reporting and iterative reflection were employed to mitigate this limitation (Popay et al., 2006), but future reviews may benefit from multi-reviewer input to enhance credibility.

2.10. Conclusion and Justification for the Study

Adolescent mothers face a significant risk of short-interval pregnancies, defined as conception occurring within 24 months of a previous birth. Approximately one in four adolescent mothers conceive within this timeframe, increasing the likelihood of maternal and neonatal complications, including preterm birth, low birth weight, and elevated maternal morbidity (ACOG, 2019; Fleming et al., 2015; Leftwich & Alves,

2017). These risks underscore the importance of effective postpartum contraceptive use to prevent unintended repeat pregnancies.

LARCs have been established as the most effective method for reducing unintended pregnancies among adolescents, demonstrating higher continuation and satisfaction rates compared to SARCs (Bitzer et al., 2016; Whitaker et al., 2016; Wilson et al., 2013; ACOG, 2017b). However, LARC uptake among adolescent mothers in LMICs, including Thailand, remains limited due to entrenched sociocultural norms, provider attitudes, and health system barriers.

Although structured postpartum contraceptive counselling has shown success in high-income countries (HICs), its relevance and effectiveness in LMIC contexts remain insufficiently understood and require further investigation. Extensive research from HICs demonstrated that postpartum contraceptive counselling significantly increases LARC uptake among adolescent mothers. Studies conducted in the US, Canada, and Europe indicate that adolescents who receive immediate postpartum contraceptive counselling and method provision are more likely to initiate and maintain LARCs and report greater satisfaction (Buckingham et al., 2021; Whitaker et al., 2016; ACOG, 2017b).

Additionally, evidence from HICs highlights that greater adolescent autonomy in contraceptive decision-making is strongly linked to improved adherence and lower rates of unintended pregnancy (Wilson et al., 2013). Building on this, Lassi et al. (2024) conducted a systematic review and meta-analysis, demonstrating that contraceptive use significantly enhance adolescent empowerment and agency.

In contrast, adolescents in LMICs—particularly in SEA—must often navigate familial control, gender norms, and provider biases when making contraceptive decisions. (Chacko et al., 2016; Shahabuddin et al., 2016). Furthermore, adolescent mothers in these contexts face significant barriers to LARC access, including misinformation, provider reluctance to serve unmarried adolescents, and financial constraints (Shoupe, 2016). Psychosocial determinants such as stigma, privacy concerns, and low self-efficacy, negatively impact adolescent contraceptive use (Masonbrink et al., 2023). These barriers are compounded by limited knowledge and high costs, which further hinder access (ACOG, 2018). This body of evidence highlights key facilitators and constraints but remains largely based in HIC contexts, leaving LMIC-specific needs underexplored.

Identified Gap in the Literature

1. Limited understanding of adolescent mothers' contraceptive decision-making in LMICs, particularly Thailand

While adolescent contraceptive behaviour has been widely studied in HICs, there is limited empirical evidence from LMICs. In Thailand, although several studies have examined adolescent contraceptive preferences (Chanthasukh et al., 2017; Kaewkiattikun, 2017; Lanjakornsiripan et al., 2015), few have focused on postpartum contraceptive decision-making. Although national FP initiatives exist, little is known about how adolescent mothers interact with these services or how counselling interventions influence LARC uptake.

2. Unknown effectiveness of postpartum counselling in LMIC settings

Immediate postpartum contraceptive counselling has proved effective in HICs (Whitaker et al., 2016), yet its utility in LMICs remains unclear. Adolescents in these settings may face additional challenges such as provider reluctance, low contraceptive literacy, and financial barriers (Kaewkiattikun, 2017). Furthermore, there is limited data on whether free provision of subdermal implants and injectables at the point of care lead to sustained LARC use.

3. Structural and policy barriers to Adolescent LARC uptake in Thailand

Although Thai FP policies formally support adolescent access to contraception, provider biases and restrictive social norms continue to constrain LARC uptake among adolescent mothers. While existing Thai studies have explored adolescent contraceptive preferences (Chanthasukh et al., 2017; Kaewkiattikun, 2017), few have examined how systemic factors—such as HCP attitudes, limited adolescent-focused reproductive services, and policy implementation challenges—affect LARC continuation rates.

Justification for the Proposed Study

The present study aims to address these critical gaps by examining the decision-making processes of late adolescent mothers (aged 15–19) in Thailand, specifically in relation to subdermal implants and injectable use. The focus on late adolescence is justified due to both higher pregnancy prevalence within this age group and their greater cognitive, emotional, and social maturity, which supports their capacity for autonomous contraceptive decision-making.

While global knowledge on adolescent contraceptive use has expanded, Thailand-specific LMIC data remain limited. By exploring how familial, societal, and healthcare system factors shape contraceptive choices, this research aims to generate context-specific evidence to inform adolescent-centred SRH strategies.

The study further examines the perceived role and influence of immediate postpartum counselling and free provision of LARCs in influencing uptake and adherence. Ethical dimensions—including informed consent, autonomy, and provider bias—are central to understanding how adolescent mothers are supported (or constrained) in making voluntary reproductive health decisions.

Findings from this research aim to highlight systemic constraints within Thailand's healthcare system, particularly in relation to:

- Provider biases and ethical challenges in offering LARCs to adolescent mothers.
- Barriers related to adolescent-specific autonomy, especially under parental authority and sociocultural influences.
- Legal and policy gaps that hinder consistent access to and adherence with contraceptive methods for adolescents.

By integrating ethical dimensions such as age-specific capacity for informed consent—this study seeks to generate actionable recommendations that align with both international reproductive rights frameworks and Thai national FP policies.

Research involving adolescent mothers necessitates rigorous ethical considerations, particularly regarding autonomy, consent, and structural vulnerability. While late adolescents (15–19 years old) are generally recognised to possess greater decision-making autonomy than early adolescents (10–14 years old), contextual factors—

including cultural expectations, HCP attitudes, and legal ambiguity—often constrain their contraceptive autonomy.

Literature emphasises that adolescents' cognitive and emotional development directly their ability to make informed contraceptive choices. Although Thai legal frameworks permit adolescent access to SRH services, in practice, access is frequently constrained by parental influence, social stigma, and a lack of adolescent-friendly services.

The postpartum provision of LARCs to adolescent mothers raises significant ethical concerns particularly around informed consent, potential coercion, and the tension between public health goals and individual autonomy. Although some studies (e.g. Whitaker et al., 2016) suggest that routine postpartum LARC provision may improve adherence, it remains ethically imperative to ensure that decisions are made voluntarily and without misinformation or pressure.

This study focuses on late adolescents (15–19 years) given their higher pregnancy rates and relatively greater maturity, which enhances their capacity for autonomous contraceptive decision-making. However, early adolescents (10–14 years)—as well as hidden or marginalised subgroup—remain underrepresented in current research due to systemic, legal, and ethical constraints.

These constraints include difficulties in obtaining informed consent, low statistical pregnancy prevalence, and the exclusion of adolescents facing coercion, abuse, or socio-cultural repression. The experiences of such vulnerable groups—particularly those subjected to sexual violence or forced pregnancy—are seldom reflected in empirical literature, despite their acute need for reproductive healthcare. Future research must prioritise the inclusion of these populations to inform equitable and

inclusive reproductive health policies that address the full continuum of adolescent contraceptive needs.

Conclusion

While global literature offers instructive perspectives, the paucity of Thailand-specific research has impeded local the development of localised policy and clinical guidelines. The study aims to address that gap by producing a contextually grounded framework that advances adolescent contraceptive autonomy, accessibility and ethical care delivery in Thailand. By integrating ethical analysis, age-specific cognitive capacity, and structural healthcare limitations, this study contributes to culturally responsive, evidence-based SRH strategies aligned with both global human rights commitments and national policy objectives.

CHAPTER 3

METHODOLOGY

3.1. Introduction

This chapter delineates the methodological framework and justifies the selection of methods employed in this qualitative research study, which adopted a CGT approach. CGT played a crucial role in shaping the research process, providing a structured pathway from the formulation of the research question to the articulation of the study's aims and objectives. Its emphasis on co-constructing meaning aligns closely with the study's goal of capturing nuanced participant experiences within their unique sociocultural contexts.

This chapter outlines the research question, objectives, and philosophical foundations, detailing the analytical framework that guides the study and ensures methodological coherence and rigour. The research design is systematically integrated into the overall structure, providing clarity about how CGT informs both data collection and analysis.

To ground the study in existing evidence, a narrative literature review was conducted as the initial phase. A narrative review was chosen over alternative approaches, such as a scoping review, due to its capacity for focused and critical synthesis of relevant literature. This review enabled a deeper understanding of the sociocultural, healthcare, and systemic factors influencing adolescent mothers' contraceptive decision-making in Thailand Its capacity to highlight theoretical gaps and critically assess existing evidence was essential for developing grounded theory that responds to these gaps in a meaningful and context-specific way.

By integrating the narrative review, this study lays the foundation for theory-building that is both empirically grounded and contextually appropriate to the Thai setting. The review surfaced complex dynamics surrounding adolescent reproductive health, including barriers to contraceptive use, and directly informed the subsequent CGT phase. It guided data collection, open coding, and theory development, facilitating an in-depth exploration of the lived experiences of adolescent mothers—particularly how structural barriers, cultural norms, and gendered expectations shape contraceptive choices.

3.2. Research Question

The research question guiding this study was developed from insights derived from the narrative literature review in the previous chapter. The study explores the decision-making processes of adolescent mothers in Thailand concerning their selection of subdermal implants and injectable contraception. The primary research question is:

> *'How do postnatal adolescent mothers in Northern Thailand make decisions regarding the use of subdermal implants and injectable contraception?'*

This question captures the dynamic and iterative nature of decision-making, emphasising contextual, cultural, and experiential factors that influence contraceptive choices.

3.3. Research Aim and Objectives

The primary aim of this qualitative research study was to examine and gain insight into the experiences and perceptions of adolescent mothers aged 15-19 regarding their

postpartum contraceptive decision-making in Northern Thailand, with a focus on subdermal implants and injectables.

The focus on this demographic was informed by both ethical and practical considerations, including higher adolescent birth rates, developmental maturity, and the availability of relevant literature, as discussed in the Background and Literature Review Chapters. While excluding younger adolescents narrows the study's scope, this decision enhances ethical rigour and allows for a more in-depth exploration of the target population.

A review of existing literature revealed notable gaps in research concerning postnatal contraceptive decision-making among adolescent mothers. These gaps are largely driven by ethical complexities and limited data—particularly around postpartum LARC counselling and uptake. This study addresses those gaps by exploring the postpartum contraceptive choices of adolescent mothers aged 15-19 in Thailand. By focusing on decision-making processes surrounding subdermal implants and injectables, the study seeks to identify and analyse the context-specific factors and barriers influencing these decisions. This culturally focused approach aims to contribute to targeted healthcare interventions and improve reproductive health outcomes for this vulnerable population.

To achieve the study aim, the following objectives were identified:

- To explore the experiences and perceptions of adolescent mothers aged 15-19 regarding postpartum contraceptive care and immediate counselling, including method preferences, interactions with HCPs, and service delivery.
- To examine the factors and barriers influencing their choices of contraceptive methods.

- To develop a theoretical framework to inform future healthcare practices and policies, enhancing postpartum contraceptive care and addressing unmet contraceptive needs among adolescent mothers.

3.4. Philosophical Orientation

The philosophical underpinning of this research methodology was grounded in assumptions about ontology (the nature of reality) and epistemology (how knowledge is constructed and understood). This study was rooted in a constructivist paradigm, which conceptualised truth and reality as socially constructed through individuals' prior knowledge, experiences, and interactions with their environments.

From an epistemological perspective, constructivism emphasises the co-constructions of meaning between individuals and their life contexts. This framework highlights the fluid, dynamic, and contextual nature of knowledge, rejecting the positivist notion of an objective reality that exists independently of human interpretation (Strauss & Corbin, 1990, 1998). It enables findings to be situated within the broader sociocultural frameworks that shape participants' lived experiences. Human perspectives are considered contingent upon historical and cultural contexts, which continually shape worldviews and understandings of truth (Guba & Lincoln, 1989).

Charmaz's CGT was chosen for its capacity to generate theory directly from empirical data while recognising the active role of both the researcher and participants in shaping meaning (Charmaz, 2006, 2014). Unlike Glaser's (1978) objectivist approach, which assumes an external reality that emerges independently of researcher influence, and Strauss and Corbin's (1990) more structured coding model, Charmaz's CGT acknowledges the intersubjectivity and prioritises reflexivity. This makes it particularly

suited to explore sociocultural nuances in adolescent mothers' contraceptive decision-making.

CGT's iterative interaction between data collection and analysis supported a flexible, responsive research design, allowing emerging insights to inform the ongoing process. This responsiveness ensured that the study remained grounded in participants' realities while being theoretically generative.

3.4.1. Comparison with Alternative Methodologies

Phenomenology, particularly in the traditions of Husserl and van Manen, shares CGT's commitment to exploring lived experiences. However, its ontological emphasis on uncovering the essence of a phenomenon often entails abstraction from its contextual and processual dimensions (van Manen, 1990; Husserl, 1970). This essentialist orientation risks neglecting the social, cultural, and historical contingencies that structure how adolescent mothers experience and make meaning of contraception (Finlay, 2008). Additionally, phenomenology's reliance on bracketing (epoché)—the suspension of research assumptions—conflicts with CGT's constructivist emphasis on reflexivity and co-construction (Charmaz, 2006, 2014). While phenomenology offers depth in capturing subjective lifeworld's, it lacks the iterative theorisation CGT affords through constant comparison and theoretical sampling.

Narrative inquiry, as developed by Clandinin and Connelly (2000), foregrounds how individuals construct identities and experiences through storytelling. This is valuable for understanding temporal trajectories and narrative logic of lived experiences. However, narrative inquiry tends to prioritise individual coherence over theoretical generalisability (Riessman, 2008). It does not seek to identify underlying social processes across cases, limiting its utility in generating a mid-range theory—a core

strength of CGT (Charmaz, 2014). Moreover, narrative inquiry lacks the systematic coding and memoing practices essential to grounded theory's conceptual abstraction.

Ethnography, rooted in the work of Malinowski and Geertz, prioritises prolonged immersion to reveal cultural meaning systems through thick description (Geertz, 1973; Hammersley & Atkinson, 2007). While ethnography offers contextual richness, it often remains at the level of cultural description rather than explanation. It may not engage in the type of analytic categorisation and theoretical integration required for grounded theory development (Bryant & Charmaz, 2007). In contrast, CGT enables the development of theoretical propositions while still attending to cultural context—especially when applied reflexively.

Case study research, particularly in the positivist tradition of Yin (2014), facilitates the in-depth investigation of real-life phenomena within bounded systems. It is well-suited to exploring complex social contexts but does not aim to develop theory inductively through systematic coding procedures (Stake, 1995). Unlike CGT, it lacks iterative theoretical sampling and grounded abstraction. Case studies are often defined by their boundedness, whereas CGT remains open, and emergent, and theoretically generative, enabling concepts to evolve throughout the research process (Charmaz, 2014).

By situating the study within a constructivist paradigm and adopting Charmaz's CGT, this study privileges reflexivity, participant meaning-making, and theoretical emergence. CGT enables the integration of micro-level experiences with macro-level structures, allowing for a theory of contraceptive decision-making that is both contextually grounded and conceptually transferable. This methodological fit is crucial for understanding how adolescent mothers in Thailand navigate the relational, institutional, and sociocultural terrains of postnatal contraception.

3.4.2. Justification for the Use of Constructivist Grounded Theory (CGT)

The application of CGT as the methodological framework for this study is firmly grounded in the synthesised findings of the literature review presented in 2.8.3, which illustrate the complex interplay of sociocultural, systemic, and psychological factors influencing postpartum contraceptive decision-making among adolescent mothers. This synthesis identified three overarching themes: (1) Cultural and Societal Influences Interacting with Knowledge and Misinformation, (2) Healthcare Access and Limited Contraceptive Counselling, and (3) Psychological and Emotional Barriers. These findings informed the CGT approach, ensuring that theory development remained inductively grounded in participants' lived experiences rather than predefined theoretical models (Charmaz, 2014).

The primary aim of this study was to explore and gain insight into the sociocultural, systemic, and individual factors shaping postpartum contraceptive decision-making among adolescent mothers aged 15-19. Findings from the narrative review (Chapter 2) played a pivotal role in shaping initial theoretical sampling, guiding data collection towards areas identified as key gaps in the existing literature. This process aligns with Charmaz's (2006) emphasis on integrating prior knowledge without constraining the emergence of new theoretical insights.

CGT's inherent flexibility enabled the generation of a theoretical framework that was both grounded in participants' realities and adaptable to context-specific variations. As Charmaz (2014) underscores, theoretical sensitivity is central to CGT and was applied in this study through the iterative refinement of emerging categories in response to participant narratives. This ensured that adolescent mothers' contraceptive decision-

making processes were interpreted within their broader sociocultural and systemic contexts.

3.4.3. Application of Narrative Review in CGT

The literature review played a foundational role in shaping the methodological approach of this study, aligning with the principles of CGT. Unlike traditional studies where a literature review informs the formulation of hypotheses, CGT requires a careful balance between existing knowledge and inductive theory generation (Charmaz, 2006). The narrative review provided a contextual foundation for understanding the key sociocultural, systemic, and psychological factors influencing adolescent mothers' contraceptive decision-making. However, it did not impose a predefined theoretical framework, ensuring that findings emerged from participants' lived experiences rather than being constrained by prior literature.

The application of the literature review within this CGT study was structured around three key functions:

1. Identifying gaps and guiding initial data collection

The literature review synthesised existing knowledge on adolescent contraceptive decision-making, highlighting critical gaps in research. While some studies explored sociocultural barriers (Mardi et al., 2018; Shahabuddin et al., 2015) and systemic healthcare limitations (Hoopes et al., 2016; Kaewkiattikun, 2017), there was limited qualitative evidence capturing adolescent mothers' real-time decision-making processes within their specific sociocultural contexts. This gap justified the use of CGT's iterative and emergent approach, where initial interview questions were designed to explore

participants' perspectives beyond the constraints of predefined literature-based categories.

2. Informing theoretical sampling and constant comparison

The review findings helped refine the theoretical sampling strategy by identifying key factors influencing contraceptive decision-making, such as healthcare accessibility, cultural expectations, and psychological barriers. Rather than dictating participant selection, these insights guided the researcher in recruiting diverse adolescent mothers across different care settings to capture a broad range of contraceptive experiences. As themes emerged from initial interviews, CGT's constant comparative method allowed for targeted sampling of participants who could expand or refine emerging categories, ensuring that theory development remained inductive rather than literature driven.

3. Enhancing reflexivity in data interpretation

In CGT, theory generation is influenced by the researcher's positionality (Charmaz, 2014). The literature review served as a reflexive tool, prompting the researcher to critically examine how pre-existing knowledge shaped data interpretation. By maintaining analytic openness, the study prevented preconceptions from limiting theory development. For example, while the review suggested that fear of side effects was a primary deterrent to contraceptive use (Wilson et al., 2013), the emergent data revealed more complex social negotiations, such as the role of male partners and familial influence in decision-making. This demonstrated the value of grounded, participant-led insights, ensuring that theoretical constructs were generated directly from the data rather than imposed by prior literature.

The literature review did not serve as a rigid theoretical framework but rather as a contextual and analytical foundation that informed key methodological decisions while maintaining the inductive integrity of CGT. It provided initial sensitising concepts that guided early interview design, theoretical sampling, and reflexivity in data interpretation, ensuring that emerging theories remained empirically grounded. As data collection progressed, the literature review was revisited iteratively, allowing emerging insights to be refined through engagement with existing research without constraining theory development. This alignment between existing knowledge and inductive exploration strengthened the credibility and depth of the findings, reinforcing CGT's role as a dynamic, context-responsive methodology (Charmaz, 2014; Strauss & Corbin, 1998).

3.5. Research Methods

3.5.1. Application of Constructivist Grounded Theory (CGT)

Grounded theory, developed by Glaser and Strauss (1967), has evolved through subsequent contributions of scholars such as Corbin and Strauss (1990). CGT, articulated by Charmaz (2006), aligns with the constructivist paradigm, emphasising the co-construction of meaning between researchers and participants. This methodology generates theory from empirical data to explain dynamic social processes and human interactions within specific contexts (Glaser, 1978; Glaser & Strauss, 1967; Strauss & Corbin, 1998).

CGT's iterative and flexible nature allows for the integration of individual decision-making with broader social and cultural contexts, addressing patterns at both specific and general levels (Charmaz, 2017; Glaser & Strauss, 1967). This adaptability is

particularly suited for exploring postpartum contraceptive decision-making among adolescent mothers, where evolving life circumstances shape choices. Building on existing literature, the CGT approach in this study focused on understanding the roles of parents, HCPs, partners, and peers in influencing participants' contraceptive decisions.

Having established CGT as the most suitable approach, the following section outlines the procedural elements essential to its application. These elements include theoretical sensitivity, theoretical sampling, constant comparative analysis, memo-writing, and concurrent generation of theory throughout the research process. The development of theoretical sensitivity was fostered by an initial literature review (Carpenter, 1999), and further enriched by the researcher's professional experiences, consistent with CGT principles (McCann & Clark, 2003).

The initial literature review and the researcher's background helped refine theoretical sensitivity, serving as a critical precursor to grounded theory fieldwork. During data collection process, the researcher continuously refined the ability to engage sensitively with the data, distinguishing relevant from irrelevant information (Glaser, 1978). This review identified key concepts and themes related to adolescent contraceptive decision-making. The researcher's field experience deepened this sensitivity, fostering a nuanced understanding of the study population's contexts and experiences.

Theoretical sampling guided the selection of participants who could offer diverse perspectives on postpartum contraceptive decision-making. Participants were chosen to explore emerging themes and refine theoretical constructs, contributing to a comprehensive understanding of the phenomena under investigation.

Data analysis employed constant comparative analysis, systematically comparing each data point with existing data to identify similarities and differences. This iterative process facilitated the development of categories and subcategories, culminating in the emergence of a grounded theory. Initial interviews revealed barriers to contraceptive use, such as cultural stigma, lack of service access, and the perception of early implant removal. These insights were continuously compared with subsequent data, refining the categories. Through constant comparison and iterative (ongoing) analysis, theoretical saturation was achieved, ensuring that the categories were fully developed and capable of explaining the observed phenomena.

Memo-writing played an integral role throughout the research process, enabling the researcher to document reflections, insights, and theoretical ideas. These memos captured evolving patterns, relationships between categories, and potential theoretical implications, anchoring the theory in the data. Theory development occurred concurrently with data collection and analysis. As new data were gathered, they were promptly analysed, and emerging theories was tested and refined through subsequent data collection, ensuring ongoing relevance and alignment with participants' experiences.

To mitigate the influence of preconceived notions or biases, the researcher adapted several strategies, including maintaining a reflexive journal, engaging in regular peer debriefing sessions, employing triangulation to cross-verify findings, conducting member checks for accuracy, and practising bracketing to temporarily set aside personal beliefs during analysis. These measures ensured methodological rigor and objectivity, resulting in a theory authentically grounded in the data (Jeon, 2004).

The literature review plays a vital role in CGT. Initially, a narrative review was conducted to identify research gaps and inform preliminary concepts before data collection and analysis (McCann & Clark, 2003), as detailed in Chapter 2. Charmaz (2017) highlights the importance of incorporating literature into grounded theory research, noting its contributions to enhancing theoretical sensitivity and refining research questions. A preliminary review aids in refining research questions, serves as a form of theoretical sampling, and validates emerging theory. In this study, the review was essential not only to meet PhD requirements but also to shape the research plan presented to the UoN Ethical Committee.

By systematically employing CGT's principles and strategies, this study ensures a robust exploration of the sociocultural, relational, and systemic factors influencing postpartum contraceptive decision-making among adolescent mothers in Northern Thailand.

3.5.2. Settings and Study Site Selection

This research study was conducted in two hospitals in Chiang Mai, selected based on their active participation in the free contraceptive implant initiative for postnatal teenagers, supported by the NHSO. The strategic selection of these sites ensured access to adolescent mothers receiving LARCs and aligned with the study's focus on postpartum contraceptive decision-making.

3.5.2.1. Study Sites

Maharaj Nakorn Chiang Mai (MNC) Hospital is a 1,400-bed University Medical Teaching (UMT) hospital affiliated with Chiang Mai University's Faculty of Medicine and operated by the Ministry of Education (MoE). As a super-tertiary care institution,

UMT hospital provides specialised medical services, serving Chiang Mai province and 17 other Northern Thai provinces through an extensive referral network.

Maternal and Child Hospital (MCH), a 90-bed facility under the Department of Health (DoH) and MoPH, specialises in maternity and paediatric services. It is part of the Regional HPC 1 network and focuses on primary care, health promotion, and adolescent reproductive health initiatives. MCH plays a pivotal role in providing antenatal care and facilitating free contraceptive services for young mothers.

Eligible participants were adolescent mothers who had given birth in Thailand. Recruitment occurred in postpartum wards, Well-Baby Clinics, and Family Planning Clinic (FPC) at UMT Hospital. Similar units at MCH, including the YFHS within HPC 1, were also included. Recruitment at these critical stages of postpartum care ensured a diverse and representative sample, capturing a wide range of experiences and perspectives related to contraceptive decision-making.

The combination of a super-tertiary hospital and a specialised maternal and child facility allowed for comprehensive data collection across different healthcare levels. This dual-site strategy enhanced the study's applicability to various healthcare settings in Northern Thailand.

3.5.2.2. Hospital Contexts and Organisational Structures

The hospital contexts and organisational structures at the two study sites differ significantly. UMT hospital predominantly operates under a medicalised care model, prioritising advanced clinical serviced, while MCH emphasises health promotion and preventive care. Both hospitals participate in the NHSO's free implant promotion

initiative for adolescents, exclusively available in public health settings. However, there are notable differences in the delivery and scope of these services.

At UMT hospital, subdermal implants and injectables are routinely offered during postnatal clinic visits, typically scheduled six weeks post-discharge. These services are provided free to individuals with Thai identification under the UHC system. However, postpartum check-ups could be conducted at other healthcare facilities through referrals, where the availability of free contraceptive services may vary.

Additionally, UMT hospital extends free contraceptive implant services to university students, including both Thai and international students, as part of its university health insurance programme. The FPC operates weekly, offering accessible contraceptive services. Procedures at MNC are performed by specialists, general practitioners, and occasionally supervised medical students, reflecting its teaching hospital status.

MCH provides free contraceptive implants and injectables to young Thai mothers (aged 10-19) during hospitalisation, aiming to reduce repeat adolescent pregnancies. Advocacy for contraceptive implants begins during antenatal visits, ensuring participants are informed of available services while emphasising voluntariness. Trained nurse-midwives perform implant procedures, highlighting task-shifting strategies and their integral role in delivering services at MCH.

Additionally, MCH collaborates with Regional HPC 1 to train nurse-midwives from primary and community network hospitals across eight Northern provinces. This collaboration underscores MCH's broader commitment to workforce development and maternal health advocacy.

Immersion in the hospital environments provided valuable context for this research, offering insights into organisational culture, workflows, and social dynamics. This engagement facilitated richer data collection, enhanced contextual understanding, and strengthened rapport with participants. Familiarity with the hospital settings enabled the identification of subtle, context-specific cues that may have otherwise been overlooked. By spending time in these environments, the researcher fostered trust and openness, contributing to more authentic data collection (Charmaz, 2014; Creswell & Poth, 2018).

3.5.3. Recruitment Process

After obtaining ethical approvals from both the Faculty of Medicine and Health Sciences Research Ethics Committee at the UoN and the ethics committees of the participating hospitals, the recruitment process commenced. The researcher introduced the study to hospital staff, gatekeepers, and local contacts who supported the recruitment process. Information about the study was disseminated through professional networks, and recruitment posters were displayed in hospital settings with approval from hospital directors. Gatekeepers made initial contact with potential participants in person at clinics and distributed study brochures to complement this approach.

3.5.3.1. Recruitment strategies

Recruitment strategies included poster invitations and research cards (Appendix 8: Recruitment Process). At the UMT Hospital, posters detailing the research project were displayed in the postpartum ward, FPC, and Well-Baby Clinic. At the MCH, posters were displayed in the postpartum ward, FPC, teenage clinic, and Well-Baby Clinic, ensuring visibility in areas frequented by adolescent mothers.

Dual-qualified nurse-midwives, acting as gatekeepers, distributed research cards to potential participants, providing a concise summary of the study along with the researcher's contact information. To mitigate social desirability bias and reduce power dynamics, they limited their involvement to facilitating initial introductions. The researcher personally conducted the consent process to foster a neutral and balanced participant interaction, ensuring comprehensive understanding and voluntary engagement.

Designed for discreet use, the research cards enabled potential participants to consider their involvement privately. These were provided during appointment registration or while waiting for treatment, preserving confidentiality and ensuring an unobtrusive recruitment approach.

3.5.3.2. Participant Contact and Engagement

Participants interested in the study were encouraged to contact the researcher directly via phone to arrange an appointment. Alternatively, participants could engage with the researcher during postpartum check-ups or baby vaccination clinics, ensuring minimal pressure and maximising flexibility. Gatekeepers discreetly collected contact information from interested individuals during clinical visits, noting upcoming appointments. On these dates, the researcher was available onsite to provide further information and assess interest in participation.

For undecided participants, research cards facilitated later contact, enabling them to join at their convenience. Participants who confirmed interest could proceed with interviews on the same day as their clinical appointments, streamlining the process and minimising additional visits.

For participants under 18, parental or guardian consent was required per Thai regulations. Gatekeepers distributed parental consent forms and Participant Information Sheets (PIS) to adolescents expressing interest. Adolescents were instructed to secure parental signatures and return the forms during subsequent visits. They were encouraged to notify the researcher of their scheduled appointments to facilitate efficient consent and interview procedures.

No participants in this study were in formal care or under state guardianship, kinship carers, or foster parents. The absence of such cases simplified the consent process, ensuring smooth participant engagement.

3.5.4. Sampling Process and Procedure

The sampling process in this study was designed to align with the principles of CGT, ensuring that participant selection was iterative, adaptive, and deeply rooted in the emerging theoretical framework. This approach combined purposive sampling during the initial stages with theoretical sampling as the study progressed, facilitating a comprehensive exploration of postpartum contraceptive decision-making among adolescent mothers.

3.5.4.1. Purposive Sampling

Purposive sampling was employed at the outset to recruit participants with specialised knowledge and experiences relevant to the study focus (Coyne, 1997; Moser & Korstjens, 2018; Polit & Beck, 2017). This strategy targeted adolescent mothers aged 15-19 with diverse experiences of postnatal contraceptive use, ensuring inclusion of participants who met the criteria outlined in Section 3.5.5.

The use of purposive sampling in grounded theory research has been a subject of scholarly debate. Traditional grounded theorists, such as Glaser (1978), argue that purposive sampling introduces preconceived ideas, which could conflict with grounded theory principles. However, contemporary scholars, including Cutcliffe (2000) and Birks and Mills (2015), emphasise its practical necessity in early research stages. Purposive sampling provides foundational data that guides the subsequent transition to theoretical sampling, supporting the development of initial codes and categories (Cutcliffe, 2000).

In this study, purposive sampling facilitated the inclusion of participants who had and had not used contraceptives after childbirth. This approach enabled the researcher to capture varied perspectives and identify foundational insights into postpartum contraceptive decision-making. These initial findings informed the transition to theoretical sampling, ensuring the dynamic evolution of data collection and analysis.

3.5.4.2. Theoretical Sampling

The study transitioned to theoretical sampling as the categories and patterns identified during initial analysis required further exploration. Theoretical sampling, a core component of CGT, directs participant selection based on emerging categories identified through constant comparison (Corbin & Strauss, 1990; Coyne, 1997; Glaser & Strauss, 1967).

Theoretical sampling allowed the researcher to refine and expand categories by selecting participants whose experiences could deepen understanding of developing theoretical constructs. Factors such as age, contraceptive knowledge and use, pregnancy acceptance, marital and relationship status, family dynamics, sociocultural influences,

and healthcare accessibility were explored. This approach enabled the researcher to validate and refine emerging patterns while addressing gaps and inconsistencies.

By systematically comparing new data with existing categories, theoretical sampling ensured robust category development and theoretical saturation. This iterative process not only strengthened the theoretical framework but also ensured that the findings accurately reflected the complex realities of the participants.

3.5.5. Eligibility Criteria

To gain a comprehensive understanding of the factors influencing adolescent mothers' decision-making regarding subdermal implants and injectables, this study established well-defined inclusion and exclusion criteria. These criteria ensured the recruitment of participants with diverse but relevant experiences, aligning with the study's aim to explore factors influencing postpartum contraceptive choices. The purposive sampling strategy facilitated the recruitment of participants whose characteristics were most likely to provide rich, meaningful data during the preliminary stage (Bradshaw et al., 2017; McCann & Clark, 2003).

Exclusion criteria were carefully designed to safeguard participants' emotional and psychological well-being. For example, mothers with newborns requiring Neonatal Intensive Care Unit (NICU) care were excluded to avoid adding emotional strain during the interview process. Similarly, participants with learning disabilities or pregnancies resulting from sexual assault were excluded in alignment with ethical research guidelines to protect vulnerable populations (Liamputtong, 2007). This thoughtful approach ensured the ethical integrity of the research.

Table 14: Inclusion and Exclusion Criteria

Inclusion Criteria	Exclusion Criteria
Adolescent women aged 15-19 at the time of childbirth, attending either FPC or Well-Baby Clinics.	Adolescent mothers who were under the age of 15 or over 20 at the time of childbirth.
Adolescent women had given birth maximum a year prior to interview.	Mothers whose newborns required care in the Neonatal Intensive Care Unit (NICU).
Participants who had made a decision regarding the use or non-use of subdermal implants or injectable contraception.	Mothers who gave birth outside Thailand.
Those experiencing either their first or a subsequent (repeated) pregnancy within one year after the previous childbirth, either intended or unintended pregnancies.	Individuals who were unwilling to share their personal experiences.
Those with varied contraceptive use histories, including those who had or had not used contraceptives prior to the current pregnancy.	Reported rape-related pregnancies.
Any marital status, including both married and single mothers.	Mothers with learning disabilities.

By establishing these criteria, the study ensured the inclusion of participants who could provide diverse perspectives on postpartum contraceptive decision-making. For instance, including participants with varied contraceptive histories enabled the exploration of differences in decision-making processes, while the exclusion of vulnerable populations maintained ethical rigour. This approach enhanced the validity of the findings and ensured alignment with the study's overarching aim of capturing the nuanced realities of adolescent mothers' experiences.

3.5.6. Data Collection

Data collection in this study utilised semi-structured interviews with adolescent mothers, audio-recorded and complemented by memos and field notes. This method was chosen for its ability to facilitate in-depth exploration of participants' experiences,

surpassing the constraints of structured interviews (Gerrish & Lacey, 2010). The semi-structured approach aligned with CGT principles, enabling flexibility to capture emergent themes and the nuanced realities of adolescent mothers (Charmaz, 2014).

Adapting to COVID-19 Constraints

The COVID-19 pandemic necessitated significant methodological adaptations. prompting a shift to online interview. Initially planned face-to-face interviews were modified to adhere to Thai government-mandated personal protective equipment (PPE) guidelines and social distancing measures. Hospital restrictions on visitors and deferred non-urgent appointments reduced participant availability for in-person interviews. Additionally, the temporary closure of YFHS facilities, repurposed as COVID-19 observation wards for pregnant women, disrupted services.

To address these challenges, video-call interviews via LINE, a platform popular among Thai teenagers, were introduced. Ethical approval for this amendment was obtained from the full-board ethics committee, ensuring participant safety and methodological integrity. Although online interviews expanded accessibility and facilitated transcription, they posed challenges such as connectivity issues and potential limitations in rapport-building. These were mitigated by selecting private locations, ensuring confidentiality, and promptly resolving technical disruptions.

These methodological adaptations are supported by broader literature addressing the challenges and innovations in qualitative research during the COVID-19 pandemic. Researchers globally have reported shifting to remote data collection methods, such as video or messaging applications—in response to public health restrictions and ethical considerations (Dodds & Hess, 2021). These shifts have prompted re-evaluation of

rapport-building strategies, digital consent processes, and safeguarding procedures (Vindrola-Padros et al., 2020).

While remote interviews offer convenience and wider geographic access, they may introduce barriers related to digital inequality, participant distraction, and limited observation of non-verbal cues (Lobe et al., 2020). Nonetheless, studies have shown that, when supported by clear communication protocols, flexible scheduling, and informal rapport-building techniques, remote methods can still yield rich and meaningful data (Howlett, 2021; Irani, 2019).

This study's use of LINE for video and text interviews aligns with these best practices. Adaptive techniques, such as using personalised opening questions and providing pre-interview orientation, helped foster participant comfort and sustained engagement. These efforts were designed to maintain methodological rigour while ensuring participant safety and autonomy within the context of the COVID-19 pandemic.

Linguistic and Cultural Considerations

Given Chiang Mai's linguistic diversity, interviews were conducted in Thai and Northern dialects to ensure inclusivity and accurately reflect participants' lived experiences. To maintain data integrity, a rigorous cross-linguistic validation process was implemented. Transcripts were initially translated into English by a bilingual translator who was not involved in data collection, followed by a back-translation to verify semantic equivalence. Proofreading services reviewed the English versions for clarity and coherence, and a second bilingual researcher conducted further checks to resolve any discrepancies.

While the supervisory team were not fluent in Thai, they assessed the robustness of the translation and validation protocols—rather than assessing literal linguistic accuracy—to ensure methodological integrity aligned with established cross-linguistic research standards. As Temple and Young (2004) argue, translation is not a neutral act; it is embedded in power relations, cultural positioning, and interpretive choices. These dynamics were addressed through transparent translation procedures and independent verification.

Bilingual coding was employed to ensure that themes and patterns were interpreted consistently across both languages, thereby minimising semantic distortion. This step is especially important given the possibility of conceptual loss or subtle shifts in interpretation during translation, as highlighted by van Nes et al. (2010). Squires (2009) similarly emphasises that language-related decisions in cross-cultural qualitative research should be documented and validated to support the trustworthiness of findings. By verifying the fidelity of transcripts to participants' intended meaning and employing independent bilingual validation, the study strengthened both the credibility and transferability of its findings.

Interview Settings and Procedures

In-person interviews were conducted in private hospital rooms during postpartum check-ups or baby vaccinations at FPCs and Well-Baby Clinics. These settings facilitated participant comfort, privacy, and practical accommodations, such as baby feeding and diaper changing facilities. Home interviews were avoided to minimise external influences from family members on participant responses.

To foster rapport and reduce power imbalances, the researcher avoided formal attire, opting not to wear a nursing uniform. Participants addressed the researcher as "Pee" (sister in Northern Thai), promoting familiarity and reducing authority distance. Warm-up questions and casual conversations created a supportive environment for open dialogue (Gerrish & Lacey, 2010). The voluntary nature of participation was emphasised, and participants were reminded of their right to pause or withdraw at any stage.

Informed consent was secured from both participants and their parents, with audio recording initiated post-consent. Personal identifiers were anonymised during transcription, and coded references were assigned to ensure confidentiality. Interviews began with structured demographic questions, followed by semi-structured questions addressing contraceptive decision-making and personal experiences.

To enhance understanding of contraceptive methods, visual aids were used during interviews. These aids included illustrated charts and models representing subdermal implants and injectables, fostering engagement and clarity, especially for sensitive topics. Visual aids minimised reliance on medical terminology, making the discussion accessible and promoting meaningful participant interaction.

Techniques for Effective Data Collection

The researcher employed active listening techniques, using rephrased neutral questions to avoid leading responses. Reflective pauses allowed participants to articulate their thoughts fully, fostering in-depth responses (McGrath, Palmgren, & Liljedahl, 2019). Silence was strategically utilised to encourage reflection without causing discomfort. Observing non-verbal cues, the researcher adjusted questioning and pacing to maintain

participant comfort, pausing interviews if distress was detected. Participants were given the option to terminate or resume interviews as needed, ensuring their well-being remained a priority.

Efforts to ensure private interviews were maintained, even when parents or partners requested to be present. The researcher explained that external presence could influence responses and kindly requested their cooperation in waiting outside. Adjacent waiting areas provided comfort for accompanying individuals, maintaining a secure and uninhibited environment for participants.

Interviews averaged one-hour, balancing depth with participant attention spans and the sensitive nature of the topic. This duration was appropriate for adolescent mothers and ensured detailed exploration of their experiences while maintaining engagement. The careful design of the interview process, prioritising participant welfare and ethical rigour, enhanced the authenticity and reliability of the data collected.

While qualitative research traditionally favours face-to-face interviews due to concerns about rapport and data depth, online interviews provided comparable insights. Participants appeared more comfortable in their personal spaces, facilitating detailed and expansive narratives. This contrasted with the sometimes formal and intimidating atmosphere of hospital environments, which may have led to more reserved responses. The adaptation to online methods demonstrated their value in expanding accessibility and overcoming geographical and mobility barriers, particularly during the pandemic (Archibald et al., 2019). Despite initial concerns about the depth achievable through online methods, the rich and detailed transcripts of virtual interviews highlighted their potential to match in-person sessions. Connectivity issues were minimal and addressed promptly, ensuring the continuity of interviews.

Regular updates on the evolving COVID-19 situation were communicated biweekly to the Director of Research and the supervisory team. Ethical approval processes, though delayed, ensured participant safety and compliance with research guidelines. These adaptations reinforced the study's commitment to ethical rigor while advancing knowledge in a challenging public health context.

The differentiation between those who were in partner relationships with the father of the child and those who were not was considered during recruitment. However, the observation that most participants attended interviews without their partners pertains to the interview setting and did not influence recruitment eligibility or strategy. The primary aim was to ensure a private and comfortable environment for the adolescent mothers to express their experiences freely and without external influence, regardless of their relationship status.

During the interviews, the researcher was acutely aware of the potential stressors faced by teenage mothers, given their complex roles as mothers, daughters, and adolescents. The sensitive nature of discussing contraception, a topic that is inherently private, was anticipated to elicit unease or embarrassment in some participants. Consequently, the researcher closely monitored for signs of discomfort or distress, which could be observed in their body language and behaviour. If any signs of distress were noted, the interview was paused, and the audio recording was stopped to address the participant's comfort. The participant was then given the choice to either continue or terminate the interview. If the participant expressed readiness to continue and no longer showed signs of discomfort, the session resumed. In cases where discomfort persisted, the participants were offered the option to end the interview, prioritising their well-being over data collection.

Transcription Process

All interviews were audio-recorded with consent and transcribed verbatim by the researcher shortly after each session. This timing ensured that contextual details, emotional nuance, and environmental cues were preserved while the interaction remained fresh. Where interviews were conducted in Thai or Northern dialects, transcription occurred in the original language before translation into English. Transcripts were then reviewed for completeness and anonymised, with coded identifiers replacing personal information to protect confidentiality.

In line with CGT principles, memo-writing accompanied the transcription process, allowing the researcher to record initial analytic insights, emerging ideas, and notable shifts in tone or emotion. These early memos supported later stages of coding and category development.

