

Addressing the Teen Mom Situation in Thailand: A Systematic Review on Challenges, Initiatives and Recommendations for Improvement

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Abstract

Teenage pregnancy in Thailand poses significant public health challenges with implications for societal welfare and economic development. This systematic review analyzed the challenges faced by teenage mothers in Thailand, evaluated existing initiatives, and proposed evidence-based recommendations. A comprehensive literature search was conducted using the Scopus and Web of Science databases and others focusing on literature from 2016 to 2023. Keywords included “teenage pregnancy,” “teen mom,” “unwanted pregnancy,” and “unintended pregnancy” resulting in the selection of 36 studies. The PRISMA framework was followed to ensure a systematic approach. Data extraction focused on societal, educational, economic, and health-related challenges as well as the effectiveness of current interventions. Results indicated that teenage mothers in Thailand face substantial societal stigma, educational disruptions, economic difficulties, and significant health risks. Current initiatives and policies are insufficient in coverage and effectiveness. This review highlights the need for comprehensive sex education, improved access to contraception, youth-friendly sexual and reproductive health services, and targeted support programs for teenage mothers, emphasizing a multi-sectoral approach involving government agencies, Non-Governmental Organizations (NGOs), educational institutions, healthcare providers, and communities. The findings suggest that better-targeted interventions and collaborative efforts are required to reduce teenage pregnancy and improve the quality of life for teenage mothers in Thailand to foster a healthier and more inclusive society.

Keywords: challenges of teen mom, public health, Thailand, unwanted pregnancy

Abstrak

Mengatasi Situasi Ibu Remaja di Thailand: Tinjauan Sistematis tentang Tantangan, Inisiatif dan Rekomendasi untuk Perbaikan. Kehamilan remaja di Thailand menimbulkan tantangan kesehatan masyarakat yang signifikan dan berimplikasi pada kesejahteraan masyarakat dan pembangunan ekonomi. Tinjauan sistematis ini menganalisis tantangan yang dihadapi oleh ibu remaja di Thailand, mengevaluasi inisiatif yang ada, dan mengusulkan rekomendasi berbasis bukti. Pencarian literatur yang komprehensif dilakukan dengan menggunakan database Scopus dan Web of Science serta database lainnya yang berfokus pada literatur dari tahun 2016 hingga 2023. Kata kunci yang digunakan termasuk “teenage pregnancy,” “teen mom,” “unwanted pregnancy,” dan “unintended pregnancy” yang menghasilkan 36 penelitian. Kerangka kerja PRISMA diikuti untuk memastikan pendekatan yang sistematis. Ekstraksi data difokuskan pada tantangan sosial, pendidikan, ekonomi, dan kesehatan serta efektivitas intervensi yang ada saat ini. Hasil penelitian menunjukkan bahwa ibu remaja di Thailand menghadapi stigma sosial yang cukup besar, gangguan pendidikan, kesulitan ekonomi, dan risiko kesehatan yang signifikan. Inisiatif dan kebijakan yang ada saat ini tidak memadai dalam hal cakupan dan efektivitas. Tinjauan ini menyoroti perlunya pendidikan seks yang komprehensif, peningkatan akses terhadap kontrasepsi, layanan kesehatan seksual dan reproduksi yang ramah remaja, dan program dukungan yang ditargetkan untuk ibu remaja, dengan menekankan pendekatan multisektoral yang melibatkan lembaga pemerintah, NGOs, lembaga pendidikan, penyedia layanan kesehatan, dan masyarakat. Temuan ini menunjukkan bahwa intervensi yang ditargetkan dengan lebih baik dan upaya kolaboratif diperlukan untuk mengurangi kehamilan remaja dan meningkatkan kualitas hidup ibu remaja di Thailand untuk mendorong masyarakat yang lebih sehat dan inklusif.

Kata Kunci: kehamilan yang tidak diinginkan, kesehatan masyarakat, tantangan ibu remaja, Thailand

Introduction

Teenage pregnancy is a complex and pressing issue that affects millions of young people around the world, with Thailand being no exception. Despite the overall decline in fertility rates across the country, the rate of teenage pregnancy has remained consistently high. Adolescent fertility rate (births per 1,000 women aged 15-19) in Thailand was reported at 31.58% in 2022, according to the World Bank collection of development indicators, compiled from officially recognized sources. Adolescent fertility rate historical data, forecasts, and projections were sourced from the World Bank in November 2024 (Trading Economics, 2017), with values notably higher for Thailand than the average for the East Asia and Pacific region at 30.5 births per 1,000 women aged 15-19 years in 2024 (United Nations International Children's Emergency Fund [UNICEF], 2024). The persistent issue of teenage pregnancy in Thailand carries significant consequences across various dimensions including public health, social welfare, and economic development. These implications must be understood to design and implement effective strategies aimed at addressing the root causes and supporting those affected (Aramnit & Wongsawat, 2019).

Teenage pregnancy poses considerable public health concerns for mothers and their children. Adolescent mothers aged 10–19 years face a higher likelihood of complications during pregnancy and childbirth including eclampsia, puerperal endometritis, and systemic infections (World Health Organization [WHO], 2015). The risks also extend to their infants, who are more prone to low birth weight, pre-term delivery, and severe neonatal conditions (WHO, 2015). Teen mothers often lack access to adequate prenatal care, which exacerbates the health risks associated with early pregnancies (Thepthien & Celyn, 2022). Teenage pregnancy also has significant social welfare implications. A major consequence of early motherhood is disruption in the education of young mothers. Thepthien and Celyn (2022) discovered that

60% of pregnant adolescents in Thailand discontinued their education, causing long-lasting effects on the lives of these young mothers by limiting their access to higher education and stable employment opportunities. As a result, they also face a cycle of poverty and social exclusion, which impacts their children's well-being and future prospects (Psacharopoulos & Patrinos, 2018; Wungrath et al., 2022).