3.5.7. Sampling Size and Theoretical Saturation

Adhering to grounded theory principles and acknowledging the time constraints of this PhD research, the initial sample size was set between 15 and 25 participants. Theoretical saturation was achieved after conducting 25 interviews, marking the point at which no new themes or categories emerged. This ensuring conceptual density across all categories and grounded the formation of theory in rich, nuanced data (Hutchinson, 1993; Strauss & Corbin, 1998). In CGT, saturation signifies that the data collection has sufficiently explored category variability and elucidated interconnections, ensuring the emerging theory is robust and well-founded.

Iterative Process and Theoretical Sensitivity

The iterative process of theoretical sampling ensured that each substantive area and emerging concept were rigorously defined and refined. This dynamic approach allowed the researcher to pursue data that deepened existing categories, facilitating theory development and enhancing the comprehensiveness of findings (McCann & Clark, 2003).

For example, as early interviews revealed sociocultural influences on contraceptive choices, subsequent participants were selected to explore how family structures, marital status, and healthcare access intersected with these factors. Theoretical sensitivity guided participant selection, systematically addressing emergent gaps, and ensuring diverse perspectives were represented.

Participant Distribution Across Hospital Sites

Participant distribution across hospital sites was intentionally unequal, reflecting contextual differences in service utilisation. UMT Hospital, as a teaching institution, recorded fewer teenage mothers compared to the MCH, a facility specialising in maternal and child health. The latter consistently attracted a higher volume of teenage mothers, shaping recruitment dynamics. Recruitment was contingent on the total number of teenage mothers accessing services during data collection, ensuring representation of diverse experiences across settings.

For example, at MCH, most participants reported receiving antenatal counselling that included contraceptive education, while participants at UMT hospital often cited a focus on clinical care without targeted counselling. This variability enriched the data,

supporting the transferability of findings by incorporating insights from different care models.

Monitoring Saturation and Reflexivity

The researcher closely monitored data saturation through memoing and constant comparison, identifying diminishing returns in new data despite continued interviews. Reflexivity was maintained throughout the sampling process, ensuring emerging categories dictated the progression towards saturation rather than arbitrary sample size targets.

To maintain methodological rigor, the researcher regularly reviewed memos with the supervisory team, ensuring alignment between sampling decisions and the study's objectives. Memoing also provided a critical reflective space to document shifts in participant recruitment strategies based on emerging themes, ensuring transparency and adaptability.

3.5.8. Data Analysis

3.5.8.1. Analytical Approach in Constructivist Grounded Theory

In alignment with GT principles, data collection and coding progressed concurrently, allowing for iterative refinement through constant comparative analysis and cross-checking across participant data. This dynamic approach facilitated the development of categories grounded in participants' lived experiences, ensuring that emerging themes informed subsequent phases of analysis.

3.5.8.2. Open Coding: Identifying Initial Patterns

Open coding marked the first phase, involving a meticulous line-by-line breakdown of the data to deconstruct participant narratives into discrete elements. This method allowed for the identification of recurring patterns and divergences across accounts.

For example, one participant voiced apprehensions about long-acting effects of implants, whereas another cited peer influence as the primary factor shaping her decisions. These initial patterns revealed broader influences, including social context, healthcare access, life circumstances, and the role of significant others and social media. These themes laid the groundwork for further exploration and theoretical development.

3.5.8.3. Axial Coding: Identifying Relationships Between Categories

Following open coding, axial coding facilitated the reorganisation and categorisation of the data, revealing relationships within and between subcategories. This phase uncovered intersecting influences such as familial expectations overlapping with HCP recommendations, leading nuanced and dynamic decision-making processes.

For instance, some participants described negotiating contraceptive use to align with cultural expectations around fertility and motherhood, while others navigated conflicting advice from parents and HCPs, influencing their contraceptive choices.

Axial coding deepened the analysis by demonstrating how external pressures converged to shape participants' reproductive decisions.

Memos generated during this stage prompted further reflection and refinement of categories, ensuring theoretical insights continued evolving. Additionally, theoretical sampling—guided by emerging themes—ensured that subsequent participants were strategically selected to explore these intersections in greater depth.

3.5.8.4. Selective Coding: Developing the Core Category

Selective coding synthesised data into a cohesive framework, culminating in the identification of the overarching category: "Maintaining Social and Bodily Integrity: An Iterative Process of Responding to Situational Dynamics." This category encapsulates the adaptive strategies employed by participants as they navigated evolving social, familial, and personal circumstances. For example, some participants described adapting their contraceptive use based on fluctuating family support and changing health priorities, reflecting a continuous balancing act between external pressure and personal well-being. The overarching category highlights the fluid nature of contraceptive decision-making, illustrating how participants dynamically adjusted their choices over time.

To ensure methodological transparency, a detailed account of the open, axial, and selective coding processes is provided in Appendix 19, including illustrative examples and memos. Additionally, Section 4.3 elaborates on the interrelationships between subcategories and their broader implications for contraceptive uptake and sustained use.

The interview guide was initially designed around broad topics, aligning with CGT principles, allowing for the concurrent progression of data collection and analysis. This iterative approach facilitated ongoing refinements, ensuring that emerging categories—identified through constant comparative analysis—shaped subsequent interviews. For example, early interviews highlighted decision-making tensions between personal agency and external influences, prompting adjustments to probe deeper into sociocultural and HCP influences. This dynamic process maintained the relevance of data collection and supported comprehensive exploration of evolving research categories.

All audio-recorded interviews, memos, and field notes were transcribed verbatim and systematically coded. Constant comparative analysis was applied at every stage, fostering progressive theoretical refinement. Key analytical steps included:

1. Comparing incidents within and across cases to identify patterns and variations,
2. Integrating multiple data sources (e.g., participant narratives, field notes, and memos) to enhance contextual depth,
3. Delineating the final conceptual framework on contraceptive decision-making, which captures the interplay of autonomy, healthcare access, and socio-cultural influences on contraceptive choices.

The resultant theory extends beyond individual decision-making processes to elucidate broader systemic influences on contraceptive uptake and adherence, offering a nuanced understanding of the mechanisms shaping contraceptive behaviours.

3.5.8.5. Constant Comparison Technique

In grounded theory, constant comparison and simultaneity are integral to data collection and analysis. Data are concurrently collected and analysed to develop a theory, forming a fundamental aspect of CGT (Blaikie, 2007; Hutchinson, 1993). The flexibility and open-ended nature of this approach are among its primary strengths (Charmaz, 1990).

The constant comparative method involves coding, categorising, and memo writing (Glaser, 1978; Glaser & Strauss, 1967). The data collected were categorised into overarching (core) category, related categories, subcategories, and concepts, facilitating the generation of theory. Constant comparison addressed similarities, differences, and degrees of consistency in meaning between incidents. This process generated

underlying patterns, resulting in coded categories and the refinement of their properties (Charmaz, 1990; McCann & Clark, 2003).

For example, in this study on contraceptive decision-making, constant comparison was applied by coding interviews from users of subdermal implants and injectables, SARC users and non-users. Factors such pregnancy order, educational level, healthcare experiences, hospital settings, sociocultural influences were examined. Emerging categories across these diverse datasets were compared and contrasted to identify consistent patterns and unique variations. As more data were gathered, codes were refined to better represent participants' nuanced experiences, ensuring comprehensive and saturate categories.

3.5.8.6. Coding Process

The process of data analysis in this study followed the principles of grounded theory, emphasising iterative coding, constant comparison, and uncover the decision-making processes of adolescent mothers regarding contraceptive choices. Coding and analysis were intertwined with data collection, ensuring a dynamic progression of emerging themes and concepts (Charmaz & Thornberg, 2020). This process utilised open, axial, and selective coding (McCann & Clark, 2003; Strauss & Corbin, 1990) to organise and refine data systemically.

- Open Coding: open coding involves breaking down data into discrete elements to identify initial categories. This process was applied conducting line-by-line analysis of interview transcripts, tagging phrases that highlighted patterns, such as "family support," "healthcare barriers," and "contraceptive perceptions".

Emerging codes were constantly compared to uncover connections and variances among participants' experiences (Strauss & Corbin, 1990).

- Axial coding: Axial coding reassembled data by examining relationships between categories and subcategories. This stage explored links such as how familial expectations influenced healthcare interactions or how sociocultural normed impacted contraceptive choices (Carpenter, 1999; Strauss & Corbin, 1990). Visual mapping and diagrams helped to clarify these connections and strengthened the theoretical abstraction (McCann & Clark, 2003).

  Appendix 17 provides a detailed example of the coding process used, including memo integration across open, axial, and selective stages. It illustrates how the core theoretical dimension of 'Maintaining Social and Bodily Integrity' was developed using constructivist grounded theory principles.

- Selective coding: selective coding focused on identifying a core category and integrating it with categories (Charmaz, 1990). A core category is developed, allowing for the identification of emergent variations and relationships among them (Strauss & Corbin, 1990). These coding steps are part of a cycling process, evolving concurrently. In this study, "situational influences on contraceptive decision-making" emerged as the core category, connecting them such as familial influences, healthcare access, and sociocultural dynamics (Hutchinson, 1993). This phase ensured the theory was cohesive, saturated, and explanatory.

The constant comparative method is fundamental to CGT, integrating data collection and analysis to refine emerging categories. Each new piece of data was compared with existing codes to verify patterns and address inconsistencies (Glaser & Strauss, 1967).

For instance, early interviews highlighted "trust in healthcare providers" as a recurring theme. Subsequent analysis compared trust levels based on participants' age, marital status, and prior contraceptive use, revealing nuanced differences in how trust influenced decision-making.

This iterative process enriched the categories by addressing similarities and differences in participants' narratives. Themes such as "beliefs about contraceptive side effects" and "impact of social media" were refined through repeated comparison to ensure they captured the complexities of participants' experiences

3.5.8.7. Memo-Writing

Memo-writing played a pivotal role in tracking analytical insights, refining categories, and creating an audit trail (Charmaz, 2006). Memos were written after each interview to capture reflections on participants' perceptions, situational contexts, and emerging patterns. The researcher utilised memos from the initial coding sessions until the conclusion of the research project (Strauss & Corbin, 1990).

For example, memos documented adolescent mothers' apprehensions about implant removal, leading to adjustments in follow-up interview questions to explore this concern further. These memos facilitated analytical depth, guiding the iterative refinement of categories and ensuring theoretical development (Birks & Mills, 2015).

Emergent issues of significance often stem from participants' narratives, particularly in research where participants and researchers share a cultural milieu (Mills et al., 2006). It is imperative for researchers to adopt a conscious, open-minded, and flexible approach. This approach facilitates the authentic emergence of theory directly from participant data, avoiding the imposition of preconceived themes and undue

interpretations on their narratives (Glaser & Strauss, 1967; Hutchinson, 1993; Strauss & Corbin, 1990).

Continuous memo-writing has emerged as a fundamental component in grounded theory, incorporating both operational notes and analytical perspectives. The practice of memo-writing, or maintaining a fieldnote diary, was instrumental in elaborating and refining categories.

To process theoretical sampling, the researcher strategically selected new data sources to elaborate and refine the emerging theory of situational influences grounded in individuality, family, service, and sociocultural contexts. For example, new incidents explored included health conditions, social media influences, experiences of repeated pregnancies, beliefs relating to infertility, issues of implant removal, continuity of care, service disruption, and perceived communication. This involved seeking participants or incidents likely to challenge or expand the understanding of situational influences as the core category. By continuously comparing new data with existing codes and categories, the analysis deepened and became more comprehensive. This iterative process ensured that the theory was grounded in the data and was sufficiently robust to account for variations and complexities within the research context.

3.5.8.8. Theoretical Sensitivity

Theoretical sensitivity refers to the researcher's ability to interpret data meaningfully, recognise patterns, and identify connections between categories (Engward & Davis, 2015). In this study, theoretical sensitivity was developed and applied through several complementary strategies.

First, an extensive review of literature on contraceptive decision-making, sociocultural influences, and healthcare services provided a strong conceptual foundation (Charmaz, 2006; Strauss & Corbin, 1990). The researcher's prior professional experience as a healthcare practitioner also enhanced sensitivity to the nuances of participant narratives, particularly in clinical or emotionally charged contexts (Engward & Davis, 2015). Throughout the analysis, memo-writing served as a key reflective tool, capturing the researcher's evolving insights into category development and relationships among emerging themes (Glaser, 1978). The process of constant comparison—analysing each new data against existing codes and categories—ensured that the emerging theory remained grounded in participants' lived experiences (Corbin & Strauss, 2015).

These strategies collectively informed the development of the study's core category: "Maintaining Social and Bodily Integrity: An Iterative Process of Responding to Situational Dynamics". This framework integrates individual, familial, healthcare, and sociocultural influences, reflecting how participants negotiated choices about contraception within their social and bodily contexts. For instance, beliefs about infertility, repeated pregnancies, social media narratives, and limited access to services all shaped the ways participants assessed and adjusted their decisions.

By refining categories through memoing and comparison, the final theoretical model captured the complexities of adolescent contraceptive decision-making. Through rigorous application of GT techniques—coding, theoretical sampling, memo-writing, and constant comparison—this study offers a nuanced and grounded account of how young mothers in Northern Thailand make reproductive decisions, contributing valuable insights to global reproductive health scholarship.

3.6. Positionality and Reflexive Account

3.6.1. Recognising Subjectivity and Positionality

Subjectivity and researcher positionality were critically addressed in this study. Acknowledging that complete neutrality is unattainable, the researcher acknowledged that personal perspectives, biases, and social positions inevitably shaped observations and interactions. During interviews, the presence of the interviewer undoubtedly influenced participants' responses. By actively reflecting on these dynamics throughout the research process, the study ensured rigour, transparency, and trustworthiness, contributing to a nuanced understanding of the social context being investigated (Bukamal, 2022). Reflexive practices were integral to producing respectful, ethical, and nuanced research outcomes, which reinforced the ethical foundations of this study. Reflexive journaling helped track emergent patterns, informing theoretical sampling adjustments to capture underrepresented perspectives. This iterative process ensured theoretical saturation was reached in line with CGT principles (Charmaz, 2014).

3.6.2. Reflexivity in Qualitative Research

In qualitative research, reflexivity involves articulating the interplay between the researcher, participants, and the broader study context (Dodgson, 2019). This reflexive process enhanced the researcher's awareness of their role within the research framework. While findings in CGT emerge from participants' views, the researcher's interpretation inevitably shapes the analysis (Jootun et al., 2009). Reflexivity strengthens the quality of findings by ensuring that they are informed by the researcher's active engagement with the evolving dynamics throughout the study. This conscious self-awareness contributed to a deeper, more transparent understanding of the participants' lived experiences, ensuring methodological rigour.

3.6.3. Managing Power Dynamics in Recruitment

The recruitment process in qualitative research requires careful navigation of power dynamics, especially when external influences limit a participant's autonomy. In one instance, a potential participant was willing to join the study, but her older and more authoritative partner declined on her behalf, citing concerns about the stigma associated with an unacknowledged pregnancy. This decision, despite the participant's willingness, highlighted how cultural and familial hierarchies can override individual agency.

As a midwife educator and researcher, I recognised that my professional role might inadvertently exert additional pressure on the couple, potentially influencing their decision. To minimise power imbalances and ensure the participant's autonomy was respected, I employed transparent communication, offered reassurance, and allowed time for dialogue, fostering a more equitable decision-making process.

Reflecting on this scenario deepened my awareness of how positionality intersected with participant recruitment, reinforcing the need for an ethical, respectful, and participant-centred approach to ensure voluntary and informed participation.

The use of the constant comparative method allowed continuous reflection on how social desirability might shape responses. Memo-writing and peer debriefing helped refine codes iteratively, ensuring that emerging categories remained participant-driven rather than influenced by interviewer expectations.

3.6.4. Leveraging Professional Expertise

As a midwife educator with extensive clinical experience, the researcher's understanding and communication skills with adolescents significantly informed the

study. These insights played a critical role in refining the interview guide, enabling the identification of key issues for in-depth exploration. Theoretical sensitivity was enhanced by systematically incorporating questions to encourage deeper analysis of participants' responses. Continual engagement with the data facilitated the development of analytic categories essential for theory formation.

The researcher's dual role as midwife and nursing instructor, coupled with extensive experience teaching SRH to adolescents across Northern Thailand, significantly facilitated rapport-building. For instance, some young mothers recognised the researcher from previous health education sessions held at local schools, which helped alleviate apprehension and foster a sense of trust and familiarity. This established rapport and familiarity encouraged participants to share their experiences more openly and candidly, enhancing both the depth and authenticity of the collected data.

As an HCP, the researcher's familiarity with the clinical environments where participants received care facilitated immediate rapport and streamlined the recruitment process. However, this dual role also introduced challenges related to power dynamics, particularly during recruitment and interviews. Participants might have perceived interview questions as assessments of their knowledge rather than as opportunities to share their lived experiences. To mitigate this, the researcher fostered trust by dedicating time to rapport-building and clearly articulating the study's objectives.

The researcher made a conscious effort to avoid interpreting issues through the lens of an HCP, instead maintaining openness and impartiality. In such instances, I clarified that my role was solely to understand their lived experiences for research purposes, and that any specific health concerns or treatment-related questions would be addressed after the interview or referred to an appropriate HCP.

This required deliberate efforts to clearly separate my roles as researcher and an HCP, ensuring that participants fully understood this distinction and felt comfortable engaging in the study. Reinforcing this distinction empowered participants to engage without fear of judgment, fostering an environment conducive to authentic dialogue.

In summary, the researcher's professional expertise as a midwife educator and nursing instructor enriched the study by enhancing participant engagement and fostering deeper trust during data collection. Simultaneously, ongoing reflexive practices ensured that any biases arising from the researcher's dual roles were continuously identified and addressed, upholding ethical rigour and enhancing the overall trustworthiness of the findings.

3.6.5. Linguistic Proficiency and Translation Challenges

As a native of Chiang Mai fluent in Northern Thai dialects, the researcher conducted interviews in whichever language each participant preferred, facilitating deeper engagement and authentic expression of their lived realities. However, certain terms in Thai and Northern dialects posed challenges in English translation due to subtle cultural connotations or multiple meanings. In these instances, the researcher undertook a rigorous, multi-stage translation and validation process designed to maintain accuracy and conceptual integrity.

Initially, transcripts were translated into English with careful attention to flagged terms that lacked direct equivalents or posed semantic ambiguity. These flagged segments then underwent systematic back-translation by a separate bilingual expert, ensuring that the essential meaning of the original Thai expressions remained intact. Throughout data collection and analysis, the researcher engaged in ongoing discussions with this expert to prevent inadvertent shifts in nuance or interpretation. Before seeking ethical

approval, an additional language specialist reviewed all research materials to verify alignment across Thai and English versions.

Despite not being a native English speaker, the researcher integrated a structured peer review process at pivotal junctures, collaborating with the supervisory team and bilingual colleagues. These peers reviewed the translated transcripts against the original Thai to verify authenticity and consistency. Feedback was incorporated through iterative revisions, documented and tracked for methodological transparency. Some culturally embedded expressions in Northern Thai did not have direct English equivalents, requiring iterative coding adjustments to ensure accurate theoretical representation. Back-translation and bilingual expert consultation helped maintain conceptual integrity across languages.

By integrating expert consultations, peer debriefings, and back-translation protocols, the researcher minimised the risk of misrepresentation and ensured the credibility of participants' contributions. This methodical approach reflects the core principles of CGT, ensuring that each participant's voice remains faithfully captured in the final analysis.

3.6.6. Managing Positionality and reflexivity

As discussed in the preceding subsections, the researcher dual roles as a healthcare practitioner and investigator introduced unique ethical and methodological considerations. Building on these discussions about power dynamics, professional experts, and ethical safeguards, particularly reflexive strategies were developed to minimise bias and maintain methodological rigour.

One key approach involved maintaining a reflexive journal throughout data collection and analysis. In this journal, the researcher recorded evolving thoughts, emotional responses, and potential biases that emerged from the dual roles of midwife educator and researcher. Documenting these reflections facilitated ongoing self-awareness and helped guard against unintentional influence on participants' responses or the emerging categories in the analysis.

In additional to the journal, the researcher conducted regular peer debriefing sessions. These sessions involved discussion interim findings and challenging interpretative assumptions with academic peers and members of the supervisory team. By soliciting critical feedback, the research could refine coding and analytic decisions, ensuring that interpretations remained grounded in participants' own perspectives rather than being shaped by researcher's professional or personal worldview.

Sampling decisions in this study were likewise influenced by reflexive considerations, aligning with the iterative principles of CGT. Purposive sampling was used initially to select adolescent mothers most likely to provide rich, diverse data on the phenomenon under investigation. As categories began to form and nuanced questions arose from ongoing analysis, theoretical sampling was employed to target participants and contexts that could expand or refine emerging themes. By reflecting on these sampling choices at each stage, the researcher ensured that potential personal or professional biases did not unduly shape who was included in the study.

In summary, the study's ethical considerations for sensitive topics combined robust safeguards, proactive planning, and a reflexive methodology. These measures ensured participant safety and well-being while supporting the development of rich, meaningful insights into the complex realities of adolescent mothers.

3.7. Ethical Considerations

3.7.1. Governance and Approvals

This research adhered to rigorous ethical standards by securing governance approvals from the University of Nottingham (UoN) and the ethical committees of two Thai hospitals: Maharaj Nakorn Chiang Mai Teaching Hospital, and the HPC, Region 1 Chiang Mai. Given the involvement of minors (adolescent mothers under 18), comprehensive ethical safeguards were implemented to ensure participant anonymity, confidentiality, and harm prevention (Goredema-Braid, 2010; Richards & Schwartz, 2002).

Following ethical clearance, the UoN issued an official letter introducing the PhD researcher and the study to the hospitals (see Appendix 2 for ethical approval). Upon obtaining permission from the directors of the research departments, recruitment posters were displayed in designated clinical areas (see Appendix 3 for a sample recruitment poster).

Ethical conduct in this study included obtaining informed, voluntary consent from the participants. For adolescent mothers under 18, parental consent was also required, in line with guidelines mandating parental approval alongside the minor's consent, except for legally married adolescents. While some participants were spiritually engaged, where parents acknowledged their relationship ceremonially, none had obtained a legal marriage certificate. The researcher remained vigilant for signs of parental coercion, which would have led to the exclusion of such participants; however, no such cases were encountered. This approach upheld ethical standards while respecting cultural practices.

Participants and their parents or guardians received a comprehensive verbal briefing in Thai or Northern dialects, supplemented with a detailed participant information sheet. Key elements of the informed consent process included clear explanations of the study's objectives, participants' roles, the researcher's identity and funding, and the planned dissemination of findings (Orb et al., 2001). It was explicitly communicated that participants could refrain from answering questions or withdraw from the study at any time without consequences.

Additionally, although one participant shared historical accounts of sensitive experiences, such as previously treated STIs and a past experience of an abusive relationship, no safeguarding disclosures occurred during the data collection period that met the threshold for mandatory reporting. This instance did not represent a current safeguarding concern, but rather formed part of the participant's historical life narrative. As such, no intervention was required.

3.7.2. Harm Prevention and Protective Strategies

Conducting research involving adolescents necessitates stringent safeguarding measures to ensure participant safety, well-being, and maintain ethical integrity. This study implemented a proactive and comprehensive safeguarding framework, designed to minimise risks, prevent harm, and facilitate timely intervention when necessary.

A structured safeguarding protocol was established to provide clear procedures for managing disclosures of abuse, distress, or sensitive information. This protocol ensured prompt intervention, adherence to legal safeguarding obligations, and compliance with ethical standards (see Appendix 4: PIS and Appendix 11: The Courses of Action for Adolescent Mothers Who Need Support).

To uphold participant protection and confidentiality, the researcher familiarised herself with institutional safeguarding protocols and national child protection guidelines prior to fieldwork. This preparation ensured that the researcher was equipped to recognise signs of distress, respond sensitively, and escalate concerns in accordance with ethical and legal standards. Ongoing self-reflection and critical engagement with ethical responsibilities during fieldwork reinforced preparedness for managing sensitive situations. These measures ensured that legal and ethical obligations were met while prioritising the well-being and autonomy of all participants, even though no disclosures during the study required mandatory reporting.

While the safeguarding protocol was robustly prepared to respond to potential disclosures of harm and abuse, it was not activated during the study. No participant reported any present or ongoing risk necessitating formal intervention. This ensured full compliance with ethical and legal obligations, while also maintaining the confidentiality and autonomy of participants.

To reduce practical barriers to participation and demonstrate respect for the participants' circumstances, interviews were scheduled at convenient times and locations, particularly in light of the potential exhaustion caused by long waiting times at public hospitals. Participants who incurred additional travel expenses received a reimbursement of THB 300 (approximately GBP 6.70) to offset costs, including childcare. At the conclusion of each interview, participants were given a small token of appreciation, such as a baby swaddling cloth and a towel. These strategies were designed to ensure that participation was not only voluntary but also free from undue burden.

3.7.2.1. Precautionary Measures for Emotional Distress

Precautionary measures were in place to address any signs of emotional or psychological distress during interviews. If a participant exhibited signs of panic, discomfort, or emotional distress, the interview was paused or terminated, and referrals were arranged to appropriate HCPs for psychological and medical support, in line with the participant's healthcare coverage. If an infant required attention during the session, the researcher paused the interview and created a calm, supportive environment for both mother and child.

Although no participants required referral during the study, the protocol anticipated the possibility of disclosures involving violence, abuse, or early sexual activity. To ensure a robust ethical response, all participants were fully informed of local safeguarding protocols, including mandatory reporting by clinic nurses and social service referral pathways. Affected adolescent mothers were provided with access to support resources, such as 24-hour hotline numbers and directories of care institutions (see Appendix 9: Support Card).

3.7.2.2. Addressing Historic Disclosures

This study proactively considered the ethical and legal implications of historical disclosures involving early sexual activity, pregnancy, and STIs, particularly among participants under the age of 15. In accordance with Thailand's Child Protection Act (2003), any safeguarding disclosure involving participants under 18 would have triggered a mandatory response, regardless of whether the events were ongoing or historical.

A structured decision-making process was applied to distinguish peer-based relationships from potentially exploitative situations involving power imbalances, significant age differences, or coercion. In cases where early sexual activity was disclosed as consensual interactions between peers of similar ages, a proportionate and contextually sensitive response was adopted. However, if disclosures had involved significantly older partners, coercion, or legal exploitation, mandatory reporting protocols would have been activated, requiring referral to social workers and multidisciplinary safeguarding teams (Alderson & Morrow, 2011).

Particular attention was given to disclosures involving participants under the age of 15 who had engaged in sexual activity with adults, in line with Thai legal definitions of statutory rape or exploitation. These cases would have required immediate notification to child protection agencies and the implementation of legal and psychosocial interventions.

To uphold psychological safety, a non-judgmental, empathetic approach was prioritised throughout. Participants were made aware—during the informed consent process—of the voluntary nature of participation and their access to legal, emotional, and medical support.

In cases of suspected exploitation, referrals would have been made to the One-Stop Crisis Centre (OSCC), a national agency under the Ministry of Social Development and Human Security (2020), which offers services through more than 22,000 crisis centres and 1,300 mobile units across Thailand.

All safeguarding concerns would have been documented in accordance with hospital and national safeguarding policies. The researcher was prepared to work closely with

social workers and hospital-based child protection teams to ensure appropriate handling of any high-risk disclosures. These procedures were essential not only for participant protection but also to maintain ethical integrity and theoretical sensitivity in interpreting participants' reproductive histories, including adolescent pregnancy and STI experiences.

One participant disclosed a history of physical abuse by her partner during pregnancy. At the time of the interview, she had already separated from her partner and was living independently. Although the situation did not require emergency safeguarding interventions, the researcher applied a context-sensitive ethical response to support the participant's well-being. This included: (1) confirming her awareness of available hospital-based support services (e.g., counselling, social work, legal aid); (2) maintaining ongoing risk assessment throughout the interview; and (3) providing tailored contact information for social service providers. These steps helped uphold participant autonomy while ensuring access to appropriate follow-up resources, even in the absence of active safeguarding concerns.

Importantly, no serious cases of abuse, exploitation, or mandated referrals arose during the study. Nevertheless, the safeguarding framework remained active and ready to respond to the complexities of adolescent reproductive health.

3.7.2.3. Legal and Multidisciplinary Response

In instances of physical or sexual violence disclosed by adolescent mothers, the Child Protection Act (2003) mandated immediate protective intervention, even if the participant did not wish to proceed with reporting (Royal Thai Government, 2003). HCPs were legally required to notify social workers, who convened a multidisciplinary team including psychologists, psychiatrists, gynaecologists, paediatricians, and nurses.

Each case was assessed on an individual basis to ensure that the safeguarding response was both context-sensitive and proportionate. Interventions could include the following measures:

1. Immediate medical and psychological assessment by child protection teams;
2. Legal protection orders where appropriate;
3. Referral to state-run shelters such as Pingjai Home in Chiang Mai, which provides safe housing and support for adolescent mothers and their children (Ministry of Social Development and Human Security, 2020).

This coordinated multidisciplinary framework ensured that all disclosures—including historical ones—would be addressed both ethically and legally, in ways that prioritised the adolescent mothers' rights, safety, and long-term well-being. No such disclosures occurred during this study, but the researcher remained prepared to activate this response protocol if required.

3.8. Chapter Summary

This chapter provides a comprehensive overview of the research methodology and methods employed in this study, emphasising the rationale for adopting CGT. The chosen methodology, underpinned by a constructivist philosophical stance and iterative analytical approach, was instrumental in exploring the sociocultural, systemic, and individual factors influencing the use of subdermal implants and injectable contraceptives among adolescent mothers.

Key methodological decisions and their justifications were detailed, illustrating how the research design facilitated a co-constructed understanding of participants'

experiences. CGT's constant comparative method guided the iterative coding process, ensuring that participant narratives shaped category development rather than being predetermined by existing theories. The chapter also elaborates on contextual recruitment strategies, including measures to manage participant capacity, ethical safeguards, and informed consent processes, particularly for minors under 18. Ethical compliance was rigorously maintained, with safeguarding measures ensuring that both psychological safety and autonomy were prioritised.

To address potential challenges, such as social desirability bias and language barriers, bilingual validation processes and culturally sensitive interviewing techniques were implemented. These strategies enhanced the authenticity and depth of the data, ensuring that findings accurately reflected participants' lived realities. The transcripts were analysed using an inductive, iterative approach, where emerging categories were refined through cycles of comparison and theoretical sampling.

The reporting of findings reflects CGT's emphasis on co-construction and emergent theory development, integrating participant voices alongside theoretical categories. Participant narratives are not merely illustrative but integral to the analytic process, demonstrating how theory was developed through grounded, iterative engagement with the data. Reflexive memos and ongoing engagement with the data were central to ensuring theoretical sensitivity, reinforcing the trustworthiness and depth of the study's findings. The findings chapter builds upon these methodological foundations, demonstrating how CGT's principles were enacted throughout the research process.

CHAPTER 4

FINDINGS

4.1. Chapter Introduction

The CGT methodology was employed to investigate the less examined area of contraceptive decision-making regarding implants and injectables among adolescent postpartum women. While postpartum contraception has been widely studied, the unique needs and decision-making processes of adolescent mothers remain insufficiently examined—particularly in Asian contexts, where sociocultural norms shape both access and choices. Adolescents face distinct challenges, including stigma, limited autonomy, and familial influence, underscoring the need for a context-sensitive exploration of their experiences. This study aims to theorise these experiences, contributing to evidence-based interventions attuned to this population's realities.

This chapter presents four interrelated categories, derived through constant comparison across participant narratives. Each category explicates how adolescent contraceptive decision-making is co-constructed through intersecting personal, relational, structural, and service-related dimensions. Rooted in CGT's iterative logic, the categories were not predetermined but emerged through continual analysis of recurring patterns across cases. For instance, systematic comparison of narratives involving side effects—such as prolonged bleeding or weight gain—revealed how participants frequently reassessed and recalibrated their contraceptive decisions. Such cross-case comparisons enabled abstraction from individual accounts to conceptual categories.

Through ongoing theoretical sampling and data refinement, the analysis moved beyond surface-level description toward the construction of theoretical insight. This process led to the identification of a core category: “Maintaining Social and Bodily Integrity: An Iterative Process of Responding to Situational Dynamics.” This central concept encapsulates how adolescents continuously navigate contraceptive choices in response to evolving social expectations, bodily experiences, and contextual constraints. In this study, agency is understood as the capacity to make decisions and act within relational, sociocultural, and institutional constraints—and this core category reflects the tension between individual agency and external structures that shape and, at times, constrain decision-making.

The following interrelated categories form the basis of this chapter:

1. Navigating and Interpreting Contraceptive Knowledge
2. Seeking Balance between Competing Priorities
3. Contraceptive Care Pathways within the Healthcare System
4. Relational and Cultural Influences on Contraceptive Decision-Making

These categories collectively represent the dynamic, adaptive, and context-sensitive nature of adolescent contraceptive decision-making. Participants repeatedly reassessed their choices in light of bodily autonomy, fertility concerns, health system encounters, and relational pressures. For example, adverse side effects often triggered new consultations, prompting a recurring cycle of decision re-evaluation. This pattern illustrates decision-making as a fluid, situated process that reflects the enactment of agency within specific structural and relational contexts.

The core category of “Maintaining Social and Bodily Integrity” thus reflects this ongoing negotiation of self, body, and social expectations. Participants’ decisions were influenced not only by personal preferences but also by interactions with female guardians, peers, partners, and HCPs. These relational dynamics complicated and sometimes constrained autonomy, revealing decision-making as an active, situated, and responsive process.

As per CGT’s inductive foundation, the findings move from description to abstraction, shaped and refined through continuous comparison. Patterns, contradictions, and variations were identified, allowing for the development of abstract concepts grounded in empirical data. For instance, differences in perceived support from HCPs illuminated subtle variations in how autonomy was experienced, enriching the theoretical scope of the model.

This chapter proceeds by outlining participant characteristics (Table 2) and revisiting key CGT principles, including constant comparison, theoretical sensitivity, and iterative development of categories. The analysis is further contextualised through reference to a global framework—SDGs—which situates individual experiences within broader health system and policy domains. Additionally, the findings are enriched by insights drawn from the preceding narrative literature review, further strengthening their theoretical depth and practical relevance.

4.2. Overview of Participant Characteristics

A total of 25 in-depth, semi-structured interviews were conducted between August 2020 and February 2021 with adolescents aged 15-20 years (mean age: 18.96 years).

The initial 19 interviews were conducted in person, while the remaining six were carried out via online video calls due to COVID-19 lockdown restrictions.

Table 15 summarises participants' sociodemographic and clinical characteristics, offering insights into the contextual factors that shaped contraceptive decision-making. Key dimensions—including age, educational background, contraceptive method choice, birth order, and familial structures—contributed to a nuanced understanding of their lived experiences.

4.2.1. Characteristics for All Participants

Participants ranged in age from 15 to 20 years, and the time since childbirth varied between one and ten months. At the time of the interview, the average age was 18.96 years, and the mean postpartum duration was approximately five months. This convergence of adolescence and early motherhood represented a critical developmental period during which contraceptive choices were shaped by evolving psychosocial identities, bodily changes, and external pressures.

The majority of participants used implants (n = 13/25, 52%), followed by injectables (n = 8/25, 32%). Two participants used OCPs, while two others reported not using any contraceptive methods. This distribution reflects the increasing emphasis on LARCs in postpartum care, aligned with national public health strategies to reduce repeat adolescent pregnancies. The average duration of contraceptive use was four months, though usage patterns varied considerably.

Among the participants, 21 (84%) were experiencing their first pregnancy, while four (16%) reported a second pregnancy. Two participants disclosed previous miscarriages, and two had living children. These cases suggest variations in contraceptive continuity

and access to postpartum support, pointing to potential gaps in adolescent-responsive reproductive health services.

Participants delivered in various healthcare settings. While most described giving birth at a MCH, others accessed university-affiliated hospitals or local health centres. This variation underscores the pivotal role of specialised services in adolescent maternity care and highlights the need for improved continuity and accessibility in reproductive health provision across the healthcare system.

In terms of education and employment, the majority (n = 21/25, 84%) were not engaged in formal work, and only a few were continuing their studies. Regarding educational attainment, 21 had attended high school: 15 completed upper secondary education, six completed lower secondary, and two reported only primary education. These diverse educational trajectories likely influenced contraceptive decision-making through varying degrees of health literacy, social support, and perceptions of future planning.

Religious affiliation among participants was diverse. Most identified as Buddhist, with a few identifying as Christian or Muslim. No clear associations between religion and contraceptive choice were evident during interviews; however, it is possible that underlying cultural or faith-based norms subtly shaped participants' perceptions of reproductive responsibility, even if not overtly stated.

Living arrangements also varied. Most participants lived with their partner—either independently or within extended family households—while others lived with their families of origin. These cohabitation patterns reflect evolving familial structures and reinforce the influence of relational dynamics on contraceptive decision-making. Several narratives indicated that choices about contraception were frequently

negotiated within intimate or household relationships, illustrating the socially embedded nature of postpartum reproductive decisions.

4.2.1.1. Characteristics for Participants Using Subdermal Implants

The mean age of the 13 participants who used 3-year implants was 17 years; the youngest was 15 and, the oldest was 20. This age range illustrates a preference for implants among mid-to-late adolescents, which may reflect provider-influenced choices aimed at minimising repeat pregnancies during a developmentally sensitive period. Only one participant used a 5-year implant.

Most of these participants were unemployed. Several who were still enrolled in formal education chose implants, suggesting the method was perceived as a practical solution that allowed young mothers to balance school commitments with postpartum responsibilities.

While the majority were Buddhists, all five non-Buddhist participants (four Christians and one Muslim) also used implants. This cross-religious uptake indicates that method selection was likely influenced more by provider recommendation and access than by religious affiliation.

Most participants using implants lived with their families of origin, with only one residing with her partner's family. This pattern underscores the importance of familial support—particularly from maternal figures—in postpartum contraceptive use. It also reflects broader trends in adolescent family dynamics, where household authority and proximity may shape health behaviours.

4.2.1.2. Characteristics for Participants Using Other Methods

Among the 12 participants who did not select subdermal implants, the mean age was 19 years (range: 17–20). This slightly older age profile may reflect greater autonomy in contraceptive decision-making or a higher likelihood of resisting provider preferences. Most of these participants selected injectables (n = 8/12, 67%), while two used OCPs (n = 2/12, 16.5%), and two did not use any method (n = 2/12, 16.5%).

All 12 participants in this group identified as Buddhists. While religious affiliation appeared uniform, their contraceptive choices were more likely shaped by individual concerns, perceived side effects, or family influence, rather than by faith-based factors.

Regarding birth settings, six participants delivered at the MCH centre, four at UMT Hospital, and two at other facilities. The decision to forgo implants—despite their availability and clinical benefits—may reflect a desire for greater control over reproductive decisions, or concerns about bodily autonomy. Factors such as mistrust in clinical recommendations, past negative experiences, or relational dynamics with partners or family likely contributed to this divergence.

Table 15: Participants' Characteristics

Pseudonym	**Araya**	**Chanalai**	**Chichamon**
Age	19	20	19
Baby's age (months)	2.5	11	6
Birth control	Implant	Not using	Injectables
Duration	2.5m	-	6m
Order pregnancy	1	1	2 (2LC)
Occupation	Unemployed	Unemployed	Unemployed
Educational level	LS	US	US
Religion	Buddhist	Buddhist	Buddhist
Partner	Together	Together	Together
Place of living	OF	OF	R/NPF
Place of delivery	MCH	UMT	UMT
Pseudonym	**Chollada**	**Davika**	**Janya**
Age	19	20	16
Baby's age (months)	6	1	6
Birth control	5-year Implant	OCPs	Implant
Duration	2m	Will use	6m
Order pregnancy	1	1	1
Occupation	Student	Unemployed	Student
Educational level	University	LS	Vocational
Religion	Christian	Buddhist	Buddhist
Partner	Together	Together	Together
Place of living	R/PF	OF	OF
Place of delivery	UMT	MCH	MCH
Pseudonym	**Jirapan**	**Kamonnat**	**Kanchanee**
Age	20	19	20
Baby's age (months)	1.5	9	10
Birth control	Injectables	Injectables	Injectables
Duration	1.5m	8m	10m
Order pregnancy	2 (1A)	1	1
Occupation	Unemployed	Housewife	Unemployed
Educational level	LS	US	LS
Religion	Buddhist	Buddhist	Buddhist
Partner	Together	Together	Together
Place of living	OF	R/PF	PF
Place of delivery	MCH	UMT	MCH

A = Abortion, LC = Living child, MCH = Maternal and Child Hospital, Health Promotion Centre, UMT = University Medical Teaching, Maharaj Nakorn Ching Mai Hospital, NPF = New partner family, OF = Own family, PF = Partner family, R = Rent, Secondary School education or Vocational programme (equivalent to high school in European countries) LS = Lower-secondary education (Grade 7-9), mostly aged 14-16 years, US = upper-secondary school or vocational programme (Grade 10-12), mostly aged 17-19 years

Table 15: Participants' Characteristics (cont.)

Pseudonym	**Kanokkorn**	**Kanyaporn**	**Nalinee**
Age	20	20	15
Baby's age (months)	2	11	3
Birth control	Injectables	Implant	Implant
Duration	2m	11m	3m
Order pregnancy	1	1	1
Occupation	Unemployed	Student	Unemployed
Educational level	US	US	Primary
Religion	Buddhist	Christian	Buddhist
Partner	Together	Together	Single
Place of living	PF	OF	OF
Place of delivery	MCH	MCH	MCH
Pseudonym	**Nantiya**	**Oraporn**	**Pornsuda**
Age	16	19	19
Baby's age (months)	6	10	2
Birth control	Implant	Injectables	Implant
Duration	6m	9m	2m
Order pregnancy	1	1	1
Occupation	Housewife	Unemployed	Housewife
Educational level	Primary	LS	LS
Religion	Buddhist	Buddhist	Buddhist
Partner	Together	Together	Together
Place of living	OF	OF	OF
Place of delivery	MCH	Others	MCH
Pseudonym	**Pranee**	**Rachada**	**Rachaya**
Age	16	19	18
Baby's age (months)	10	8	2
Birth control	Implant	Injectables	Implant
Duration	10m	7m	2m
Order pregnancy	1	1	1
Occupation	Housewife	Unemployed	Student
Educational level	LS	LS	US
Religion	Buddhist	Buddhist	Buddhist
Partner	Together	Together	Together
Place of living	OF	PF	OF
Place of delivery	MCH	UMT	MCH

A = Abortion, LC = Living child, MCH = Maternal and Child Hospital, Health Promotion Centre, UMT = University Medical Teaching, Maharaj Nakorn Ching Mai Hospital, NPF = New partner family, OF = Own family, PF = Partner family, R = Rent, Secondary School education or Vocational programme (equivalent to high school in European countries) LS = Lower-secondary education (Grade 7-9), mostly aged 14-16 years, US = upper-secondary school or vocational programme (Grade 10-12), mostly aged 17-19 years

Table 15: Participants' Characteristics (cont.)

Pseudonym	**Salarat**	**Sudarat**	**Sunathip**
Age	18	18	20
Baby's age (months)	4	2	1
Birth control	Implant	Injectables	OCPs
Duration	4m	2m	7d
Order pregnancy	1	1	1
Occupation	Unemployed	Unemployed	Student
Educational level	LS	LS	University
Religion	Buddhist	Buddhist	Buddhist
Partner	Together	Together	Together
Place of living	PF	R/PF	PF
Place of delivery	MCH	MCH	MCH
Pseudonym	**Suneeya**	**Tanida**	**Thipporn**
Age	18	17	17
Baby's age (months)	4	1.5	2
Birth control	Implant	Implant	Not using
Duration	4m	1.5m	-
Order pregnancy	2 (2LC)	1	1
Occupation	Unemployed	Unemployed	Unemployed
Educational level	LS	LS	Vocational
Religion	Christian	Christian	Buddhist
Partner	Together	Together	Together
Place of living	OF	OF	PF
Place of delivery	MCH	MCH	Others
Pseudonym	**Wiraphon**		
Age	15		
Baby's age (months)	1		
Birth control	Implant		
Duration	1m		
Order pregnancy	2 (1A)		
Occupation	Housewife		
Educational level	LS		
Religion	Islamic		
Partner	Together		
Place of living	OF		
Place of delivery	MCH		

A = Abortion, LC = Living child, MCH = Maternal and Child Hospital, Health Promotion Centre, UMT = University Medical Teaching, Maharaj Nakorn Ching Mai Hospital, NPF = New partner family, OF = Own family, PF = Partner family, R = Rent, Secondary School education or Vocational programme (equivalent to high school in European countries) LS = Lower-secondary education (Grade 7-9), mostly aged 14-16 years, US = upper-secondary school or vocational programme (Grade 10-12), mostly aged 17-19 years

4.2.2. Interpretation of Participant Characteristics

The characteristics of participants illuminated several intersecting influences—structural, interpersonal, and cultural—that shaped contraceptive choices. The data revealed that most participants chose implants and injectables, reflecting their accessibility through local healthcare services and their perceived effectiveness in preventing unintended pregnancies. Social influences, including peer recommendations and HCP guidance, appeared to shape these preferences, alongside educational campaigns that promoted contraceptive implants as reliable options for postpartum women.

Most participants were unemployed or engaged in education, highlighting financial dependencies that may have influenced contraceptive choices. This economic reliance often limited access to a full range of contraceptive methods, resulting in greater dependence on publicly funded healthcare services or more low-cost options, often subsidised through government programmes.

The predominance of Buddhist participants mirrored regional demographics, while small subsets of Christian and Muslim participants indicated religious diversity. These cultural factors shaped contraceptive preferences: Buddhist participants often adhered to community norms, while Christian and Muslim participants navigated religious perspectives that either supported or constrained contraceptive use.

Social support from partners and families encouraged consistent contraceptive use, although conflicting views within family settings sometimes introduced barriers. These findings highlight how adolescent contraceptive decision-making was embedded within broader relational and sociocultural contexts. They also reinforce the emergent core category—maintaining social and bodily integrity—as participants negotiated

contraception within the constraints of family expectations, financial limitations, and healthcare access. These contextual insights enrich the emerging grounded theory by situating individual decisions within multi-level sociocultural and economic frameworks.

4.2.3. Institutional Recruitment Patterns and Participant Distribution

A total of 25 participants were recruited from two distinct hospital settings: 20 participants from MCH and 5 from UMT Hospital. This disparity reflects institutional differences in accessibility and service provision, with MCH accommodating a larger pool of eligible participants. The Well-Baby Clinic and FP Clinic at MCH operate five days a week, ensuring consistent access to reproductive health services. In contrast, UMT hospital is limited to one day per week (Thursdays), reducing recruitment opportunities.

UMT Hospital functions as a super-tertiary care centre, specialising in high-risk pregnancies and complex deliveries. This specialisation inherently limits the inclusion of adolescent mothers in the study, as their cases often require advanced medical interventions, rendering them ineligible under the study's low-risk postpartum inclusion criteria. Conversely, MCH serves a more diverse, low-risk population, enhancing the feasibility of recruiting adolescent mothers whose healthcare needs align with the study's objectives.

Recruitment patterns reflect the broader clinical roles and operational frameworks of each institution. UMT's emphasis on complex care shapes its patient demographics, while MCH's focus on routine maternal and child health facilitates higher recruitment rates. These institutional distinctions not only influenced sample composition but also shaped participants' experiences with contraceptive counselling and access—

reinforcing the structural and systemic dimensions of decision-making explored in this study.

4.2.4. Integrated Analysis of Participant Characteristics: Biophysical, Familial, and Contraceptive Preferences

This section presents an integrated analysis of biophysical factors, familial influences, and contraceptive preferences among adolescent participants. It explores how birth order, delivery mode, familial roles, and evolving autonomy intersect to shape contraceptive decision-making. These dynamics are interpreted through the lens of the core category—maintaining social and bodily integrity—highlighting the relational and embodied negotiations that underpinned participants' choices.

4.2.4.1. Biophysical and Reproductive Characteristics:

Birth order and delivery type emerged as critical influences on contraceptive preferences, shaping both physical recovery experiences and sociocultural expectations. Most participants (n=21) were experiencing their first pregnancy, while four reported a second. Two participants had prior miscarriages, and two had living children—highlighting diverse reproductive trajectories that informed postpartum decision-making.

Delivery mode further influenced contraceptive selection. Among those who had caesarean sections, concerns about prolonged recovery, wound healing, and post-surgical complications contributed to a preference for LARCs, such as subdermal implants. Conversely, participants who delivered vaginally more often opted for injectables or OCPs, citing fewer physical restrictions and a desire for greater flexibility.

The intersection of birth order and delivery type proved particularly salient. Multiparous adolescents (those with a second pregnancy) who underwent caesareans often chose LARCs to support recovery and avoid further pregnancies. Primiparous adolescents with vaginal deliveries exhibited more diverse preferences, often shaped by future fertility intentions, peer advice, or uncertainty about side effects.

4.2.4.2. Parental and Historical Influences

Intergenerational influences significantly shaped contraceptive uptake, particularly where mothers or female guardians played a central role in reproductive decision-making. In many cases, parental attitudes towards contraception informed by prior personal experiences and shifts in generational norms.

Participants whose mothers had limited contraceptive access or negative experiences with hormonal methods expressed hesitancy towards LARCs, fearing similar adverse outcomes. Conversely, those whose mothers endorsed LARCs—highlighting their effectiveness and convenience—were more inclined to adopt them, often with maternal encouragement.

Household power dynamics also played a role. Adolescents living with extended family or in conservative family settings faced pressure to choose methods deemed socially acceptable (e.g., injectables over implants due to stigma around LARCs). These narratives demonstrate how familial history, authority, and trust intersected with evolving autonomy, leading to complex and sometimes conflicted contraceptive decisions.

4.2.4.3. Age-Related Differences in Contraceptive Preferences

A comparative analysis revealed distinct trends across participant age groups:

- Younger participants (15-17 years, n=5): Primarily selected subdermal implants, with decisions strongly influenced by HCPs and parental guidance. While individual preferences were present, these participants exercised limited and externally shaped agency.
- Mid-range participants (18-19 years, n=14): Demonstrated a greater balance between external influence and emerging self-directed agency. Their preference for injectables suggested a growing interest in medium-term, adaptable methods.
- Oldest participants (20 years, n=6): Exercised the most independent and experience-informed agency, often switching methods based on prior contraceptive use. OCPs were preferred for their flexibility and daily control.

Educational status and economic dependency further influenced method selection. Participants enrolled in school were more likely to use implants, viewing them as low-maintenance and compatible with academic routines.

These findings illustrate how adolescent mothers navigate layered influences—biophysical recovery, relational dynamics, cultural expectations, and institutional constraints—when making contraceptive decisions. The interplay between these factors underscores the complexity of postpartum contraception and reinforces the relevance of the core category: maintaining social and bodily integrity in the face of intersecting pressures.

4.3. Core Category: 'Maintaining Social and Bodily Integrity: An Iterative Process of Responding to Situational Dynamics'

This section presents the core category of the study—*Maintaining Social and Bodily Integrity: An Iterative Process of Responding to Situational Dynamics*—which encapsulates the evolving, context-sensitive, and multi-layered nature of contraceptive agency among postpartum adolescent women in Thailand. This concept integrates two interrelated aspects:

- Social integrity—referring to efforts to preserve respectability, relational harmony, and communal acceptance
- Bodily integrity—the capacity to exercise reproductive control and enact decisions aligned with one's physical and emotional well-being.

Findings demonstrate that contraceptive agency does not follow a linear or fixed pathway. Instead, it involves a process of continuous recalibration in response to shifting relational expectations, personal aspirations, biophysical experiences, and systemic constraints. This iterative process reflects how adolescents continually negotiate autonomy within socially embedded and structurally mediated environments.

Figure 3 illustrates how this core category connects with four interrelated categories: (1) Navigating and Interpreting Contraceptive Knowledge, (2) Seeking Balance between Competing Priorities, (3) Contraceptive Care Pathways within the Healthcare System, and (4) Relational and Cultural Influences on Contraceptive Decision-Making.

Each category aligns with a specific structural level of engagement—individual, institutional, or sociocultural—and corresponds to a dominant form of agency. Categories (1) and (2)—are positioned at the individual level, and are primarily

associated with proactive agency, involving self-directed efforts to access, interpret, and apply knowledge while managing personal priorities and internal tensions.

Category (3), Contraceptive Care Pathways within the Healthcare System, is situated at the institutional level and reflects service-oriented agency, which is shaped by interactions with HCPs, institutional protocols, and system-level constraints.

Category (4), Relational and Cultural Influences on Contraceptive Decision-Making, corresponds to the sociocultural level and aligns with relationally mediated agency—where decisions are shaped through negotiation of social norms, family dynamics, and community expectations.

These three forms of agency—(i) proactive (individual level), (ii) service-oriented (institutional level), and (iii) relational (sociocultural level)—are analytically distinct but deeply interconnected. Agency may be enacted fluidly across these levels, depending on the situational context, available support, and perceived constraints.

At the sociocultural level, the enactment of contraceptive agency was shaped not only by individual values but by relational influences—particularly within family structures. This study conceptualises this as relationally mediated agency: a form of agency negotiated within the emotional, moral, and normative constraints imposed by family authority, religious beliefs, and cultural expectations. In this sense, relational dynamics are embedded within—and inseparable from—the broader sociocultural landscape.

This conceptual model advances the central insight that adolescent contraceptive agency is non-linear, relational, and context sensitive. Agency is shaped not only by access to information or social relations, but also by embodied experiences, emotional responses, and shifting social positions. For instance, proactive planning around

educational or reproductive goals might intersect with negotiation with partners or deference to cultural norms. Such strategies shift and adapt in response to evolving relationships, health changes, or external pressures.

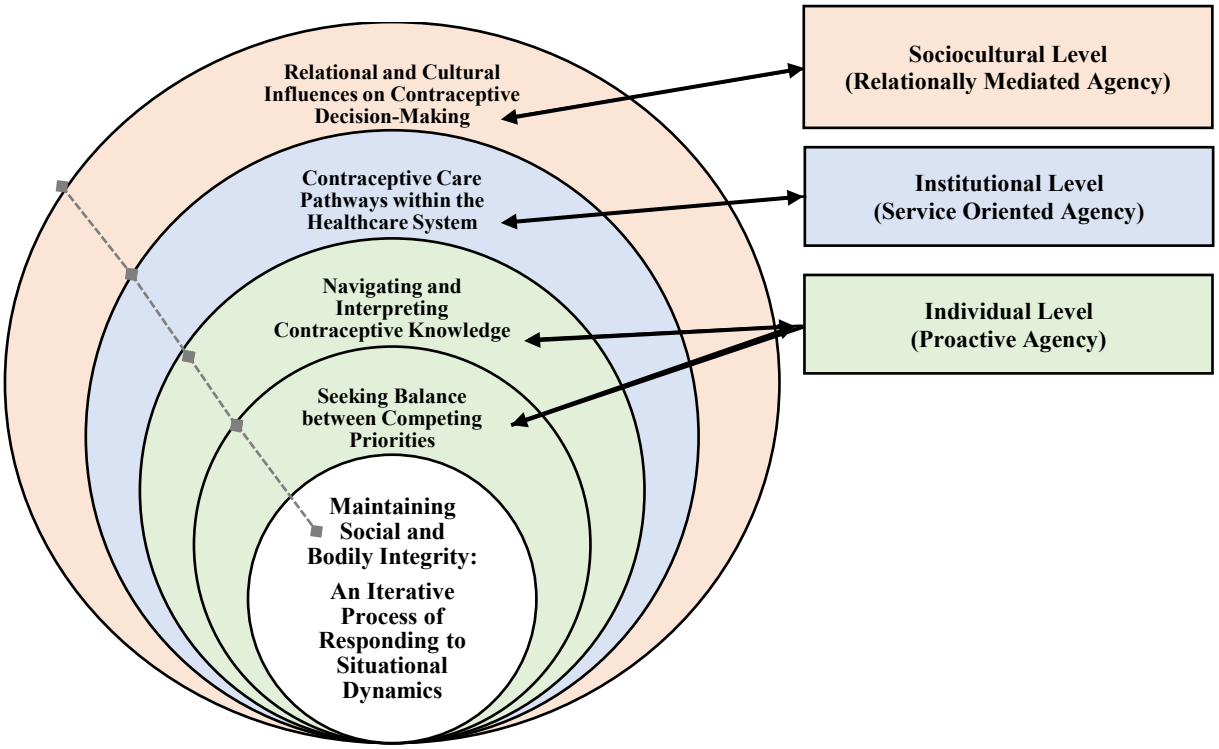

Figure 3: Illustration of the core category "Maintaining Social and Bodily Integrity" and its four interrelated categories.

The model maps each category to a distinct form of agency—proactive (individual level), service-oriented (institutional level), or relationally mediated (sociocultural level)—demonstrating how adolescent contraceptive agency is enacted through dynamic, iterative processes.

While agency is often assumed to be individually located, this study reveals its distributed and shifting nature: adolescent mothers demonstrate proactive agency in

knowledge-seeking, service-oriented agency when navigating healthcare pathways, and relationally mediated agency in response to sociocultural and familial expectations.

The double-headed arrow in Figure 3 illustrates the fluid, non-linear nature of the contraceptive decision-making process. Rather than operating in fixed stages, participants shifted dynamically between different forms of agency depending on the constraints and affordances of each situation. This movement across categories and structural levels reflects the iterative, context-sensitive process at the centre of the category.

Participants frequently enacted multiple, overlapping forms of agency depending on the situational context. Rather than constituting distinct modes, these practices are better conceptualised as context-responsive enactments of agency. For example, one participant might consult a HCP about side effects (demonstrating proactive agency), while another might defer to a partner's preferences (exhibiting relationally mediated agency).

This adaptability demonstrates the fluid and negotiated nature of reproductive agency. Where systems were supportive—such as through respectful healthcare, accessible digital resources, or open family dialogue—participants reported greater confidence and control. In contrast, fragmented, coercive, or judgmental environments often led to hesitation, withdrawal, or confusion.

This ongoing tension between constraint and adaptability reinforces the explanatory power of the core category. Maintaining bodily autonomy and social acceptability is not a fixed state, but a continuously reconfigured process. Many participants reported re-evaluating contraceptive choices as their relationships, health circumstances, or life

goals evolved. These shifting trajectories reflect how reproductive agency is iteratively enacted, recalibrated, or withheld in response to dynamic circumstances.

The four analytical categories explored in sections 4.3.1 to 4.3.4—Navigating and Interpreting Knowledge, Balancing Priorities, Service Pathways, and Relational/Cultural Influences—represent distinct yet interconnected domains of influence. While presented separately for analytical clarity, they operate across three structural levels and reflect the dynamic modes through which agency is expressed.

Section 4.3.1 begins with Navigating and Interpreting Contraceptive Knowledge, examining how adolescents access, evaluate, and apply information while negotiating internal tensions and external uncertainties.

4.3.1. Category One: 'Navigating and Interpreting Contraceptive Knowledge'

Adolescents' contraceptive decision-making reflected an active and iterative engagement with diverse, and at times contradictory, sources of knowledge. The subcategory proactive knowledge-seeking captures their intentional efforts to gather, evaluate, and apply information from institutional, peer, and digital sources—often initiated before pregnancy. This engagement was not a process of passive learning but a strategic and reflexive process of validating knowledge, shaped by lived experience, perceived risk, and anticipated futures.

Participants accessed information through school-based sex education, HCPs, and online platforms. While formal education often focused narrowly on STI prevention, it introduced foundational contraceptive knowledge. The government-led implant programmes targeted school-aged adolescents, expanding access to long-acting methods. Digital platforms—including hospital websites and health forums—were

especially valued for translating medical content into accessible, relatable, and culturally resonant language.

Alongside these channels, peer narratives and social media offered embodied and affective forms of knowledge. Testimonials—especially in Facebook groups—both amplified anxieties and validated positive experiences. This hybrid informational landscape required participants to navigate with careful discernment, balancing curiosity, caution, and trust as they made sense of contradictory inputs.

Social networks exerted complex and sometimes contradictory influence. Some participants were dissuaded by stories of complications, while others found reassurance in supportive communities such as the Teen Mom group, where peer endorsements echoed or reinforced clinical advice. Rather than accepting these accounts uncritically, participants weighed peer stories against institutional knowledge, engaging in a continuous negotiation between medical authority and emotionally charged discourse. This process reflected efforts to maintain bodily autonomy while preserving social credibility within peer and familial settings.

Across the data, participants demonstrated an evolving and situated approach to knowledge—often involving experimentation, risk calibration, and the revision of earlier assumptions. Some aligned with familial or partner advice; others actively resisted it through independent research and counter-narratives. Unintended pregnancies often acted as turning points, prompting renewed engagement with trusted and reliable sources and facilitating reinterpretation of prior misconceptions.

This category incorporates two subcategories:

- *Proactive Knowledge-Seeking*— engagement with formal, institutional, and expert-endorsed sources.
- *Influence of Negative Experiences*— peer-led scepticism and emotionally resonant accounts shared via informal networks.

These subcategories reflect the core process of maintaining social and bodily integrity by managing trust, risk, and autonomy within a contested and emotionally complex informational landscape. Rather than viewing knowledge as fixed, participants engaged in dynamic interpretation—an ongoing construction of meaning responsive to shifting personal, relational, and cultural contexts

4.3.1.1. Proactive Knowledge-Seeking

Proactive Knowledge-Seeking emerged as a defining strategy through which participants actively engaged with multiple information sources to inform and sustain contraceptive decisions—particularly in relation to implant use. This form of agency involved deliberate, selective engagement with information accessed through school-based education, adolescent-friendly clinics, peer networks, and digital platforms.

A strong link was observed between educational engagement and implant adoption, particularly among postpartum adolescents pursuing further study. Participants who had been exposed to structured school health education programmes were more likely to select subdermal implants, suggesting that education—rather than culture or religion—served as the primary driver of choice.

> Since grade 12, I became interested in implants through school services. Healthcare providers at the Teenage Clinic highlighted their efficacy,

> presenting them as ideal for teens… which led me to choose implants during pregnancy. (Kanyaporn, 20, implants)

HCPs played a dual role: they corrected misconceptions and strategically framed adolescent contraception narratives as suitable and empowering. However, Yet, relational and systemic barriers—such as parental consent and fear of judgement—often limited early uptake.

> We were interested in getting implants, but at that time, parental consent was required… One of my friend's mothers refused, and that discouraged me—even though my mom might have agreed. I just didn't ask. (Rachaya, 18, implants)

In response to such barriers, peer networks—especially the NGO-led Teen Mom group— functioned as alternative support systems, offering emotional validation and practical insight. These spaces provided relatability and safety often absent in formal healthcare encounters.

> I joined the Teen Mom network when I was three months pregnant. Friends encouraged me to join, and all members were young mothers or pregnant. I chose implants because sisters and friends in the group used them. Their positive experiences gave me confidence. (Wiraphon, 15, implants)

Peer consultations frequently preceded and extended beyond pregnancy, with shared experience functioning as both validation and reassurance. These informal interactions often substituted for absent or uncomfortable family discussions.

> My close friend, who became pregnant at the same time and had implants earlier, encouraged me to get them. We were interested in implants before pregnancy since nurses had introduced them to us in school. (Chollada, 19, implants)

Digital platforms—particularly university and hospital websites, health forums, and social media—demystified medical procedures, clarified policy details like insurance eligibility, and translated institutional messages into peer-relevant narratives.

> I found a forum where university students recommended implants. They shared their experiences… University insurance covered it for free, even for those under 20. Many friends from my major and others got implants, even those not pregnant. (Chollada, 19, implants)

These online sources helped participants interpret side effects, manage concerns, and support sustained method use over time.

> My periods became irregular... but online resources explained it was typical. Eventually, my cycle regulated, and I committed to keeping the implant for the recommended three years. (Kanyaporn, 20, implants)

Rather than replacing institutional knowledge, digital and peer platforms contextualised and enhanced it. Participants triangulated across these domains—adapting, validating, and synthesising sources to construct informed strategies. They enacted strategic agency in managing uncertainty and using knowledge not only to choose contraception, but to maintain and defend those choices.

In summary, Proactive Knowledge-Seeking reflects a triangulated strategy grounded in institutional instruction, peer validation, and digital literacy. In navigating these overlapping domains, participants balanced bodily autonomy with relational expectations—asserting reproductive control while maintaining credibility within social networks.

4.3.1.2. Influence of Negative Experiences

While positive reinforcement from peers and professionals supported implant uptake, distressing peer narratives—particularly from social media—acted as significant deterrents. Platforms such as Facebook and YouTube, perceived as more relatable than clinical settings, became dominant arenas for contraceptive discourse. However, their unregulated and emotionally charged content frequently amplified fear and misinformation, shaping perceptions of risk in ways that formal guidance struggled to counterbalance.

Participants frequently cited Facebook groups as primary reference points. Graphic posts and unverified peer accounts—absent clinical framing—constructed vivid mental images of implants as invasive or harmful.

> I joined a Facebook group… Most shared about weight gain from implants. Removal sounded scarier, and costly. Providers didn't allow early removal unless necessary. (Kanokkorn, 20, injectables)

> A friend struggled with removal. I saw frightening images online showing repeated incisions. That—and fear of weight gain—held me back. (Chanalai, 20, not using)

These peer-driven accounts carried more emotional weight than medical statistics, generating a heightened sense of bodily vulnerability and undermining participants' trust in institutional reassurance.

> I rejected implants after watching a YouTube video. The deep incisions and bleeding scared me. I worried about infection. (Sudarat, 18, injectables)

As a result, participants often rejected long-acting methods in favour of short-acting alternatives perceived as more manageable or reversible.

> A friend told me she couldn't lift her arm properly after implants. I have to care for my child alone, so I chose injectables. (Thipporn, 17, not using)

Central to these fears was a perceived loss of bodily control. Posts about denied removal, prolonged side effects, and provider resistance reinforced anxieties around autonomy and permanence.

> I found Facebook posts about early removal being denied. My friend wasn't allowed to remove hers before 3 years. That scared me. (Kamonnat, 19, injectables)

These experiences reveal how emotionally resonant information shaped contraceptive meaning-making as powerfully as clinical advice. Statistically rare complications became magnified through distressing peer narratives, often triggering avoidance or delay.

> I worried about implants after reading stories. But my friend reassured me so I waited to talk to the nurse after birth. (Kamonnat, 19, injectables)

Importantly, social media also offered anonymity, peer validation, and a sense of safety often absent in clinical encounters, particularly where adolescents felt morally judged or stigmatised. These dynamics intensified during COVID-19, when in-person services were restricted and digital platforms became primary sources of reproductive knowledge.

Age-related differences in perceived autonomy shaped how participants interpreted these experiences. Older adolescents (18+) were more likely to confidently reject subdermal implants—even when medically recommended—suggesting that maturity enabled greater confidence in boundary-setting and selective engagement with institutional advice.

Implants were thus framed not only in terms of medical effectiveness, but also through perceived risks: pain, permanence, denied removal, and disrupted control—especially in contexts where adolescent agency felt limited or contested.

Ultimately, decisions were shaped by a dynamic interplay of fear, credibility, and personal needs. While negative experiences often led to hesitation or avoidance, participants revisited their decisions—particularly when new information or relational reassurance emerged.

This subcategory reinforces the grounded theory core: maintaining social and bodily integrity required continuous negotiation across emotional, interpersonal, and institutional terrains. The influence of peer-driven digital content underscores how

adolescent decision-making is embedded in broader patterns of embodied vulnerability and strategic recalibration.

4.3.1.3. Summary

Social media played a pivotal role in shaping contraceptive decisions among teenage mothers—operating both as an enabler of knowledge and a source of anxiety. Participants navigated between formal structures (HCPs, school education) and informal channels (peer networks, digital platforms), using each to interpret risk and either reaffirm or revise their contraceptive choices.

Patterns of engagement varied. Some employed proactive, multi-source strategies, combining institutional knowledge with trusted peer accounts. Others relied more reactively on anecdotal or emotionally charged narratives. These differences reflect not only knowledge access but also variations in perceived agency and levels of relational trust.

This variation underscores the complexity of adolescent contraceptive decision-making. The process is not linear or uniform, but context-sensitive and iterative—guided by participants' ongoing efforts to balance autonomy, social legitimacy, and personal security.

The next section examines how these negotiations are further mediated by interactions with healthcare systems, policies, and providers—extending the process of maintaining autonomy within structurally constrained environments.

4.3.2. Category Two: 'Seeking Balance between Competing Priorities'

This category highlights the intricate interplay between adolescents' aspirations for future fertility and their desire to maintain both bodily integrity and personal autonomy,

particularly in light of concerns about contraceptive side effects. The contraceptive decision-making process among participants revealed a deliberate, often strategic effort to reconcile competing priorities, demonstrating both adaptability and pragmatism.

Many adolescents gravitated toward subdermal implants due to their effectiveness in preventing unintended pregnancies and the perceived ease of long-term protection. However, apprehensions about potential side effects or removal complications frequently shaped their decision-making, creating a tension between practicality and the preservation of bodily integrity.

Where familial or relational expectations diverged from their goals, several participants confidently asserted their preferences, reflecting a pursuit of autonomy and control over both their bodies and reproductive futures. This category encompasses two interrelated subcategories: (1) 'Securing Future Aspirations and Life Plans' and (2) 'Autonomy and Control over Bodily Integrity.' Together, these subcategories show how participants negotiated external expectations while centring their contraceptive decisions within longer-term aspirations.

This category demonstrates how adolescents engaged in future-oriented, pragmatic decision-making—characterised by a combination of proactive, service-oriented, and relationally negotiated strategies. Such efforts involved asserting preferences, managing interpersonal tension, and aligning method choice with evolving educational, economic, or familial goals. This embodies not just method selection but active self-protection and self-advocacy.

Contraceptive decisions frequently intersected with critical life domains, including career advancement, educational pursuits, and relational stability—highlighting the

multidimensional nature of reproductive autonomy. A key feature was the ability to mediate familial and social expectations while maintaining personal resolve. Participants encountered divergent opinions, emotional responses, and varying levels of support from significant others. Managing these tensions required not only resilience, but also a clear articulation of personal reproductive objectives.

Despite facing power imbalances—particularly within parental relationships—many participants exhibited a strong commitment to preserving both bodily integrity and autonomy. Their capacity to negotiate contraceptive choices highlights context-sensitive agency, enacted within the boundaries of age, social role, and anticipated life trajectory.

Ultimately, participants' experiences underscore the importance of fostering environments that empower adolescents to make informed and autonomous contraceptive decisions. Their ability to weigh external pressures against internal goals reflects strategic foresight and adaptive autonomy. This balance reinforces their roles as proactive agents shaping their reproductive futures and underscores the critical role of SRH services in enabling informed, future-oriented reproductive planning.

4.3.2.1. Securing Future Aspirations and Life Plans

This subcategory explores how adolescents' educational and career goals influenced their contraceptive decisions, reflecting a deliberate and strategic effort to align reproductive choices with future-oriented plans. Many participants, driven by ambitions for academic success and professional independence, strategically opted for subdermal implants due to their effectiveness in preventing unintended pregnancies. These decisions reflected not just a desire to avoid pregnancy, but a means of safeguarding educational mobility and asserting agency.

Participants articulated clear goals, including completing secondary education, pursuing university degrees, and establishing career stability before considering additional pregnancies.

> Before informing my parents, I focused on my academic concerns, sharing only with close friends and advisors. I opted for a 5-year implant because a three-year option wouldn't last. I wanted job stability before considering another child. (Chollada, 19, implants)

> I felt I had let my mom down as her only child. I persuaded her to let me continue my education. Repeating classes with younger students didn't concern me. My goal was to graduate, and I just had one year left. I chose implants to avoid more surprises. (Rachaya, 18, implants)

While many participants valued the reliability of implants, concerns about side effects—such as irregular bleeding or weight gain—presented significant barriers. However, these concerns were often weighed against the potential risks of unplanned pregnancies. For most, implants represented a pragmatic choice between short-term discomfort and long-term security.

> One child was enough for me. Being a young mom was tough, and I fully understood the challenges. I had been uninformed with contraception before, but now I am more cautious. I don't want to add to my family's burden. (Nantiya, 16, implants)

For some, health anxieties became decisive. Tanida's hesitations—rooted in both physical discomfort and emotional unease—shaped how she assessed long-term contraceptive options:

> I was offered a 5-year implant, but it felt like too long of a commitment. I didn't plan to have another child soon, but the thought of two rods in my arm scared me. Even one rod felt intimidating. Most of my friends chose the single-rod implant. (Tanida, 17, implants)

> Labour was extremely painful due to complications, and I wasn't ready to experience that again. The nurse told me injectables still posed a pregnancy risk, so I felt more secure with the implant. (Tanida, 17, implants)

Tanida's experience exemplifies how emotional memory and provider dialogue intersect in shaping contraceptive pathways.

Participants who transitioned from SARCs to implants cited difficulties such as inconsistent clinic access or hormonal side effects:

> I received four shots of injectables, after which my periods stopped completely, and I experienced muscle pains. My work shifts made it hard to visit the clinic. I began considering implants to better manage pregnancy control. I was exhausted by the constant worries and decided that having just one child was enough. (Kanchanee, 20, injectables)

While community norms and generational practices initially reinforced familiar methods (e.g., injectables), some participants engaged in relational negotiation to advocate for more effective methods:

> My mother suggested injectables, as she had used them herself. I explained that implants were safer and more effective. She hadn't heard of them before, but she trusted me and agreed. (Chollada, 19, implants)

This exchange marks a shift from intergenerational conformity to future-oriented autonomy, built through both lived experience and relational negotiation.

Across these narratives, reproductive planning was positioned not merely as pregnancy prevention but as a deliberate investment in future aspirations. This form of pragmatic decision-making illustrates how adolescents navigated competing roles and expectations to secure a pathway toward economic stability and educational attainment, thereby safeguarding both social and bodily integrity.

4.3.2.2. Autonomy and Control over Bodily Integrity

Adolescents' reproductive choices were shaped by familial scrutiny, social media narratives, and institutional structures. These influences—whether overt or subtle—frequently constrained their capacity for autonomous contraceptive decision-making. This study underscores the critical importance of bodily integrity in reproductive health, framing it as a fundamental right for adolescents to make independent decisions about their reproductive futures. Understanding these dynamics reveals the complex interplay of personal agency, ethical considerations, and sociocultural constraints.

Autonomy in contraceptive decisions was relational—not an isolated act, but co-constructed through interpersonal exchanges, cultural expectations, and institutional conditions. The degree of autonomy varied across participants, influenced by family support, partner involvement, exposure to social media, and interactions with HCPs.

Adolescents who proactively sought information and asserted their preferences exhibited higher levels of autonomy.

> My parents and relatives suggested injectables, worried about the rod moving or the pain of removal. I explained I might forget the injections, so I chose implants. They didn't pressure me; the decision was entirely mine. (Tanida, 17, implants)

Conversely, participants who deferred to authority figures or felt pressured into specific methods experienced limited agency.

> My mother, healthcare providers, and boyfriend encouraged me to choose implants, but the final decision was mine. I hesitated because of the implant's size and how it fit in my arm. I decided against it, and they respected my choice. (Kanchanee, 20, injectables)

These experiences reveal that supportive familial relationships fostered autonomy, whereas coercive or directive influences limited adolescents' ability to exercise control over their reproductive decisions.

Concerns about bodily integrity—particularly the physical and psychological impacts of contraceptive methods—were central to participants' decisions. Many rejected long-acting methods due to fears of insertion pain, removal complications, and hormonal side effects such as weight gain.

> I felt uncomfortable having a plastic rod in my arm, so I chose injectables... I didn't want to gain weight like some of my friends. (Jirapan, 20, injectables)

These concerns were often entangled with societal beauty norms that equated thinness with desirability.

> I rejected free implants due to worries about weight gain—my boyfriend also had concerns about my appearance. (Kanokkorn, 20, injectables)

Despite these reservations, some participants recognised the practicality of implants, especially when balancing academic and career aspirations.

> One child was enough for me. Being a young mom was tough, and I fully understood the challenges. I had been careless with contraception before, but now I am more cautious. (Nantiya, 16, implants)

This reflects a pragmatic, future-oriented form of decision-making in which bodily concerns are negotiated in light of long-term goals.

Digital media emerged as a powerful source of both information and anxiety, mediating how participants interpreted the risks associated with long-acting methods. Older adolescents, through exhibiting greater autonomy, often demonstrated heightened caution towards LARCs due to online content. Emotionally charged social media content, including testimonials and videos, often amplified fears of pain, permanence, or complications.

> I joined a Facebook group to seek contraception advice. Most sharers complained about weight gain from implants. The idea of removing implants seemed even scarier. Healthcare providers didn't allow for early removal unless necessary, and it's costly. (Kanokkorn, 20, injectables)

> I watched a YouTube video about implant removal, and it looked painful. The thought of it being stuck in my arm worried me. I chose injectables because they seemed less permanent. (Sudarat, 18, injectables)

This pattern represents a reactive decision-making strategy—one influenced more by peer-generated fear than by clinical fact. However, not all participants remained fixed in these responses.

> I worried about implants after reading online stories, but my friend reassured me. I decided to wait until my postnatal check-up and discussed it with the nurse. (Kamonnat, 19, injectables)

This iterative process of balancing peer narratives with professional input illustrates dialogical decision-making, where contraceptive agency evolves through layered conversations, internal reflection, and ongoing recalibration.

These findings demonstrate that bodily autonomy was not simply granted or withheld—it was continuously negotiated, contested, and reasserted through interpersonal dialogue, social scripts, and embodied experience. This reinforces the centrality of bodily integrity in adolescent reproductive decision-making.

4.3.2.3. Summary

The category of 'Seeking Balance between Competing Priorities' highlights the intricate interplay of life goals, situational contexts, and competing priorities that shape adolescents' contraceptive decision-making. This process reflects multi-layered strategies, as adolescents navigate their reproductive health alongside educational, career, relational, and familial responsibilities.

While many participants exercised autonomy in aligning contraceptive choices with their broader life aspirations, others faced constraints, tensions, and compromises shaped by external influences such as parental input, healthcare policies, or sociocultural expectations. The findings reveal disparities in achieving desired contraceptive outcomes, with some women expressing dissatisfaction or ambivalence towards the methods ultimately chosen.

Autonomy and bodily integrity emerged as pivotal dimensions, influencing how adolescents negotiated their reproductive pathways. These dimensions were deeply intertwined with their perceptions of fertility preservation, bodily control, and long-term reproductive goals.

These findings underscore that contraceptive decision-making is embedded within intersecting personal, social, and institutional factors, rarely isolated, but always relationally and culturally situated.

This category reinforces the grounded theory's core: adolescents maintained social and bodily integrity through adaptive, context-sensitive, and often future-oriented contraceptive strategies. Their ability to anticipate, negotiate, and act upon competing demands exemplifies reproductive agency rooted in resilience, social navigation, and long-term planning.

4.3.3. Category Three: 'Contraceptive Care Pathways within the Healthcare System'

This category explores how adolescents' contraceptive journeys were shaped by the organisation, quality, and continuity of healthcare services. Two subcategories were developed: 'Continuity of Care and Provider Engagement' and 'Disruptions and

Barriers in Contraceptive Service Delivery.' Participants who experienced coordinated, youth-friendly services were more likely to adopt long-acting methods, particularly implants. In contrast, fragmented or inconsistent care often resulted in default use of SARCs, reflecting constrained decision-making. This category reveals how systemic structures either facilitated or disrupted adolescents' efforts to maintain social and bodily integrity through adaptive contraceptive choices.

Table 16: Comparison of Continuity and Fragmented Care Models in Contraceptive Pathways

Stage of Care	Continuity of Care model	Fragmented Care Model
1. Antenatal Contraceptive Counselling	Hospital policy supports early counselling and long-term planning	Changing hospitals disrupts service continuity and contraceptive planning
2. Trust and Relationship with HCPs	Youth-friendly services enable sustained, empathetic engagement	Limited rapport and rushed visits limit personalised counselling
3. Contraceptive Offer at Discharge	Clear linkage between antenatal counselling and postnatal provision ensures follow-up	Lack of provision at discharge results in missed opportunities and SARC reliance

Continuity of care: Enabling Informed Contraceptive Decision-making

Adolescents' experiences reflected dynamic interactions across three interlinked stages: antenatal counselling, sustained provider relationships, and postnatal provision. These were not linear steps, but adaptive entry points that supported decision-making over time.

First, antenatal counselling—particularly when delivered through YFHS—provided anticipatory guidance. These settings enabled personalised, proactive planning, aligning contraceptive choices with individual health profiles and life trajectories.

Second, sustained engagement with trusted HCPs proved transformative. Participants valued consistent, non-judgemental dialogue across visits, which enabled them to revisit questions, reconsider side effects, and refine choices in response to evolving needs. This continuity fostered emotional safety, particularly for those balancing social expectations and bodily discomfort.

Third, the integration of contraceptive counselling with postpartum provision strengthened contraceptive commitment. Participants who received coherent advice prior to discharge were better equipped to reassess their reproductive goals and act decisively—especially after birth-related complications or changes in partner dynamics. Rather than following a scripted path, they engaged in a fluid, responsive process that reflected both personal agency and structural support.

> The nurse explained the implant again before discharge. I'd asked during antenatal visits but wasn't sure. After birth, it felt right. I agreed. (Pornsuda, 19, implants)

These participants demonstrated service-oriented decision-making, actively engaging with healthcare infrastructure to negotiate constraints and reinforce bodily autonomy. Rather than making one-time decisions, they recalibrated their choices as new information and relational dynamics emerged.

Fragmented Care: Disruptions and Barriers to Contraceptive Access

In contrast, participants who encountered fragmented systems described disrupted trajectories—marked by limited adolescent services, policy mismatches, and inconsistent counselling. These disruptions led not only to delays, but also to reactive decisions based on availability, stigma, or fear.

> I started antenatal care in Bangkok under Social Security. The hospital lacked a teenage clinic, and contraceptives were never discussed. Near delivery, I moved to Chiang Mai and gave birth under UHC. (Kanchanee, 20, injectables)

Kanchanee's narrative illustrates how institutional disconnection between health systems undermined early counselling opportunities. Without continuity, she navigated postnatal contraception in isolation—shaped less by proactive choice than by circumstantial improvisation.

When contraceptive counselling was absent or superficial, SARCs became the default, not by informed preference, but through a process of elimination. Participants described this pathway as shaped by uncertainty, mistrust, or logistical constraints—not by personal alignment with method effectiveness or bodily fit.

4.3.3.1. Continuity of Care and Provider Engagement

This subcategory explores the role of CoC and sustained provider engagement in shaping adolescents' contraceptive decision-making. The findings underscore how integrated care models—characterised by ongoing, trust-based interactions with HCPs, streamlined service delivery, and clear transitions between antenatal counselling and postpartum provision— significantly influenced the implant uptake. These models reinforced participants' agency and supported informed, confident decisions aligned with both health goals and social responsibilities.

From the participants' perspectives, CoC was not only a matter of service availability but also a relational and emotional experience. Familiarity with HCPs, established through prior encounters (e.g., STI treatment or school-based programmes), reduced

anxiety and strengthened trust, particularly for adolescents navigating postpartum recovery and concerns about repeat pregnancy.

> I had no idea about implants until Nurse X explained them to me… She encouraged me to use implants to avoid another pregnancy. After giving birth, Nurse X came to the postpartum ward and inserted the implants at my bedside. (Nalinee, 15, implants)

Participants consistently reported high satisfaction with care models that offered continuity from antenatal counselling to postpartum provision. Services that involved partners or parents during counselling further empowered timely decisions and reinforced personal autonomy.

> During counselling with my mom and partner, the nurse confirmed I could receive free implants... I felt secure because I wasn't ready for another pregnancy. (Chollada, 19, 5-year implants)

Chollada's experience demonstrates that continuity of care was not solely clinical; it was embedded in relational networks. Involving key influencers, such as parents and partners, enhanced adolescents' confidence and created conditions conducive to contraceptive adherence.

Figure 4 conceptualises the CoC model emerging from these accounts. It illustrates three key components: (1) comprehensive antenatal contraceptive counselling, (2) trust-based provider relationships, and (3) immediate postpartum contraceptive provision. These elements created a responsive and coherent care environment that enabled adolescent mothers to navigate complex social and bodily dynamics.

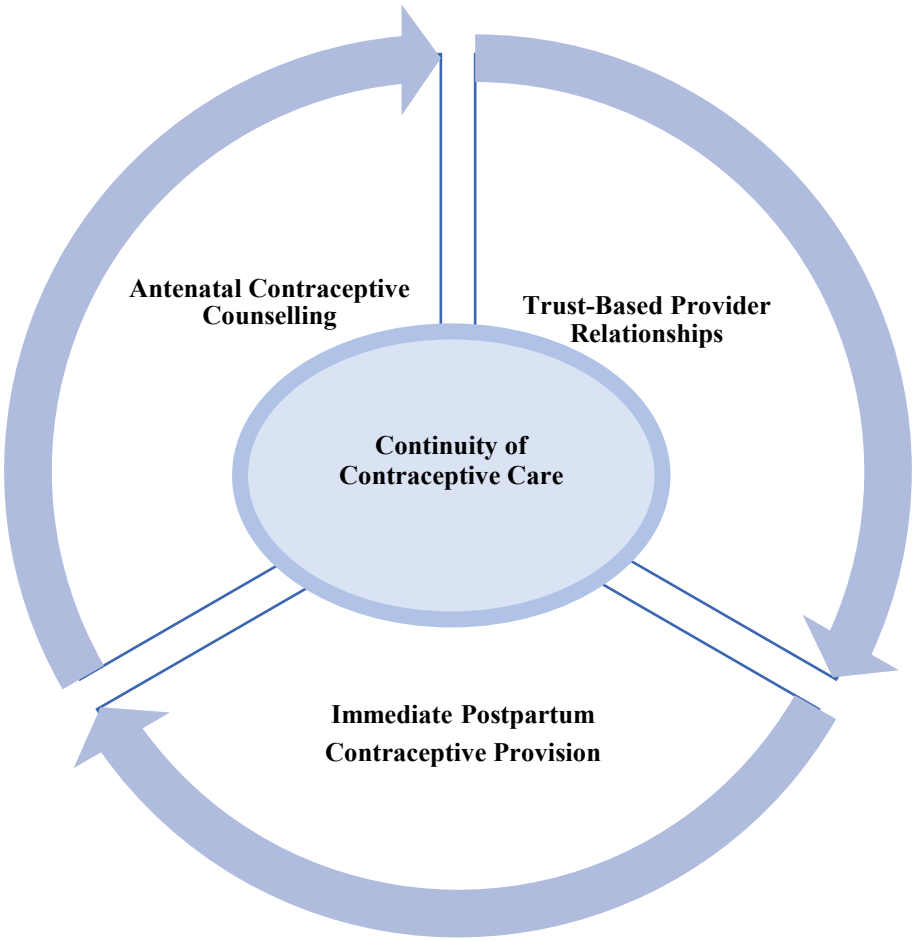

Figure 4: Continuity of Contraceptive Care

A three-component model illustrating trust-based, anticipatory, and postnatal engagement points that support sustained contraceptive uptake among adolescent mothers.