The high prevalence of teenage pregnancy in Thailand also has economic consequences. The loss of human capital due to early motherhood negatively impacts the workforce and overall productivity (Mörk et al., 2020). Adolescent pregnancy in Thailand poses significant economic losses, impacting the health of young mothers and also the broader socioeconomic landscape. The burden of adolescent pregnancy is reflected in the loss of healthy life years, with 15.4% of total disability-adjusted life years (DALYs) attributed to this demographic, primarily due to preventable conditions like unsafe abortions and maternal hemorrhage (Aung et al., 2018). The high rates of unintended pregnancies, accounting for 80,523 cases in a single year, exacerbate the economic strain on families and healthcare systems (Aung et al., 2018). This economic burden affects the lives of young mothers and their families and also has wider implications for national development and progress.

Addressing the issue of teenage pregnancy in Thailand is a multifaceted challenge that requires the concerted efforts of various stakeholders including policymakers, educators, healthcare providers, and communities. This review article provides a comprehensive overview of the challenges faced by teen moms in Thailand by analyzing the existing initiatives and policies in place to prevent teenage pregnancies and support young mothers while offering evidence-based recommendations for improvement. A thorough understanding of the situation is required to target interventions and make meaningful progress in addressing this critical issue (Orr et al., 2020; Psacharopoulos & Patrinos, 2018).

Methods

A comprehensive literature search was conducted using the Scopus and Web of Science electronic databases, internet searches, and other trial registers. The appropriate keywords used included teenage pregnancy, teen mom, unwanted pregnancy, and unintended pregnancy (Figure 1) from all published data between 2016 and 2023 relevant to teen mom situations, relevant policies, and related studies (Table 1). The authors independently selected 36 studies and extracted the data. The reference list of each selected article was reviewed for further relevant study. The literature review focused on studies involving teenage mothers or adolescents aged 13-19 years who were either pregnant or

had given birth in Thailand. The primary aim was to examine this population within the broader context of teenage pregnancy, public health, and social welfare. The review considered a wide range of interventions, policies, and programs designed to prevent teenage pregnancies or to support teenage mothers. These interventions included initiatives related to education, healthcare, social support, and economic assistance reflecting the multifaceted nature of addressing teenage pregnancy.

To ensure a comprehensive assessment, the review included studies that compared different interventions or policies aimed at reducing teenage pregnancies or improving outcomes for teenage mothers and their children, focusing on

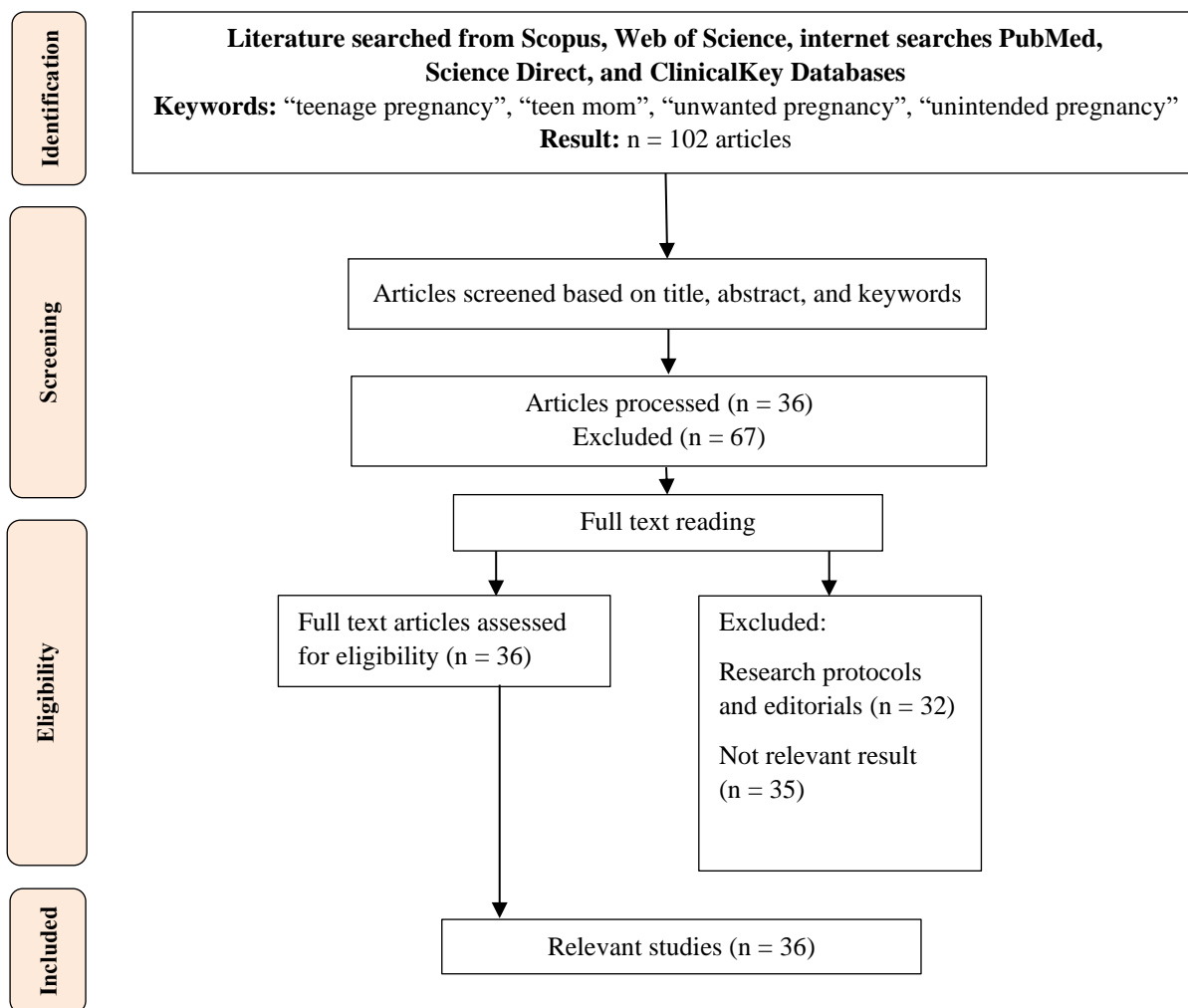


Figure 1. PRISMA Flowchart for the Selection of Articles

studies reporting various outcomes such as health-related measures (including maternal and infant health), educational attainment, and economic impacts. This approach allowed a thorough understanding of the consequences of teenage pregnancy and the effectiveness of different support mechanisms.