A comparison of service models across study sites revealed that institutional factors also shaped the implementation of CoC. MCH Hospital offered a proactive, embedded service model where counselling was integrated into routine antenatal care and implant provision occurred before discharge. This model promoted anticipatory decision-making and strengthened contraceptive continuity. In contrast, UMT hospitals followed a conditional approach. Clinical priorities often delayed postpartum insertion,

postponing contraceptive provision until the 4–6-week follow-up. This introduced gaps that could disrupt motivation, access, or method continuity.

Participants who received antenatal care early—especially in teenage-friendly clinics—were more familiar with hospital policies and aware of their contraceptive options prior to discharge. These preparatory interactions allowed them to reflect, consult with family, and seek supplementary information from trusted sources, including school-based programmes and digital platforms.

> A nurse I had met earlier recommended implants as a more effective option with minimal side effects. I also learned about free implants through a school programme. With my mom's support, I chose implants to avoid repeating past mistakes. (Rachaya, 18, implants)

> The nurse highlighted the difficulty of daily pill use and recommended implants for long-term protection. With my mom's support, I chose implants and received them before discharge. (Nantiya, 16, implants)

These interactions exemplify how HCPs reinforced proactive, service-oriented decision-making by aligning methods with lifestyle, social pressures, and reproductive goals.

Participants identified three timepoints as especially critical in the contraceptive counselling process—antenatal care, immediate pre-discharge, and the postnatal check-up. However, the degree of preparedness at each stage was shaped by the level of institutional coordination. Those receiving care at MCH reported a "one-stop" model in which the same HCPs provided counselling and conducted bedside procedures. This

approach strengthened continuity and reduced both procedural and emotional anxiety associated with the contraceptive decision-making process.

A supportive rapport with teenage clinic providers emerged as a critical enabler of both contraceptive uptake and continued use. Participants frequently attributed their decisions to the interpersonal sensitivity, clarity, and non-judgmental approach of HCPs.

Some participants described how their choices were reinforced by family involvement alongside supportive HCPs. One noted:

> I hesitated at first, but the nurse explained the implant's benefits. My mother came with me, and her encouragement helped me decide. (Tanida, 17, implants)

Others relied more heavily on the provider relationship itself:

> Without my family's guidance, I trusted the nurse's advice and chose implants. Her support was essential. (Salarat, 18, implants)

These narratives illustrate how contraceptive decisions were embedded in relational ecosystems. Where family support was strong, HCPs reinforced it. Where it was absent, HCPs became trusted proxies—demonstrating their flexible roles in enabling adolescent agency.

A second key dimension of provider engagement involved addressing misconceptions—particularly about side effects and removability. Several participants explained that misinformation from social media or peers had initially discouraged

implant uptake. However, clear, fact-based counselling reframed implants as reversible, safe, and adaptable—reassuring participants and encouraging method continuation.

> The doctor explained removal could be scheduled any time and fertility would return quickly. The implant releases hormones gradually, which my body could adjust to more easily than injectables. This reassured me and helped me plan for future pregnancy. (Chollada, 19, implants)

These affirming conversations helped participants move from uncertainty to confidence in their contraceptive decisions. As trust was built, anxieties were reduced, and adolescents gained the reassurance necessary to maintain consistent use. These interactions underscore the importance of CoC in building the trust and clarity central to adolescent reproductive agency.

School-based health programmes and prior contact with familiar HCPs also laid the groundwork for future decision-making. Several participants traced their awareness of implants back to early education, which helped destigmatise contraceptive discussions and prepared them for later choices.

> I first learned about implants from the school nurse. Later, I met her again during antenatal visits, which made me feel comfortable. (Nantiya, 16, implants)

This illustrates how continuity of care extended beyond clinical encounters. Longitudinal engagement—across school, clinic, and hospital settings—normalised contraceptive planning and supported timely, confident uptake. This illustrates how continuity of care extended beyond clinical encounters, encompassing multi-sectoral engagement across educational, community, and health institutions.

In summary, continuity of care facilitated adolescent contraceptive uptake by fostering stable, trust-based relationships, coordinating services across the antenatal-postnatal continuum, and reinforcing personal agency through supportive communication. Whether through family-supported or provider-led dialogue, participants experienced a model of care that upheld the principles of bodily autonomy, responsiveness, and social coherence. This process exemplifies the grounded theory's core category: maintaining social and bodily integrity through iterative, context-sensitive, and relationally embedded decision-making.

4.3.3.2. Disruptions and Barriers in Contraceptive Service Delivery

Disruptions and barriers within contraceptive delivery reflected fragmented healthcare pathways, creating disparities in access and uptake among adolescents. The divide between public and private services was particularly pronounced. Public sector facilities, especially those offering YFHS, provided integrated contraceptive counselling during antenatal and postnatal stages and offered a wider range of methods. These structures supported continuity and facilitated proactive, service-oriented decision-making.

In contrast, private facilities operated independently from national FP initiatives. Participants who accessed these services reported inconsistent counselling, limited method availability, and financial obstacles—particularly for LARCs. These clinics often stocked SARCs more readily and lacked free implant programmes, undermining participants' capacity to make informed, autonomous choices.

> I switched to a public hospital for delivery because private maternity packages were expensive. No one discussed contraception during my

> pregnancy. At 20, I no longer qualified for free implants, so I chose OCPs. (Sunathip, 20, OCPs)

Navigating across public and private systems introduced delays, confusion, and missed opportunities, particularly when medical records were not transferred and services were uncoordinated. This systemic fragmentation limited adolescents' ability to maintain social and bodily integrity through consistent reproductive planning.

> I had antenatal care at a primary hospital but was referred elsewhere for delivery. Despite considering implants, I hesitated and lacked sufficient information. (Thipporn, 17, not using)

Many participants described delayed contraceptive counselling—typically postponed until the six-week postpartum check-up. For those unable to attend, this gap reduced uptake of LARCs and led to reactive, short-term method choices.

> Upon discharge, I wasn't consulted about contraception. At my follow-up, I asked about implants—but since it wasn't the scheduled family planning day, I received injectables instead. It took three months to get implants. (Chollada, 19, implants)

> I'm sure I wasn't offered contraceptives before discharge because I was already 20. At the postnatal check-up, I was only offered OCPs and injectables—not implants. (Davika, 20, OCPs)

Adolescents also described being transferred out of teenage clinics into adult antenatal services, where assumptions about maturity reduced provider support and parental

involvement. This shift disrupted the relational support system that had previously enabled proactive decision-making.

Hospital transfers—due to clinical risk, preference, or public health protocols—frequently interrupted care. Even with UHC coverage, participants described bureaucratic hurdles, including paperwork for each visit or service-specific co-payments.

> I preferred UMT Hospital due to my heart condition, but I needed a referral form for every visit. Even with coverage, I had to pay extra for non-UHC services. (Rachada, 19, implants)

The complexity of accessing care redirected many participants toward SARCs—not as a matter of preference, but as a pragmatic response to limited availability and delayed counselling.

Participants' physical recovery and psychological readiness also shaped contraceptive decisions. Those who experienced intensive labour or delivery complications reported feeling unprepared to discuss contraception immediately post-birth. Injectables were often chosen for their perceived ease and reversibility, reflecting a strategy of minimising disruption during recovery.

> I was embarrassed to get injectables before pregnancy because I thought it reflected risky behaviour... Now, I'm considering implants, though it feels overdue." (Kanchanee, 20, injectables)

Participants who missed antenatal care entirely faced heightened vulnerability, often entering delivery with no prior contraceptive information, compounded by familial

rejection or stigma. These participants often relied solely on relational decision-making, particularly from mothers or supportive HCPs.

> I didn't receive antenatal care and came to the hospital for delivery. No one discussed contraception with me. My mother later encouraged me to get implants before discharge. (Janya, 16, implants)

For others, the absence of structured counselling resulted in confusion or reliance on emotionally charged peer narratives—highlighting the importance of embedding contraceptive guidance early and consistently across care encounters.

Across these barriers—whether institutional, relational, or informational—participants faced a common outcome: reduced capacity to make timely, supported decisions. These disruptions—whether institutional, relational, or informational—ultimately undermined adolescents' ability to make timely, confident contraceptive choices. These constraints disproportionately affected adolescents without family support or prior antenatal care, exacerbating inequalities in access to LARCs.

Despite these barriers, participants demonstrated adaptive and resourceful decision-making strategies. They navigated fragmented systems, sought out alternative providers, or re-engaged at later stages—reflecting service-oriented agency within structurally constrained settings.

This subcategory reinforces the grounded theory's core category: adolescents' efforts to maintain social and bodily integrity are shaped not only by interpersonal and cultural pressures, but also by systemic inconsistencies and policy gaps that condition the terrain of reproductive agency.

4.3.3.3. Summary

The contrast between continuity and fragmentation in contraceptive service delivery illustrates how institutional structures shape—either enabling or limiting— adolescents' capacity to maintain social and bodily integrity. In contexts of relational continuity and provider trust, participants engaged in proactive and service-oriented decision-making, often adopting long-acting methods with confidence. Where services were inconsistent—due to system transfers, delayed counselling, or unclear eligibility—participants adopted more reactive or cautious strategies, defaulting to SARCs or delaying decisions altogether. These reactive strategies were often driven by uncertainty, fragmented information, or method availability rather than deliberate preference.

Across both conditions, mothers and HCPs emerged as relational anchors, either reinforcing or undermining contraceptive intent depending on the quality of communication and continuity. These findings highlight the iterative and adaptive nature of adolescent decision-making and reinforce the need for youth-responsive, structurally coherent reproductive health services.

While institutional structures shaped the consistency of care, the next category turns to how cultural and relational influences framed the choices adolescents made within those systems.

4.3.4. Category Four: 'Relational and Cultural Influences on Contraceptive Decision-Making'

This category explores how relational and cultural structures shaped adolescents' contraceptive decisions, revealing ongoing negotiations between personal autonomy

and external expectations. Parents, partners, and wider sociocultural networks frequently acted as mediators—or in some cases, gatekeepers—of contraceptive behaviour. These influences were particularly salient in a context where preserving family harmony, avoiding stigma, and upholding gendered norms remained paramount.

While some participants appeared to follow external advice, their choices were rarely passive. Instead, they engaged in subtle, context-sensitive strategies—including compliance, negotiation, and selective resistance—to maintain social legitimacy while asserting control over their reproductive lives. This reflects Relationally Mediated Decision-Making.

Figure 5 illustrates how contraceptive decisions emerged from the interplay of three intersecting domains: parental (particularly maternal guardians), partner, and broader sociocultural influences (including peers, elders, and community norms). These layered dynamics produced what can be theorised as a "negotiated contraceptive decision"—a process in which adolescents actively balanced relational pressures with reproductive intentions.

Key drivers of this negotiation included fear of judgment, shame associated with early sexual activity or unplanned pregnancy, and perceived obligations to family reputation. In such contexts, cultural expectations of obedience, modesty, and self-restraint often constrained options or introduced conflicting pressures. These dynamics were especially pronounced where contraceptive decisions intersected with gendered assumptions about responsibility and moral worth.

This category comprises three interrelated subcategories:

1. Relational Influence and Mediation in Contraceptive Choices – how partners, parents, and elders shaped decisions, ranging from collaborative input to coercive control.
2. Stigma, Shame, and Control in Contraceptive Decisions – how concerns about morality, blame, and family reputation shaped behaviour.
3. Cultural Expectations and Social Regulation of Contraceptive Use –how Thai cultural norms and community surveillance framed reproductive decision-making.

These subcategories are analytically distinct but practically intertwined. Together, they demonstrate how contraceptive decision-making is co-constructed through relationships and cultural scripts, not simply individual preferences. This aligns with CGT's focus on contextualised action and further reinforces the core category: adolescents' efforts to maintain social and bodily integrity required adaptive negotiation within relationally and culturally embedded terrains.

4.3.4.1. Relational Influence and Mediation in Contraceptive Choices

Contraceptive decision-making emerged as a negotiated process rather than an individual act, shaped by the converging influences of family members, partners, and broader sociocultural networks. Participants navigated relational expectations while seeking validation from significant others. However, these negotiations reflected more than passive compliance; they involved subtle forms of resistance, adaptation, and strategic engagement.

Participants did not passively accept external guidance. Some resisted familial preferences, citing concerns about side effects or expressing a preference for shorter pregnancy intervals. This reflects the dialectical nature of decision-making, in which

compromise was actively negotiated between personal goals and external pressures. These interactions exemplify how reproductive agency is co-constructed within social relationships, reinforcing a constructivist interpretation of adolescent autonomy.

Three relational spheres emerged: (1) maternal figures (e.g., mothers, mothers-in-law), (2) partners, and (3) sociocultural actors (peers and relatives). While maternal figures exercised direct authority through caregiving roles and financial oversight, partners often shaped choices in relation to relational commitments. Sociocultural actors reinforced moral norms and community standards.

Figure 5 conceptualises this interplay. At the centre lies the Negotiated Contraceptive Decision, illustrating how adolescent mothers' choices were co-produced across intersecting relational and cultural pressures. These decisions were fluid, contingent, and deeply context bound.

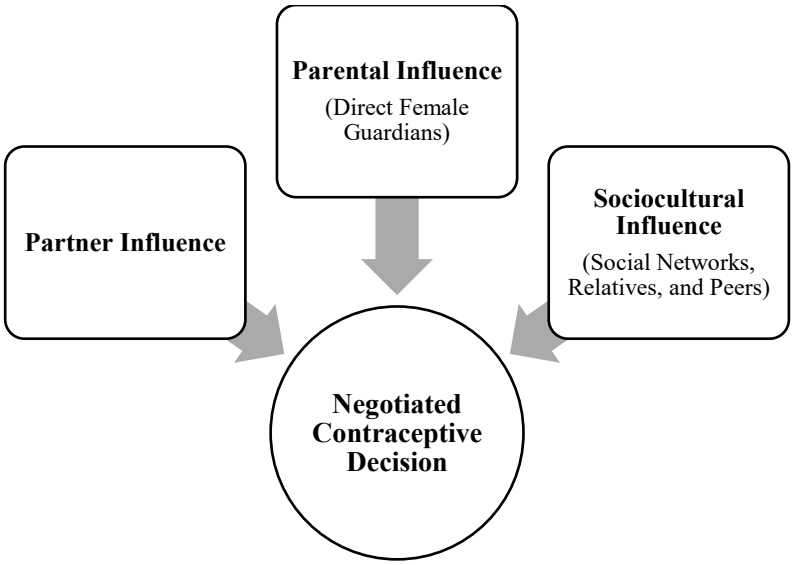

Figure 5: Negotiated Contraceptive Decision-Making: Relational and Sociocultural Influences Among Adolescent Mothers.

While some participants described these decisions as collaborative, others revealed more subtle coercion. What appeared as Shared decision-making (SDM) often occurred within asymmetrical power structures. where age, economic dependency, or cultural norms constrained genuine autonomy. This calls for a critical reading of ‘choice’ as contextually shaped rather than freely made.

Participants frequently aligned their choices with maternal preferences to avoid conflict and ensure familial support. Parental endorsement not only reduced anxiety but bolstered confidence in the chosen method.

> My mother and mother-in-law covered all our expenses. They advised me to get implants for my benefits, and I agreed. (Wiraphon, 15, implants)

Even when HCPs recommended implants, maternal concern could override medical advice—rooted in anecdotal experiences and caution.

> Healthcare providers recommended implants, but my mother advised against them. Her niece had side effects. This made me anxious, so I chose injectables. (Chitchamon, 20, injectables)

For adolescents with limited contraceptive literacy, familial trust networks—especially grandmothers and aunts—offered emotional and logistical support, reinforcing intergenerational norms.

Institutional policy also legitimised maternal control. Parental consent requirements for minors blurred boundaries between protection and control, embedding family power into clinical settings.

> I didn't ask about contraception, but my mother told me to get implants before I left the hospital. (Janya, 16, implants)

> My mother-in-law brought me to the clinic. She and the nurse encouraged implants, so I agreed. (Salarat, 18, implants)

Not all maternal influence supported LARCs. Some mothers, wary of side effects or reversibility, preferred injectables:

> A month after my baby was born, my mom recommended injectables and took me to get them. I accepted her choice, and I always relied on her. (Oraporn, 19, injectables)

In the absence of mothers, some relied on fathers—whose advice often echoed maternal histories:

> I consulted my father, and he supported injectables—just like my mom had used. (Jirapan, 20, injectables)

These narratives illustrate how contraceptive decisions were anchored in family memory, with methods often chosen to reflect continuity rather than personal preference.

Experiential learning—especially after contraceptive failure or repeat pregnancy—often prompted shifts in familial attitudes. Previously hesitant caregivers began advocating implants as a pragmatic solution:

> After my first baby, my mom preferred pills. But I forgot them and got pregnant again. Then my mom and mother-in-law supported implants. (Suneeya, 18, implants)

Beyond maternal guidance, romantic relationships also shaped contraceptive behaviour—particularly where economic dependence or emotional dynamics were prominent.

> My boyfriend had two children with his ex. We planned to have another child in a couple of years, so I stayed on injectables. I wanted to keep my options open. (Sudarat, 18, injectables).

In some cases, logistical barriers shaped decisions more than preference:

> My boyfriend suggested pills. I would've agreed to implants if he recommended them, but clinics were far away. If I got pregnant, we'd deal with it. (Chanalai, 20, not using)

Participants also concealed SRH behaviours to avoid judgement. In such contexts, apparent acceptance often masked relationally compliant decisions made to preserve family relationships or avoid conflict. Still, participants exercised agency—even when constrained—by choosing methods that aligned with their relational priorities and emotional readiness.

The next section, Stigma, Shame, and Control in Contraceptive Decisions, explores how these dynamics intersected with moral regulation and public perceptions of young motherhood.

4.3.4.2. Stigma, Shame, and Control in Contraceptive Decisions

Contraceptive decision-making among adolescent mothers in Thailand was often shaped by deeply entrenched stigma surrounding teenage pregnancy. Adolescents—especially those who had experienced unprotected sex or early pregnancy—frequently internalised societal judgement and deferred to authority figures, including parents and healthcare providers. This deference often led to the acceptance of implants, perceived not only as effective contraception but as a moral safeguard against further social disapproval.

Participants from disrupted or unsupportive family structures were particularly vulnerable to externally imposed decisions, where implants were presented as the default or only viable solution.

> I started OCPs at 10 but missed doses. My mother didn't trust me, so she switched me to injectables at 12. I wasn't consistent with visits, so she told me to get implants to avoid problems. (Nalinee, 15, implants)

This narrative illustrates how adolescent risk was often medicalised into control, reducing space for adolescents to explore personal preferences or question long-term methods.

While some adolescents accepted implants voluntarily, recognising their benefits in preventing repeat pregnancies, others expressed hesitation. However, fear of judgement during consultations, and concern about family disappointment, often led them to suppress concerns and comply silently.

> My mother-in-law suggested implants, but I kept delaying. I didn't want to argue, so I reassured her I'd get it soon. (Thipporn, 17, not using)

Here, compliance served as a strategy to preserve relational harmony, even in the absence of genuine readiness or consent.

Financial dependency on family or partners further limited autonomy. Participants described how late disclosures of pregnancy shifted decision-making power to caregivers, leaving little room for discussion.

> At the hospital, the nurse kept asking if I wanted free implants. She didn't explain other methods. I didn't know what to ask, so I stayed silent. (Thipporn, 17, not using)

Judgemental consultations—especially in referral hospitals—reinforced feelings of shame, with some participants describing moralistic questions about their age, parenting ability, or financial preparedness.

> HCPs asked, 'Why would you get pregnant at such a young age?' and "How would you manage the costs of childrearing as a student?" They suggested implant as the solution. I was very sensitive to those comments. (Wiraphon, 15, implants)

Delayed antenatal care—often due to fear of stigma—further fractured the decision-making process. In these cases, contraceptive plans were often initiated by others, with adolescents positioned as passive recipients.

> I gave birth without prior care. My baby tested positive for syphilis. The nurse told me to prepare for implants. My mom blamed me and insisted I get it. I didn't ask questions. (Janya, 16, implants)

In such contexts, implants symbolised not only pregnancy prevention but moral rehabilitation—a means of restoring family honour through visible compliance.

> My mother and mother-in-law encouraged implants. My boyfriend wanted more children, but I didn't. I regret not using protection—I can't enjoy life like before. (Nantiya, 16, implants)

In families where parental guidance was framed as protective rather than punitive, decisions were more collaborative—though still shaped by authority structures.

> My mom accompanied me to every hospital visit, and we decided on implants together. My mother-in-law supported it too. (Wiraphon, 15, implants)

Relationship dynamics also affected decision-making. Participants in age-disparate relationships—especially with older partners—described greater coercion, often deferring to partner preferences or their families.

> My boyfriend had two children with his ex. We planned another child later, so I stayed on injectables." (Sudarat, 18, injectables)

Across these narratives, stigma, shame, and control intersected to constrain adolescents' contraceptive autonomy. While implants were often presented as responsible or protective choices, they also reflected a broader social script of discipline and correction. The appearance of choice masked underlying power asymmetries shaped by age, dependency, and social judgment.

This subcategory further supports the core category of maintaining social and bodily integrity, showing how adolescents adapted and negotiated decisions within a terrain marked by social surveillance, moral regulation, and limited alternatives.

4.3.4.3. Cultural Expectations and Social Regulation of Contraceptive Use

This subcategory expands the analysis of relational influences by examining how Thai cultural norms and community-based moral expectations regulate adolescents' contraceptive decisions. While earlier sections focused on immediate family or partner dynamics, this dimension highlights how broader social networks and collective cultural logics—including elders, neighbours, and informal advisors—shaped decisions through moral discourse, experiential storytelling, and normative pressure.

In Thailand's collectivist context, decisions around sexuality and reproduction are rarely individualised. Participants described how extended kinship systems and neighbourhood-based moral surveillance shaped their perceptions of acceptable contraceptive behaviour. Contraception was framed not only as a health intervention but as a symbol of discipline, responsibility, and moral repair—particularly for young mothers perceived to have transgressed social norms.

> All my female relatives and neighbours told me, 'Just get the implants. Don't have more children'. I took their advice. (Suneeya, 18, implants)

In many accounts, elder female relatives—mothers, grandmothers, aunts—acted as cultural brokers, translating collective wisdom and lived experiences into concrete guidance. Even non-biological women in the community, often addressed using familial terms, exercised considerable moral authority, offering advice imbued with cultural memory and normative expectations.

> I sought advice from my mother and other relatives. They had experiences with injectables, and all recommended them to me. My grandmother once had an allergic reaction to an implant, so I chose injectables. Her arm swelled. Eventually, she had to get it removed, so I chose injectables. (Kamonnat, 19, injectables)

Rather than neutral counselling, these interactions were often loaded with emotion, caution, or fear, particularly around newer or less familiar methods. IUDs and implants were frequently discouraged based on misinformation or anecdotal complications, whereas injectables were positioned as safer, more familiar, and socially endorsed.

> I didn't know much about IUDs. An aunt said it had to be inserted inside, which sounded painful and difficult to remove… I heard implant rods could get stuck. I wasn't brave enough to try unfamiliar options. (Tanida, 17, implants)

The narratives also revealed a geographically patterned cultural logic. In rural or semi-rural areas, where healthcare infrastructure was limited, injectables were both more accessible and more culturally embedded. These preferences reflected not only pragmatic constraints but social reinforcement of the familiar.

> I was willing to use injectables... Most people in my hometown and my friends used them too. IUDs and implants? I wasn't brave since no one around me had. (Sudarat, 18, injectables)

In contrast, participants in urban areas—often exposed to youth-friendly services, school-based programmes, and broader digital networks—expressed greater openness to subdermal implants. This urban-rural divide underscores how spatial inequalities

intersect with cultural conformity, shaping method acceptability and perceived legitimacy.

In this context, reproductive agency was not absent—but situated within a framework of moral accountability and relational legitimacy. Participants carefully navigated familial expectations, collective memory, and structural limitations in ways that maintained social coherence while cautiously exercising personal judgement.

This subcategory further reinforces the grounded theory's core category of maintaining social and bodily integrity. Cultural expectations functioned not only as external pressures but also as internalised moral frameworks that guided reproductive behaviour. To be effective, SRH interventions must move beyond individual-level counselling and instead engage with the social meanings, cultural narratives, and intergenerational dynamics that shape adolescent decision-making.

4.3.4.4. Summary

The category of Relational and Cultural Influences on Contraceptive Decision-Making underscores the complex interplay between family dynamics, sociocultural norms, and systemic hierarchies in shaping adolescent contraceptive pathways. This study reveals how reproductive decisions were embedded within relational ecosystems—where the voices of mothers, partners, and community elders often mediated or even superseded individual autonomy.

Support and involvement from trusted figures—particularly maternal caregivers and partners—often facilitated the adoption of implants and injectables. Yet these decisions were not always grounded in shared agency; they were frequently negotiated under conditions shaped by stigma, family reputation, and the imperative to restore relational

harmony. In many cases, deference to familial authority reflected strategic compliance—a means to secure emotional stability, maintain household peace, or access material support.

Cultural expectations around early motherhood, sexual morality, and contraception further shaped how adolescents engaged with SRH services. Within asymmetrical power dynamics—whether in families or clinics—dialogue was often constrained, and options limited. Many participants engaged in what could be described as relational trade-offs: relinquishing certain aspects of choice in exchange for reassurance, support, or social approval.

In summary, relational and cultural influences were not peripheral but central determinants of adolescent contraceptive decision-making. These dynamics both constrained and enabled agency, offering adolescents emotional scaffolding, practical support, and pathways to socially sanctioned pathways to reproductive control. This relational positioning set the stage for further negotiation, as explored in the next category: the tensions between personal aspirations, family responsibilities, and the lived realities of young motherhood.

CHAPTER 5

DISCUSSION

5.1. Introduction

This chapter presents a critical interpretation of the study's grounded theory by situating it within existing empirical and theoretical literature, demonstrating how young Thai women navigate postnatal contraceptive decision-making within complex social, cultural, and institutional contexts. It builds directly on the four categories presented in Chapter 4, advancing the analysis by theorising their interrelation in shaping the study's core category: maintaining social and bodily integrity. These four categories are conceptualised as key dimensions of the participants' lived experience, offering insight into the contextualised strategies they employ to manage reproductive choices and maintain agency.

Within this theoretical framework, different types of decision-making—such as proactive, relational, and service-oriented—are interpreted as expressions of agency that manifest in and through these categories. Rather than treating the categories as separate layers, this framework illustrates how individual agency is exercised within and shaped by structural and relational conditions.

In this study, agency is understood as the capacity of individuals to make choices and enact decisions within the constraints and possibilities of their sociocultural context. Rather than describing agency as "sociocultural," the thesis frames it as individual agency shaped, structured, and sometimes constrained by sociocultural norms, institutional arrangements, and gender expectations. This interpretation recognises that

agency is not fixed, but dynamic, and contextually mediated. This approach enables a nuanced understanding of how adolescents actively respond to multiple, and sometimes competing, pressures—while navigating tensions between personal intentions, social expectations, and systemic limitations.

The discussion positions grounded theory within the broader theoretical landscape shaped by a relational turn on bioethics. Recent scholarship challenges individualistic notions of reproductive autonomy, arguing instated that autonomy is constituted through social norms, institutional structures, and embodied experiences (Goering, 2009; Hirsch, 2023; King et al., 2017). These perspectives resonate GT's sensitivity to context, power, and meaning-making, thereby extending its explanatory power in reproductive health research.

In this context, the grounded theory conceptual model (Figure 3) highlights how social expectations, health system fragmentation, and cultural scripts shape adolescent contraceptive decision-making in Thailand (Tangcharoensathien et al., 2004; Tangcharoensathien et al., 2018; Whittaker, 2002). This integrated theoretical structure strengthens the interpretive clarity of the findings and foregrounds how adolescent agency is enacted in relation to the interdependencies between personal, relational, institutional, and sociocultural forces.

In line with CGT (Charmaz, 2014), this chapter does not re-analyse the data but instead elaborates the conceptual contributions of the grounded categories by linking them to broader debates on adolescent reproductive decision-making. The four categories are interpreted as dynamic components of a theoretical model, in which adolescents negotiate competing priorities—such as bodily autonomy, social acceptability, familial

approval, and access to services—within interconnected personal and structural contexts.

The discussion examines how these categories interact with broader influences to shape contraceptive choices and the constraints and possibilities they entail. While these dynamics are addressed in turn, they are not discrete; rather, they are deeply interwoven, reflecting the non-linear, adaptive, and relational nature of adolescent contraceptive agency. Emphasis is placed on how adolescents navigate institutional protocols, relational pressures, and policy-level constraints through strategies of negotiation, adaptation, and resistance.

By foregrounding the interplay between grounded categories and multi-layered sociocultural and institutional factors, this chapter makes a theoretical contribution to understanding how reproductive agency is constructed, challenged, and maintained in settings marked by structural inequities. These insights hold significant implications for future policy and service design, which are elaborated at the close of this chapter and in the synthesis presented in Chapter 6.

This discussion is structured around the core category ‘Maintaining Social and Bodily Integrity’, which captures how adolescents navigate complex, and at times conflicting, influences on contraceptive decision-making. Five interlinked key areas extend the analytical categories:

(1) Information Barriers: Misinformation and Educational Silences,

(2) Implant Use: Agency, Bodily Integrity, and Reproductive Control,

(3) Trust and Power in Contraceptive Care,

(4) Institutions: Interpersonal and Structural Dynamics, and

(5) Relational Autonomy: Cultural Norms and Family Authority.

These sections explore how adolescents engage with modern contraceptive methods within a landscape shaped by competing priorities, power relations, and moral narratives. The final section (5.7) synthesises the findings by critiquing dominant behavioural models, incorporating adolescent neurodevelopmental and relational perspectives, and linking the analysis to SDG 3.7 and 5. This broader framework deepens the study's core category and calls for developmentally responsive, gender-sensitive contraceptive care.

5.2. Information Barriers: Misinformation and Educational Silences

This section explores how adolescents accessed, evaluated, and responded to contraceptive information within a digitally connected landscape, highlighting how multi-level contextual factors shape their decision-making processes. The interplay between individual agency, digital platforms, educational institutions, and social relationships is central to understanding how contraceptive decision-making is navigated.

Misconceptions about subdermal implants and injectables were particularly prevalent on social media and significantly shaped contraceptive uptake. Even where accurate information was available, fear-based narratives persisted, suggesting that factual provision alone is insufficient to change behaviour. This aligns with research on youth health misinformation, which emphasises the role of emotional resonance, cognitive bias, and peer trust in sustaining misinformation (Foran, 2019; Glasier et al., 2008; Hoggart et al., 2013; Swire-Thompson & Lazer, 2020)

Closed Facebook groups were particularly influential in shaping peer-led contraceptive discourse. Adolescents were not passive recipients; rather, they were active contributors to these narratives—exercising their agency by co-producing knowledge that reflected their lived experiences, emotional reactions, and social realities. When such groups validated negative portrayals of implants, these perspectives gained credibility—even when they contradicted clinical evidence. This dynamic reflects the digital trust bias (Chou et al., 2018), where peer-shared content is perceived as more trustworthy than expert information.

This effect was compounded by emotionally intense posts—often containing graphic imagery of scarring, bleeding, or implant removal—that provoked visceral fear. Such content, rarely found in institutional materials, shaped decisions about adoption and removal. As Hoggart et al. (2013) observed in the UK, adolescents were similarly influenced by peer accounts of side effects, including bleeding and implant removal difficulties. Their qualitative research showed how informal, face-to-face conversations—often in schools or peer groups—shaped contraceptive attitudes, frequently overriding clinical guidance. However, this study reveals how digital platforms intensify these concerns through mechanisms of visual amplification and repetition. In contrast to offline peer groups, online forums allow stories to be widely shared, remain accessible over time, and include emotionally charged imagery—reinforcing fear-based narratives more durably.

This aligns with Glasier et al. (2008), who demonstrate that persistent myths and negative beliefs about LARCs even when accurate contraceptive information is available—undermining the assumptions of traditional information-deficit model. As Nutbeam (2000) further argues, effective digital health literacy must move from mere

comprehension to capacity for critical evaluation, participatory engagement, and contextual sensitivity—capacities that, as this study shows, are often underdeveloped among adolescents navigating contraceptive decisions (Glasier et al., 2008; Nutbeam & Lloyd, 2021).

Importantly, these digital anxieties cannot be understood in isolation from broader sociocultural contexts. Participants' hesitancy toward implants was shaped by religious conservatism and gendered expectations around reproductive control (Blanc et al., 2009; Srikanthan & Reid, 2008). Here, online content did not simply misinform—it intersected with cultural norms that already constrained individual adolescents' agency, reinforcing moralised and fearful framings of contraception.

Thus, the circulation of implant-related misperceptions online illustrates how bodily autonomy is navigated not only through access to information but through a combination of affect, peer validation, and cultural meaning. Digital platforms do not merely transmit misinformation—they operate as affective infrastructures that mediate reproductive anxiety in emotionally and socially situated ways. Recognising this underscores the need for nuanced interventions that go beyond correcting facts and instead engage critically with the digital and cultural terrains in which adolescents exercise agency in making contraceptive decisions.

These dynamics were particularly pronounced when participants recounted bodily side effects—such as bleeding, hormonal imbalance, headaches, or implant migration—through emotionally charged testimonies. Many sought early removals due to fears instilled by these narratives, especially in closed Facebook groups where graphic portrayals of complications, such as scarring or failed removals, circulated repeatedly and with affective intensity. While Hoggart et al. (2013) identified peer influence as a

key factor among UK adolescents, the current study demonstrates how digital platforms magnify such influence through continuous narrative reinforcement. These decisions were not merely reactive but reflected a hybrid form of agency: adolescents navigated between proactive contraceptive experimentation and socio-culturally responsive choices shaped and constrained by digital peer validation, sociocultural norms, and bodily experiences. In this context, implant discontinuation was often a strategy for preserving both bodily and social integrity, aligning with the study's core model of postnatal contraceptive decision-making.

While Yousef et al. (2021) highlight the benefits of technology in enhancing contraceptive access, this study finds that the credibility of digital information is shaped less by the technology itself and more by the perceived trustworthiness of the source. This variation may stem from demographic and cultural differences, or from the specific platforms and modes of access. These findings caution against generalising the advantages of digital health information, particularly across age groups and cultural settings, where eHealth literacy and prior healthcare experiences vary widely.

Among younger participants, online platforms emerged not as neutral tools but as affective and relational spaces. Digital environments—particularly social networks—shaped perceptions through emotional testimony, peer storytelling, and culturally resonant fears. These findings extend the work of Lanjakornsiripan et al. (2015), who documented low uptake of LARCs among Thai adolescents, by offering insight into how reproductive hesitancy is maintained not only culturally but digitally, through shared anxieties around bodily autonomy and fertility disruption.

This study shows that Facebook groups for expectant adolescents and unfiltered Google searches were not merely information sources—they were affective infrastructures for

reproducing cautionary narratives about subdermal implants and injectables. These narratives often discouraged clinical consultation, positioning the body as a site of risk rather than autonomy. This illustrates the model's core insight: that contraceptive decision-making involves a negotiation between proactive strategies and culturally responsive self-protection. Participants were not simply misinformed or passive; they were acting within a logic of protective self-regulation—exercising agency through decisions intended to preserve both bodily integrity and social acceptability in the face of conflicting digital and cultural messages.

The dual nature of social media—as both a tool for empowerment and a vector for misinformation—presents a clear challenge for HCPs. While digital platforms extend the reach of health information, they also undermine institutional authority through emotionally persuasive counter-narratives. To address this, clinicians and public health actors must not only disseminate accurate content but also participate meaningfully in the digital spaces where reproductive anxieties take shape.

McNee (2024) similarly highlights the persuasive role of peer-led narratives on social media. This study extends that insight by showing how such narratives are internalised within broader logics of bodily protection and social conformity. While the focus is on adolescent contraceptive users with digital access, future work should consider how structural inequalities—such as poor connectivity, low literacy, or healthcare mistrust—may limit access to online health resources and exacerbate exclusion. Building digital health literacy—particularly among vulnerable adolescent populations is essential for fostering trust and enabling informed, confident contraceptive choices. While Nutbeam and Lloyd (2021) do not specifically address contraception, they argue that strengthening health literacy—especially in digital contexts—is vital for reducing

health inequalities and enabling individuals to more effectively engage with health information and service.

Findings from this study reveal that stigma and fear of judgement significantly influenced contraceptive information-seeking behaviours, with many participants preferring online sources to maintain anonymity and avoid disclosing their pregnancy status to family members. This aligns with studies in high-income settings, such as the USA (Logsdon et al., 2014; Roque et al., 2022) and Australia (Ireson, 2015; Nolan et al., 2015), where adolescent mothers prioritised the internet and social networks over HCPs, family, or peers for SRH information. Similarly, Girl Effect and Women Delivery (2022) reported that adolescents in India, Malawi, and Rwanda relied on smartphones for confidential SRH education. These patterns highlight how digital platforms serve as emotionally safe spaces for contraceptive decision-making, allowing adolescents to exercise agency proactively within socially constrained environments. This reinforces the need for youth-oriented, digital SRH interventions to effectively reach and empower adolescents (Dehlendorf et al., 2020; Todd & Black, 2020).

However, online platforms also present challenges in reaching all adolescents. Barriers such as unequal internet access, limited mobile data, and lack of culturally engaging content on official health platforms restrict the utility of digital SRH tools. Similar disparities have been observed globally. For instance, Walsh-Buhi et al. (2016) found that among university students in the US with digital access, a mobile video intervention for LARC did not significantly increase healthcare service utilisation, indicating that information availability does not guarantee engagement. These constraints underscore the situated nature of individual agency, shaped by infrastructural and socio-economic realities.

Notably, this study found that many participants were unaware of Thailand's free implant programme, despite its promotion on hospital websites and Facebook. This gap illustrates a misalignment between institutional messaging and adolescent engagement, reinforcing the need for multi-format, accessible educational campaigns grounded in digital habits and cultural contexts.

Social network sites were shown to strongly influence contraceptive choices, with personal anecdotes and peer narratives outweighing formal health information. This aligns with research showing that endorsements from trusted social circles influence contraceptive uptake more than independent research (Calhoun et al., 2023; Dalessandro et al., 2021; Iyoke et al., 2014). Dalessandro et al. (2021) further observed that US women often bypassed clinical advice in favour of informal, feminised health networks. In this study, such dynamics were better understood as relationally mediated agency, where trust, emotional resonance, and perceived moral legitimacy shaped contraceptive behaviour.

The findings also echo prior research indicating limited contraceptive literacy among adolescents, especially around LARCs (Menon, 2020; Pritt et al., 2017). Misperceptions—such as reliance on withdrawal and overestimating condom efficacy— often stemmed from school curricula focused more on STI prevention than pregnancy prevention. In contrast, online communities, such as "Teen Mom" groups, offered alternative, implant-positive narratives. These spaces functioned as peer-driven advocacy hubs, where young mothers reshaped contraceptive norms through shared experience. Such platforms functioned not just as information sources but as norm-constructing environments, in which adolescents enacted agency by aligning with or contesting dominant reproductive expectations.

Most participants reported limited access to credible SRH websites, reflecting both educational disparities and gaps in digital literacy. Barriers to meaningful engagement included technological limitations, online safety concerns, and the absence of age-appropriate or culturally relevant content. These findings align with Nolan et al. (2021), who noted a lack of research on adolescent mothers' online SRH use. This study further demonstrates that adolescents navigate digital SRH information through context-sensitive strategies, balancing proactive searching with adaptive responses to constraint.

The findings reinforce the importance of professional involvement in online networks to support contraceptive continuation, side-effect management, and method switching. While Nolan et al. (2021) advocated for HCPs to enter these digital spaces, this study extends that view by showing how adolescents' socio-culturally responsive decisions are often informed by, but not adequately supported by, professional sources. Bridging this gap is essential to reduce discontinuation and mistrust. The findings suggest that integrating HCPs into social networking platforms could improve decision-making support. Moderated, evidence-based content and interactive digital forums could bridge peer-driven networks with clinical knowledge, allowing adolescents to make informed choices while preserving the emotional and social trust that underpins their online engagement.

Comprehensive sexuality education (CSE), along with supplementary activities, shapes contraceptive choices among adolescents. The discussion foregrounds adolescents' perspectives, considering cultural sensitivities and the structural limitations of both academic and familial communication channels. It also highlights extracurricular initiatives, particularly the role of HCPs in promoting subdermal implants within the

Teenage Pregnancy Programme. These dynamics demonstrate how contraceptive decisions emerge from a negotiated space between institutional silences and individually enacted agency—capturing the hybrid logic at the centre of this study's conceptual model.

Societal expectations position schools as the primary source of SRH education (MoE & UNICEF Thailand, 2017). Although designated as primary providers of CSE, participants perceived school-based contraceptive education as shallow, ineffective, and impractical—a finding consistent with Boonmongkon et al. (2019), who noted that Thai CSE programmes emphasise STI and pregnancy prevention over practical contraceptive knowledge. This institutional failure prompted participants to seek contraceptive information elsewhere, often using informal or digital platforms—a proactive expression of agency shaped by culturally constrained formal structures. The overemphasis on condoms in school curricula, coupled with the absence of LARC discussions, led some participants to mistakenly perceive condoms as the most effective option.

A lack of decisional support from peers and family further compounded poor contraceptive decision-making. While CSE is expected to fill these knowledge gaps, findings indicate that teachers often struggle to discuss sexuality due to discomfort and uncertainty (Thammaraksa et al., 2014). Similarly, parent-child communication about contraception remains rare, as many Thai parents perceive teenagers as too immature for SRH discussions (Sridawruang et al., 2010; Bekele et al., 2022). These silences reflect broader sociocultural norms that position adolescent sexuality as taboo—conditions under which adolescents nonetheless find ways to act intentionally, learn, and make decisions. Cultural and religious norms further limit open discussions on

sexuality, particularly where premarital sex and contraceptive use are discouraged (Atallah & Redón, 2023).

CSE implementation faces significant sociocultural and psychological challenges, leading to uneven programme quality and inconsistent adoption in Thai schools (Boonmongkon et al., 2019; Thammaraksa et al., 2014). Chiba (2022) highlights how cultural norms inhibit discussions on sexuality, and Kay et al. (2010) similarly observed that Thai society tends to avoid public discourse on sexual health because of longstanding taboos surrounding sexuality. This aligns with findings from the current study, where participants reported variations in CSE quality based on school type, teacher perspectives, and gender norms influencing pedagogical styles. Such uneven implementation reinforces disparities in contraceptive literacy—requiring adolescents to develop individualised and context-sensitive strategies for knowledge acquisition, consistent with the model's view of socio-culturally responsive agency.