A broad array of study designs was considered, encompassing quantitative, qualitative, and mixed-methods research. These included randomized controlled trials, cohort studies, cross-sectional studies, case-control studies, and observational studies, ensuring a diverse and inclusive examination of the topic. The review was restricted to studies published between January 2016 and November 2023, focusing on the most recent and relevant research to provide an up-to-date synthesis of the literature.

To capture a wide range of insights and to ensure inclusivity of local contexts, the review included studies published in English and Thai. This bilingual approach was essential to incorporate findings from both international and national sources to enrich the understanding of various interventions implemented to address teenage pregnancy in Thailand.

Results

Challenges Faced by Teen Moms in Thailand.

The following sections delve deeper into the specific challenges faced by teen moms in Thailand by exploring the societal stigma and discrimination they experience, examining the impact of teenage pregnancy on education, analyzing the economic challenges they face, and assessing the health risks associated with teenage pregnancy. This in-depth analysis provides a comprehensive understanding of the many obstacles that teen moms must overcome and details the development of targeted strategies to address these challenges.

Societal Stigma and Discrimination. Teen moms in Thailand often face significant societal stigma and discrimination due to cultural and tra-

ditional beliefs. This stigma manifests in various ways such as social isolation, shaming, and exclusion from community activities (Sripipandh, 2022). Teen moms may also encounter difficulties in accessing essential services such as healthcare and education due to discrimination from service providers. This societal stigma exacerbates the challenges faced by teen moms, negatively impacting their mental and emotional well-being, and making it difficult for them to seek support and assistance (Cho et al., 2022).

Impact on Education. Teenage pregnancy has a substantial impact on the education of young mothers in Thailand. As mentioned earlier, a study by Thepthien and Celyn (2022) found that 60% of pregnant adolescents in Thailand discontinued their education due to pregnancy. High school dropout rates among pregnant teens are high, and young mothers often lack access to alternative educational opportunities. This disruption limits their chances of pursuing higher education and also reduces their long-term employability and earning potential.

Economic Challenges. Teen mothers in Thailand typically face significant economic challenges due to their limited educational attainment which impacts job opportunities, and often experience lower income levels compared to their non-parenting peers (Nawae et al., 2022). They also struggle to find stable employment, particularly if they lack support for childcare and transportation. Thus, teen moms and their children often experience financial instability and a higher risk of poverty.

Health Risks. Teenage pregnancy presents various health risks for mothers and their children. As mentioned in the introduction, adolescent mothers are more likely to experience complications during pregnancy and childbirth such as eclampsia, puerperal endometritis, and systemic infections (Waleewong & Yueayai, 2022). Studies have shown that teenage mothers in Thailand are less likely to receive adequate prenatal care, which further exacerbates these health risks

(Thepthien & Celyn, 2022).

Infants born to adolescent mothers also face higher health risks including low birth weight, preterm delivery, and severe neonatal conditions (Waleewong & Yueayai, 2022). These risks may have long-lasting effects on the child's health, development, and overall quality of life.

Current Initiatives and Policies in Thailand

Government Programs. The Thai Government has implemented several programs aimed at preventing teenage pregnancies and supporting teen moms. Some notable initiatives include the National Re-

productive Health Development Policy (2017-2026), which focuses on promoting reproductive health education and services for adolescents (Ministry of Public Health, Thailand, 2017). This policy aims to improve access to contraception, provide comprehensive sexuality education, and strengthen the capacity of healthcare providers to cater to adolescents' reproductive health needs. Another government program is the Teenage Pregnancy Prevention and Solution Act 2016. This outlines strategies to reduce teenage pregnancies such as establishing multidisciplinary teams to provide support and monitor pregnant adolescents, developing a referral system for at-risk teens, and promoting community participation in prevention efforts (Areemit et al., 2023).

Table 1. Data Analysis

No.	Article Details	Methods	Results
1	Aramnit and Wongsawat (2019) <i>Sex and Unintended Pregnancy among School Students: Reproductive Health Problems in Adolescents</i>	The study utilized a survey methodology to collect data from sample school students to explore their sexual behaviors and the incidence of unintended pregnancies.	The findings revealed a significant correlation between lack of sexual education and increased rates of unintended pregnancies among adolescents. The study emphasized the need for improved reproductive health education in schools.
2	Areemit et al. (2023) <i>Five-year Trend of Adolescent Hospitalizations and Deaths in Thailand: A Secondary National Data Health Situation Analysis</i>	The study performed a secondary data analysis of national health databases to assess trends in adolescent hospitalizations and deaths over five years.	The analysis indicated a rising trend in hospitalizations and a stable pattern in mortality rates, pointing to specific health vulnerabilities in Thai adolescents.
3	Ballard et al. (2020) <i>Parenting Practices in the Karen Refugee Community</i>	Qualitative interviews were conducted with members of the Karen refugee community to understand parenting practices.	The study found unique parenting challenges and strengths within the Karen community, emphasizing cultural adaptation and community support.
4	Ballon and Tamoria (2023) <i>Factors Contributing to and Biological Concepts About Early Pregnancy among Filipino Adolescent Mothers</i>	Qualitative research involving interviews with Filipino adolescent mothers to explore factors leading to early pregnancy.	Identified a lack of sexual education and socioeconomic factors as major contributors to early pregnancy among adolescents in the Philippines.
5	Chainok et al. (2022) <i>Lived Experiences of Adolescents Undergoing Legal Abortion in A Province of Thailand</i>	This hermeneutic phenomenological study explored legal abortion experiences among 30 Thai adolescents (aged 15–19) recruited via purposive and snowball sampling from Referral System for Safe Abortion (RSA) clinics. Data was gathered through in-depth interviews and non-participatory observation from December 2019 to July 2020 and analyzed thematically, with trustworthiness ensured by triangulation, member checking, and debriefing.	The study revealed that adolescents viewed legal abortion as a safe choice and a source of stigma, experiencing it as safe yet morally challenging. While most participants had positive health outcomes, some faced minor complications. Accessibility to legal abortion services was challenging, and the experience had a profound impact on personal growth and life perspective.