Although some adolescents benefited from CSE, they cited teacher storytelling and personal contraceptive experiences as particularly impactful. Female teachers were generally preferred, reinforcing the importance of cultural sensitivity in CSE delivery (Chiba, 2022). Building parental and teacher support for CSE is crucial to enhance school-based contraceptive education (MoE & UNICEF Thailand, 2017). Globally, evidence suggests that effective CSE programmes reduce adolescent risky behaviours, including unplanned pregnancies and HIV exposure (Fonner et al., 2014; UNFPA, 2013b). However, in Thailand, CSE remains inconsistently implemented, lacking a comprehensive and sustainable national framework (MoE & UNICEF Thailand, 2017). This institutional inconsistency forces adolescents to navigate fragmented instruction

and informal sources, making decisions that reflect both resistance to dominant narratives and adaptative engagement with alternative ones.

This study found that adolescents primarily gained contraceptive knowledge outside of school. Many could not recall classroom-based discussions on contraception, highlighting limited interactive engagement in formal education. In contrast, LARC information was first encountered through social media, healthcare settings, or supplementary educational activities led by HCPs. The decentralised Thai education system grants schools significant autonomy over curriculum design, meaning CSE implementation varies widely and is not a mandatory component of the Ordinary National Education Test (ONET) (MoE & UNICEF Thailand, 2017). This structural variability places the burden of knowledge acquisition on adolescents themselves—illustrating a logic of constrained agency, where individuals act within limited institutional support.

Adolescents valued contraceptive implants for enabling continued education and career aspirations, reinforcing the link between contraceptive choices and long-term personal goals. Contraceptive information-seeking, especially from trusted online sources, was associated with higher implant adoption rates. Conversely, limited LARC knowledge contributed to rejection of implants, mirroring pre-campaign reluctance toward LARC adoption. These findings align with Kumruangrit and Srijundee (2022), who found that adolescents viewed school-based CSE as passive, advocating for interactive, engaging pregnancy prevention programmes. The alignment between personal aspirations and implant use highlights how decisions were made not just in reaction to fear, but in pursuit of futures grounded in bodily autonomy and social mobility.

HCP-led interventions emerged as a pivotal influence on contraceptive decision-making. Extracurricular activities introduced LARCs as part of the FP programme, prompting subsequent information-seeking through digital and peer networks. These findings align with Iyoke et al. (2014), who emphasised the role of HCPs in enhancing contraceptive education in schools.

Participants highlighted HCPs' expertise as a critical factor in building trust, especially when contrasted with traditional classroom instruction. Unlike traditional classroom-based sex education, HCP-led programmes featured hands-on demonstrations, question-led teaching, and visual learning strategies, described by participants as engaging and memorable. These teaching methods encouraged trust in contraceptive options, fostering positive rapport between HCPs and adolescents. In doing so, these initiatives bridged institutional credibility with emotional accessibility—an essential combination for cultivating sustained engagement.

However, teenage pregnancy prevention activities were primarily school-based, limiting access for adolescents outside formal education. This exclusion raises significant equity concerns, as out-of-school adolescents—often navigating compounded barriers—are left without tailored interventions. These findings echo Greenberg et al. (2017), whose study examined community-based LARC promotion in New York. While adolescents understood LARC efficacy, concerns about side effects, partner acceptance, and bodily autonomy influenced their choices. This comparison underscores the importance of integrating personal narratives and medical accuracy to improve LARC perceptions. Participants in this study similarly weighed clinical advice against peer knowledge, social risk, and personal history—evidence of an evaluative process that reflects agentic reasoning embedded in cultural and relational contexts.

Despite success in school-based implant promotion, the lack of broader outreach efforts is a critical gap in contraceptive education. LARC initiatives primarily target non-pregnant adolescents in school settings, limiting access for out-of-school youth and socioeconomically disadvantaged groups. Expanding community-based outreach beyond educational institutions is essential for comprehensive contraceptive promotion. Ultimately, these findings deepen the study's theoretical claim that adolescent contraceptive agency is negotiated within complex intersections of institutional access, social norms, and experiential credibility.

Conclusion

While CSE remains essential, it is insufficient on its own. A multi-tiered approach—incorporating digital, familial, and community-based interventions—is needed to meet the diverse needs and social realities of adolescents. Although HCP-led interventions within school settings contributed to improved contraceptive literacy and uptake, they remain inaccessible to many adolescents outside formal education. This exclusion underscores the urgent need for a more inclusive and decentralised model of contraceptive education—one that reaches across institutional boundaries and supports hybrid, context-sensitive forms of knowledge-building and agency enactment.

This study contributes to ongoing discussions about SRH accessibility by showing that contraceptive decision-making is not merely a product of information availability, but of emotional trust, cultural legitimacy, and structural access. As such, it affirms the need for holistic, contextually responsive contraceptive education strategies—ones that recognise adolescents' capacity to act both proactively and responsively in pursuit of bodily and social integrity.

5.3. Implant Use: Agency, Bodily Integrity, and Reproductive Control

The preceding section examined how adolescents formulate contraceptive decisions based on acquired knowledge. However, this study demonstrates that decision-making extends beyond knowledge acquisition; the enactment of individual agency and the pursuit of bodily autonomy emerge as a central determinant of contraceptive choices.

This section highlights how adolescents' capacity for agency—understood here as the ability to make decisions within sociocultural, institutional, and relational constraints—shapes their navigation of three interrelated domains: pregnancy prevention, menstrual and fertility regulation, and the continuation or removal of subdermal implants. These domains reflect the dynamic and context-dependent nature of individual agency as previously outlined in this study.

Decision-making within these domains is rarely linear. Instead, adolescents negotiate competing influences, particularly when interacting with family members and HCPs, often weighing personal intent against social expectations and medical authority.

This section contributes to the core conceptual model developed in this study—where contraceptive decision-making reflects a hybrid logic of proactive intention, relational negotiation, and socio-cultural responsiveness. Specifically, pregnancy prevention often illustrates proactive intent; menstrual and fertility management demonstrates how bodily integrity is negotiated under uncertainty; and implant continuation or removal reveals the intersection of agency, provider control, and dominant social narratives.

Pregnancy Prevention and Contraceptive Autonomy

This study highlights the pivotal role of subdermal implants and injectables as reliable methods for delaying repeat pregnancies, particularly among participants with prior reproductive disruptions. Many prioritised method effectiveness over concerns about side effects, regarding LARCs as tools to reclaim bodily and reproductive control over disrupted life plans. These decisions reflected a calculated weighing of risks, influenced by personal experience, structural access, and sociocultural narratives.

Where family or partners opposed implant use, participants asserted their reproductive autonomy, navigating relational tensions while sustaining their contraceptive preferences. Some adolescents initially expressed uncertainty, often due to misinformation or relational pressure. However, their motivation strengthened when support was aligned with their life stage. Roque et al. (2022) found that postnatal adolescents became more receptive to LARCs when providers responded to their lived contexts, affirming that adolescent ambivalence is not static but modifiable through care.

During counselling, adolescents weighed the risks and benefits of each method, acknowledging that all forms carried side effects, albeit experienced differently. This aligns with Margherio (2019), who noted the complexity of asserting contraceptive autonomy in South Africa, where adolescents assessed financial pressure, reproductive risks, and abortion outcomes prior to committing to a method. In this study, contraception was consistently framed as a woman's right, even when partners objected—demonstrating hybrid agency, balancing personal resolve with social negotiation. These findings underscore that contraceptive decisions are multifaceted, embedded within broader socioeconomic and cultural landscapes.

Participants with a history of unintended pregnancies showed a pronounced preference for LARCs, especially implants, which they viewed as more dependable and less burdensome than SARCs. This finding reflects those of Tang et al (2013), who reported that women with previous unintended pregnancies were more likely to opt for IUDs and implants for their long-term reliability. Likewise, Secura et al. (2014) and Winner et al. (2012) noted greater satisfaction and continuation rates with LARCs among women with prior contraceptive failure. In this study, earlier pregnancies had disrupted participants' education, strained familial relations, and introduced emotional hardship –intensifying risk awareness and strengthening motivation. LARCs were seen not merely as tools, but as strategic resources to regain reproductive control.

This affirms the importance of contextualising contraceptive preferences within women's reproductive life histories (Barden-O'Fallon et al., 2018), where motivation, knowledge, and past outcomes intersect. These choices exemplify hybrid agency: proactive in intention, relational in negotiation, and responsive to social constraint.

LARCs were often perceived as low-maintenance and more practical—particularly valued during a period of heightened health system contact and decision-making clarity. Roque et al. (2022) similarly found that childbirth prompted re-evaluation of contraceptive priorities. Implants were frequently described as a 'corrective measure'—a proactive step after past failure. In contrast, Carbone et al. (2020) found urban US-based adult women with broad method access and reproductive education demonstrated more autonomous decision-making from the outset. This comparison highlights how reproductive autonomy is not evenly distributed but emerges through interactions of opportunity, support, and cultural permission.

The sociocultural stigma surrounding unintended pregnancy in Thailand significantly shaped LARC uptake. Heightened awareness of the consequences of early pregnancy fostered urgency among adolescents. In contrast to Western discourses that frame contraception as a private right, participants' decisions in this study were deeply relational, shaped by familial norms and community perceptions. Implants—initially perceived as semi-permanent and for married women—were re-evaluated after participants received accurate information. Regretful reflections—such as *"I wouldn't be in this situation if I had known how it worked"*—illustrated how informational gaps constrained earlier expressions of agency.

These findings align with research that underscores the value of integrated contraceptive counselling during transitional reproductive phases. Roque et al. (2022) showed that postpartum women made more informed choices than those who had never been pregnant, due to increased HCP contact. Similarly, Kokanalı et al. (2019) found that adolescents in post-abortion were significantly more receptive to LARCs. These studies, and the present one, collectively indicate that childbirth, abortion, and postpartum recovery are critical moments to establish trust, dispel myths, and foster reproductive decision-making and agentic confidence.

Participants in this study described how childbirth transformed their contraceptive worldviews. Many initially thought implants were inappropriate for unmarried women but revised these views after counselling or learning from peers. They experienced a process of "reproductive reframing," in which decisions became linked with aspirations for bodily control and social legitimacy. Noone (2004) noted that such decisions evolve at the intersection of personal aims and societal norms, while DeMaria et al. (2019a) emphasised the importance of peer networks and cultural discourse in shaping

contraceptive trust. These actions reflect what this study conceptualises as the pursuit of social and bodily integrity— where adolescents sought to reconcile the stigma of early motherhood with the desire for control, protection, and dignity.

Adolescents' contraceptive decisions—especially in the postnatal context—were layered and deliberative. They drew on lived experiences, recalibrated trust, and navigated interpersonal and institutional power. These findings illustrate a model of hybrid individual agency: proactive in risk reduction, relational in family and provider interactions, and socio-culturally responsive to stigma and structural inequity. Decisions were not reactive but intentional strategies to assert autonomy, preserve dignity, and manage future risks—embodying a form of agency uniquely shaped by structural constraints and cultural context.

Menstrual and Fertility Regulation

In addition to pregnancy prevention, this study found that concerns around menstrual regulation and future fertility were key determinants of implant discontinuation. These anxieties were not only physiological but also socially and relationally shaped. Participants commonly associated menstruation with reproductive normalcy and used its presence to verify non-pregnancy. These findings align with Gunson (2010) and DeMaria et al. (2019b), who observed that amenorrhea can provoke anxiety, particularly among adolescents. In this study, cultural and relational interpretations of menstruation—including partner suspicion and family concern—added further complexity to contraceptive use.

Participants reported that lack of counselling on menstrual changes heightened their discomfort and sometimes led to premature discontinuation. Misunderstandings about

amenorrhea's causes—whether hormonal or linked to breastfeeding— highlighted critical gaps in counselling during the postnatal period.

Importantly, menstrual suppression was not only misunderstood but actively contested in relational contexts. Several participants described partners or family members expressing concern or disapproval when menstruation ceased. In some cases, amenorrhoea was misread as an indicator of illness or sterility. These findings resonate with broader literature (Dombola et al., 2021; Harrington et al., 2021) highlighting how social norms and relational dynamics influence contraceptive decision-making among adolescents.

These responses illustrate that adolescents' decision-making is not simply a matter of individual preference. Rather, it reflects a form of hybrid agency—one that balances embodied awareness (e.g., discomfort over unpredictable bleeding), relational negotiation (e.g., partner suspicion), and cultural norms (e.g., menstruation as a sign of fertility). Within this ecosystem, participants were compelled to weigh contraceptive effectiveness against the perceived social costs of menstrual suppression.

For some, implants were discontinued in favour of short-acting methods like OCPs—not because these were more reliable, but because they preserved menstrual regularity and, by extension, visible fertility. This prioritisation of "reproductive visibility" over clinical efficacy illustrates the contradiction many participants navigated: the desire to prevent pregnancy while simultaneously performing reproductive normalcy within social expectations.

Misinformation also shaped participants' anxieties. Some feared that amenorrhoea caused by implants would lead to permanent infertility—a concern echoed in

Sundstrom et al. (2017), who found that online misinformation often amplifies fears about LARC safety. In this study, these misconceptions were rarely countered during consultations, thereby limiting participants' capacity to make informed, agentic decisions. Leave to reconcile conflicting sources alone, adolescents navigated contraceptive choices under conditions of uncertainty, rather than empowerment.

Following childbirth, hormonal fluctuations, particularly the decline in oestrogen and progesterone, contribute to the resumption of ovulation as early as 25 days post-delivery (Ahrens et al., 2019). Additionally, lactation-induced amenorrhea, a recognised postpartum phenomenon, further delays menstruation (Sridhar & Salcedo, 2017). This study found that several participants experienced amenorrhea, a condition they often attributed to breastfeeding rather than contraception. However, this study did not explore breastfeeding duration in depth. Crucially, certain contraceptive methods, including subdermal implants and injectables, also induce amenorrhea as a common side effect. This dual influence—natural hormonal shifts post-birth and contraceptive-induced amenorrhea—suggests that some participants lacked a clear understanding of the biological interplay between postpartum recovery and contraceptive side effects, reinforcing the need for targeted health communication addressing these overlaps.

Beyond amenorrhoea, altered bleeding patterns such as prolonged spotting or hypermenorrhoea were also frequently reported. These side effects, often emerging within the first 12 months post-insertion, were a major factor leading to early implant discontinuation (Coombe et al., 2016; Guazzelli et al., 2010; Rocca et al., 2021) This aligns with Moray et al.'s (2021) meta-analysis, which found that one-year continuation rates for ESI were lower than IUDs, largely due to menstrual disturbances (Moray et al., 2021).

A particularly critical finding from this study was participants' reluctance to return to the same facility for implant removal, citing difficulties in obtaining removal services. This mirrors global concerns about LARC discontinuation, where access to timely removal services remains a structural barrier to exercising contraceptive autonomy. Additionally, adolescents perceived the lack of control over their menstrual cycles as a disruption to their reproductive identity, reinforcing the cultural preference for predictable monthly bleeding.

Menstrual suppression was a contentious issue among participants, with many perceiving monthly bleedings as a sign of reproductive health. This aligns with DeMaria et al. (2019b), who found that women associated regular menstruation with a healthy reproductive system and viewed amenorrhea as unnatural and concerning. Similar sentiments were reported in Gunson's (2010) study, where women linked menstrual suppression with potential long-term infertility. However, Gunson's study also found that many adolescents still preferred LARCs due to their effectiveness, whereas the current research suggests that concerns over amenorrhea were a major factor leading to discontinuation. This inconsistency highlights the contextual nature of contraceptive beliefs—while some adolescents value LARCs for their convenience and reliability, others perceive menstrual suppression as a threat to their reproductive health. These variations may be influenced by cultural norms, where menstruation is viewed as a necessary physiological process that validates fertility status.

Beyond personal concerns, partner and family attitudes significantly influenced participants' contraceptive choices. Menstrual changes, particularly amenorrhea, were frequently misinterpreted as a loss of fertility, leading to disapproval from partners who associated menstrual absence with sexual and reproductive dysfunction. This aligns

with research by Boamah-Kaali et al. (2021), which found that in patriarchal societies, women's reproductive choices are often shaped by partners' fertility expectations.

In this study, women whose partners strongly disapproved of amenorrhea were more likely to discontinue implant use. This highlights the relational dimension of contraceptive decision-making, where adolescents must balance personal preferences with familial and partner expectations. These findings echo Harrington et al. (2021), who argue that contraceptive decision-making among adolescents is deeply embedded within social norms and gendered power dynamics.

Participants expressed anxiety over amenorrhea because they relied on regular menstrual cycles as a confirmation of non-pregnancy. The absence of menstruation triggered fear and uncertainty, reflecting broader findings by DeMaria et al. (2019b) that women perceive menstrual cycles as an essential fertility indicator. This fear was particularly pronounced among first-time adolescent mothers, who viewed contraceptive implants as an effective method for pregnancy prevention but struggled with the psychological discomfort of not having a monthly period. These women were more likely to revert to contraceptive methods they had used before pregnancy, particularly OCPs, despite recognising their higher failure rates. The prioritisation of reproductive control over contraceptive effectiveness illustrates a key tension, highlighting the contradictory pressures adolescents face in making contraceptive choices.

The decision-making process surrounding contraceptive implants was not solely about avoiding pregnancy but also about preserving future fertility. Some participants overestimated the long-term impact of implants, fearing that their use could cause permanent infertility. These misconceptions were exacerbated by misinformation

encountered online, as observed in previous studies (Sundstrom et al., 2017). In this study, such misinformation constrained adolescents' ability to make fully informed choices, shaping agency under conditions of partial or distorted knowledge.

Sundstrom et al. (2017) found that adolescents often weigh the perceived risks of medical contraceptive interventions against their fertility goals, leading to hesitation in adopting LARCs. The current study corroborates these findings, showing that two competing priorities—pregnancy prevention and fertility protection—often conflict, creating ambivalence toward LARC use.

These insights underscore the importance of integrating menstrual education into contraceptive counselling, particularly for first-time adolescent mothers, who may require additional support in navigating these complex decisions. Addressing menstrual suppression concerns, debunking infertility myths, and acknowledging the relational and structurally embedded nature of adolescents' agency can contribute to higher LARC continuation rates and greater reproductive autonomy.

Implant Continuation and Discontinuation

Although many adopted implants, participants expressed frustration about their inability to remove them at will. HCP reluctance, ambiguous removal procedures, and perceived policy limitations constrained adolescents' ability to exercise reproductive agency. While implants were promoted as effective long-acting methods, continued use was not always voluntary or informed.

These findings align with Zeal et al. (2018) and Hoggart & Newton (2013), who found that LARC users—especially adolescents—often reported feeling unable to control removal decisions. In Thailand, this study adds a regional nuance: service delivery was

often shaped by national cost-efficiency frameworks or targets, leading HCPs to discourage early removal as economically inefficient or unjustified. Such structural constraints problematise typical metrics of continuation as a proxy for satisfaction, urging a more user-centred interpretation grounded in adolescents' autonomous decision-making.

Many participants who experienced prolonged bleeding, mood changes, or weight gain reported seeking removal, but some were advised to "wait and see" or "complete the term." These adolescents did not reject contraception per se, but felt that their agentic choices were undermined when bodily discomfort was dismissed.

In contrast, OCPs were sometimes preferred despite their lower effectiveness, as they were perceived to offer greater self-management and reversibility. This supports Wigginton et al. (2016), who found that method satisfaction often stems from a user's perception of control, not just clinical efficacy.

The perceived permanence of subdermal implants led some participants to favour more flexible methods. While implants were valued for their effectiveness, their required clinical removal created a dependency on providers that many described as restrictive. Wigginton et al. (2016) similarly found that women in Australia associated OCPs with greater bodily awareness and autonomy, viewing them as tools for self-regulation rather than externally imposed interventions. This sentiment aligns with findings from this study, where some adolescents perceived implants as foreign objects incompatible with their bodies, reinforcing the need for contraceptive counselling that prioritises individual agency and informed choices over provider-driven recommendations.

In some cases, concerns about bodily control over side effects outweighed the perceived benefits of implant effectiveness. Some participants sought removal due to prolonged bleeding or weight gain, aligning with findings from recent UK research on LARC discontinuation (Hoggart & Newton, 2013). However, a distinct cultural component emerged in this study: adolescents viewed contraception as a balance between proactive self-regulation and structural control, where social expectations regarding fertility and health influenced discontinuation decisions beyond the immediate physical side effects.

The study revealed that delays or discouragement of removal requests were not solely medical decisions but also shaped by broader structural factors, including financial constraints and healthcare policies. Cost-effectiveness considerations influence service provision, as LARCs are most economically viable when retained for their full duration (Mavranezouli, 2008; Blumenthal et al., 2010). As a result, adolescents in this study faced implicit discouragement from some HCPs, reinforcing power asymmetries that constrained reproductive agency.

Moreover, the findings underscore a critical gap in contraceptive counselling: many participants did not receive adequate information about removal procedures during initial counselling. This contributed to hesitation and misconceptions, further complicating informed decision-making. A study by Sundstrom et al. (2017) similarly noted that inadequate counselling leads to overestimation of contraceptive risks, fostering uncertainty and hesitancy in implant use. Addressing this issue requires comprehensive counselling strategies that explicitly discuss both insertion and removal, ensuring that adolescents feel confident in their ability to act autonomously throughout their journey.

Another significant factor shaping implant discontinuation was peer influence, particularly through social networks and online platforms. This study found that common myths about implants, including permanent infertility and excessive weight gain, were widely circulated in social media groups. Misinformation was often reinforced through anecdotal evidence rather than medical guidance, leading some participants to seek early removal. This trend underscores the need for HCP engagement in online spaces, ensuring that accurate contraceptive information is accessible through digital platforms, where adolescents exercise agency.

A related concern involved the perception that implant removal was costly, inaccessible, or required extensive justification. This research is one of the first to identify implant removal barriers in SEA, filling a significant gap in the literature. Existing studies on LARC use have predominantly focused on Western contexts (Zeal et al., 2018; Hoggart & Newton, 2013), with limited examination of how structural and cultural factors specifically shape removal experiences in postnatal adolescents.

This study provides a nuanced understanding of how adolescents navigate contraceptive implant use, balancing effectiveness with bodily control, autonomy, and social influences. While implants offer long-term pregnancy prevention, they also introduce complex challenges related to bodily autonomy and provider dependence. The findings underscore the need for user-centred contraceptive counselling, flexible removal policies, and improved digital health engagement to ensure that adolescents can make informed, contextually responsive reproductive decisions.

5.4. Trust and Power in Contraceptive Care

This study adds to existing literature by suggesting that parental influence in contraceptive counselling can both empower and restrict adolescents' autonomy. Many adolescents relied on their parents for guidance and emotional support, appreciating their involvement in decision-making. However, in some cases, parental influence overrode individual agency, resulting in limited contraceptive choice. A key finding was that some adolescents preferred separate consultations without parental involvement, allowing the adolescents to express their contraceptive concerns freely. This aligns with recommendations from Roque et al. (2022), who emphasised the importance of providing confidential spaces for adolescents to discuss SRH issues independently.

Despite their dependence on family support, adolescents' capacity to exercise autonomous decision-making in contraceptive care must be respected. The UN (2007) argues against the assumption that adults inherently possess greater decision-making capacity, advocating for youth-centred approaches that prioritise young people's individual agency within their social contexts.

This study found that although many adolescents held positive views on subdermal implants, their uptake was largely influenced by external actors, including parents and healthcare service structures. In some cases, external support was necessary and appreciated; in others, power imbalances reduced adolescents' ability to make fully informed and independent choices. These findings contrast with Melo et al. (2015), who reported that adolescents in the US demonstrated decisive, autonomous contraceptive decision-making. This contrast suggests that contextual factors—such as cultural

expectations, reproductive goals, and access to independent counselling—significantly shape how agency is enacted and constrained.

Furthermore, concerns regarding the cost and accessibility of implant removals emerged as barriers to informed and sustained reproductive autonomy. Unlike SARCs, LARCs require provider intervention for removal, reinforcing power differentials between HCPs and adolescents (ACOG, 2018; FSRH, 2017). To address these imbalances, contraceptive counselling should be dynamic, interactive, and youth-centred, enabling adolescents to make informed decisions and revisit them as their priorities shift. Roque et al. (2022) stress that adolescents should be fully informed of their right to remove LARCs at any time and that healthcare providers must facilitate easy, judgement-free access to removal services.

This section continues by critically examining how communication styles, power dynamics, and trust shape contraceptive implant decision-making among young Thai women. It situates these decisions within Thai cultural norms, societal structures, and familial expectations, highlighting the multi-level and relationally situated nature of interpersonal negotiations with partners, family members, and HCPs. Framed through the conceptual model, relational and service-oriented expressions of agency emerge as deeply shaped by trust-based interactions.

The findings underscore that establishing and maintaining trusting relationships is not merely beneficial but foundational for navigating contraceptive choices effectively—particularly within systems marked by power asymmetries, informational hierarchies, and cultural constraints. Foregrounding adolescents as individual agents acting within these relational structures, this analysis reveals how trust and power interplay to either

facilitate or constrain reproductive autonomy—a core concern aligned with the study's overarching conceptual model of maintaining social and bodily integrity.

Trust in patient-provider interactions is fundamental to healthcare, particularly in contraceptive counselling where decisions carry deeply personal and often long-term implications. This study highlights that adolescents' contraceptive choices were significantly shaped by the degree of trust they placed in their HCPs. When empathy, respect, and open dialogue were present, participants reported greater satisfaction, engagement, and confidence in their decisions. Conversely, a lack of trust—stemming from coercive tones, stigma, or misinformation—undermined their capacity to exercise autonomous, informed agency and led to disengagement or delayed care.

These findings echo Dehlendorf et al. (2013), who emphasise that women value collaborative, non-hierarchical relationships with HCPs—an insight further supported by Holt et al. (2018) and Kolak et al. (2022), particularly among adolescents and marginalised groups. Mahanaimy et al. (2022) similarly argue that non-directive, comprehensive counselling—regardless of age or pregnancy intentions—enhances trust and improves reproductive health outcomes. Within Thai cultural norms that often moralise youth sexuality, trust is not merely a relational feature but a structural enabler of agency.

Glover et al. (2024) reinforce this view, showing that trust profoundly shapes maternity care experiences, especially among marginalised individuals. Their work underscores that empathy, respect, and open dialogue are central to fostering trust, which in turn supports informed decision-making and autonomy. Crucially, patient-centred care (PCC) must be delivered within an awareness of broader social structures, including

power asymmetries, historical trauma, and systemic marginalisation—factors that directly influence adolescents' reproductive choices and the enactment of agency.

Variability in HCP training, personal attitudes, and counselling approaches led to disparate experiences. While some participants described supportive, patient-centred engagement, others experienced directive or coercive approaches, especially those with repeat pregnancies, STIs, or limited SRH literacy. This power imbalance often resulted in adolescents feeling pressured into LARC use—particularly subdermal implants—without sufficient understanding of options or removability. This mirrors findings from Kok et al. (2020) in Malawi and Mahanaimy et al. (2022) in California, both of whom emphasise that inconsistent provider training and embedded bias hinder equitable contraceptive access. In the present study, some adolescents postponed antenatal visits or avoided further care due to previous negative encounters, aligning with US studies showing that stigma around unplanned pregnancy reduces care-seeking and limits the expression of agency (Moseson et al., 2019; Turan et al., 2014).

Several participants also described modifying their communication with providers to avoid judgement, revealing the psychological burden of navigating systems marked by unequal power dynamics. This reinforces Mahanaimy et al.'s (2022) call for neutral, patient-empowering language, avoiding terms like "intended" or "planned pregnancy," which can inadvertently impose moral expectations and alienate vulnerable patients.

This section contributes to the broader conceptual model by elucidating how relational and service-oriented modes of agency are not merely functions of access or information but are conditioned by the quality of interpersonal dynamics and institutional trust. Trust, as both a psychological and structural condition, shapes how decisions are made, revised, or deferred. When relationships are affirming and culturally attuned, they serve

as enabling infrastructures of care. When marked by asymmetry or moralism, they constrain the very autonomy they purport to support. These findings reinforce that maintaining social and bodily integrity—at the heart of the model—is not an individual act, but a relational and institutional mediated process co-produced in everyday encounters with power.

The approach used in contraceptive counselling significantly influenced trust, decision-making, and satisfaction with contraceptive methods. The present study found that efficacy-based and tiered counselling were the most frequently used strategies by HCPs, though they were met with varying levels of receptivity among participants. Trandafir et al. (2019) emphasise that effective adolescent counselling should prioritise confidentiality, trustworthiness, and clear information about side effects and adherence. Their findings support the importance of discussing dual protection and LARC options to address both pregnancy prevention and STI risks.

Some participants expressed discomfort when asked about future pregnancy intentions—a hallmark of the One Key Question (OKQ) framework. In conservative Thai cultural contexts, where unintended pregnancy is heavily stigmatised, such direct inquiries were often perceived as coercive or judgmental. Several participants reported feeling pressured to choose LARCs, viewing the OKQ screening as prescriptive rather than supportive. This aligns with Stulberg et al. (2020), who caution that OKQ may be inappropriate for adolescents, as it can elevate provider agendas over patient preferences. Similarly, Mahanaimy et al. (2022) advocate for non-directive, patient-led counselling that fosters trust and supports autonomy, rather than imposing rigid screening protocols.

The tiered counselling model—which ranks methods by efficacy and prioritises LARCs—elicited mixed responses. While some women appreciated the clarity and structure, others felt their choices were constrained. Misunderstandings about removability led some to believe that implants were the only option and could not be discontinued early. These concerns mirror findings by Gubrium et al. (2015) and Stanback et al. (2015), who warn that overemphasising efficacy without addressing reversibility and personal fit can compromise autonomy. To counter this, patient-centred counselling should place individual priorities—such as concerns about side effects, lifestyle compatibility, and control—on equal footing with clinical effectiveness.

The study found that SDM significantly enhanced trust and adherence, especially among participants who had experienced directive or coercive counselling in the past. Unlike provider-led models, SDM promotes collaborative discussions that respect patient autonomy and align contraceptive choices with personal values and circumstances (ACOG, 2022; Dehlendorf et al., 2017).

Chen et al. (2019) and Lee et al. (2021) show that SDM improves satisfaction and continuity in contraceptive use. Durand et al. (2014) further demonstrate that SDM improves healthcare outcomes among vulnerable populations. In this study, some adolescents described parental involvement as a source of emotional reassurance and decision support—though it was also clear that this dynamic must be managed carefully to ensure that autonomy is not undermined, particularly in contexts of stigma or unequal power dynamics.

Postpartum adolescent mothers presented unique needs that standard adolescent counselling frameworks often fail to address. Participants in this study identified key considerations, including:

- Breastfeeding compatibility
- Emotional and physiological postpartum changes
- Sociocultural expectations around early motherhood
- Readjustment to sexual activity
- Managing multiple caregiving and domestic responsibilities

Marcell and Burstein (2017) argue for tailored, flexible contraceptive counselling that responds to these shifting postpartum priorities. Similarly, Biggs et al. (2020) highlight the importance of acknowledging postpartum women's evolving reproductive goals and concerns. This study also revealed anxieties regarding implant removability, with some women fearing that early removal requests would be denied. These fears limited their ability to make fully informed or autonomous contraceptive decisions—illustrating how structural and informational constraints can diminish adolescent's ability to enact agency. These findings mirror those of Biggs et al. (2020), who reported similar barriers that led to distrust and dissatisfaction with services.

These results suggest that SDM must be carefully adapted for adolescents with limited autonomy and low SRH literacy. This counselling approach is used in non-life-threatening circumstances where a decision must be made, and a range of options (including doing nothing) are available (NHS England and NHS Improvement, 2019). Hoopes et al. (2021) emphasise the importance of ongoing counselling and follow-up to support consistent and correct contraceptive use among sexually active youth.

These frameworks assume a baseline capacity for adolescents to engage in informed health decisions. Dehlendorf et al. (2017) and Meier et al. (2021) argue that the true value of SDM lies in its ability to empower patients to become active participants in their healthcare— shifting the balance from provider control to collaborative partnership. This represents a significant shift toward personalised, responsive care that aligns with broader principles of PCC.

This study affirms the broader relevance and value of SDM in contraceptive counselling, particularly for postpartum and adolescent populations. However, its effective implementation hinges on several key conditions. First, counselling must be delivered in a manner that is culturally sensitive, recognising the diverse values, beliefs, and social contexts that shape adolescents' reproductive choices. Second, it should also uphold and respect individual autonomy, ensuring that adolescents are not coerced or unduly influenced by provider biases or systemic pressures. Third, to be truly effective, counselling approaches must be tailored to the developmental stage and health literacy level of the individual, acknowledging that adolescents and postpartum women may have different informational needs and decision-making capacities. Finally, all contraceptive options should be communicated clearly and without bias, enabling informed, confident choices. When these conditions are met, HCPs can create a supportive environment that builds trust, enhances reproductive agency, and aligns contraceptive counselling with the broader principles of equitable PCC.

Power dynamics between HCPs and adolescents in clinical settings significantly influenced contraceptive decision-making. The findings reveal that provider influence, parental involvement, and healthcare policies affect adolescents' reproductive autonomy not only through overt coercion but also via more subtle, normative framing

of certain choices as ‘best’ or ‘default’. This reflects the study’s conceptual category of service-oriented agency, which emphasises how institutional relationships and provider behaviours can enable or constrain adolescent autonomy. Agency is not simply a matter of having access to care, but of navigating a healthcare environment where certain choices are promoted as medically superior or morally responsible.

This section critically examines how provider biases and structural constraints shape decision-making, showing that power does not operate solely through directive authority but circulates through routine institutional encounters—often under the guise of efficiency, expertise, or care. This subtle exercise of power aligned with broader sociocultural norms that position adolescents as less capable of making independent reproductive choices.

The study found that contraceptive counselling often lacked sufficient discussion of implant removability, which limited informed, autonomous decision-making. Many participants voiced concerns about difficult removal procedures and HCP reluctance to remove implants, citing reasons such as cost and efficacy (Zeal et al., 2018). This omission illustrates how provider power can operate less through overt coercion and more through omission—where the absence of critical information functions as a form of structural control, limiting adolescents’ capacity to make fully informed decisions.

While some participants did not explicitly name coercion, their narratives highlighted a tension between personal preferences and provider recommendations. This reflects a complex negotiation of perceived reproductive risk—sometimes internalised as medical necessity, sometimes actively resisted as paternalism. These dynamics are consistent with Higgins et al. (2016), who argue that HCPs must respect discontinuation requests without gatekeeping. In the Thai setting, pressure to meet national FP targets

may result in LARC promotion taking precedence over personalised care, aligning with efficacy-based counselling that implicitly constructs implants as the most responsible or normative choice.

Professional guidelines affirm that adolescents should be able to remove or switch methods without pressure and feel respected even when opting out of contraception (ACOG, 2017b, 2022; FSRH, 2017; Higgins et al., 2016). While provider bias may stem from public health priorities, the consistent promotion of LARCs—especially without sufficient discussion of alternatives—can erode trust and limit reproductive agency. This reinforces the conceptual category of service-oriented agency, where institutional dynamics—policies, counselling strategies, and time pressure—either enable or constrain adolescent autonomy. When risk perception becomes a site of contested authority between HCPs and adolescents, agency is subtly displaced from the adolescent toward systemic and institutional imperatives.

Several participants felt pressured to accept LARCs and perceived coercion, particularly multiparous adolescent mothers or those perceived as at risk of repeat pregnancy. This suggests that provider bias disproportionately affects vulnerable adolescents, reinforcing power asymmetries in clinical interactions (Gomez & Wapman, 2017; Gubrium et al., 2015; Manzer & Bell, 2021). Some interpreted this repetition as subtle coercion, echoing research by Gomez and Wapman (2017) and Gubrium et al. (2015), who note that provider-driven recommendations can marginalise patient preference.

While preventing rapid repeat pregnancies is a legitimate concern, overemphasis on LARCs—especially when presented as the default—can diminish patient voice. Several participants resisted perceived pressure by deferring decisions, consulting peers, or

negotiating for SARCs. These forms of relational resistance highlight that adolescent agency is not absent but enacted in subtle, iterative ways.

Positive HCP relationships played a key role in reducing perceptions of coercion. Participants described feeling heard and respected when providers took time to discuss options and respected their concerns with empathy. These interactions aligned with the study's relational mode of agency, wherein trust-based, dialogic exchanges function as enabling infrastructures for informed, confident decision-making.

Under the Prevention and Solution of the Adolescent Pregnancy Problem Act (2016), complimentary implants were offered postpartum. While this policy improved access, it also raised concerns about informed consent. Some participants felt overwhelmed by repeated offers, suggesting that policy-driven targets may not always align with individual needs. Moreover, they expressed mixed views on receiving postpartum implants or injectables before hospital discharge. Some appreciated the CoC, while others felt rushed or uninformed. This demonstrates how structural constraints—such as time-limited hospital stays or HCP workload—can override patient readiness or preference.

Framing implants as "free" or "one-time offers" also introduced implicit pressure. While well-intentioned, such incentives can reinforce uptake without fostering true choice. These findings align with critiques from Gomez et al. (2014), who argue that even seemingly neutral financial or policy incentives can produce coercive conditions when not accompanied by robust informed consent.

5.5. Institutions: Interpersonal and Structural Dynamics

This section critically explores how institutional structures—including service design, provider interactions, and national policy frameworks—shape adolescents' contraceptive decision-making processes. While early antenatal counselling, free provision of subdermal implants, and integrated service delivery are intended to promote access, this study finds that institutional settings are characterised by a persistent tension between supporting and constraining adolescent autonomy.

Structural factors such as provider bias, fragmented referral pathways, and inconsistent implementation of contraceptive protocols frequently limited adolescents' ability to make timely and informed decisions. In this context, reproductive autonomy is neither guaranteed by service availability nor achieved through individual agency alone. Rather, it emerges through an ongoing negotiation with institutional logics, expectations, and limitations—an insight that directly reinforces the grounded theory developed in this study, wherein adolescents engage in an iterative process of maintaining social and bodily integrity in response to shifting institutional pressures.

Timely contraceptive counselling—particularly during the initial antenatal visit and throughout hospitalisation—was perceived by adolescent mothers as crucial for enabling their readiness to make informed decisions. Adolescent mothers highlighted the importance of early engagement, echoing Roque et al. (2022), who found that missed discussions on contraception led to dissatisfaction among postpartum women in the US. These findings support the principle that antenatal care offers critical windows for patient-centred counselling, consistent with Dehlendorf et al. (2017a), who advocate for personalised, relational frameworks.

However, both timing and sensitivity were critical. Discussions initiated during labour or immediately postpartum were often considered inappropriate, with participants describing these moments as physically and emotionally overwhelming. Instead, many suggested that counselling would be better placed during the final days of hospitalisation, when they felt more prepared to engage. These preferences reinforce the need for HCPs to respond not only to clinical guidelines but to women's situational readiness and emotional states—key components of adaptive, institutionally- and relationally-mediated agency.

Repeated, trust-based interactions with HCPs across antenatal and postnatal periods were viewed as opportunities to build trust, support SDM pathways, and reduce contraceptive pressure. This aligns with broader recommendations (Cooper, 2019; Lunniss et al., 2016; Cameron et al., 2017) on expanding postnatal contraceptive access through continuity and repeated engagement. Such contact enabled reflection and preparation, reducing pressure and emphasising the iterative nature of adolescents' decision-making processes.

Both task-oriented and relational communication styles emerged as relevant. As Dehlendorf et al. (2014) emphasise, trust must be coupled with clear, structured counselling that directly addresses patient concerns. In some cases, triangulated communication—between HCPs, adolescents, and family members—was helpful. Nevertheless, the importance of personalised care that safeguarded adolescent autonomy remained essential, especially when navigating complex family dynamics or reproductive uncertainty.

Not all counselling experiences were positive. Some adolescent mothers described coercive or confusing consultations, where limited method options—usually injectables

or implants—were offered without adequate explanation or alternatives. These encounters reflected a disempowering power dynamic, in which institutional priorities appeared to override individual needs. This underscores the critical need for respectful, participatory counselling practices that prioritise adolescent agency. These findings resonate with Welsby et al. (2020), who highlight how HCPs' beliefs, training deficits, and time constraints can shape the delivery of contraceptive options.

While some participants were satisfied with early counselling, others—particularly those facing emotional or situational challenges—preferred to delay decision-making until postnatal visits. This diverges from Lunniss et al. (2016), who advocate for antenatal initiation, yet aligns with barriers such as short consultations and provider workloads (McCance & Cameron, 2014). The findings stress the need for flexible, adolescent-responsive care that supports timely decisions while respecting readiness and choice.

Although hospital-based LARC provision may help reduce follow-up attrition, decision-making must remain voluntary. Adolescents should be empowered to delay or decline contraception if needed (Thompson et al., 2022). Participants varied in their certainty—some were resolute, while others required additional time and support to make informed choices.

Decision-making readiness—defined as the ability to understand one's options and feel confident in selecting a method—was often low immediately postpartum (NHS England and NHS Improvement, 2019). Amidst recovery and newborn care responsibilities, contraception was understandably de-prioritised. This finding supports calls for antenatal preparation and structured postnatal follow-up, particularly when privacy is limited within busy hospital wards (McCance & Cameron, 2014).

Improved communication was found to enhance implant acceptability by clarifying its role in birth spacing and preventing short interpregnancy intervals. Counselling should encompass both method details and reproductive goals, address misconceptions, and highlight the reversibility of LARCs. Task-oriented counselling was especially valued for managing immediate concerns, but relational strategies—emphasising empathy, respect, and autonomy—remained essential for complex decisions (Dehlendorf et al., 2014).

Adolescents must be supported in identifying contraceptive methods that reflect their needs and preferences, even when their preferred options are not immediately available (ACOG, 2017b; FSRH, 2017). Although convenience is important, the right to informed, autonomous decision-making must remain central to contraceptive care.

These antenatal care dynamics illuminate how adolescents' contraceptive decisions are embedded within—and continually shaped by—shifting interpersonal, institutional, and emotional contexts. Adolescents are not passive recipients of care; rather, they actively negotiate, resist, defer, or embrace contraceptive options in ways that preserve their sense of control and well-being. This resonates with the grounded theory, which conceptualises decision-making as an iterative process aimed at maintaining social and bodily integrity.

Antenatal encounters are thus not merely clinical moments, but sites where adolescents navigate power, trust, and readiness. The tensions between institutional imperatives and individual agency underscore the complexity of contraceptive decision-making, affirming the need for relational, responsive, and youth-centred care models.

Contraceptive counselling unfolds within a dynamic network of stakeholders, each shaping adolescent decision-making in complex and often contradictory ways. These include HCPs, who act as both facilitators and gatekeepers; parents, whose involvement can both support and constrain autonomy; policymakers, who define service frameworks and targets; contraceptive suppliers, who influence availability; and adolescents themselves, who must negotiate reproductive choices under structural and emotional pressures (Chandra-Mouli et al., 2014; Dehlendorf et al., 2014).

In the Thai context, adolescents frequently relied on parental figures for emotional and logistical support, reflecting deep-rooted cultural norms around family involvement. However, parental preferences sometimes superseded the adolescents' own, particularly in method selection. This highlights how reproductive autonomy and bodily integrity are socially negotiated, not individually exercised. HCPs—particularly general nurses and midwives—played a central role, but their counselling quality varied depending on training, confidence, and service pressure (Narkbubpha et al., 2025). Inconsistent or incomplete information—especially regarding implant removability and side effects—fostered uncertainty and undermined adolescents' confidence in provider recommendations, ultimately limiting their ability to make fully informed, autonomous choices (UNFPA Thailand, 2022).