No.	Article Details	Methods	Results
6	Chalernphon (2021) <i>A Narrative Review of Adolescents' Knowledge, Attitudes and Utilisation of Contraception in Cambodia, Lao PDR, Myanmar, Thailand and Vietnam</i>	Narrative literature review on adolescent contraception use.	The review identified gaps in knowledge and varying attitudes towards contraception, highlighting cultural and educational barriers in the Mekong region countries.
7	Cho et al. (2022) <i>Association between Social Support and Postpartum Depression</i>	Quantitative analysis of the relationship between social support and postpartum depression.	Found a significant positive association between increased social support and reduced postpartum depression among new mothers.
8	Cox and Thompson (2022) <i>The Hmong</i>	Book chapter providing a cultural study of the Hmong community's practices regarding death.	Described traditional Hmong beliefs and practices surrounding death, emphasizing the importance of cultural sensitivity in healthcare and funeral services.
9	Espiritu (2020) <i>Refugee Life Making Practices: Southeast Asian Women</i>	Qualitative analysis of the life-making practices of Southeast Asian refugee women.	Explored how these women navigate and adapt to challenges while maintaining cultural identity in the diaspora, emphasizing resilience and resourcefulness.
10	Ha et al. (2023) <i>Assessing Barriers and Utilization of Sexual and Reproductive Health Services among Female Migrant Workers in Vietnam</i>	Survey and qualitative interviews with female migrant workers in Vietnam to evaluate their access to sexual and reproductive health services.	Highlighted significant barriers such as lack of knowledge, stigma, and logistical challenges, affecting service utilization among migrant workers.
11	Hotz et al. (2018) <i>The Impacts of Teenage Childbearing on The Mothers and The Consequences of Those Impacts for Government</i>	The study used data from the National Longitudinal Survey of Youth (NLSY), which tracks a nationally representative group of individuals aged 14–21 in 1979 including teen mothers whose teenage years spanned from 1970 to 1985. The NLSY provides data on social welfare benefits received by participants such as Aid to Families with Dependent Children, food stamps, Supplemental Security Income, and General Assistance.	Findings indicated that teen mothers generally come from more disadvantaged backgrounds than those who delay childbearing. The impact of early motherhood on social outcomes was smaller than previously estimated but negatively affected marriage prospects for teen mothers in the long term.
12	Hymas and Girard (2019) <i>Predicting Postpartum Depression among Adolescent Mothers: A Systematic Review of Risk</i>	Systematic review of literature on risk factors for postpartum depression among adolescent mothers.	Found that factors like low social support, history of depression, and stressful life events are predictive of higher risk for postpartum depression in adolescent mothers.
13	Idris et al. (2022) <i>A Qualitative Study to Explore the Determinants of Risky Sexual Behaviors and Pregnancy among Female Adolescents in Sabah, Malaysia</i>	This study was conducted in Kota Kinabalu, Sabah, Malaysia, which has the highest pregnancy rate in the region to identify factors related to risky sexual behavior and adolescent pregnancy.	The study found that family dynamics, peer influence, self-esteem, mental health, economic factors, and knowledge about sex significantly impact risky sexual behavior and adolescent pregnancy rates. The findings supported the recommendation to include sex education in the high school curriculum alongside physical and health education to address this issue in Sabah.
14	Khan and Idris (2023)	Study on the impact of early teenage pregnancy on mental health	Found a significant correlation between early teenage pregnancy and

No.	Article Details	Methods	Results
	<i>The Effect of Early Teenage Pregnancy on Depression and Mental Health in Malaysia</i>	outcomes among Malaysian adolescents.	increased levels of depression and other mental health issues.
15	Leekuan et al. (2021) <i>Narratives on Sex and Contraception from Pregnant Adolescent Women in A Northern Province In Thailand: A Phenomenological Study</i>	Phenomenological approach to understanding experiences of pregnant adolescents regarding sex and contraception.	Revealed deep-seated cultural and educational gaps influencing contraceptive use and sexual education among adolescents.
16	Li et al. (2020) <i>Maternal Healthcare Coverage for First Pregnancies in Adolescent Girls: A Systematic Comparison with Adult Mothers in Household Surveys Across 105 Countries, 2000–2019</i>	Data was analyzed from 283 Demographic and Health or Multiple Cluster Indicator Surveys across 105 countries (2000–2019) to estimate trends in inequality in coverage of five maternal health services between adolescent girls (15–19) and adult mothers (20–34), including antenatal care, skilled birth attendants, and postnatal check-ups within 24 hours of delivery.	Data from 0.9 million adolescent girls and 2.4 million adult mothers were analyzed. It was found that adolescent girls had lower coverage in all areas: 6.5 percentage points less for antenatal care, 3.6 points less for skilled birth attendants, and 3.2 points less for postnatal check-ups. Coverage for adolescents was 54.2%, 69.7%, and 30.0%, respectively. Despite improvements in many countries, age-related disparities persisted, especially in the Western Pacific (e.g., Vietnam, Laos, Cambodia, and the Philippines).
17	Maravilla et al. (2017) <i>Factors Influencing Repeated Teenage Pregnancy: A Review and Meta-Analysis</i>	This review searched eight databases (1997–2015) for studies on factors linked to repeated teenage pregnancy in adolescents under 20. Narrative synthesis and meta-analyses provided pooled odds ratios and examined sources of study heterogeneity.	In 26 studies (mostly U.S.-based), over 47 factors were identified without publication bias. Contraception, especially long-acting reversible methods, and educational factors (higher education and school continuation) were protective against repeated teenage pregnancy. Depression, a history of abortion, and partner support increased risk. Study heterogeneity was influenced by follow-up frequency and study location.
18	Mason-Jones et al. (2016) <i>School-Based Interventions for Preventing HIV, Sexually Transmitted Infections, and Pregnancy in Adolescents</i>	Systematic review of school-based interventions aimed at preventing HIV, STIs, and adolescent pregnancy.	Highlighted effective strategies in school settings that reduced the incidences of HIV, STIs, and unintended adolescent pregnancies.
19	Mörk et al. (2020) <i>Consequences of Parental Job Loss on The Family Environment and on Human Capital Formation-Evidence from Workplace Closures</i>	This study used detailed Swedish administrative data to examine the impacts of parental job loss, focusing on cases of workplace closures to minimize selection bias in displaced workers. This approach allowed researchers to accurately measure the effects of job loss on various family outcomes.	The study found that parental job loss negatively impacted parental health, labor market outcomes, and family stability, though effects on children were limited. There was no observed impact on childhood health, and educational and early adult outcomes remained unaffected by paternal job loss, with only minor negative effects from maternal job loss. Family disposable income was largely stable due to Sweden's welfare support, especially benefiting low-income families. The dual-earner model and incentives for female labor participation may

No.	Article Details	Methods	Results
			explain the minimal impact of maternal job loss.
20	Muthuta (2021) <i>Public Policy Related to Fertility in Thailand: Past, Present and The Way Forward</i>	Analysis of historical and current public policies related to fertility in Thailand.	Discussed the evolution of fertility-related policies and proposed future directions for more effective family planning and population management.
21	Nawae et al. (2022) <i>A Repeated Teenage Pregnancy in Southernmost of Thailand</i>	Study on patterns and determinants of repeated teenage pregnancies in southern Thailand.	Identified socioeconomic and cultural factors contributing to high rates of repeated teenage pregnancies in the region.
22	Orr et al. (2020) <i>Exposure to Family and Domestic Violence is Associated with Increased Childhood Hospitalisations</i>	Retrospective analysis using medical records to study the impact of domestic violence on child hospitalizations.	Demonstrated a clear link between domestic violence exposure and increased rates of hospitalization among children.
23	Plesons et al. (2019) <i>Forward, Together: A Collaborative Path to Comprehensive Adolescent Sexual and Reproductive Health and Rights in Our Time</i>	The study examined adolescent sexual and reproductive health and rights (ASRHR) by analyzing the progress and challenges since the 1994 International Conference on Population and Development, with a focus on political, financial, and systemic factors impacting ASRHR globally.	Findings highlighted significant opportunities for advancing ASRHR through increased funding, political support, protective laws, data usage, and quality program implementation. However, persistent issues like gender inequality, denial of adolescent sexuality, and weak systems continue to hinder progress. Five strategic areas were proposed to address these challenges over the next decade.
24	Psacharopoulos and Patrinos (2018) <i>Returns to Investment in Education: A Decennial Review of Global Literature</i>	Review and metaanalysis of global studies measuring the economic returns of investment in education.	Confirmed that investments in education yielded substantial economic returns across different global regions.
25	Sanghirun et al. (2021) <i>Perspectives of Parents Regarding Sexual and Reproductive Health in Early Adolescents: A Qualitative Descriptive Study</i>	Qualitative descriptive study using interviews with parents to explore their perspectives on adolescent sexual and reproductive health.	Parents expressed concerns about early adolescent exposure to sexual content and the need for effective communication and education on sexual and reproductive health.
26	Sanitya et al. (2020) <i>Healthcare Providers' Knowledge and Attitude Towards Abortions in Thailand: A Pre-Post Evaluation of Trainings on Safe Abortion</i>	Pre-post study design evaluating training interventions aimed at improving healthcare providers' knowledge and attitudes towards safe abortion practices in Thailand.	The training significantly improved healthcare providers' knowledge and attitudes towards safe abortion, suggesting the effectiveness of targeted educational interventions.
27	Sriprapandh (2022) <i>Education Model Development of Media Health Literacy for Adolescents in Upper Northern Thailand</i>	Descriptive analysis on the development of an educational model to enhance media health literacy among adolescents in Upper Northern Thailand.	Proposed a model that facilitated adolescents' understanding of health information through media, aiming for social upliftment and improved health literacy.
28	Tabain et al. (2019) <i>Central Lisu</i>	Linguistic study analyzing the phonetic characteristics of the Central Lisu language.	Detailed description and analysis of the phonetic system of Central Lisu, contributing to the broader understanding of Sino-Tibetan linguistic features.
29	Tasijawa et al. (2021) <i>Is Adolescent Fertility High in Maluku Province? Indonesian</i>	Statistical analysis of data from the Indonesian Demographic and Health Survey to assess adolescent fertility rates in Maluku Province.	Found high rates of adolescent fertility in Maluku Province, suggesting a need for targeted reproductive health education and services.