At the policy level, adolescent pregnancy prevention frameworks—such as free implant provision—represent commendable efforts to expand access. Yet these initiatives sometimes clashed with adolescents' emotional readiness or understanding, exposing a disconnect between policy intentions and user experiences (UNFPA Thailand, 2022). While aiming to reduce unmet need, such policies may inadvertently narrow choice or increase perceived coercion if not sensitively delivered.

Understanding stakeholder roles is vital to improving adolescent-centred counselling. These findings reinforce the study's core category— 'Maintaining Social and Bodily Integrity'—by demonstrating how antenatal encounters are shaped by broader social systems. Contraceptive counselling is not just a clinical exchange, but a process of negotiation influenced by protection, control, and care.

Antenatal contraceptive decision-making emerges from multiple intersecting influences: neurodevelopmental capacity, interpersonal trust, familial authority, and policy directives. These intersecting forces may enable or restrict reproductive autonomy. A coordinated, culturally responsive, ethically sensitive model of care is needed to support adolescents' informed decisions. This calls for stakeholder-inclusive frameworks that prioritise relational ethics and iterative responsiveness, aligned with adolescents' lived realities.

Immediate postpartum implant provision remains central to Thailand's strategy for reducing repeat adolescent pregnancies (BRH, 2017). Global and national guidelines, including those by ACOG (2016) and FSRH (2017), endorse this approach due to high continuation rates and reduced follow-up loss. Many adolescents appreciated the offer, particularly given barriers such as travel costs, short hospital stays, and traditional confinement practices. This supports findings by Sothornwit et al. (2022), which identified convenience, cost coverage, and prior education as key uptake drivers.

However, tensions emerged between policy-driven provision and adolescent readiness. While some welcomed immediate access, others felt pressured or unprepared—especially when counselling was poorly timed or directive. Postpartum discomfort, emotional overwhelm, and misunderstanding or underestimation of early fertility return also contributed to de-prioritisation. These complexities highlight that contraceptive

decisions in the postpartum period are deeply influenced by institutional, cultural, and emotional factors.

Despite national endorsement, stigma around LARC use—especially among unmarried adolescents—remains a significant barrier. While quantitative data show increased implant uptake (Jaisamrarn et al., 2021; Kaewkiattikun, 2017), this statistical success does not inherently signal acceptability or truly informed choice.

The quality of communication was a decisive factor. When adolescents had time to ask questions and were counselled by trusted midwives, uptake was more likely to reflect informed preference. Conversely, rushed or inflexible counselling risked undermining trust. Many participants found the postpartum environment—marked by physical recovery and competing priorities—often unsuitable for meaningful engagement, echoing concerns raised by Polis and Zabin (2012) about cognitive overload and perceived low fertility risk. Postpartum counselling is influenced by a complex web of competing stakeholder priorities: policy targets, provider workloads, familial expectations, and supply logistics (Sothornwit et al., 2022; Hoggart et al., 2013). Adolescents must navigate this pressure while coping with pain, stigma, and limited contraceptive knowledge.

These findings reinforce the grounded theory developed in this study: adolescents' contraceptive decisions are not isolated events, but contextually situated, iterative responses to shifting interpersonal, institutional, and emotional dynamics. While immediate postpartum LARC offers may facilitate access, they must be embedded in care models that promote agency, trust, and contextual sensitivity. Ensuring that adolescents are not merely offered contraception, but are meaningfully engaged in

decision-making, is essential to supporting their social and bodily integrity throughout the reproductive journey.

Immediate postpartum contraceptive implant counselling is influenced by a complex interplay of stakeholders, each contributing uniquely to the decision-making environment. Policymakers often establish performance indicators aimed at reducing repeat adolescent pregnancies, which HCPs may feel pressured to meet—occasionally prioritising policy compliance over individualised care (Sothornwit et al., 2022). HCPs, including midwives and nurses, are responsible for delivering counselling and services, yet their approaches vary significantly depending on training, personal beliefs, and systemic constraints (Dehlendorf et al., 2014). Parents play a key role in adolescents' decisions, providing support but sometimes overriding the adolescents' preferences, especially in contexts where familial authority is culturally embedded (Hoggart et al., 2013).

Individual adolescents must navigate these overlapping influences by exercising their agency within complex social environments, where cultural expectations, parental authority, and institutional goals may either support or constrain their choices. These layered influences directly affect both method uptake and satisfaction with counselling (Ott & Sucato, 2014; Ott et al., 2025).

Understanding the roles and motivations of these stakeholders is crucial for developing strategies that uphold adolescents' rights while ensuring that care is both comprehensive and culturally responsive (FSRH, 2017). By acknowledging and addressing the multi-layered influences on contraceptive decision-making, healthcare systems can more effectively support adolescent mothers in making informed, confident, and contextually grounded choices that reflect constrained yet active agency (Boog & Cooper, 2021).

Consistent contraceptive use and adherence were found to rely heavily on sustained, coordinated care across time and settings. In the absence of informed choice, SDM, and trusted provider–patient relationships, discontinuation became more likely. Comprehensive patient education—particularly regarding side effects—was central to enhancing satisfaction and promoting long-term method continuation. This finding aligns with evidence from chronic care models, where low health literacy, poor provider communication, and fragmented service pathways are known to compromise adherence (Gellad et al., 2009; Louise et al., 2021; Mansukhani et al., 2021).

The present findings highlight the importance of fostering open, iterative communication, allowing adolescents to express concerns and receive personalised guidance. This approach helps ensure that contraceptive use is guided by situated agency—intentional decisions made by individuals, yet shaped by ongoing social, relational, and informational factors (Slyer, 2022; Stiggelbout et al., 2015). Effective LARC uptake was facilitated by consistent availability, timely counselling, and the visible presence of trained midwives within youth-friendly clinics and maternity wards (BRH, 2021; WHO, 2022).

A qualitative study by Calhoun et al. (2023), conducted in Kenya, underscored the importance of youth-responsive contraceptive counselling, identifying three intersecting themes: method choice, trust in the care source, and persistent uncertainty. Participants often began with SARCs due to peer influence or ease of access, but many expressed a desire to transition to LARCs to reduce repeat clinic visits and increase convenience—especially amid competing responsibilities. This desire to switch methods reflected individual agency, shaped by relationships of trust and mediated by socio-cultural and logistical constraints. Negative experiences—such as rushed

counselling or dismissive attitudes—discouraged the exercise of agency by undermining adolescents' confidence and sense of autonomy.

Decision-making was further complicated by persistent uncertainty, driven by inadequate or inconsistent information, particularly concerning side effects, reversibility, and long-term implications. These findings resonate with the current study's identification of counselling gaps and method hesitancy, reinforcing the broader argument that trust, clarity, and continuity are central to adolescent contraceptive engagement. Importantly, Calhoun et al.'s findings illustrate that even in contexts where methods are technically available, adolescents' ability to exercise agency can be derailed by misinformation or lack of support—demonstrating how relational and structural breakdowns disrupt individual decision-making.

This study also found that structural and organisational variations between healthcare facilities significantly influenced contraceptive decisions. Hospitals unaffiliated with the MoPH, including some private providers, are ineligible to participate in the national free LARC scheme (Chunin et al., 2016), thus limiting access for eligible adolescents. This fragmented service delivery created care gaps, especially for those transitioning between health providers postpartum. The findings highlight an urgent need for improved alignment both within and between healthcare facilities to ensure uninterrupted postpartum care. A similar concern was raised by Sothornwit et al. (2022), who identified inter-facility disconnects as a critical barrier to delivering immediate postpartum contraception. Where national strategies fail to address these systemic disconnections, even well-intentioned policy frameworks risk falling short in practice.

One proposed solution to address discontinuities in CoC is the use of telemedicine. A study conducted in Thailand by Vatrasresth et al. (2023) explored the acceptability of virtual follow-up consultations after contraceptive implant initiation, using LINE® Official Account—a widely adopted chat application in Thailand. The study found that telemedicine was well received by postpartum women, particularly those facing logistical constraints, travel barriers, or caregiving responsibilities. These findings point to the potential for blended care models that integrate digital follow-up with in-person counselling, especially in under-resourced or overburdened systems (WHO, 2022). As health systems adapt to evolving patient needs, integrating telemedicine into routine post-insertion care may offer a sustainable, patient-centred strategy for supporting contraceptive continuation.

Despite these innovations, a degree of misalignment between national policy intentions and frontline service realities persists. Although Thailand's DoH promotes universal postpartum contraceptive access (BRH, 2017), implementation at the facility level remains uneven. A key concern relates to rigid age-based eligibility criteria: under the current policy, free LARCs are limited to adolescents aged 10–19. Participants who turned 20 shortly after childbirth reported losing access to the scheme, despite ongoing vulnerability. This abrupt age-based cutoff constrained individuals' ability to exercise their reproductive agency at a time when they remained socioeconomically and emotionally dependent—highlighting the need for more inclusive, lifecycle-sensitive policy design.

Service fragmentation and inconsistent access to quality contraceptive counselling contributed to delayed decision-making, method discontinuation, and reduced uptake. These outcomes support the findings of Hoopes et al. (2021), who advocate for holistic,

adolescent-centred counselling frameworks that include support for method switching, anticipatory guidance on side effects, and SDM processes. Similarly, Dehlendorf et al. (2014) emphasise that respecting personal preferences, providing comprehensive information, and fostering collaborative dialogue are central to improving contraceptive outcomes. Embedding such approaches may help overcome the barriers identified in this study and enhance both satisfaction and method continuation among adolescent users.

In conclusion, this study identified a strong association between effective CoC and adolescent contraceptive implant uptake. Conversely, fragmented service delivery, inadequate counselling, and restrictive eligibility policies were found to limit adolescents' reproductive autonomy and hinder sustained method use. These findings reinforce the conceptual model developed in this study, in which contraceptive decision-making is shaped by the interplay of interpersonal trust, institutional influences, and service design. When care is continuous, responsive, and rooted in relational ethics, adolescent users are more likely to engage in informed, confident, and contextually meaningful decisions. In contrast, directive, fragmented, or inflexible service environments constrain agency and diminish decision quality. Addressing these barriers requires systemic alignment, adaptable policy frameworks, and embedded counselling models that uphold adolescents' social and bodily integrity throughout their reproductive journey.

5.6. Relational Autonomy: Cultural Norms and Family Authority

The role of family and broader sociocultural norms in shaping adolescents' contraceptive decisions is both profound and multi-layered, influencing not only

autonomy but also access to SRH services. This study highlights how parental engagement can foster emotional security and enable open discussions around contraception. Maternal involvement, in particular, was associated with positive outcomes in contraceptive implant use, including greater adherence and improved side-effect management—especially when combined with supportive counselling from HCPs. Participants frequently linked decision satisfaction with the presence of SDM, suggesting that maternal engagement can tangibly influence implant uptake.

Previous research has explored the impact of social norms and stigma on reproductive health decisions, including contraceptive use (Frost et al., 2012), pregnancy (Wiemann et al., 2005), abortion (Cockrill & Nack, 2013), and childbirth (James-Hawkins & Sennott, 2015). However, few studies have examined these dynamics within the postpartum context of adolescents—a gap this study seeks to fill. This research contributes to existing literature by demonstrating that social norms shape not only reproductive outcomes but also the decision-making process itself. It introduces the concept of sociocultural decision-making, which captures the convergence of personal agency with familial and societal expectations.

Sociocultural decision-making involves a complex web of relational obligations, normative pressures, and anticipated judgements. By capturing this matrix, the study sheds light on the myriad influences shaping adolescent mothers' contraceptive decisions. This interplay between personal autonomy and sociocultural constraint underscores the need for reproductive health interventions that are both clinically sound and culturally responsive.

The present research emphasises the pivotal role female parents—particularly mothers—play in reproductive decision-making. Contraceptive choices were often

shaped through interactions with both HCPs and maternal figures. This finding aligns with Roque et al. (2022), who documented that even as parous adolescents moved toward greater autonomy in their reproductive choices, maternal involvement remained influential. This recognition across studies underscores the enduring influence of maternal involvement.

However, maternal involvement was not uniformly perceived as supportive. Several participants described discomfort with parental engagement due to power imbalances, conflicting values, or limitations in parents' understanding of their needs. This finding resonates with Storck et al. (2022), who found that sources of discomfort included weak emotional bonds, religious views equating contraception with abortion, and perceived gaps in mothers' ability to offer effective advice. Additionally, familial power disparities—such as economic dependence, reproductive stigma, and formal consent requirements—further constrained participants' sense of autonomy.

Smith et al. (2016) provided a detailed examination of social norms and perceptions surrounding unintended pregnancies in Western countries. Their research underscores a prevailing community expectation for pregnancies to occur within stable, monogamous relationships, where maturity, education, and financial readiness are assumed. Yet, despite these ideals, unintended pregnancies remain common, and communities often encourage continuation, with women who choose childbirth viewed more favourably than those who pursue abortion.

When situated within Asian contexts, however, additional cultural and moral layers complicate this narrative. Collectivist Asian societies often place significant emphasis on family honour, social reputation, and traditional gender roles. An unintended pregnancy outside normative frameworks becomes not only a personal matter but also

a familial and communal issue, escalating the potential for stigma. Participants in this study often described the continuation of pregnancy as a morally weighted and spiritually significant decision, informed by religious doctrine, ethical considerations, and beliefs in karma. In this way, the intersection of moral reasoning, family authority, and social control becomes a confluence of individual morality, social structure, and family dynamics.

While Western societies have their reproductive norms, collectivist Asian contexts tend to amplify the ramifications of unintended pregnancy. This intensified pressure can lead to subtle coercion—where LARCs, particularly subdermal implants, are promoted not solely for medical efficacy but as instruments to prevent repeat pregnancies. In such settings, individual agency may be exercised within—but constrained by—risk-averse policies and cultural mandates, underlining the need for more ethically balanced, context-sensitive counselling frameworks.

Unlike Western contexts, access to LARCs in Thailand often still requires parental consent. Behmer Hansen and Arora (2018) argued that US adolescents should have access to contraceptives without parental consent or authorisation. Yet even where legal rights exist, adolescents may lack the ability to act autonomously due to relational and structural dependencies. In Thailand, while FP programmes claim adolescents can access contraceptives without parental consent, this study reveals that practical access remains entangled with relational dependence. Adolescent motherhood often necessitates parental involvement beyond legal requirements—emotionally, socially, and materially.

The study also found that directive, persuasive, and provider-controlled counselling were often perceived negatively. Adolescents' contraceptive choices reflected not only

provider influence but also their self-assessments of parenting readiness amid socioeconomic hardship. This scenario reflects their lived realities, particularly when mothers or mothers-in-law attended contraceptive counselling. This dynamic illustrates how adolescents' agency is relational—shaped through negotiations with providers and family members in real-life, constrained settings. Adolescents facing poverty, unstable relationships, and fractured family support were more likely to be offered subdermal implants, with parental approval shaping both recommendation and uptake.

In terms of male partners, the current study found that same-age or younger partners were rarely involved in adolescents' contraceptive decision-making. This absence of partner involvement was linked to casual or unstable relationships and the stigma attached to non-marital pregnancy. This finding aligns with previous studies by Storck et al. (2022) and by Roque et al. (2022), which found that intimate partners had limited influence and made only minor contributions to contraceptive decision-making in Utah and Cleveland in the US. In both studies, young male partners commonly lacked contraceptive knowledge and viewed contraception as a woman's responsibility.

In the Thai context, men are traditionally expected to act as financial providers, and some participants interpreted this role as excluding male responsibility for reproductive planning. This reinforces gendered perceptions of contraceptive responsibility and highlights a persistent gender gap in reproductive engagement. Moreover, participants reported seeking advice not from male partners but from maternal figures—mothers, mothers-in-law, or extended family—further illustrating the primacy of relationally mediated decision-making within female-centric networks (Roque et al., 2022; Storck et al., 2022). This underscores how decision-making is fundamentally relational, with maternal guidance acting as both a support and a potential constraint.

In Bangladesh, Shahabuddin et al. (2016) reported that newly married adolescent females had low autonomy in contraceptive and fertility decisions. Although cultural dynamics differ—particularly regarding marriage norms—the power imbalance reported there is echoed in this study. Unlike Bangladesh, early marriage is socially discouraged in Thailand, where it is seen as a burden on familial reputation and economic stability (BRH, 2017). While Shahabuddin et al. (2016) observed that husbands and mothers-in-law influenced decisions to determine childbearing, in this study, mothers and mothers-in-law encouraged pregnancy spacing and contraceptive use to support continued education and professional development. In this way, familial influence in Thailand can operate in the interest of long-term empowerment, even within an authority-laden framework.

The findings also link contraceptive decisions to relationship quality. Participants reported that monogamy and perceived emotional commitment increased their willingness to adopt subdermal implants. Recognised familial bonds and trust were central to implant uptake. This aligns with Harvey et al. (2018), who found that higher relationship quality among U.S. young adults was positively associated with LARC use, suggesting that relational stability and perceived supportiveness enhance reproductive confidence. These examples reinforce that relational trust and commitment are central to contraceptive uptake—hallmarks of the relationally mediated agency framework advanced in this study.

From a sociocultural lens, parental acknowledgement and support remain pivotal in multigenerational Thai households. This study contributes to SDM literature by reaffirming that adolescents' reproductive decisions are not made in isolation but negotiated through familial structures. These decisions are further shaped by normative

frameworks wherein abortion is illegal and culturally framed as morally and spiritually damaging, tied to beliefs in karma and filial duty.

Unintended pregnancies were widely perceived as moral failings, and sexual activity outside of marriage as shameful. Participants feared reputational damage, strained family ties, and disrupted kinship systems (Chanthasukh et al., 2017). Thus, choosing highly effective contraception became not only a preventive measure but also a strategy to protect family honour and preserve social respectability. This highlights the intersection of personal agency and sociocultural expectations.

Participants also expressed difficulty discussing contraception due to fear of parental reprimand and deeply embedded cultural norms of obedience and respect. Similar to Chanthasukh et al. (2017), this study found that non-pregnant adolescents feared the consequences of pregnancy, including physical punishment, social stigma, and bringing hardship to their families. Religious beliefs further reinforced this dynamic—with parental obedience equated to moral virtue and karmic merit (Liamputtong et al., 2004). Such beliefs limited negotiation capacity, especially among those with weaker emotional ties to their parents.

The study also observed tensions between medical advice and sociocultural values. Some out-of-school participants, especially from ethnic minority groups, placed greater value on childbearing as a means of securing new romantic partnerships or fulfilling in-law expectations. In such cases, the desire for pregnancy may intentionally or unintentionally run counter to clinical guidance, complicating contraceptive counselling. Yet, the principles of SDM require that HCPs centre adolescents' values while offering medical expertise. Respecting patient agency—even when it diverges

from public health goals—is foundational to ethical care (ACOG, 2022; Dehlendorf et al., 2017).

Regarding parental involvement, Ott and Sucato (2014) emphasised the importance of recognising the roles of parents in contraceptive counselling. This aligns with current findings, which show that providers must navigate familial influence rather than exclude it to support relationally embedded autonomy. Respecting adolescents as experts in their lived experiences—while acknowledging their relational contexts—remains key.

Finally, Pack et al. (2011) examined psychosocial factors influencing dual-method use among urban U.S. adolescents. They found that those using only hormonal methods were more sexually active and less likely to negotiate condom use. Conversely, those who relied solely on condoms perceived lower pregnancy risk and were more conservative in sexual behaviour. These findings contrast sharply with the present study, where the postpartum status and sociocultural context substantially recalibrate adolescents' motivations. In Thailand, the desire to avoid future unintended pregnancies was shaped more by fears of stigma, shame, and karmic consequences than by sexual behaviour alone. Participants navigated pressures from multiple sources—parents, community expectations, religious norms, and digital discourse—demonstrating that contraceptive choices are shaped through a constellation of relational, cultural, and moral forces. These dynamics reflect the conceptual model underpinning this study, where reproductive agency is relational and culturally embedded, rather than individually autonomous.

The current study's findings highlight the importance of social norms and external influences in shaping the process of contraceptive decision-making. This contribution

adds to the existing body of literature and aligns with reviews such as Costenbader et al. (2017), which examined the impact of social norms on modern contraceptive utilisation. That review identified 17 studies on social influences, but many lacked clear definitions of key influencers, leading to variable outcomes. Most also relied on cross-sectional data and focused narrowly on condom use, often within HIV-prevention frameworks, rather than on broader contraceptive decision-making.

This narrow application of behavioural models limits the quality of norm measurement and overlooks the broader socio-relational dynamics that influence contraceptive decisions. Within this review, only two studies—Pack et al. (2011) and Wang & Wang (2005)—offered insights into social norm measurement, while the remaining studies primarily examined condom use, reflecting an HIV-prevention agenda more than a reproductive autonomy focus (Costenbader et al., 2017).

Consistent with the present findings, Wang and Wang (2005) highlighted the influence of subjective norms and perceived social pressure. Studying adolescent mothers in Taiwan, they found that psychosocial intentions formed before childbirth—particularly the intention to use condoms postpartum—often aligned with actual postpartum behaviour. These intentions were shaped by social expectations surrounding contraception. Their work reinforces the importance of anticipatory counselling during pregnancy, which can strengthen self-efficacy and support postpartum contraceptive planning.

While this study underscored the benefits of parental involvement, it also illuminated the challenges of parent-dominated contraceptive decisions, particularly when adolescents' priorities diverged. Power imbalances may constrain agency, making it essential to ensure that adolescents have access to private counselling opportunities,

even when parents are involved. Some participants described tensions between personal preferences and parental expectations. Antenatal sessions may provide a key window for providers to facilitate these negotiations, helping adolescents assert their reproductive preferences within family dynamics.

For many, asserting autonomy remains difficult in Thai cultural contexts where obedience is highly valued, and resistance may be framed as disobedience or ingratitude. This challenge is amplified when adolescents lack contraceptive knowledge or confidence in their negotiation skills. These findings illustrate the importance of culturally sensitive communication strategies that acknowledge familial authority while actively promoting adolescent agency.

The findings also support the role of targeted social marketing campaigns in enhancing contraceptive literacy and uptake. Sundstrom et al. (2021) analysed the design and impact of a 'You Have Options' campaign, which aimed to increase LARC awareness and access among university students. Drawing from their work, this study echoes the need for well-designed social marketing to expand method awareness and reduce unintended pregnancies.

In conclusion, power dynamics—whether institutional or familial—profoundly shape adolescents' contraceptive experiences. Acknowledging and addressing these dynamics is essential for promoting equitable reproductive care. These findings reaffirm the broader conceptual model guiding this study: adolescent contraceptive decision-making unfolds through overlapping individual, relational, structural, and sociocultural dimensions. Recognising this complexity is central to building responsive strategies that balance agency and access.

5.7. Adolescent Decision-Making: Developmental Contexts and SDG Alignment

Understanding how postpartum adolescents make contraceptive decisions requires a multi-layered, contextually embedded approach that goes beyond individual-level determinants. This section integrates empirical insights from the current study with critical perspectives on behavioural theory, adolescent neurodevelopment, and the SDGs, to develop a more comprehensive theoretical lens. While existing models provide partial insights, they often fail to capture the relational constraints, sociocultural pressures, and healthcare system limitations that fundamentally shape adolescents' reproductive agency and autonomy.

5.7.1. Limitations of Traditional Behavioural Theories

This section critically evaluates the relevance of three dominant behavioural frameworks—the Transtheoretical Model of Behavioural Change (TTM) (Prochaska, 2008; Prochaska & DiClemente, 1983), the Information-Motivation-Behavioural (IMB) model (Fisher et al., 2000), and the Fogg Behaviour Model (FBM) (Agha et al., 2021)— in the context of postpartum contraceptive decision-making among Thai adolescents.

These models are widely used in reproductive health research, but their application to adolescent contraceptive choices in postpartum, relationally embedded contexts reveals key limitations.

The TTM, while useful for identifying stages of readiness to adopt contraception, presumes that behaviour change is driven by internal motivation. However, participants' readiness in this study was largely shaped by external pressures—

including partner or parental approval, provider encouragement, and the fear of repeat pregnancy. As such, motivation was not purely intrinsic but socially and situationally shaped.

The IMB model, which links knowledge, motivation, and skills to behaviour change, assumes that informed individuals will act autonomously and rationally. Yet several participants in this study were knowledgeable about contraceptives but constrained in their ability to exercise agency due to familial disapproval, relational pressure, or conflicting information from peers—highlighting the cultural and relational constraints on individual decision-making.

The FBM, which focuses on the interaction of motivation, ability, and behavioural triggers, is partially useful in explaining how social media narratives act as triggers. However, the model underestimates emotional and structural barriers, such as stigma, fear of disapproval, misinformation, and access constraints—all of which prominently shaped adolescents' experiences.

Thus, while these models offer partial insights, they fail to adequately reflect the multidimensional complexity and embeddedness of adolescent contraceptive decisions in real-life contexts. They often prioritise individual cognition over relational embeddedness and structural conditions, limiting their utility for reproductive health interventions involving postpartum adolescent mothers.

5.7.2. Neurodevelopmental Perspectives in Adolescent Decision-Making

Beyond behavioural models, this study underscores the importance of considering the neurodevelopmental context in which postpartum adolescents make decisions. Traditional frameworks such as the Subjective Expected Utility (SEU) theory assume

that individuals evaluate contraceptive options through rational cost-benefit analysis. Yet this assumption is increasingly contested in adolescent research (Weisman et al., 1991). Adolescence is a developmentally sensitive period, characterised by ongoing changes in brain structure and cognitive control. These changes interact with the demands of pregnancy and parenting in ways that challenge assumptions of fully autonomous decision-making.

Key neurodevelopmental factors include:

Dual Systems Model: Adolescents' socioemotional system, which governs reward-seeking and emotional reactivity, develops earlier than their cognitive control system, responsible for impulse regulation and planning (Steinberg, 2010). This mismatch can lead to risk-prone decisions and short-term thinking, particularly under social and relational pressure.

Prefrontal Cortex Maturation: The prefrontal cortex, central to decision-making and future planning, continues to mature into early adulthood (Casey et al., 2008). This affects adolescents' ability to anticipate long-term consequences—a factor directly relevant to contraceptive use.

Reward Sensitivity: Adolescents often exhibit heightened responsiveness to social rewards, which can skew their risk assessments and reinforce behaviours aligned with peer approval or familial compliance (Galván, 2010).

These neurodevelopmental realities suggest that decision-making in this cohort is less autonomous and more contextually contingent than most models assume. For example, many participants described accepting provider-recommended implants not due to

personal preference, but because they lacked the cognitive or emotional readiness to question authority or assert choice.

This also explains why some participants, despite being informed about LARCs, reverted to familiar methods like OCPs due to their greater perceived control—even when these were less effective. Their actions were shaped by developmental, emotional, and social factors, not simply rational evaluation. Instead, postpartum adolescent's contraceptive choices in this study were frequently shaped by external influences, including HCPs, family members, and cultural expectations. This highlights that agency is exercised within—but often constrained by—relational, institutional, and developmental contexts.

For example, HCPs often promote LARCs as the default postpartum method, shaping adolescent mothers' contraceptive choices by narrowing the perceived range of acceptable options (Higgins et al., 2016). Similarly, parental influence—particularly from mothers—frequently overrides adolescents' preferences, challenging the SEU model's assumption that individuals make rational, autonomous decisions based on stable preferences and full information (Edwards, 1954). This example highlights how social pressure, rather than individual intent alone, often guides contraceptive choices.

Furthermore, gendered norms discourage male involvement in postpartum contraception, placing the burden of decision-making on adolescent mothers who must navigate conflicting expectations from partner, family members, and HCPs. This dynamic, as Gage et al. (2022) demonstrate, significantly influences postpartum family planning outcomes among young women in Kinshasa, where male partners' limited engagement—shaped by entrenched gender norms—complicates contraceptive use and decision-making.

The TTM model conceptualises behaviour change through stages of contemplation, preparation, action, and maintenance (Prochaska & DiClemente, 1983). While extensively used in research on contraceptive adoption (Melo et al., 2015; Peipert et al., 2008), its applicability to postpartum adolescents is limited because systemic and relational influences often disrupt the linear progression assumed by the model.

- Contemplation Stage: Many adolescent mothers have limited contraceptive knowledge and autonomy, restricting their ability to make informed decisions (Storck et al., 2022).
- Preparation Stage: Contraceptive choices are shaped by HCP recommendations, structural access issues, and prevailing social norms, all of which can limit adolescents' perception of meaningful options—especially regarding LARC methods. (Kavanaugh et al., 2015).
- Action Stage: Many adolescents passively accept provider-recommended contraceptive methods—often prioritising perceived social acceptability and parental approval over personal choice, especially when provider bias and normative expectations limit the range of option offered (Sieverding et al., 2018; D'Souza et al., 2022).

Thus, while the TTM and SEU frameworks offer useful starting points, they fall short in explaining the relational, developmental, and structural dimensions of adolescent contraceptive decisions. Integrating neurodevelopmental perspectives into these models highlights the importance of contextualised support during the sensitive transition from adolescence to motherhood. Postpartum contraceptive counselling should be tailored to adolescents' developmental stage, recognising the cognitive and emotional factors that influence decision-making under social pressure. This

developmental lens reinforces the study's core category of maintaining social and bodily integrity, illustrating how adolescent mothers navigate competing pressures with evolving cognitive capacity.

5.7.3. Relational Dynamics and Age-Related Variations: Linking SDGs

The findings in this chapter highlight the complex interplay between age-related gender inequality and the challenges of autonomous contraceptive decision-making among postpartum adolescent mothers. To further contextualise these insights, this section links the findings to two key SDGs: (1) SDG 3.7: Ensure universal access to SRH services, including for FP, information, and education, and (2) SDG 5: Achieve gender equality and empower all women and girls.

The decision-making processes of adolescent mothers, as explored in this chapter, illustrate how gendered power dynamics, relational hierarchies, and social stigma shape contraceptive choices. These dynamics particularly affect younger adolescents (15–17 years), who encounter greater difficulty asserting autonomy than their older peers (18–20 years). This disparity underscores the intersection between SDG 3.7 and SDG 5, where gender inequality directly undermines reproductive autonomy and equitable access to contraceptive options.

In line with SDG 3.7, the findings indicate that healthcare services often fall short in providing youth-friendly, rights-based, and unbiased contraceptive counselling. For younger adolescent mothers, decisions were frequently shaped by external actors—parents or HCPs—rather than being grounded in informed personal choice. This lack of meaningful agency and consent reflects broader gaps in reproductive health access.

Similarly, SDG 5's emphasis on empowering adolescents to make their own reproductive decisions is challenged by the narratives in this study. In relationships with older male partners, participants reported limited negotiation power, reinforcing traditional gender expectations and structural inequalities. Such power imbalances—both intimate and familial—often relegate adolescent girls to passive roles, further entrenching barriers to gender equality.

The analysis reveals that younger adolescents (15–17 years) were more likely to adopt LARCs, such as subdermal implants, largely due to external encouragement or pressure from parents or HCPs. These decisions reflected perceived risk and social control, rather than autonomous preferences. In contrast, older adolescents (18–20 years) demonstrated greater decision-making confidence, often selecting short-term methods like OCPs or injectables to preserve reproductive flexibility and personal control.

Additionally, second pregnancies appeared to prompt the LARC use as a strategy to promote physical recovery and reduce the risk of rapid repeat pregnancy. In contrast, first-time adolescent mothers showed more diverse contraceptive preferences, influenced by concerns around future fertility and partner involvement.

These findings reflect how gender inequality intersects with age, relational power, and sociocultural norms, producing differentiated contraceptive trajectories. While younger adolescents often deferred to authority figures, older adolescents expressed more assertiveness, reflecting the development of self-agency over time.

Strengthening the connection between SDG 3.7 and SDG 5 requires recognising how relational and structural conditions constrain contraceptive choices. Tailoring contraceptive counselling to address age-specific and gendered barriers can enhance

adolescents' ability to make informed, autonomous decisions. By integrating gender-sensitive and developmentally appropriate approaches, reproductive health systems can better align with global agendas for adolescent empowerment and gender equity.

These insights challenge the universal applicability of individualistic decision-making models in postpartum adolescent contexts. While behavioural theories provide useful conceptual tools, they require contextual expansion to reflect adolescents' neurodevelopmental, relational, and cultural realities. By integrating relational power analysis, developmental science, and global equity frameworks, this study advances a more accurate and ethically responsive understanding of contraceptive agency. This repositioning deepens the study's core category—maintaining social and bodily integrity—and reinforces the need for contraceptive care that supports negotiated, informed, and developmentally situated agency.

CHAPTER 6

CONCLUSION AND RECOMMENDATIONS

6.1. Introduction and Chapter Overview

This final chapter synthesises the study's empirical insights and theoretical contributions to provide an integrated account of postpartum contraceptive decision-making among adolescent mothers in Northern Thailand. The study illustrates how adolescents navigate reproductive choices amidst intersecting interpersonal hierarchies, institutional routines, and sociocultural norms.

This chapter is structured into five interrelated components: (1) A summary of major findings; (2) Theoretical and conceptual contributions; (3) Policy and practice recommendations; (4) Implications for future research; and (5) Concluding reflections on adolescent reproductive agency and equity.

These components foreground the central thesis argument: that adolescent mothers are not passive service recipients but rather strategic agents operating within complex and context-specific reproductive landscapes. By advancing a developmentally attuned and culturally grounded account of agency, this chapter contributes to broader debates on reproductive justice, autonomy, and health system accountability in LMICs.

6.2. Summary of Major Findings

The study developed a grounded conceptual model based around a core category of 'maintaining social and bodily integrity', capturing how adolescent mothers made contraceptive decisions through layered and adaptive modes of agency.

This summary distils the key findings into four interrelated categories, each reflecting distinct but overlapping domains of decision-making.

Navigating and Interpreting Contraceptive Knowledge

Adolescent participants navigated a fragmented, peer-driven, and inconsistently mediated information environment in their efforts to understand postnatal contraceptive options. Digital media and peer networks emerged as double-edged resources—offering accessible and anonymous avenues for exploration, yet also acting as conduits for misinformation, particularly around LARCs and the perceived risks of menstrual suppression.

Most participants reported first learning about subdermal implants only after childbirth, highlighting a missed opportunity for anticipatory contraceptive counselling during antenatal care. Adolescents often relied on peer accounts—particularly on social media—which prioritised anecdotal experience over clinical accuracy. These narratives, while relatable, frequently reinforced misconceptions about amenorrhea, fertility impairment, and method safety, contributing to uncertainty and, in some cases, early discontinuation of effective methods.

These patterns underscore the importance of integrating timely, youth-responsive contraceptive education into both antenatal and postnatal care. Interventions must address not only knowledge gaps, but also the emotional, relational, and cultural filters through which adolescents receive and interpret contraceptive information.

Seeking Balance between Competing Priorities

Contraceptive decision-making among participants was embedded in complex relational dynamics, where autonomy was exercised not in isolation but through negotiation with influential figures such as mothers, partners, and HCPs. These interactions did not uniformly result in compliance or coercion; rather, adolescents engaged in strategic and culturally attuned forms of negotiation, aligning reproductive decisions with their aspirations, constraints, and cultural expectations.

In some cases, participants adopted LARC methods in response to familial pressure or to demonstrate responsibility and restore social credibility following an unintended pregnancy. In others, adolescents employed more subtle strategies to assert control—such as seeking private counselling sessions, deferring decisions until after delivery, or switching to preferred methods once relational tensions had eased.

These acts of adaptation and subtle resistance reaffirm adolescents' capacity for agency—even within relational and structural constraints—highlighting their pragmatic strategies for navigating power imbalances.

Contraceptive Care Pathways within the Healthcare System

Although LARCs were routinely promoted during postpartum care, participants frequently encountered systemic barriers that undermined informed choice. Several adolescents reported being strongly encouraged—or implicitly expected—to adopt subdermal implants following childbirth, with limited opportunity to discuss alternatives. Requests for removal were sometimes delayed or met with resistance, often framed by providers in moral or efficiency-based terms.

These experiences revealed a persistent tension between institutional goals—such as reducing repeat pregnancies—and adolescents' rights to dignified, informed, and client-centred care.

Rather than enabling autonomy, the health system at times reinforced power asymmetries, limiting adolescents' capacity to make and revise contraceptive decisions in line with their evolving needs. Despite efforts to standardise postpartum contraception, these institutional practices often conflicted with adolescents' expectations for personalised and respectful care.

Relational and Cultural Influences on Contraceptive Decision-Making

Contraceptive decisions were shaped not only by medical considerations but by deeply embedded cultural narratives surrounding fertility, menstruation, and moral accountability. For many participants, contraception was a means of navigating societal expectations—used not merely to prevent pregnancy but to restore a sense of respectability and align with ideals of responsible womanhood.

Amenorrhea, particularly as a side effect of LARC use, was frequently misinterpreted as a sign of reproductive harm, heightening anxiety and prompting discontinuation. At the same time, some adolescents viewed contraceptive use as a way to repair their social image post-pregnancy, signalling maturity and future-oriented responsibility. These choices were intimately tied to family honour, gender norms, and perceptions of marital legitimacy.

As such, adolescent contraceptive agency operated not only at a biomedical level but also within a symbolic register, as adolescents negotiated moral worth and social standing under the weight of cultural scrutiny. This symbolic function of

contraception—as a marker of accountability, maturity, and social rehabilitation—was especially pronounced in a sociocultural landscape where female honour and post-pregnancy redemption were tightly regulated.

6.3. Global and Contextual Synthesis: Reframing Adolescent Contraceptive Autonomy

This section critically situates the study's findings within broader reproductive health discourses, policy frameworks, and global debates. By juxtaposing empirical insights with international reproductive goals, it challenges dominant paradigms that equate access with autonomy and reframes adolescent contraceptive decision-making through the study's conceptual lens.

The findings provide a contextually grounded and theoretically robust account of adolescent postpartum contraceptive choices in Northern Thailand. The analysis reveals that these choices are not isolated acts of individual will, but context-sensitive and adaptive responses shaped by relational power, institutional dynamics, and sociocultural expectations.

While reproductive health discourses in many Western contexts conceptualise contraception as a matter of individual and consumer selection (Lowe, 2016), this study reveals a far more entangled decision-making landscape. In Thailand, contraceptive decisions around pregnancy prevention were not merely s matter of selecting from available methods, but involved navigating constrained and often contradictory pathways shaped by economic vulnerability, stigma, inconsistent counselling, and familial oversight. Adolescents engaged in strategic decision-making that was both

responsive and negotiated, embedded in their lived realities and historical positioning within Thai society.

Notably, adolescents with prior unintended pregnancies—often marked by educational interruption, social pressure, or familial tension—expressed a strong inclination toward adopting subdermal implants. This corroborates international findings from settings such as the United States (Roque et al., 2022) and Turkey (Kokanalı et al., 2019), which identify postpartum and post-abortion periods as moments of increased contraceptive receptivity. However, in the Thai context, this receptivity was driven less by structured continuity of care and more by adolescents' adaptive strategies—motivated by personal necessity rather than institutional support.

The findings challenge global reproductive health narratives that often assume access equates autonomy (Senderowicz, 2020). Although Thailand's public health system formally guarantees access to LARCs, such access did not consistently translate into informed or voluntary uptake. Several participants reported learning about subdermal implants only after childbirth, and in some cases, receiving minimal or one-off counselling. For adolescents outside formal institutions—such as schools or workplaces—continuity of care was even more fragmented, revealing systemic blind spots in adolescent-responsive reproductive health provision.

While rights-based frameworks and client-centred care are widely endorsed in global policy discourse, their implementation is not always straightforward. The notion of "informed choice," for instance, presumes privacy, contraceptive literacy, and provider trust—conditions not consistently met by participants in this study. Instead, adolescents reported limited knowledge of contraceptive options prior to pregnancy, distrust of SARCs and OCPs due to past failures, pressure from family or partners to avoid LARCs

due to myths about infertility, and structural barriers to accessing LARC removal and follow-up care.

These experiences problematise the universality of global FP targets and raise critical questions about accountability mechanisms within national health systems (Hardee et al., 2021). Metrics that focus narrowly on contraceptive uptake and continuation risk obscuring deeper relational, emotional, and structural complexities. Apparent programmatic success, such as high LARC uptake, may mask tensions—such as constrained choice, coercive counselling, or difficulty accessing removal services.

Against this backdrop, the study's conceptual model—centred on the preservation of bodily and social integrity—provides an alternative lens for interpreting adolescent contraceptive agency. Here, decision-making is not conceptualised as a binary of free choice versus coercion, but as a layered and iterative process shaped by power relations, affective landscapes, and pragmatic negotiation.

Participants exercised agency in multiple and interwoven ways. Some demonstrated proactive individual agency by initiating contraceptive discussions, independently researching methods, or directly requesting LARCs. Others engaged in relationally mediated agency, navigating power dynamics with family members or providers through subtle negotiation or quiet resistance. Many also enacted sociocultural responsiveness, aligning their contraceptive choices with prevailing norms and expectations—using contraception as a means to restore credibility, prepare for future opportunities, or repair disrupted life trajectories.

This triadic typology disrupts simplified characterisations of adolescent passivity or irrationality. Instead, it reflects situated judgement, grounded in bounded options and

evolving relational contexts. Adolescents' decision-making processes were strategic and context-sensitive, informed by past experiences, anticipated futures, and social expectations.

Accordingly, this study advocates for a paradigmatic shift in how reproductive autonomy is conceptualised and measured. Moving beyond utilisation-focused indicators, it endorses a capability-based framework that prioritises adolescents' real freedom to choose, refuse, switch, or discontinue methods in accordance with evolving needs and identities (Senderowicz, 2020). Only by embedding reproductive interventions within the socio-material realities of young people's lives can health systems move from nominal access toward substantive autonomy and reproductive justice.

6.4. Theoretical and Conceptual Contributions

This study makes a significant theoretical contribution by developing a grounded conceptual model of contraceptive decision-making that centres on the core category of *Maintaining Social and Bodily Integrity*. Through in-depth analysis of young people's reproductive narratives, the model reconceptualises decision-making as an iterative, context-responsive process shaped by situational dynamics—a multi-level, relational, and context-sensitive practice shaped by lived experiences, structural conditions, and sociocultural norms.

This approach challenges dominant linear and individualised conceptualisations of reproductive choice by demonstrating that agency is not a static or purely autonomous act. Instead, young people's contraceptive decisions are enacted through continuous

negotiation across social, institutional, and moral terrains. The model identifies three interrelated forms of agency that reflect the layered and adaptive nature of this process:

- **Proactive agency:** Refers to deliberate, future-oriented strategies aimed at asserting reproductive control—such as choosing LARCs to prevent repeat pregnancies. This form of agency reflects planning, anticipation, and attempts to create stability amid uncertainty.
- **Relationally mediated agency:** Captures how decisions are co-constructed in relation to others—particularly partners, family members, and peers. Participants described aligning, concealing, or justifying their choices to accommodate or resist interpersonal expectations. Relationally mediated agency also includes attunement to cultural scripts, moral discourses, and anticipated stigma, which often guide or constrain how decisions are framed and enacted in socially acceptable ways.
- **Service-oriented agency:** Describes how young people engage with healthcare institutions—navigating barriers such as removal delays, lack of provider responsiveness, or conflicting clinical advice. Agency is enacted through persistence, advocacy, and learning how to navigate within bureaucratic systems to access or adapt care.