No.	Article Details	Methods	Results
	<i>Demographic and Health Survey (IDHS) Data Analysis in 2017</i>		
30	Teerawichitchainan et al. (2019) <i>Productive Aging in Developing Southeast Asia: Comparative Analyses between Myanmar, Vietnam and Thailand</i>	Comparative analysis of aging populations in Myanmar, Vietnam, and Thailand, focusing on economic and social engagement in older age.	Highlighted the varying levels of productive engagement among older adults in these countries, influencing policy directions for aging populations in Southeast Asia.
31	Thepthien and Celyn (2022) <i>Risky Sexual Behavior and Associated Factors among Sexually-Experienced Adolescents in Bangkok, Thailand: Findings from A School Web-Based Survey</i>	Cross-sectional web-based survey analyzing risky sexual behaviors and associated factors among adolescents in Bangkok.	Identified key factors associated with risky sexual behaviors including lack of knowledge and exposure to risky peer behaviors, underscoring the need for targeted health education.
32	Thongsomboon et al. (2020) <i>Perceived Stress and Associated Factors among Pregnant Women Attending Antenatal Care in Urban Thailand</i>	Cross-sectional study assessing perceived stress and its factors among pregnant women attending antenatal clinics.	Found high levels of stress linked to personal, family, and economic concerns, highlighting the need for supportive measures in antenatal care settings.
33	Todd and Black (2020) <i>Contraception for Adolescents</i>	The study reviewed current approaches and guidelines for adolescent contraception, focusing on shared decision-making within a rights-based framework and the role of healthcare providers in delivering adolescent-friendly reproductive health services.	Although adolescent pregnancy and abortion rates have declined, unintended pregnancies remained high. Long-acting reversible contraceptives (LARCs) were particularly effective and suitable for adolescents, and dual method use was recommended to prevent unintended pregnancies and sexually transmitted infections. Providers play a key role in offering non-judgmental, high-quality care that meets adolescents' unique needs.
34	Waleewong and Yueayai (2022) <i>Patterns of Socioeconomic Inequities in SDGS Relating to Children's Well-Being in Thailand and Policy Implications</i>	Analysis of socioeconomic disparities affecting the achievement of SDGs related to children's well-being in Thailand.	Identified significant inequities impacting children's health, education, and general welfare, suggesting targeted policy interventions to address these disparities.
35	Wu et al. (2022) <i>The Relationship between Form and Ritual in Cultural Sustainability</i>	Conceptual analysis of how traditional forms and rituals contribute to cultural sustainability.	Argued that maintaining traditional forms and rituals is crucial for sustaining cultural identity and continuity, emphasizing the need for cultural preservation.
36	Wungrath et al. (2022) <i>Perception towards Food Choice among Low-Income Factory Worker Parents of Pre-School Children in Northern Thailand</i>	Qualitative interviews and focus groups with low-income factory worker parents.	The study found that the main factors influencing food choices included financial constraints, availability of food, and parental knowledge about nutrition. Parents expressed a desire to provide healthier food, but this was often limited by cost and accessibility.

Non-Governmental Organizations (NGOs). Several NGOs in Thailand work towards preventing teenage pregnancies and supporting teen moms. Organizations such as the Planned Parenthood Association of Thailand (PPAT) and

the Population and Community Development Association (PDA) provide sexual health education, contraceptive access, and counseling for adolescents. These NGOs often work in collaboration with the government and local com-

munities to reach vulnerable populations and provide tailored interventions (UNICEF, 2016, as cited in Orr et al., 2020).

Effectiveness of Programs and Policies. While the government and NGOs have made efforts to address teenage pregnancy in Thailand, the effectiveness of these programs and policies remains a concern. Some progress has been made in increasing access to contraception and sexuality education but the adolescent fertility rate in Thailand remains relatively high compared to the regional average (World Bank, 2021, as cited in Aramnit & Wongsawat, 2019). The complex interplay of cultural, social, and economic factors that contribute to teenage pregnancy necessitates a comprehensive and multifaceted approach to prevention and support initiatives (Sriprapandh, 2022).

Gaps in Existing Initiatives and Policies. Despite the current efforts, several gaps in the existing initiatives and policies need to be addressed (Li et al., 2020; Plesons et al., 2019) including: 1) limited reach of sexuality education, particularly in rural areas and among marginalized populations, 2) Insufficient training of healthcare providers to cater to adolescents' specific reproductive health needs, 3) Lack of community-based interventions that challenge societal norms and stigmas surrounding teenage pregnancy, and 4) Inadequate support for teen moms in terms of childcare, education, and employment opportunities.

Ongoing efforts by the Thai Government and NGOs to address teenage pregnancy and support teen moms are continuing but there is still room for improvement. By identifying gaps in existing initiatives and policies, stakeholders can develop more effective targeted strategies to address the complex challenges faced by teen moms in Thailand.

What is the Impact of Teen Mothers on A Country? The impact of teenage pregnancy on Thailand is multifaceted, affecting various aspects of society including public health, social

welfare, and economic development. The consequences of teen pregnancy extend beyond the individual lives of young mothers and their children, having broader implications for the country as a whole (Todd & Black, 2020).

Public Health Impact. Teenage pregnancy poses considerable public health challenges. Pregnant adolescents have increased risks of complications during pregnancy and childbirth such as eclampsia, puerperal endometritis, and systemic infections (WHO, 2015). These complications strain healthcare systems and result in higher healthcare costs (Sanghirun et al., 2021). Infants born to adolescent mothers face a greater risk of low birth weight, preterm delivery, and severe neonatal conditions leading to long-term health consequences that further burden the healthcare system (Muthuta, 2021).

Social Welfare Impact. The social welfare implications of teenage pregnancy mainly revolve around education and social inclusion. Teen moms often experience disruptions in their education, leading to higher dropout rates and limited access to higher education (Thepthien & Celyn, 2022). This disruption contributes to a cycle of poverty and social exclusion which impacts teen mothers and also their children, who experience lower educational attainment and reduced opportunities for social and economic mobility (Sanghirun et al., 2021).

Economic Impact. Teenage pregnancy has significant economic consequences for Thailand. The loss of human capital due to early motherhood negatively impacts workforce participation and overall productivity (Mason-Jones et al., 2016). A UNICEF report estimated that the economic loss associated with adolescent pregnancy in Thailand amounted to 1.1% of the country's Gross Domestic Product (GDP) in 2016 (UNICEF, 2016, as cited in Orr et al., 2020). The financial burden of supporting teen moms and their children also strains social welfare systems, diverting resources from other essential programs and services (Thongsomboon et al., 2020).

The impact of teenage pregnancy in Thailand is far-reaching, affecting public health, social welfare, and economic development. Addressing the issue of teenage pregnancy and supporting teen moms requires concerted efforts from various stakeholders including policymakers, educators, healthcare providers, and communities. By taking a comprehensive approach to prevention and support the negative consequences of teenage pregnancy can be mitigated to promote a healthier, more inclusive society.

Teen Moms Situation among Ethnic Minority Groups in Thailand. In Thailand, ethnic minority groups such as the Karen, Akha, and Lahu encounter unique challenges that contribute to high rates of teenage pregnancy. These challenges are deeply rooted in cultural, socio-economic, and health-related factors necessitating a comprehensive and culturally sensitive approach to intervention. For instance, among the Karen people, cultural norms and economic barriers often impede the regular use of contraceptives. Traditional beliefs may deter the adoption of modern contraceptive methods, and the remote locations of Karen settlements further restrict access to healthcare services. This scarcity of resources is compounded by potential misinformation or misconceptions about contraception, leading to lower usage rates (Leekuan et al., 2021). Akha and Lahu women face significant issues related to intimate partner violence, which extends to reproductive coercion. This form of coercion undermines women's autonomy over their reproductive health, frequently resulting in unintended or early pregnancies. The lack of control over their reproductive decisions is a profound hindrance to their health and well-being. Educational opportunities for these communities are also limited, which exacerbates the problem. Education plays a crucial role in reducing teenage pregnancies by increasing awareness and access to reproductive health information (Maravilla et al., 2017). The scarcity of healthcare facilities in these areas means that basic maternal and reproductive health services are often inaccessible, limiting the ability to prevent and adequately

ly manage pregnancies (Tabain et al., 2019).

Further complicating matters, there is a significant stigma associated with utilizing maternal and child health services among these communities. Cultural differences and language barriers often lead to discrimination or misunderstandings within healthcare settings, which discourages hill tribe members from seeking necessary medical care. This stigma results in poorer health outcomes for women and children and reinforces cycles of disadvantage (Wu et al., 2022).

To effectively address teenage pregnancy among Thailand's ethnic minorities, it is essential to implement targeted interventions that respect and integrate traditional beliefs and practices. These include culturally appropriate health education programs, mobile health clinics to reach remote areas, training for healthcare providers in cultural competence, and community-based initiatives that challenge harmful gender norms and empower women. By addressing the medical and broader socio-cultural factors influencing teenage pregnancy, these interventions can help to mitigate the risks and improve the lives of ethnic minority women and their communities (Ballard et al., 2020; Cox & Thompson, 2022; Espiritu, 2020).

Discussion

Several research studies have contributed to our understanding of teenage pregnancy in Thailand and its associated challenges (Thepthien & Celyn, 2022) explored the complex interplay of sociocultural factors, economic pressures, and individual circumstances that contribute to early marriage and motherhood in Northeastern Thailand using in-depth interviews and focus group discussions. Teerawichitchainan et al. (2019) analyzed trends and subnational variations in teenage childbearing, identifying significant regional disparities and emphasizing the need for targeted interventions to address the specific challenges faced by young mothers in different regions of Thailand. Sanitya et al.

(2020) evaluated the effectiveness of a school-based teen pregnancy prevention program in Thailand. This improved adolescents' knowledge about sexual and reproductive health and increased their intention to delay sexual initiation. Collectively, these studies provide valuable insights into the challenges faced by teen moms in Thailand and suggest potential interventions and support strategies.

Notably, Chainok et al. (2022) provided a comprehensive understanding of the underlying causes and contributing elements that lead to teenage pregnancies in the country. Their findings can be used to inform targeted interventions, design support measures, and develop policies that effectively address the challenges faced by teen moms in Thailand. A deeper understanding of the risk factors and the specific needs of this population will allow stakeholders to work together to create comprehensive and sustainable solutions that can improve the well-being of young mothers and their children.

Comparison of the Teen Mom Situation in Thailand with Other Southeast Asian Countries. Teen pregnancy is a significant issue across Southeast Asia, with varying rates and challenges in each country. In Thailand, the adolescent fertility rate stands at 39.3 births per 1,000 women aged 15–19 years, influenced by early marriage, socio-cultural factors, and inadequate sex education (Chainok et al., 2022).

Indonesia showed regional variations, with provinces like Maluku reporting rates of 9.7% and Kalimantan 11% for adolescent marriages and 9.9% for pregnancies. These numbers underscore the need for targeted interventions across different regions (Tasijawa et al., 2021). By contrast, the Philippines faces a significant challenge with an adolescent fertility rate of 47.9 births per 1,000 women aged 15–19 years. This high rate is driven by early sexual initiation, limited reproductive health services, and inadequate sex education. Thus, enhancing family planning and access to reproductive health services is essential (Ballon & Tamoria, 2023).

Vietnam has a lower rate of 25.3 births per 1,000 women aged 15–19 years but still faces challenges such as stigma related to premarital sex and insufficient sex education, particularly among young migrant women in industrial zones (Ha et al., 2023). Malaysia's lower teenage pregnancy rate has been attributed to effective sex education and interventions. Key factors influencing this include familial variables, peer interactions, self-esteem, psychiatric concerns, and economic considerations (Idris et al., 2022; Khan & Idris, 2023). Thus, cultural practices, socioeconomic conditions, access to reproductive health services, and the quality of sex education all influence the situation of teen moms across Southeast Asia. Tailored interventions are crucial to address the specific challenges faced by teen moms in each context (Chalernphon, 2021).