These forms of agency are not discrete or sequential, but dynamic, fluid, overlapping, and context-dependent—shaped by shifting relationships, resources, social meanings, and embodied experiences. Participants often moved between these forms—sometimes within a single decision-making episode—as they responded to evolving personal, structural, and cultural dynamics.

By foregrounding this complexity, the model offers a youth-centred and intersectional perspective on reproductive agency. It reframes contraceptive decision-making not as a moment of isolated choice, but as a situated, evolving, and adaptive practice that reflects both constraint and creativity. This contribution extends grounded theory's potential to generate mid-range conceptual models and provides a robust framework for understanding reproductive agency in ways that are socially situated, relationally embedded, and theoretically transferable.

6.5. Policy and Practice Recommendations

This study's findings underscore the importance of aligning reproductive health interventions with adolescents' lived realities, relational contexts, and sociocultural frameworks. Grounded in the conceptual model of *maintaining social and bodily integrity,* the following recommendations are designed to inform adolescent-responsive practice and policy in Thailand and similar LMIC contexts.

1. **Culturally Responsive and Developmentally Informed Counselling**

HCPs must deliver empathetic, confidential, and developmentally appropriate contraceptive counselling that affirms adolescents' agency and recognises sociocultural influences.

Recommendations:

- Ensure informed consent is consistently obtained for both LARC insertion and removal, including for second-cycle users.
- Provide private consultations, particularly during antenatal and postnatal visits, minimising family or partner interference.

- Debunk myths surrounding menstrual suppression, infertility, and LARC side effects, using culturally resonant analogies and age-appropriate language.
- Tailor language, tone, and counselling strategies to reflect adolescents' cognitive development and maturity levels.
- Promote contraceptive choice specifically for underrepresented and hidden groups, including out-of-school adolescents, ethnic minorities, and young migrants, by mapping their needs and piloting targeted outreach programmes.
- Develop and distribute accessible educational materials in Northern dialects and minority languages to ensure that adolescents who do not speak central Thai can fully understand and apply contraceptive information.

2. Reform Contraceptive Removal Protocols and Health System Incentives

Trust in the health system is undermined when method discontinuation is delayed or denied. Contraceptive services must respect adolescents' evolving preferences and bodily autonomy.

Recommendations:

- Establish clear, accessible pathways for timely implant removal, communicated through community clinics, school programmes, and digital platforms.
- Train providers in rights-based, non-directive communication, particularly regarding removal requests.
- Unlink LARC continuation targets from provider incentives and cost-efficiency metrics that may inadvertently encourage coercive counselling.

3. Integrate Gender and Age-Specific Approaches in SRH Policy

Younger adolescents (15–17) and young adults (18–20) face distinct vulnerabilities, shaped by age, family dynamics, and legal status. SRH policy must reflect these differences while promoting equity.

Recommendations:

- Enforce safeguards against coercive counselling and institutional gatekeeping, particularly in adolescent-specific services.
- Expand eligibility for free or subsidised contraception to cover adolescents aged 20–24, reflecting economic vulnerability and ongoing reproductive risk.
- Strengthen adolescent-friendly health services by improving cultural safety, particularly for hidden populations often overlooked in mainstream programmes.

4. Enhance Digital Health Interventions and Literacy

Digital platforms are critical sources of information—but also vectors for misinformation. Adolescents need support to navigate digital contraceptive content critically and safely.

Recommendations:

- Collaborate with youth influencers, digital educators, and peer advocates to deliver trustworthy, engaging contraceptive content on platforms such as LINE, TikTok, and Facebook.

- Develop interactive digital literacy programmes to teach adolescents how to assess credibility and scientific backing of online health claims.
- Integrate media literacy into school-based SRH education to strengthen digital resilience and support informed contraceptive decision-making.
- Recognise adolescents' varying perceptions of "verifiable sources," with some prioritising peer experiences over clinical evidence. Youth-centred digital campaigns should bridge this gap by combining lived narratives with verified information.

These recommendations aim to foster an adolescent-responsive reproductive health system that centres dignity, autonomy, and cultural relevance in both policy and practice.

5. **Strengthen Co-Production and Post-Pandemic Learning for Future Research**

Participatory approaches can ensure future reproductive health research and interventions remain adolescent-centred and resilient to disruptions.

Recommendations:

- Embed co-production principles into programme design by involving adolescent mothers in service planning, implementation, and monitoring.
- Apply lessons from the COVID-19 pandemic—such as remote care models and flexible delivery formats—to increase service accessibility and continuity.
- Use hybrid data collection approaches in future research to account for both in-person depth and digital reach, especially when engaging hidden or underserved populations.

6. Build Practitioner–Researcher Capacity for CGT-Driven Service Improvement

This study highlights how CGT can surface the nuanced realities of contraceptive decision-making. Strengthening cross-sector capacity to use CGT insights can enhance adolescent-responsive programming.

Recommendations:

- Offer training for HCPs and policy practitioners on the principles and applications of CGT, focusing on service innovation and participatory analysis.
- Establish academic–practitioner partnerships to co-develop CGT-informed tools for service assessment, communication improvement, and adolescent engagement.

6.6. Implications for Future Research

This study contributes a novel conceptualisation of adolescent contraceptive decision-making, rooted in sociocultural understanding of agency and constraint. In doing so, it also opens new directions for inquiry. Building on the grounded model, future research should address the following priorities to extend, validate, and operationalise the findings across varied adolescent populations and service contexts.

1. **Investigate Digital Influences and Misinformation**

Future studies should examine how digital platforms shape contraceptive perception among adolescents—both as sources of empowerment and misinformation. Content analysis of social media narratives and adolescent-led qualitative research can clarify how online messages influence method preferences and fears (e.g. around amenorrhea

or infertility). Research is also needed on how HCPs might proactively engage in digital spaces to counter misinformation and deliver youth-friendly education.

2. **Evaluate the Quality and Timing of Contraceptive Counselling**

There is a pressing need to assess the effectiveness of contraceptive counselling strategies across antenatal, intrapartum, and postnatal care. Comparative studies across urban and rural settings can reveal context-specific challenges and effective strategies that uphold adolescent autonomy while meeting public health goals.

3. **Explore Relational Dynamics and Power in Contraceptive Decision-Making**

Given the centrality of relational influence in this study, future research should include the perspectives of male partners, mothers, and extended family members. Understanding how adolescents negotiate these relationships—particularly in contexts of intergenerational authority and gendered expectations—can support the design of interventions that balance autonomy and inclusion. Attention should also be given to coercion and subtle forms of pressure within both clinical and family settings.

4. **Understand Discontinuation and Method Switching as Dynamic Processes**

While much global attention focuses on contraceptive uptake, this study shows that continuation and discontinuation are equally shaped by individual, structural, familial, and sociocultural factors. Future research should explore the lived experiences of implant removal, decision reversals, and long-term contraceptive trajectories to ensure rights-based and adaptable contraceptive care.

5. **Extend Research to Understudied and Diverse Adolescent Groups**

Further studies should target younger adolescents (15–17), those not currently pregnant, or those using implants for a second cycle, to explore variations in experience and support needs. Investigating regional, ethnic, and religious diversity across Thailand can enhance the generalisability and cultural sensitivity of findings and contribute to tailored, equitable service design.

6. **Include Health Providers and Systems in the Research Agenda**

Integrating the perspectives of midwives, nurses, and counsellors can provide valuable insight into the constraints and capacities of service delivery. Research should examine how HCPs understand adolescent autonomy, respond to discontinuation requests, and navigate tensions between policy goals and PCC. Findings can inform training, supervision, and structural reforms to better align service delivery with reproductive rights.

7. **Embrace Co-Production and Youth-Centred Methodologies**

Participatory and co-productive research frameworks—engaging adolescent mothers, HCPs, and digital health innovators—can support more responsive and inclusive interventions. Lessons from the COVID-19 pandemic (e.g., telemedicine, digital counselling, and service disruption) should inform future methodological and programmatic innovations to ensure resilience and accessibility.

6.7. Study Strengths and Contributions

This section outlines the key strengths and contributions of the study. It highlights the methodological and ethical rigour, contextual and policy relevance, and practical

implications of the research. Particular attention is given to the study's originality in the Thai context, its adherence to grounded theory principles, and the culturally and ethically sensitive approach adopted throughout the research process.

Methodological Strength

This qualitative research provides critical insights into the contraceptive decision-making of postpartum adolescents, particularly in relation to subdermal implants and injectables. Grounded theory was selected for its capacity to capture diverse lived experiences and support reflexive engagement with the researcher's positionality and disciplinary lens. To the researcher's knowledge, this is the first study in Thailand to explore this specific topic, thereby making a novel contribution to the field.

Policy Context and Novel Contribution

The study enhances understanding of decision-making processes among postnatal adolescents within the context of Thailand's free-of-charge subdermal implant policy under the Thai FPI, introduced through the Adolescent Pregnancy Act (2016). Given the limited research on adolescent mothers' contraceptive decision-making experiences, a systematic review was deemed unsuitable, reinforcing the need for a qualitative, exploratory approach. By addressing these gaps, this study advances empirical knowledge on contraceptive decision-making among postpartum adolescents, particularly in relation to LARCs.

Tailored Service Provision and Practice Relevance

The identified decision-making processes broaden existing knowledge on contraceptive choices among adolescents in Thailand and other socially conservative contexts. The

study's findings highlight the need for a tailored contraceptive provision by HCPs, ensuring that services align with adolescents' sociocultural realities and reproductive autonomy. The insights can inform the development of adolescent-responsive interventions that promote informed decision-making, improve patient–provider communication, and enhance contraceptive adherence.

The study underscores the importance of improving service delivery and strengthening communication between HCPs and adolescent clients. It illustrates how familial and social networks influence decision-making processes. Using grounded theory methodology, the research reveals the complex and shifting pathways adolescents navigate when deciding to accept free subdermal implants and injectables during hospitalisation.

Analytical Rigour and Theoretical Saturation

This research rigorously adhered to grounded theory principles. Theoretical sampling was employed to guide participant selection and refine the interview guide, while constant comparison strengthened theoretical development. Categories were iteratively refined until data saturation was reached—when no new themes emerged in subsequent interviews, ensuring conceptual depth and internal validity. Although conducted by a single researcher, analytic rigour was reinforced through supervisory feedback, memo-writing, and careful auditing of coding decisions.

Semi-structured interviews allowed participants to discuss service provision, family influence, and social norms, while allowing the researcher flexibility to explore emerging themes aligned with study's core objectives.

Linguistic and Cultural Sensitivity

Interviews were conducted in Thai, although several participants preferred the Northern dialect. The researcher's fluency in this dialect enriched the data collection process by allowing participants to express themselves in a culturally and linguistically familiar manner. No major linguistic barriers were encountered; however, some culturally specific terms required nuanced interpretation to preserve meaning. The researcher remained attentive to accurate representation throughout transcription and analysis, reducing the risk of misinterpretation.

While this study offers important methodological, conceptual, and applied contributions, it is also important to acknowledge its limitations, which are outlined in the following section.

Ethical Preparedness and Safeguarding Protocols

Although no safeguarding concerns arose during the study, a full set of safeguarding protocols was developed and approved through institutional review. These included procedures for informed consent, participant distress, referral in the event of disclosure, and confidentiality protections. The researcher received training in adolescent-sensitive interviewing and was prepared to activate these protocols if needed. This ethical preparedness reflects the study's commitment to protecting vulnerable participants, aligning with both international research standards and Thai cultural norms. By embedding ethical responsiveness throughout the research process, the study upholds high standards of integrity, sensitivity, and participant care.

6.8. Study Limitations

This section outlines the key limitations of the study, including sampling constraints, the absence of HCP perspectives, language and translation challenges, the impact of researcher positionality, and data collection adaptations due to COVID-19 pandemic. These limitations should be considered when interpreting the study's findings and assessing their broader applicability.

Exclusion of HCP Perspectives

While the study captured adolescents' experiences of contraceptive decision-making, it did not include perspectives from HCP such as midwives or counsellors. This limits insight into the provider side of service delivery, including challenges in implementation and communication. Including provider voices in future research would support a more holistic understanding of contraceptive care and help align youth-centred services with system-level realities.

Researcher Positionality and Interpretive Bias

As in all qualitative research, the researcher's background and positionality influenced data interpretation. Reflexive memo-writing and supervision were used to mitigate potential bias, but the findings remain shaped by a single interpretative lens. Future studies might consider engaging multiple analysts, peer debriefing, or triangulation to enhance analytic, depth, breadth, and rigour.

Language and Translation Challenges

Although the interviews were conducted in Thai, transcripts were translated into English for analysis and reporting. Despite bilingual checking and peer review, some

cultural nuance and emotional tone may have been diminished in translation. This is a recognised challenge in cross-language research. Future studies could incorporate collaborative strategies such as participant transcript validation and co-translation with youth co-researchers to ensure meaning is preserved.

Adaptations During the COVID-19 Pandemic

Due to COVID-19 restrictions, the final six interviews were conducted via video calls rather than in person. While this approach increased flexibility and participant comfort, it also introduced limitations—such as reduced access to non-verbal cues, environmental context, and the potential for distractions due to caregiving demands.

However, remote interviews also offered benefits. Some adolescents reported feeling more relaxed and open in their home environments than in clinical settings. These interviews often yielded rich and candid narratives. Future research may consider hybrid approaches that combine the contextual depth of in-person interviews with the accessibility of remote methods.

This study provides contextually rich insights into the sociocultural and service-related dimensions of contraceptive decision-making among postpartum adolescents in Northern Thailand. However, its findings may not be directly transferable to other geographical, social or cultural settings. Nevertheless, the categories—such as familial influences, healthcare navigation, and sociocultural accountability—may resonate with other SEA settings with comparable social structures and healthcare systems. Cross-contextual research is recommended to explore the broader applicability of these patterns.

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APPENDIX 1: NARRATIVE REVIEW PROCESS

Methods of Searching Strategies, Search Terms, Combining Terms with Boolean Operators, and Final Combined Search String:

1.1 Methods of Search Strategies

Steps	Description
1	Initial Limited Search: A preliminary search was conducted on CINHAL and Google Scholar utilising the keywords ‘contraception’, ‘decision-making’, ‘adolescent’, ‘postpartum’, and ‘LARC’. The analysis of titles and abstracts from initially identified articles facilitated the development of additional relevant keywords and index terms, thereby expanding the search scope. This search was set to literature published from the year 2000 to the present.
2	Comprehensive Database Search: following the initial search, an extensive search including several databases was carried out. The selected databases included CINAHL, ProQuest, MEDLINE, and Web of Science. Identified keywords and MeSH (Medical Subject Headings) terms were combined using the Boolean operators OR, AND, and NOT. In addition to these databases, grey literature sources, notably the WHO websites and Google Scholar, were also explored. All retrieved articles were systematically exported to Endnote, a referencing software, where their titles and abstracts underwent rigorous assessment for potential inclusion in the review.

1.2 Search Terms

Key Concepts	Synonyms/Related Terms/Alternative Terms for Keywords (Boolean Operators)
Population	Adolescent* OR teenager* OR youth OR young women OR girl* OR adolescent mother* OR teenage mother* OR young adult mother* OR young mother*
	OR nulliparous adolescent* OR multiparous adolescent* OR postpartum adolescent* OR parenting adolescent*
Interest	decision-making OR decision-making process OR decision* OR choice* OR barrier* OR facilitator* OR enabler* OR benefit*
	OR facilitating factor* OR influencing factor* OR factors influencing OR influencer* OR determinant*
Context	contraceptive* OR contraception OR LARC* OR contraceptive method* OR birth control* OR inpatient LARC* OR postnatal contraceptive*
	OR postpartum contraceptive* OR implant* OR IUD* OR Intrauterine device*
MeSH Terms	**Population MeSH Terms:** "Adolescents" [MeSH] OR "Adolescent, Pregnant" [MeSH] OR "Adolescent, Postpartum" [MeSH]
	Interest MeSH Terms: "Decision Making" [MeSH] OR "Decision Support Techniques" [MeSH] OR "Facilitator" [MeSH]
	Context MeSH Terms: "Contraceptive Agents" [MeSH] OR "Contraception" [MeSH] OR "Intrauterine Devices" [MeSH]

1.3 Combining Terms with Boolean Operators:

Step	Search Terms	Boolean Operators
Step 1	Combine Population and Interest Terms	AND
	(Adolescent* OR teenager* OR youth OR young women OR girl* OR adolescent mother* OR teenage mother* OR young adult mother*	
	OR young mother* OR nulliparous adolescent* OR multiparous adolescent* OR postpartum adolescent* OR parenting adolescent*)	
	AND	
	(decision-making OR decision-making process OR decision* OR choice* OR barrier* OR facilitator* OR enabler* OR benefit*	
	OR facilitating factor* OR influencing factor* OR factors influencing OR influencer* OR determinant*)	
Step 2	Include Context	AND
	AND	
	(contraceptive* OR contraception OR LARC* OR contraceptive method* OR birth control* OR inpatient LARC* OR postnatal contraceptive* OR postpartum contraceptive*	
	OR implant* OR IUD* OR Intrauterine device*)	
Step 3	Incorporate MeSH Terms	AND
	AND	
	("Adolescents" [MeSH] OR "Adolescent, Pregnant" [MeSH] OR "Adolescent, Postpartum" [MeSH])	
	AND ("Decision Making" [MeSH] OR "Decision Support Techniques" [MeSH] OR "Facilitator" [MeSH])	
	AND ("Contraceptive Agents" [MeSH] OR "Contraception" [MeSH] OR "Intrauterine Devices" [MeSH])	

1.4 Final Combined Search String

(Adolescent* OR teenager* OR youth OR young women OR girl* OR adolescent mother* OR teenage mother* OR young adult mother* OR young mother* OR nulliparous adolescent* OR multiparous adolescent* OR postpartum adolescent* OR parenting adolescent*) AND (decision-making OR decision-making process OR decision* OR choice* OR barrier* OR facilitator* OR enabler* OR benefit* OR facilitating factor* OR influencing factor* OR factors influencing OR influencer* OR determinant*) AND (contraceptive* OR contraception OR LARC* OR contraceptive method* OR birth control* OR inpatient LARC* OR postnatal contraceptive* OR postpartum contraceptive* OR implant* OR IUD* OR Intrauterine device*) AND ("Adolescents" [MeSH] OR "Adolescent, Pregnant" [MeSH] OR "Adolescent, Postpartum" [MeSH]) AND ("Decision Making" [MeSH] OR "Decision Support Techniques" [MeSH] OR "Facilitator" [MeSH]) AND ("Contraceptive Agents" [MeSH] OR "Contraception" [MeSH] OR "Intrauterine Devices" [MeSH])
(Adolescent* OR teenager* OR youth OR young women OR girl* OR adolescent mother* OR teenage mother* OR young adult mother* OR young mother* OR nulliparous adolescent* OR multiparous adolescent* OR postpartum adolescent* OR parenting adolescent*) AND (decision-making OR decision-making process OR decision* OR choice* OR barrier* OR facilitator* OR enabler* OR benefit* OR facilitating factor* OR influencing factor* OR factors influencing OR influencer* OR determinant*) AND (contraceptive* OR contraception OR LARC* OR contraceptive method* OR birth control* OR inpatient LARC* OR postnatal contraceptive* OR postpartum contraceptive* OR implant* OR IUD* OR Intrauterine device*) AND ("Adolescents" [MeSH] OR "Adolescent, Pregnant" [MeSH] OR "Adolescent, Postpartum" [MeSH]) AND ("Decision Making" [MeSH] OR "Decision Support Techniques" [MeSH] OR "Facilitator" [MeSH]) AND ("Contraceptive Agents" [MeSH] OR "Contraception" [MeSH] OR "Intrauterine Devices" [MeSH])

1.5 Data Extraction Forms

This section outlines the data extraction process undertaken for the review, comparing the approach with the standardised data extraction tool used JBI framework. Key details and the iterative and pilot-testing processes recommended by the JBI framework are highlighted.

The JBI framework emphasises a standardised approach to data extraction with a strong focus on methodological rigor. It includes specific details related to study identification, characteristics, outcomes, and results. Although it does not explicitly list methodological quality or other information such as funding sources and conflicts of interest, the JBI framework advocates for an iterative process and pilot-testing of the data extraction tool to ensure consistency and reliability across different studies.

Section	Details
Identification Details	
Title of the Study	
Authors	
Year of Publication	
Journal	
Country	
Study Characteristics	
Study Design	
Objective/Aim	
Population	
Sample Size	
Intervention/Phenomenon	
Intervention/Exposure	
Comparator (if applicable)	
Outcomes/Findings	
Primary Outcomes	
Secondary Outcomes	
Key Findings	
Methods	
Data Collection Methods	
Analysis Methods	
Duration of Follow-Up	

Section	Details
Context	
Setting	
Contextual Factors	
Relevance to Review Question	
Relevance to Research Question	
Inclusion Criteria Met	
Quality/Appraisal	
Risk of Bias	
Quality Appraisal	
Notes	
Additional Comments	

APPENDIX 2: ETHICAL APPROVAL

2.1 The University of Nottingham

University of Nottingham
UK | CHINA | MALAYSIA

Faculty of Medicine & Health Sciences
Research Ethics Committee
Faculty Hub
Room E41, E Floor, Medical School
Queen's Medical Centre Campus
Nottingham University Hospitals
Nottingham, NG7 2UH
Email: FMHS-ResearchEthics@nottingham.ac.uk

13 January 2020

Miss Lawitra Khiaokham
PhD Student
c/o Dr Catrin Evans
Associate Professor
School of Health Sciences
B Floor, Queen's Medical Centre Campus
Nottingham University Hospitals
Nottingham
NG7 2UH

Dear Miss Khiaokham

Ethics Reference No: 441-1912 **– please always quote**	
Study Title: Adolescent Mothers' Experiences, Perceptions and Decision-Making regarding Long-Acting Reversible Contraceptives (LARC) in Thailand	
Location of Study: Chiang Mai, Thailand	
Chief Investigator/Supervisor: Dr Catrin Evans, Associate Professor, School of Health Sciences	
Lead Investigators/student: Miss Lawitra Khiaokham, PhD Student, School of Health Sciences	
Other Key Investigators/Collaborators: Professor Helen Spiby, Professor in Midwifery, Dr Sara Borelli Assistant Professor, School of Health Sciences.	
Proposed Start Date: 01/02/2020	**Proposed End Date:** 31/08/2020

The Committee considered this application at its meeting on 13 December 2019 and the following documents were received:

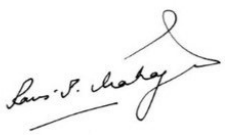
- FMHS REC Application form and supporting documents version 1.0: 28/11/2019

These have been reviewed and are satisfactory and the study has been given a favourable opinion.

A favourable opinion has been given on the understanding that:

1. All appropriate ethical and regulatory permissions are respected and followed in accordance with all local laws of the country in which the study is being conducted and those required by the host organisation/s involved. Please submit approval letters from the Maharaj Nakom Ching Mai Hospital and the Health Promotion Hospital, Chiang Mai, Thailand when these are available.
2. The protocol agreed is followed and the Committee is informed of any changes using a notice of amendment form (please request a form).
3. The Chair is informed of any serious or unexpected event.
4. An End of Project Progress Report is completed and returned when the study has finished (Please request a form).

Yours sincerely



Professor Ravi Mahajan
Chair, Faculty of Medicine & Health Sciences Research Ethics Committee

2.2 Health Promotion Centre Research Ethics

The Ethics Committee Certification for Research in Human Subjects

Health Promotion Center Region 1 Chiang Mai

Research Project No:	15/2563
Title of Project::	Adolescent Mothers' Experiences, Perceptions, and Decision-Making regarding Long-Acting Reversible Contraceptives (LARC)
Principal Investigator:	Miss Lawitra Khiaokham
Department :	Faculty of Health Sciences, University of Nottingham, the United Kingdom

Result of Ethics Committee		
1.	Protocol Synopsis	No. 1 24 February 2020
2.	Information Sheet for Research Volunteer	No. 2 10 July 2020
3.	Informed Consent Form	No. 2 10 July 2020
4.	Questionnaire/Quiz	No. 2 10 July 2020

We also confirmed an Ethics Committee constituted in agreement and in accordance with the ICH-GCP.

The committee has reviewed and approved for implementation of the research study as above mention, therefore the Thai protocol will be mainly conduct. The protocol must be approved by continuation review for the duration of one year until date of expired.

progress report: ทุก ๆ	☐ 3 months ☐ 6 months ☑ 1 year ☐ Etc.		
Date of Approval	24 February 2020	**Date of Expired**	24 February 2021

Sign. Chotiros Phanpong

(Miss Chotiros Phanpong)

Chairman of the Ethics Committee, Department of Health

Health Promotion Center Region 1 Chiang Mai

Remarks

Researchers should submit Continuing review report (RF13-01) to the Ethics Committee every 6 months until the expired date and notify them:

1) When an adverse event in the research project will occur or it will be a serious adverse event, please inform and report in adverse event report form (RF18-01) or Serious adverse event report form (RF18-02) to the committee as soon as possible.

2) When there will be a change in the research project, it must be clearly state what change has been made with the reasons for the change in Protocol amendment form (RF12-01) to request the approval from the Ethics Committee.

3) When the research project leader will change or add someone to be the researcher. The research team must send the curriculum vitae of the additional person to the Ethics Committee for consideration and approval.

4) When the research project will be terminated, it may be incomplete research or may not be able to continue. The research team must to declare the indication and reason in Termination protocol report form (RF14-01) to the Ethics Committee.

2.3 Faculty of Medicine, Chiang Mai University

No. 269 / 2020

Certificate of Ethical Approval

Name of Ethics Committee: Research Ethics Committee No. 1 Faculty of Medicine, Chiang Mai University **Address of Ethics Committee:** 110 Intavaroros Rd., Amphoe Muang, Chiang Mai, Thailand 50200	
Principal Investigator: Miss Lawitra Khiaokham Obstetrics and Gynecology Nursing Department, Faculty of Nursing, Chiang Mai University.	
Protocol title: Adolescent Mothers' Experiences, Perceptions, and Decision-Making regarding Long-Acting Reversible Contraceptives (LARCs) **STUDY CODE: NONE-2563-07255** **Research ID:** 07255 **Sponsor:** -	
Documents approved	**Document reference**
Research protocol	Research Protocol Version 3.0 Date 24 June 2020
Protocol amendment	-
Participant information sheet/ Informed consent form	Parent information sheet and Informed consent form version 3 Date 24 June 2020 Participant information sheet and Informed consent form (15 – 17 years old) version 3 Date 24 June 2020 Participant information sheet and Informed consent form (> 18 years old) version 3 Date 24 June 2020
Recruitment material	Announcement Poster version 3 Date 24 June 2020
Case report form	Case Record Form version 2 date 20 April 2020
Patient's card and other documents given to research participants	Interview Questions Guidance version 2 date 20 April 2020 Research Card version 1 Date 7 February 2020
Supplementary documents reviewed Principal Investigator Curriculum vitae: Miss Lawitra Khiaokham version 1.0 Date 7 February 2020 Co-Investigator Curriculum vitae: Assoc. Prof. Cartin Evans, Ph.D. Prof. Helen Spiby Assist. Prof. Sara Borrelli, Ph.D.	

No. 269 / 2020

The research has been approved:

[ ] By expedited review

[✓] By full committee review

Committee **Board 1** meeting no. **4 /2020 Date: May 28, 2020**

Date of Approval: ....15.... **July 2020 Expiration Date:** ....14.... **July 2021**

Progress report required every 1 year

Date next progress report required: ....15.... June 2021

(About one month before expiry date)

This Ethics Committee is organized and operates according to GCPs and relevant international ethical guidelines, the applicable laws and regulations.

Signed : .....

(Emeritus Professor Malai Muttarak, M.D.)

Chairman, Faculty of Medicine

POSTAPPROVAL REQUIREMENT:

- Investigator must renew approval by submission of progress report for REC continuing review about one month prior to the expiration date if the research is to be continued.
- Prior Research Ethics Committee approval is required before implementing any changes in the consent documents or protocol unless (a) these changes are necessary for the safely of subjects, (b) minor changes such as logistical or administrative aspects of the trial (e.g., change of monitor(s), telephone number(s)).
- Any event or new information that adversely affect the safety of the subject or conduct of the trial must be reported to the REC promptly.
- Any protocol deviation/violation/noncompliance must be reported to the REC.
- All adverse drug reactions (ADRs) that are both serious and unexpected must be reported to the REC promptly as stated in Faculty of Medicine Notice.

2.4 Faculty of Nursing, Chiang Mai University

Research Ethics Office
Faculty of Nursing, Chiang Mai University

AF 04-021

No. 053/2020

Certificate of Approval

Name of Committee : Research Ethics Committee, Faculty of Nursing, Chiang Mai University **Address of Committee** : 110/406 Intavaroros Rd., Amphoe Muang, Chiang Mai, Thailand 50200	
Principal Investigator : Miss Lawitra Khiaokham Doctoral Program Faculty of Nursing, University of Nottingham	
Protocol Title : Adolescent Mothers' Experiences, Perceptions, and Decision-making regarding Long-Acting Reversible Contraceptives (LARC) in Thailand **Research ID**: 2020-025 ; **Study Code**: 2020-FULL006 **Sponsor**: None	
Documents filed	**Document reference**
Research protocol	Version 2 Date April 20, 2020
Informed consent documents	Version 2 Date April 20, 2020
Patient information sheet	Version 2 Date April 20, 2020
Instrument	Version 1 Date February 7, 2020
Principal Investigator Curriculum vitae	Version 1 Date February 7, 2020
Advertisements : Contraceptive Experiences and Decision-making process	Version 1 Date February 7, 2020

Opinion of the Ethics Committee/Institutional Review Board : Full Board Review on February 21, 2020
The Ethics Committee has reviewed the protocol and documents above and give the favorable opinion

Date of Approval : **April 23, 2020** **Expiration Date** : **April 22, 2021**

Progress report is required to be submitted to the Ethics Committee for continuing review

[ ] at 3 month interval
[ ] at 6 month interval
[✓] annually (in this case please submit at least 60 days prior to expiration date)

This Ethics Committee is organized and operates according to GCPs and relevant international ethical guidelines, the applicable laws and regulations.

Signed : wichit Srisup

(Professor Emerita Dr.Wichit Srisuphan)

Chairperson, Faculty of Nursing, Chiang Mai University

Signed :

(Professor Dr.Wipada Kunaviktikul)

Dean, Faculty of Nursing, Chiang Mai University

GENERAL CONDITION OF APPROVAL:

1. Research Ethics Committee approval is required before implementing any changes in the consent documents or protocol unless those changes are required urgently for the safely of subjects.
2. Any event or new information that may affect the benefit/risk ratio of the study must be reported to the REC promptly.
3. Any protocol deviation/violation must be reported to the REC.
4. Review of close study report is required to be submitted to the REC.
5. Review of progress report to the REC before expiration date at 2 months.

APPENDIX 3: POSTER INVITATION

University of Nottingham
UK | CHINA | MALAYSIA

Research project:

Contraceptive Experiences and Decision-making process

Exploring how adolescent mothers make decisions about using or not using Long Acting Reversible contraceptives (LARC) after childbirth

We would you to share your stories with us

- Are you 15 to 19 years old?
- You don't need to have any experience using contraception.
- You don't need to be using LARCs.
- You are able to be interviewed approximately an hour.

To find out more email: lawitra.khiaokham@nottingham.ac.uk
Call us for more details: (pre-paid sim card will be purchased)

email: Lawitra.Khiaokham@nottingham.ac.uk
Tel: (XXX-XXX-XXXX)

APPENDIX 4: RESEARCH CARD

Research Project:

Contraceptive Experiences and Decision-making Process

We would like you to share your stories with us

- Are you 15 to 19 years old?
- You don't need to have any experience using contraception.
- You don't need to be using LARCs.
- You are able to be interviewed approximately an hour.

To find out more email: lawitra.khiaokham@nottingham.ac.uk
Call us for more details: (pre-paid sim card will be purchased)

APPENDIX 5: PARTICIPANT INFORMATION SHEET

University of Nottingham
UK | CHINA | MALAYSIA

Faculty of Medicine & Health Sciences

School of Health Sciences

B33 Room Postgraduate Research Office

School of Health Sciences, University of Nottingham

Queen's Medical Centre, Nottingham, NG7 2HA

Study Title: Adolescent Mothers' Experiences, Perceptions, and Decision-Making regarding Long-Acting Reversible Contraceptives (LARC) in Thailand: Exploring how adolescent mothers make decisions about LARC use.

Name of Chief Investigators: Associate Professor Dr. Catrin Evans, Professor Helen Spiby, Assistant Professor Dr. Sara Borrelli and Lawitra Khiaokham

PARTICIPANT INFORMATION SHEET

Research Ethics Reference: [441-1912]

Version 2.0 Date: 24/06/2020

We would like to invite you to take part in a research study. Before you decide, it is important for you to understand why the research is being done and what it will involve. One of our team will go through the information sheet with you and answer any questions you have. Please take time to read this carefully and discuss it with your parents or others if you wish. Ask us anything that is not clear.

What is the purpose of the research?

We know little about how adolescent mothers make decisions and experience contraceptive use after childbirth. This study aims to understand what influences adolescent mothers in Thailand, what happens to them, and what they experience while making decisions on whether to use LARCs.

Why have I been invited to take part?

You may be receiving this information sheet because you have seen one of our adverts or have been contacted by one of our nursing colleagues in the hospitals during your admission in postpartum ward, or while visiting teenage, well-baby, or family planning clinics.

You are being invited to take part because you have recently given birth and are less 20 years old. You do not need to have any experience of using contraception before pregnancy and do not need to use LARCs. Importantly, you are being invited to share personal experiences of making decisions about using contraception. We are inviting up to 25 people like you to take part.

Do I have to take part?

No. It is up to you to decide on your own if you are over 18 years old and want to take part in this research. If you are under 18 years old and would like to take part, you will also need permission from your parents (in which case the Parental Consent Form must be completed before participation). Then, we will describe the study and go through this information sheet with you (and your parents) to answer any questions you (and your parents) may have. If you agree to take part, we will ask you to sign a Consent Form and will give you a copy to keep. However, you will still be free to withdraw from the study at any time, without giving a reason, and without any negative consequences, by advising the researchers of this decision. This would not affect your statutory legal rights or the quality and type of healthcare you receive.

1. What will happen to me if I take part?

Your involvement in the study will take approximately an hour for one interview. If you decide to take part in the study, you will be asked about personal information and to attend an interview about LARC experiences and decision-making choices. The appointment can be set when you are visiting the hospital, either for baby vaccination at the well-baby clinic or for a postpartum check-up at the family planning clinic. We understand that the long process of waiting for service in a hospital may be tiring, especially when you visit the hospital alone. In this case, re-scheduling will be made whenever convenient for you, such as during the next appointment of you or your baby at the hospital. By attending this interview, you formally enter the study. This interview will take place in a private room inside the hospital. The conversation will be audio-recorded, with your permission. If you wish to have a break, stop the interview, or withdraw from the study during the interview you may do so; your participation is entirely voluntary.

During the unpredictable spreads of Coronaviruses or COVID-19, we do not know when the pandemic will be ended. We are concern that you may feel uncertainty to be interviewed face-to-face. If the COVID-19 become aggravated, a face-to-face interview will be paused in respect to social responsibility and abide by government regulations to slow down transmission. Therefore, if this will happen, we would like to interview you through applications such as LINE, Facebook or whatever applications that you are convenient.

2. Are there any risks in taking part?

Some people may find talking about contraception after giving birth to be a private matter and they may feel uncomfortable or embarrassed to share this information with others. The research team member who speaks with you be a health professional experienced in discussing sensitive topics**.**

3. Are there any benefits in taking part?

For some people, it may be useful to talk about your contraceptive experiences after giving a baby. In other research studies like this, people report that taking part can be a positive experience.

There will be no direct benefit to you from taking part in this research. However, your contribution may help us to understand what it is going on during the time of deciding on contraception after giving birth. Studies like this may help to understand adolescent mothers' needs in order to improve the continuation rate of using LARCs to prevent unintended pregnancy. This information may have relevance for adolescents' contraceptive support, enabling health providers and policymakers to improve services offered to people like you.

4. Will my time/travel costs be reimbursed?

Participants will receive a baby bath set to acknowledge their time contributing to the study. However, if you feel inconvenient to be interviewed on the same day as your hospital visit, we will provide travel compensation of ฿300 [approximately £7.50] for making an additional journey.

5. What happens to the data provided?

We will follow all applicable ethical and legal practice and regulations in handling all information about you in confidence.

If you join the study, the data collected for the study will be looked at by authorised persons from the University of Nottingham who are organising the research. All will have a duty of confidentiality to you as a research participant, and we will do our best to meet this duty**.** All information collected from you during the research will be kept strictly confidential, stored in

a secure and locked office, and on a password- protected database. This means we are responsible for looking after your information and using it properly. To safeguard your rights, we will use the minimum personally identifiable information possible. Any information about you which leaves the University will have your name and address removed (anonymised), and a unique code will be used so that you cannot be recognised from it.

Where interviews are recorded, this will be done on a digital recorder, and the recording will be transferred onto a university computer where it will be stored in a password-protected file. The recording will then be deleted from the recorder. Interviews will be transcribed and anonymised by a member of the research team. These anonymised transcripts will also be stored on the computer in a password- protected file. Transcripts and recordings will be filed by the code assigned to you, not under your name. Where a written record of an interview has been kept, the notes will be typed and stored in a password-protected file.

All other research data will be kept securely for seven years. After this time your data will be disposed of securely. During this time all precautions will be taken by all those involved to maintain your confidentiality, only members of the research team given permission by the data custodian will have access to your personal data.

In accordance with the University of Nottingham's policies we may share our research data with researchers in other educational institutions, including those in other countries, for research in health and social care. Sharing research data is important to allow peer scrutiny, re- use (avoiding duplication of research), and to understand the bigger picture in particular areas of research. Data sharing in this way is usually anonymised (so that you could not be identified), but in the unlikely event that we need to share identifiable information, we will seek your consent for this and ensure it is secure (and you will retain the right to refuse).

Although what you say in interviews is confidential, should you disclose anything to us which we feel puts you or anyone else at any risk, we may feel it necessary to report this to the appropriate persons.

6. What will happen if I don't want to carry on with the study?

Even after you have signed the Consent Form, you are free to withdraw from the study at any time. You do not need to give any reason and your statutory legal rights and the quality and type of healthcare services you receive will not be affected. Any personal data will be destroyed. If you withdraw, we will no longer collect any information about you or from you but we will keep the anonymous research data that has already been collected and stored, as we are not allowed to tamper with study records, and this information may have already been

used in some analyses and may still be used in the final study analyses. To safeguard your rights, we will use the minimum personally identifiable information possible.

7. Who will know that I am taking part in this research?

If you are under 18, it is legally required that you obtain parental consent if you wish to participate, in which case you will inform your parents, and they will be told about the nature of the study and will be asked to sign the Parental Consent Form. Apart from this, no one will be notified of your participation in this study.

8. What will happen to the results of the research?

The interviews in the study will be studied in detail and will be used in writing a thesis for an educational qualification (PhD) by one of the research team members. The thesis will be published online and material form. It will also be published in articles submitted to academic journals and conferences to share the findings with others. Direct quotes from your interviews may be used in these publications, but you will not be identified in any of these. If you want to know about the published findings from this study, we will share it with you by sending email provided. The research will be written up as a thesis. On successful submission of the thesis, it will be deposited both in print and online in the University archives, to facilitate its use in future research. The thesis will be published open access.

9. Who has reviewed this study?

All research involving people is looked at by an independent group of experts called a Research Ethics Committee, to protect your interests. This study has been reviewed and authorised as safe and appropriate for you by the Faculty of Nursing Research Ethics Committee, Faculty of Medicine Research Ethics Committee, Chiang Mai University (Reference number: 269/2020) and Health Promotion Centre, region 1 Chiang Mai Research Ethics Committee. (Reference number: 15/2563).

10. Who is organising and funding the research?

This research is being organised by the University of Nottingham and is being funded by Chiang Mai University.

11. What if there is a problem?

If you have a concern about any aspect of this project, please speak to the researcher (Lawitra Khiaokham), who will do her best to answer your query. The researchers' contact details are given at the end of this information sheet. The researcher should acknowledge your concern

within 10 working days and give you an indication of how she intends to deal with it. If you remain unhappy and wish to complain formally, you can do this by contacting:

1. The Research Ethics Committee Administrator, Faculty of Nursing, Chiang Mai University Address: 110/406 Intrawarorot Road, Suthep, Muang, Chiang Mai, 50200 Telephone: 053-935024 or via E-mail: cmufonec@gmail.com
2. The Research Ethics Committee Administrator, Faculty of Medicine, Chiang Mai University Address: 110 Intrawarorot Road Soi 2, Suthep, Muang, Chiang Mai, 50200 Telephone: 0-53-936643 or via E-mail: researchmed@cmu.ac.th or researchmed@gmail.com
3. The Research Ethics Committee Administrator, Health Promotion Centre Region 1 Chiang Mai Address: 51 Prachasamphun Road, Changclan, Muang, Chiang Mai, 50100 Telephone: 053-27401 or via E-mail: researchhpc1@gmail.com

12. Contact Details

If you would like to discuss the research with someone beforehand (or if you have questions afterwards), please contact:

Miss Lawitra Khiaokham

Faculty of Nursing, Chaing Mai University 110/406 Inthawaroros Road, Suthep, Mueang Chiang Mai District. Chiang Mai 50200, Thailand UoN job title: PhD student in nursing studies

Telephone: 062-316-1216 Email: lawitra.khiaokham@nottingham.ac.uk

APPENDIX 6: INFORMED CONSENT FORM (PARTICIPANTS)

University of Nottingham
UK | CHINA | MALAYSIA

Faculty of Medicine & Health Sciences
School of Health Sciences
B33 Room Postgraduate Research Office
School of Health Sciences, University of Nottingham
Queen's Medical Centre, Nottingham, NG7 2HA

CONSENT FORM
(Final version 2.0: 04/08/2020)

Title of Study: Adolescent Mothers' Experiences, Perceptions, and Decision-Making regarding Long-Acting Reversible Contraceptives (LARC)

REC ref: 441-1912

Name of Researcher: Assc. Prof. Dr. Catrin Evans, Prof. Helen Spiby, Asst. Prof. Dr. Sara Borrelli, and Lawitra Khiaokham

Name of Participant: _____ **Please initial box**

1. I confirm that I have read and understand the information sheet version number 2.0 dated 04/08/2020 for the above study and have had the opportunity to ask questions. ☐
2. I understand that my participation is voluntary and that I am free to withdraw at any time, without giving any reason, and without my medical care or legal rights being affected. I understand that should I withdraw then the information collected so far cannot be erased and that this information may still be used in the project analysis. ☐
3. I understand that relevant sections of data collected in the study may be looked at by authorised individuals from the University of Nottingham, the research group and regulatory authorities where it is relevant to my taking part in this study. I give permission for these individuals to have access to these records and to collect, store, analyse and publish information obtained from my participation in this study. I understand that my personal details will be kept confidential. ☐
4. I understand that the interview will be recorded and that anonymous direct quotes from the interview may be used in the study reports. ☐
5. I agree to take part in the above study. I also understand that although what I say in the interview is confidential, if I disclose anything which researcher feel puts myself or anyone else at any risk, it is necessary to be reported this to the appropriate persons. ☐

_____	_____	_____
Name of Participant	Date	Signature
_____	_____	_____
Name of Person taking consent	Date	Signature

2 copies: 1 for participant, 1 for the project notes

APPENDIX 7: INFORMED CONSENT FORM (PARENTS AND PARTICIPANTS)

University of Nottingham
UK | CHINA | MALAYSIA

Faculty of Medicine & Health Sciences
School of Health Sciences
B33 Room Postgraduate Research Office
School of Health Sciences, University of Nottingham
Queen's Medical Centre, Nottingham, NG7 2HA

Consent Form
(Final version 2.0: date: 04/08/2020)

Title of Study: Adolescent Mothers' Experiences, Perceptions, and Decision-Making regarding Long-Acting Reversible Contraceptives (LARC)

REC ref: 441-1912

Name of Researcher: Assc. Prof. Dr. Catrin Evans, Prof. Helen Spiby, Asst. Prof. Dr. Sara Borrelli, and Lawitra Khiaokham

Name of Parent/Guardian: _____

Name of Child: _____ **Please initial box**

1. I the above-named parent have been consulted about my child's participation in this research project. I have read and understand the information sheet version number 2.0 dated 04/08/2020 for the above study and have had the opportunity to ask questions. ☐
2. I understand that I can request my child is withdrawn from the study at any time, without giving any reason, and without their legal rights being affected. I understand that should I withdraw them from the study, then the information collected so far cannot be erased and that this information may still be used in the project analysis. ☐
3. I understand that the interview will be recorded and that anonymous direct quotes from the interview may be used in the study reports. ☐
4. I understand that relevant sections of the data collected in the study may be looked at by authorised individuals from the University of Nottingham and the research group. I give permission for these individuals to have access to these records and to collect, store, analyse and publish information obtained from their participation in this study. I understand that their personal details will be kept confidential. ☐
5. I voluntarily agree for my Child to take part in this study. ☐

Name of Parent/Guardian	Date	Signature
Name of Child (optional for those that like to)	Date	Signature
Name of Investigator	Date	Signature

2 copies: 1 for participants, 1 for the project notes

APPENDIX 8: RECRUITMENT PROCESS

Approach to Recruitment

Participants were recruited using two primary methods:

1. Poster Invitations – Informational posters were displayed in clinical areas to inform potential participants about the study.
2. Direct Introduction by Gatekeepers – Healthcare providers or clinic staff (gatekeepers) introduced the study and distributed research cards to eligible participants.