Recommendations for Improvement of the Teen Mom Situation in Thailand. Addressing the issue of teenage pregnancy and improving the situation for teen moms in Thailand is a critical issue that requires a comprehensive and multifaceted approach. This article provides evidence-based recommendations to prevent teenage pregnancies and enhance support for teen moms. By focusing on key areas such as education, access to contraception, and social stigma this article contributes to the ongoing efforts to create a more inclusive and supportive society for young mothers and their children. The following sections outline specific strategies and interventions that have proven effective in addressing the challenges faced by teen moms and preventing teenage pregnancies.

It is crucial to consider intrinsic factors such as teenagers' self-resilience in preventing unwanted pregnancy. Building self-resilience involves empowering adolescents with confidence, skills, and knowledge to make informed decisions about their sexual and reproductive health. Programs focusing on developing self-esteem, goal-setting, and critical thinking will enhance teenagers' ability to resist peer pressure and make healthier choices.

Table 2. Recommendations for Improvement of the Teen Mom Situation in Thailand

Strategies	Details
Comprehensive sex education	Implement age-appropriate, comprehensive sex education in schools and communities to empower adolescents with accurate information about sexual and reproductive health, contraception options, and responsible decision-making (United Nations Educational, Scientific and Cultural Organization [UNESCO], 2018). This will reduce the risk of unintended pregnancies among teenagers.
Access to contraception	Ensure that teenagers have access to affordable and confidential contraceptive services including a wide range of contraceptive options and counselling on their correct use (Todd & Black, 2020). Easy access to contraception can significantly reduce the rates of unintended teenage pregnancies.
Youth-friendly sexual and reproductive health services	Develop and expand youth-friendly sexual and reproductive health services that are accessible, confidential, and tailored to the specific needs of young people. These services should be staffed by trained professionals to provide non-judgmental guidance and support for teenagers seeking information or assistance regarding their sexual health (WHO, 2015).
Financial assistance and childcare services	Provide financial assistance and affordable childcare services to support teen moms in meeting the needs of their children and pursuing their education or employment opportunities. This will break the cycle of poverty and improve the well-being of teen mothers and their children (Hotz et al., 2018).
Educational and vocational programs	Develop and promote flexible educational and vocational programs that cater to the specific needs of teen moms such as alternative learning systems, distance education, and vocational training. These programs will help young mothers to continue their education or acquire valuable skills that lead to stable employment and financial independence (Hotz et al., 2018).
Addressing societal stigma and discrimination	Implement awareness campaigns and community-based initiatives that challenge societal stigma and discrimination against teen moms. Promoting empathy, understanding, and support for young mothers will help them to better navigate the challenges they face and foster a more inclusive and accepting society (Hymas & Girard, 2019).
Multi-sectoral approach	Advocate for a multi-sectoral approach to address teenage pregnancy, involving collaboration among government agencies, non-governmental organizations, educational institutions, healthcare providers, and communities. Coordinated efforts across sectors will ensure a comprehensive and effective response to the issue, maximizing the potential for positive outcomes (WHO, 2015).

This review demonstrates several key strengths and some notable limitations. One of the primary study strengths is its comprehensive scope, covering a wide array of challenges faced by teenage mothers in Thailand including societal stigma, educational disruptions, economic difficulties, and health risks. This broad approach allows a thorough understanding of the complex issues surrounding teenage pregnancy. The literature review comprised multiple reputable databases such as Scopus and Web of Science as well as internet searches and trial registers, ensuring that a wide range of relevant

studies were considered. The focus on recent data, spanning from 2016 to 2023, ensured that the findings and recommendations were based on the most current and relevant research (Table 2).

This study provides practical, evidence-based recommendations for policy and practice, offering actionable steps for improving the situation for teenage mothers. The comparative analysis with other Southeast Asian countries offers valuable contextual insights and highlights effective interventions from other regi-

ons. The study's emphasis on a multi-sectoral approach, involving collaboration among various stakeholders, underscores the importance of a comprehensive strategy to tackle teenage pregnancy.

However, this review has certain limitations. One is the language constraint, as it only included publications in English and Thai, potentially excluding relevant studies in other languages. The reliance on published studies may introduce publication bias, as studies with positive or significant results are more likely to be published than those with negative or null outcomes. The heterogeneity of the included studies, varying widely in design, population, and outcomes, may also limit the generalizability of the findings and complicate comparisons across different contexts. The study provides only a broad overview of various initiatives and policies without delving into detailed evaluations of specific interventions or their implementation processes, limiting the understanding of factors contributing to their success. The study addresses the challenges faced by ethnic minority groups, but the coverage of these populations is not as comprehensive as the general population, potentially overlooking unique issues faced by these groups. There is also the possibility of missing relevant gray literature such as government reports or NGO documents which could provide additional insights.

Conclusion

Teenage pregnancy in Thailand remains a significant challenge, with wide-ranging implications for public health, social welfare, and economic development. Teen moms in Thailand and their children face numerous challenges including societal stigma, educational disruptions, economic difficulties, and health risks. Despite the existence of various government programs and non-governmental organizations aimed at preventing teenage pregnancies and supporting teen moms, gaps remain in terms of the effectiveness and coverage of these ini-

tiatives. Addressing the teen mom situation in Thailand is crucial for the well-being of young mothers, their children, and society as a whole. Implementing evidence-based interventions such as comprehensive sex education, access to contraception, youth-friendly sexual and reproductive health services, and tailored support programs for teen moms can reduce the prevalence of teenage pregnancy and improve the quality of life for affected individuals.

Further research and collaboration among government agencies, NGOs, educational institutions, healthcare providers, and communities are essential for developing effective and sustainable solutions to the challenges faced by teen moms in Thailand. By working together and embracing a multi-sectoral approach, stakeholders can make a significant impact on the lives of young mothers and their children, ultimately fostering a healthier, more inclusive, and prosperous society.

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