Recruitment Settings and Procedures

Recruitment took place in four clinical settings, with specific strategies applied in each location:

Clinical Setting	Recruitment Strategy	Follow-Up Process
Postpartum Ward	Research cards were provided to eligible participants and, if agreeable, affixed to their antenatal booklet.	Appointment details were recorded and forwarded to the researcher for follow-up at well-baby or family planning clinics.
Youth-Friendly Health Services (YFHS) Clinic	Similar to the postpartum ward, research cards were distributed, and contact details were recorded.	Participants were instructed to contact the researcher if they wished to arrange an interview.
Family Planning Clinic	Participants who had previously received research cards were reminded (without coercion) to confirm participation via direct contact with the researcher.	Participants could contact the researcher upon completing their hospital visit.
Well-Baby Clinic	Gatekeepers distributed research cards to newly identified eligible participants and explained the study.	Interested participants were encouraged to schedule an interview after their hospital visit.

- Participants under 18 years of age required parental consent before participation.
- An information sheet and parental consent form were provided and had to be returned at the next hospital visit.
- To avoid coercion, gatekeepers reminded participants of the study without directly inquiring about their decision.

APPENDIX 9: PERSONAL INFORMATION

Assigned code: _____

Initial: _____

1. Age: _____years and _____ months Date of Birth: _____
2. Baby's birth date: _____ Place of birth: _____
3. Order of Pregnancy: _____ Number of living children: _____
4. Occupation:

   _____

5. Educational status: _____
6. Religion: _____
7. Ethnicity: _____
8. Living arrangement: _____
9. Marital status:

   Single _____ Married _____ Separated _____ others (specify): _____

10. Contraceptive use methods in the past:

    SARCs (specify): _____

    LARCs (specify): _____

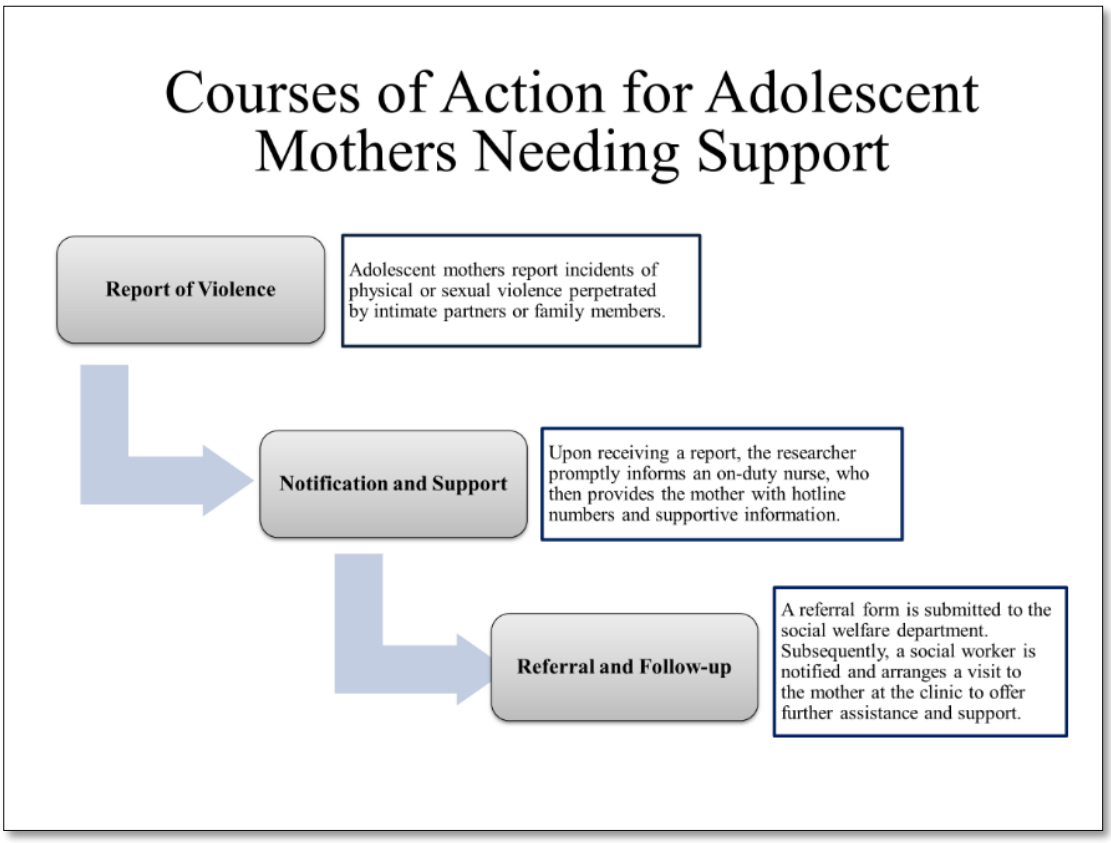
11. Current contraceptive method being used: _____
12. How long have you been using this method? _____
13. How long have you planned to use the current contraceptive method? _____
14. Who are the supporting persons regarding contraceptive use? _____

    Mother Husband/partner Mother-in-law siblings/cousin Friends

    Healthcare providers others (specify): _____

APPENDIX 10: SUPPORT CARD

APPENDIX 11: COURSES OF ACTION FOR ADOLESCENT MOTHERS NEEDING SUPPORT



This process outlines the structured response protocol for adolescent mothers who disclose incidents of physical or sexual violence perpetrated by intimate partners or family members. The support system consists of three key stages:

1. Report of Violence

The process begins when an adolescent mother discloses an incident of violence—either physical and sexual—perpetrated by a partner or family member. This disclosure may occur spontaneously or in response to routine screening questions during data collection or clinical interaction. The report serves as the first step in initiating safety and support measures.

2. Notification and Support

Upon receiving a disclosure, the researcher immediately notifies the on-duty nurse to ensure a prompt institutional response. The nurse then provides the adolescent mother with essential resources, including emergency hotline numbers, referral information, and guidance about available services. This stage ensures initial psychological reassurance and access to immediate support options.

3. Referral and Follow-Up

After notification, a formal referral form is submitted to the social welfare department. A social worker is then assigned to the case and arranges a follow-up visit with the adolescent mother at the clinic. This visit enables further assessment of her needs and the delivery of additional support, such as access to legal aid, psychological counselling, shelter services, or other protection mechanisms.

APPENDIX 12: INTERVIEW TOPIC GUIDE (FIRST VERSION)

Pre-Interview Procedures

1. **Introduction and Consent Process (Before Recording)**
   - The researcher welcomes the participant:

     "Thank you for taking part in this study. Your insights are valuable in helping us understand contraceptive decision-making."
   - The researcher provides an overview of the study:

     Purpose: *"This study explores women's experiences, decision-making processes, and satisfaction with LARCs."*

     Participation rights:

     "*There are no right or wrong answers; we are interested in your experiences and perspectives."*

     "You may pause, stop, or withdraw from the study at any time without any consequences."
   - Consent and confidentiality:

     "All information will remain confidential. We will not use your name or any identifiable details."
   - Consent for audio recording:

     "To ensure accuracy, we would like to audio-record this session. Do I have your permission to start recording now?".

2. **Interview Approach**
   - The researcher employs active listening, probing questions, and silence as a reflective tool when necessary.
   - The researcher avoids leading questions and remains reflexive and aware of their own assumptions and potential biases.
   - The researcher remains sensitive to cultural norms, emotional readiness, and age-specific communication, adapting the language and pace of the interview accordingly.

Interview Topics and Questions

1. **Initial Conversation: Exploring Contraceptive Use Postpartum**

   "Can you share your experiences of using contraception after childbirth?"

   "What did you know about LARCs before you started using one?"

   "Have you noticed any changes in your body or daily routine since using a LARC?"

   (If yes) "Can you describe what those changes were like for you?

   "How have you managed these changes?"

   "Did you receive any support while adjusting to these changes? If so, from whom?"

2. **Decision-making process for LARCs**

   "Can you describe what you considered before choosing this method?"

   "How did you feel when you received contraceptive counselling from the nurse?"

   (Follow-up) What aspects of the counselling were most useful or unclear?

   "What influenced your decision to choose this method over others?"

   "What concerns or hesitations, if any, did you have before choosing a LARC?"

   "Who or what was the most influential factor in your decision-making process?"

3. **Satisfaction and Continuation of LARCs**

   "How has your experience with LARCs been so far"

   "What do you like most about this method?"

   "Have you encountered any challenges or side effects? If so, how have you managed them?"

   "How do you feel about continuing with this method in the future?" (Follow-up) What factors might lead you to continue or discontinue LARC use?

4. **Probing Techniques**

   To encourage deeper responses, the researcher will use:

   "Can you explain that further?"

   "Could you give me an example?"

   "Can you tell me what that means in your own words?"

   "What helped you make that decision?"

This guide was developed in English and translated into Thai. Back-translation and pilot testing were conducted to ensure conceptual accuracy and cultural appropriateness.

APPENDIX 13: INTERVIEW TOPIC GUIDE (MODIFIED)

Introduction and Informed Consent (before audio recording):

- Welcome the participant: "Thank you for joining this interview. Your insights are valuable in helping us understand how young mothers make decisions about contraception."
- Explain the study purpose: "This study aims to understand how young mothers think about, choose, and experience using contraception after giving birth."
- Emphasise voluntary participation: "There are no right or wrong answers. You can choose to skip questions, pause the interview, or stop at any time."
- Assure confidentiality: "Your name and personal information will remain confidential and will not appear in the report."
- Request audio consent: "To make sure we capture your words correctly; may I have your permission to record this interview?"

Warm-Up Questions

1. "Can you tell me a bit about yourself or your baby?"
2. "What do you know about family planning or birth control?"

Section 1: Experiences and Perceptions of Contraception

1. "What does the word 'contraception' or 'LARC' mean to you?"
2. "How do you feel about using contraception in general?"
3. "What types of contraceptive methods have you heard about?"
   (e.g., condoms, pills, injectables, implants, emergency contraception)
4. "Can you tell me about any contraception you used before or after giving birth?"
    - "Where or how did you first learn about contraception? (e.g., school, clinic, internet)
    - Have you ever had an unintended pregnancy? If so, how did that affect your view of contraception?
5. "Have you heard of LARCs like implants or IUDs? Where did you first hear about them?"
6. "What do you think about LARCs?"
    - Positive: long-lasting, effective, convenient
    - Negative: fear of pain, side effects, difficult removal, stories from others or online

7. "Have you experienced any body or lifestyle changes after using a LARC?"
    - Changes in menstruation, mood, weight, energy
8. "How have you responded to these changes?"
9. Considered switching or removing the method? Sought support?
10. "Has anyone supported you during these changes?"
    - Partner, friends, healthcare provider

Section 2: Decision-Making Process

1. "What did you think about before deciding to use (or not use) this contraceptive method?"
    - Was anyone particularly helpful or influential?
    - Did you make the decision during pregnancy or afterward?
    - What made the decision easy or hard?
2. "Can you describe what it was like when a nurse or doctor talked to you about contraception?"
    - During antenatal care? Postpartum care? Teen clinic?
    - Did you feel you had a real choice? Was the information clear?

3. "Why did you choose this method?" Free or recommended? Preferred side effects? Familiarity?
4. "What helped or convinced you to choose this method?" Family member, healthcare provider, peer advice, online information
5. "Who influenced you the most when making this decision?" Probe: who came up most often in your mind when deciding?

Section 3: Satisfaction and Continuation

1. "How do you feel now about using this method?"
    - Positive or negative experiences?
    - Any side effects or unexpected outcomes?
2. "How long do you plan to use it?"
    - Planning to continue? Considering switching or stopping?
    - What would lead you to continue or stop

APPENDIX 14: CROSS-CHECK LANGUAGE TRANSLATION

MEMORANDUM

Affiliation Faculty of Nursing, Chiang Mai University **Phone:** +66(53)-935021

Ref. No.8393(7)/031 **Date** 4th February 2020

Subject Cross-check of the research study documents (Ethics Reference No: 441-1912)

To: Chair, Research Ethics Committee, Faculty of Medicine & Health Sciences, University of Nottingham

I, Assistant Professor Dr. Orn-Anong Wichaikhum, Nursing Lecturer, at Faculty of Nursing, Chiang Mai University, have cross-checked the Thai version of the research study entitled "Adolescent Mothers' Experiences, Perceptions, and Decision-Making regarding Long-Acting Reversible Contraceptives (LARC) in Thailand".

I would like to certify that the concept and the areas included remain the same meaning as English version.

Signature .....

(Assistant Professor Dr. Orn-Anong Wichaikhum)

APPENDIX 15: EXAMPLES OF MEMO-WRITING

MEMOS [22 December 2020] Comparing within the data of MCH06

Interesting events in her life:

- interviewed at age of 16 years and 3 months.
- Engaged in risky behaviours; multiple partners, treatment for syphilis [baby also checked for syphilis and exhibited fast breathing at birth.
- Experienced an unintended or unplanned pregnancy versus sporadic use of protection (occasional condom use)
- has used emergency pills and condoms.
- did not receive any antenatal car and went to the hospital only when in labour.

Analytic data:

1. Throughout the interview, contradictory data emerged. The mother talked about wanting to have a baby, yet this conflicts with not receiving antenatal care and using emergency pills to avoid pregnancy. The phrase "let it be in the way it should be", appears to have a deeper meaning, possibly about pregnancy fulfilling a certain need or desire in her life.
2. The duration of the relationship before pregnancy was quite short, only a few months. They have been together for a total of one and a half year, implying a short period before the pregnancy, (considering a 10-month pregnancy and a 4-month-old baby).
3. **Issues of trust issue versus condom use**: she used condoms consistently with ex-boyfriends but stopped using them with her current boyfriend due to desire to have a baby. However, this is contradictory to using emergency pills to prevent pregnancy. In her context, it seems more likely that she experienced an unplanned or unintended pregnancy, especially considering the lack of antenatal care.
4. This case clearly supports the properties of emerging categories like "being forced to get implants" and "not being offered choice" [Quotes: being forced to get implant from mother, not taking part in making the decision, not being explained about implants, being doubted and surprised "if they call you to get implants, go and get it."]
5. **The absence of communication:** she was not informed about subdermal implants. I wonder if she faced stigma due to having had syphilis, not receiving antenatal care, or being a young mother. She perceived this pregnancy as a social issue, with the implants being as only solution for her complicated situation.

6. **Lack of continuity in care:** she did not receive care from the teenage clinic or ANC and was not exposed to contraceptive knowledge from HCPs.
7. **Not being offered choices:** her contraceptive choice [implant] seems to have been made by her mother and perhaps influenced by HCPs.
8. **The intention of not having a baby versus continuation rate:** the number of children seems to influence contraceptive use in the postpartum period and continuation rate of the implant. In this case, the decision about the number of children to have appears to be influenced by the biological mother, mother-in-law, or partner, not just the couple**.** For example, she expressed "I don't want to get it removed before due date [even she didn't decide to use implant] because I don't have to have another baby, maybe thinking to use another one when I will be 19 [the free project for teenagers who under 20.]". What she is saying is about all [mother, partner, and herself] wanted to have only one, one is enough!

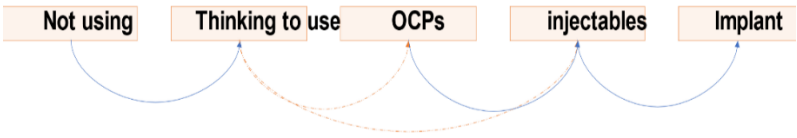
MEMOS-Developing tentative categories

[26th January 2021]

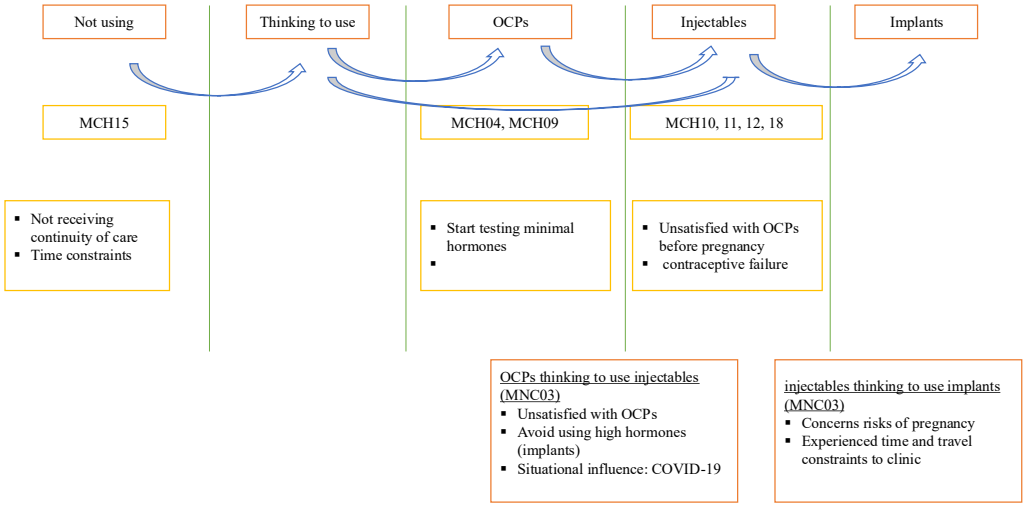
<u>Perceptions, experiences and decision-making towards LARCs</u>

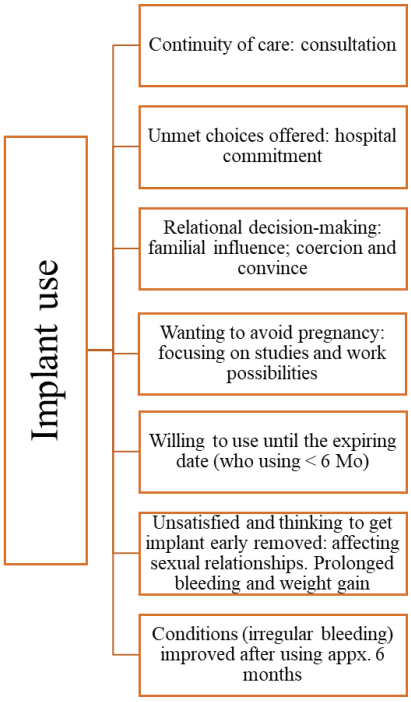
The pattern of contraceptive use in adolescent mothers

A specific pattern for the mother who had a high degree of freedom in making a decision and not received continuity care.



The steps of contraceptive use testing a minimal level of hormonal exposure





- The pattern of contraceptive use began with a low effective method for pregnancy prevention [lack of experiences and knowledge] [emergency pills and condoms with inconsistent use --- unintended pregnancy group]

    - **<u>Not using ---- thinking to use [OCPs and injectables]</u>**
        - **Low degree of responsibility**
            - Unawareness of having risks for pregnancy
            - Not paying attention to use protection

        - **Situational influence**
            - Busy and unavailable time
            - Lack of supports from family
            - Inaccessibility to buy the OCPs in a remote area, not being offered contraceptive use before hospital discharge postpartum check-up at the remoted hospital
            - Unnecessary to use because of not living together during the COVID-19
    - **<u>Short-acting methods [OCPs and injectables]</u>**
        - Testing the minimal level of hormonal side effects
        - Barriers: facing difficulties --- thinking to use long-acting methods
            - Unsatisfied side effects [absent period – worrying about getting pregnant]
            - Situational influences
                - Time, working conditions, and travelling constraints
                - COVID-19 limiting number of hospital visitors
                - Uncertainty: more concerned about getting pregnant than pains.
        - Unmet choice: willing to get implant but became 20 when she was 20
        - Rejecting implants
            - The pain from a device insertion and removal [media and friend influences --- scary pictures from difficult removal and a big rod]
            - Timing [offering in labour room]: not ready to get it before discharge and experience more pain after delivery.
            - Side effect influences: putting on weight and prolonged bleeding
            - Misbelief: having difficulty to conceive a baby
            - Pregnancy interval: less than two years

- **Long-acting method [implant]**
  - Facilitators: receiving continuity care [contraceptive consultation, teenage clinic, hospital commitment to using implant before discharge]
  - Facilitators: encouragement to use implant from family, boyfriend, and HCPs
  - Wanting to have pregnancy Interval suffering from prolonged labour
  - Limited two choices offered: coercive and convinced to use implant
  - Self-assessment of the past contraceptive experiences: as a mistake --- committing to use implants
  - Satisfied --- continuation and life-goal commitment [studies and pregnancy interval, a high degree of responsibility, confident in its effectiveness on pregnancy prevention]
  - Unsatisfied --- thinking to get it removed [those had had the implant < 6 months]
    - Prolonged and irregular bleeding --- affecting the sexual relationship
    - Putting on weight --- affecting body images
  - Continue using [those had had the implant for 9-11 months] --- periods became regular and better

Developing the concepts and categories

1. Relational decision-making/relative decision-making
2. Degree of responsibility for decision-making
3. Limited/unmet choices and time offered: [implant and injectables] and [implant and tubal resection]
4. Committing to use contraception
   [met choice: continuation, satisfaction,]
   [unmet choice: unsatisfaction, thinking to change to other [long-acting] methods, thinking to get the implant removed]

APPENDIX 16: OPEN CODING

Examples of Open Coding

MNC02

Demographics and Context:
- Age: 19 years, 6 months
- Baby boy is going to be 7 months old.
- Mode of Transport: Arrived at the hospital alone via motorbike
- Education: Currently in the second year at university
- Field of Study: Mass Communication at Chiang Mai University (CMU)
- Religion: Christian
- Living Arrangement: Resides with boyfriend in a rented dormitory

Childcare Arrangements:
- "My mom takes care of my baby [in Chiang Rai], but my boyfriend supports the rearing expenses because he is working now."

Preferences for Future Children:
- "We would like to have a baby girl because my boyfriend said he's afraid that a baby boy might be naughty."

MNC02
Interview date: 25 August 2020
[Appointment for interview[

Past Contraceptive Use:
- Condoms, emergency pills, OCPs, and withdrawal methods.

Current Contraceptive Use:
- After birth, received injectables for 3 months at the postpartum check-up and switched to a 5-year implant nearly 3 months ago.

Future Contraceptive Plans:
- Plan to use the 5-year implant, possibly switching to a 3-year implant later. Reason: does not want to have a baby until after graduation.

Support System:
- Supporters include partner and friend.

Partner's Background:
- "He is 21 and 2 years older than me."

Partner's Involvement in Pregnancy:
- "My boyfriend takes good care of me and attended every antenatal care (ANC) visit."

Partner's Commitment to Childcare:
- "My boyfriend said he would take all responsibilities for the baby."
- 'We made him born, so we should take the best care of him."

Contraceptive Decision-Making:
- "He said, 'It [choosing contraceptive methods] depends on me.'"

Mother's Initial Reaction and Ongoing Support:
- "After revealing my pregnancy, my mom called me two days later. Since then, I have consulted her about everything, including what food I should eat. She supported me by buying baby's stuff."

Mother's Involvement in Contraceptive Decisions:
- "My mom asked me, 'Which method would you use?' She recommended injectables because she had used them before, as well as contraceptive pills."

Peer Influence on Contraceptive Decision:
- "My close friend, who was pregnant three months before me, influenced my decision to choose implants. She suggested, 'Shall we go to get implants together when we get back to university?' Since she was accepted to study at the same university as me, I agreed with her proposal. She researched and sent me information about the 3-year and 5-year implant options."

Friend's Experience with Implants:
- "She received free implants from Samui hospital before I did."

Life Situation Influence on Parenthood:
- "I think I'm lucky because my family is ready to rear a child. Both my family and my boyfriend's family are middle class. Some teenage mothers who lack knowledge can be a burden for society. I've seen news [studied in my faculty: mass communication] debating whether teenage motherhood is a burden for society or not."

Comparison of Family Support and Societal Impact:
- "In my case, it's alright because our parents can support and raise the baby in good quality, but some cannot. The babies of less fortunate teenage mothers are left without fundamental education and cannot take care of themselves."

Social Media Influence on Contraceptive Choices:
- "I uploaded a post about 'going to get implants' on Instagram as a story, sharing it more like a recommendation for others to consider implants. I think it's good and effective. We don't need to worry because it lasts long term. If we have a boyfriend... or experience a condom failure, we don't need to worry at all because we're already on implants. However, the doctor emphasized that implants cannot protect against STDs."

Information and Recommendations from Online Forums:
- "I've seen reviews of implants on the PANTIP forum, where it is recommended that most university students get free implants through university-organized projects. For example, Chiang Mai University offers free implants for university students, even those over 20, through the student health scheme. I've just learned about this as well."

User Experiences Shared on Forums:
- "In the reviews, it is mentioned that the procedure isn't too scary. You may feel a bit of pain only when the anesthesia is injected. After that, it's going to be fine. You are advised to take care of the implant site; avoid lifting heavy things and exposing it to water. There was a photo of the wound site shown in the review."

Initial Contraceptive Use and Unplanned Pregnancy:
- "We always used condoms, and my boyfriend always prepared them. However, we experienced a one-time condom leak, and I took emergency pills afterward. I was quite sure I took it correctly."
- "It was an unplanned pregnancy. I was shocked at first but did not feel regret or consider abortion. Being a mom made me feel mature."

Confirmation and Disclosure of Pregnancy:
- "My period was absent for a month. I discussed it with my boyfriend, and we decided to buy a pregnancy test, which showed positive. My boyfriend advised keeping it confidential until the pregnancy was confirmed. We went to the Maternal and Child Health Center (MNC) where the pregnancy was confirmed at over a month. I started receiving antenatal care (ANC) from then and gained 15 kg, from 43 to 58 kg."
- "I decided to tell my family when I was 7 months pregnant. I was studying in Chiang Mai and didn't go back to my hometown when my belly got bigger. I was stressed about revealing my pregnancy. At ANC, I was told my mood could be irritable, swinging, and depressed due to being too young and the pregnancy being unplanned."

Managing Pregnancy in University and Family Reaction:

- "I lived normally, attended university studies, and participated in all university activities, including trekking. I didn't hide my pregnancy; my friends and classmates knew. I informed my advisor and academic teacher because I might need to interrupt my studies for one term to care for my baby."
- "My older brother visited me in Chiang Mai and noticed my big belly, so I decided to tell him. He was shocked and cried. He and my second older brother decided to inform our aunt, who, along with my brother, flew from Bangkok to tell my mother. My parents were initially shocked but did not blame me. My father called to ask how I was, whether I was receiving ANC, and who I was staying with. Eventually, I moved from the university dormitory to live with my boyfriend's parents."

Support from Boyfriend's Family:
- "His parents knew about the pregnancy and did not blame us. They accepted me and my baby, seeming happy to be grandparents."
- "Everyone was more worried about me than my boyfriend because he was in his last year of university, while I was only in my second year."

University Support and Academic Planning:

- "The university staff, including my advisor and faculty teachers, were all concerned about my situation. They were aware that I had not yet informed my parents about my pregnancy. My advisor offered extensive support for my studies and registration, assuring me that I could seek help at any time. All faculty teachers were informed about my pregnancy and expressed their support and concern. They acknowledged my status as a good student and expressed confidence in my ability to manage the situation. 'They said, I am a good student; they didn't worry too much.' Additionally, I had proactively planned my studies to ensure timely graduation without needing to interrupt my studies. I presented my study plan to the academic director, who complimented my thorough preparation: 'He complimented that I'm well-planned.'"

Initial Experiences with Contraception:

- "I had my first boyfriend and we had sexual intercourse. It seemed like he wasn't wearing condoms. He brought emergency pills for me. So, it was my first time that I've known emergency pills. 'I misunderstood that you won't be pregnant if you take emergency pills, and you don't need to use condoms. I took emergency pills every time after having sex. I was doubtful so I searched for information, and I found out that it should not be taken a lot like that. I should take monthly pills instead.' The only thing I knew was it required to be taken within 72 hours after sex [release inside] to prevent pregnancy. I had a misconception. I am not sure I took it right or not. I took two tablets at once. I quite used a lot."

Use of Oral Contraceptive Pills (OCPs) and Withdrawal Method:

- "I decided to take 21-tablet contraceptive pills when I was in grade 9 [Mor.3]. I experimented but experienced body swelling [from hormones], a lot of swallowing, and pimples. I broke up with my boyfriend [ex] at that time. I always used condoms and withdrawals with my following ex-boyfriend. He sometimes released inside and sometimes outside. I took emergency pills. I didn't know about injectables or implants. 'I've known 21-tablet from searching the internet. The contents which I gone through explained about how it protects by taking every day but I didn't check its cons. I experienced like "เมายาคุม" and "บวมยา" [swelling and being drunk from pills]. I felt blurred and I couldn't focus on studying. Being drunk from pills is like feeling dizziness. It seems like it was incompatible with my body and swelling. I took it daily in the morning after breakfast. I took it in the morning to prevent me from being forgetful because I always have breakfast. [Over-the-counter drugs] no one recommended how to use pills. I got it from a pharmacy shop. I told them I wanted 21-tablets and she gave it to me. I didn't remember which brand, didn't really know. There are so many brands. I wasn't given choices. She gave only one for me. I've known 28-tablet pills. It's similar the other 7 tablets are hormone-free, aren't they? It's more like to keep you taking for a month not to forget.'"

Awareness of Other Contraceptive Methods:

- "I didn't even know about injectables and implants before. I was taught when I was in high school [Mor. 4 or Mor.5]."

Early Perception of Contraceptive Use:

- "I've known about contraception since I was in grade 8 [Mor.2] when my boyfriend gave me emergency pills to take. At that time, I hadn't been taught about contraception and didn't know about the pros and cons."

Current Contraceptive Method and Decision Making:

- "After giving birth, I used injectables for 3 months, received during the first postpartum (PP) check-up, and then switched to a 5-year implant, which I have had for 2 months. I decided on my own. '[timing] I am thinking about a contraceptive plan after I told my mom about my pregnancy.' I've told my mom about implants. My mom just heard from me. She agreed with me because it lasts longer than others and it seems more effective as well. 'I've first known about implants in school. Nurses from Chiang Rai Hospital visited and taught us [female students who were in high school] about contraception. I've never known before about the government project which provides free contraception for teenagers under 20. I felt like we have more choices and its effects last longer than others and are more effective. Then, I studied by myself more. I was thinking to get implants when I would be going to university [not being pregnant at that time].'"

Experiences Leading to Implant Use:

- "It was high school graduation. I was with my current boyfriend. We experienced leaked condoms. I took emergency pills already, but I had no clue why I was pregnant.' 'We [I and my boyfriend] had planned to get implants when we came back for study in Chiang Mai. I've heard from a senior friend about being able to get free implants at MNC because we can claim this service covering student insurance, but it was too late. So, I told my boyfriend that I choose to get an implant after giving birth.' 'I've had 5-year implants for 2 months now.' 'My boyfriend and friends helped me a lot to choose implants.' 'My mom said, "choose whatever I want." I felt painful a few days after implants. The doctor said it was normal. It was ok for me and didn't affect my routine life.'"

Long-term Contraceptive Planning and Financial Considerations:

- "I talked to my boyfriend whether to get 3-year or 5-year implants. I decided to get 5-year implants. I was on the implant in the 2nd year. The due date of the 3-year implant will be when I graduate. Personally, I don't want to get married or to have a baby and I had planned to get married when I turn 30. I preferred working first to save money. I may have a better choice of contraception. I want to have time to work so I decided to get a 5-year implant. [financial factors] The decision will be made depending on my readiness to have another baby. After the 5-year implants are due, I need to pay for it. At that time, I will have my own income, I can choose whatever methods I want 3-year or 5-year implants. I knew implants are costly as well ฿2,000 but I didn't pay for anything. [better choice] it means I may choose injectables. Getting injectables is costly, isn't it? I will have my own money and at that time, I will be able to get whatever injectables. Free offering implants affects my decision a bit."

Experience with Injectables Before Implants:

- "I decided to get injectables before getting implants at the postpartum check-up because the doctor who performed the procedure wasn't available that day. I was unsatisfied with the injectable because I experienced bleeding and spotting for the whole 3 months. I used small-size [care-free] pads countless times. I felt like I had to spend a lot of money on pads. It's also costly. I felt uncomfortable and inconvenienced doing things and found it disturbing. My boyfriend didn't complain because we were separated during lockdown. I didn't meet him because I was in Chiang Rai. We couldn't travel between provinces. I got injectables only once and was appointed [got an appointment slip in the next 3 months] to get implants. I got implants as scheduled."

Implants and Condom Use:

- "I used condoms while having implants at the beginning because condoms can protect me from STDs, but we rarely use them because I trust him that he doesn't sleep with other girls. I am open to telling anyone about having a child and implants. I don't care what other people think about me. My boyfriend and I are focused on trying our best to raise our child, not being a social burden."

Side Effects and Body Response:

- "I don't worry about my body weight but I prefer a little bit decreasing, but I eat a lot like my eating behaviors either with injectables or implants. It wasn't because of hormones.' I experienced spotting sometimes. Now, the pattern of bleeding seems gradually getting stable. My periods were drained in the first month for 2-3 weeks. I was gradually decreasing by time. The doctor told me that menstruation might be absent, spotting in the first year of using. Periods would return to normal in year 2 and 3. I don't worry that much."

Device Influence and Procedure Experience:

- "At first, I was afraid of [invasive procedure]. I came across reading a review. They talked about injecting anesthesia before incision at arm's skin. It was too close when looking at my arm. I turned my head and saw the big [hole] needle's anesthesia. I'm not the kind of person who is afraid of needles, but it looked too close. I was afraid of the blade for incision. It wasn't really painful. It didn't scare me like I thought. It doesn't affect my body, only irregular periods."

Current Contraceptive Method:

- "Implants [2 months]"

Healthcare Provider Influence at Postpartum Ward:

- "No healthcare providers (HCPs) approached me to discuss a contraceptive plan after birth."
- "The focus was more on coaching me for breastfeeding rather than discussing contraception. One nurse inquired, 'Which contraceptive methods would you use?' I expressed my choice for implants but was informed that I couldn't receive them during admission as it wasn't the appointed date for the postpartum check-up [OPD family planning]."
- "I inquired about the side effects of injectables. The nurse explained, 'Absent periods and prolonged spotting. If you experience heavy bleeding, you should come to visit the doctor before your appointment.'"

Healthcare Provider Influence at Family Planning Clinic:

- "The doctor recommended care for the implant site similar to that found in online reviews, advising that the wound should avoid exposure to water."
- "[Removal process] The doctor explained that if I wanted to have another baby or was not satisfied with the implants, I could remove them at my discretion. The ability to conceive after removing implants is faster compared to stopping injectables. He mentioned a type of hormone with a gradual mild-release, which allows the body to return to normal faster than injectables and other methods."

Expectations for Contraceptive Services:

- "I believe that contraception for teenagers should be discussed publicly as a common topic to educate the youth. It's evident that many younger individuals are unaware of which contraceptive methods are suitable for them. Healthcare providers should address this topic with children as a normal conversation, free from shame or negative connotations. While some families believe that discussing contraception with children is inappropriate, I feel it is essential for their education and well-being."

APPENDIX 17: CODING PROCESS—AXIAL TO SELECTIVE CODING WITH MEMO INTEGRATION

This appendix illustrates the progression from initial/open coding to axial coding, and finally to selective coding, drawing on data excerpts and participant narratives. Each step was supported by memo writing, which documented analytic decisions, tracked conceptual development, and facilitated theory construction in line with Constructivist Grounded Theory (Charmaz, 2014).

Step 1: Open Coding

Data Excerpt:

"My mom and nurse kept telling me to get implants. I didn't want another child, but I was scared of the rod inside me. I finally agreed because they kept saying it's safer." (Tanida, 17, Implants)

Initial Codes:

- Fear of implant
- External encouragement (mother, nurse)
- Unwanted pregnancy prevention
- Compliance despite hesitation

Step 2 Axial Coding (connecting categories and subcategories)

Axial coding involved organising codes into conceptual categories and specifying the relationships between conditions, interactions, and consequences (Strauss & Corbin, 1998). For example:

Category	Subcategories/properties
Relational Decision-Making	- Influence of parents and HCPs - Trust vs. pressure - Agency within relationships
Bodily Autonomy and Integrity	- Fear of foreign objects - Discomfort with implants

Category	Subcategories/properties
	- Fear of pain/insertion - Conflicted consent
Risk Management & Reproductive Planning - Balancing emotional discomfort with practical benefits	- Desire to avoiding pregnancy - Balancing fear with protection

Memo: Negotiating Support and Fear

Tanida's narrative highlights an internal conflict—external validation of implants as "safe" vs. her visceral fear of insertion. Her final decision reflects neither full coercion nor free choice. It is a negotiated response to relational authority figures, mediated through bodily anxiety. This reinforces the "Relational Decision-Making" category and supports the conceptual link to "Negotiated Autonomy."

Contraceptive decisions are not binary (autonomous/coerced) but emerge through negotiation—between fear and trust, personal discomfort and social endorsement, future planning and embodied experience.

Step 3: Across-Case Coding and Memo Integration

Patterns across cases supported the emergence of core conceptual dimensions. Below are examples of cross-case axial categories, supported by participant data and analytic memos.

Across-Case Coding Example (Axial → Selective)

Axial Category	Subcategories / Properties	Cross-Case Illustrations
Negotiating Bodily Autonomy	Balancing fear of implants vs. pregnancy Embodied discomfort Fear vs. control	Rachaya, Tanida, and Jirapan expressed fear of insertion but accepted implants due to effectiveness. Others like Kanokkorn opted for injectables due to fear of weight gain.
Relational Pressures and Support	Maternal and partner influence Emotional trust vs. soft coercion.	Tanida accepted implants after mother's nudging. Kanchanee declined implants despite combined advice from HCPs and partner.
Digital Influence and Risk Perception	Online misinformation Visualised complications Social comparison	Kanokkorn and Sudarat reported fear of removal after watching YouTube videos. Kamonnat changed her decision after speaking to a nurse.
Institutional Access and Constraints	Postpartum services Default method offering Removal restrictions	Many described implants being offered immediately after birth. Some felt they lacked real choice due to service-level protocols.

Analytic Memo (Selective Coding Stage)

Across participants, autonomy emerged not as a fixed trait but as a situated practice—negotiated daily in response to relationships, clinical guidance, bodily concerns, and information flows. Some initially resisted LARCs due to social media fear, but adopted them later through relational reassurance and policy access. This iterative process crystallised into the core theoretical dimension of "Negotiated Autonomy," now articulated across four decision-making types in the conceptual model.

Step 4: Axial to Selective: Coding Integration Table

Open/Initial Codes	Axial Code (Category)	Selective Code (Theoretical Dimension)	Supporting Excerpt/Theoretical Link
"I opted for a 5-year implant because a 3-year one would expire during my second year. I wanted job stability before considering another child." (Chollada, 19, implants)	Future-oriented planning	Proactive Decision-Making (Individual level)	Emphasises individual agency and forward planning (proactive agency)
"My mom, healthcare providers, and boyfriend encouraged me to choose implants… I hesitated… I decided against it and they	Conflicted advice, Personal choice	Autonomy and Control over Bodily Integrity Relational Decision-Making	autonomy within family/HCP advice

Open/Initial Codes	Axial Code (Category)	Selective Code (Theoretical Dimension)	Supporting Excerpt/Theoretical Link
respected my choice." (Kanchanee, 20, injectables)			
"I rejected free implants due to worries about weight gain—my boyfriend also had concerns about my appearance." (Kanokkorn, 20, injectables)	Body image concern, Peer influence	Relational Decision-Making	peer narratives, beauty norms
"I joined a Facebook group… most sharers complained about weight gain… removal seemed scarier. Healthcare providers didn't allow early removal." (Kanokkorn, 20, injectables)	Digital anxiety Institutional mistrust	Service-Oriented Decision-Making	Reflects online misinformation and fear
"The nurse said I had to wait for approval before removal—so I gave up asking." (Nalinee, 15, Implants)	Consent not honoured	Service-Oriented Decision-Making	institutional power and access limits
"I worried about implants after reading online stories, but my	Peer reassurance HCP trust	Relational decision-making	

Open/Initial Codes	Axial Code (Category)	Selective Code (Theoretical Dimension)	Supporting Excerpt/Theoretical Link
friend reassured me. I discussed it with the nurse." (Kamonnat, 19, injectables)			
"I chose implants because I might forget the injections… They didn't pressure me; the decision was entirely mine." (Tanida, 17, implants)	Informed choice with support	Bodily Autonomy and Control	autonomy reinforced by social trust

The use of open, axial, and selective coding, supported by systematic memo writing, allowed for conceptual depth and analytic clarity. Memoing ensured theoretical saturation and transparency, guiding the abstraction from lived experience to higher-order constructs. This process underpins the final model of postnatal contraceptive decision-making as a dynamic, relational, and multi-level negotiation of autonomy.