

Knowledge, Attitudes and Preventive Behaviors toward Unintended Pregnancy among Female Students at Suan Sunandha Rajabhat University, Samut Songkhram Campus.

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Abstract

This cross-sectional descriptive study investigated the knowledge, attitudes, and pregnancy prevention behaviors of 1,064 female students at Suan Sunandha Rajabhat University, Samut Songkhram Campus. Data were collected using a content-validated and reliability-tested questionnaire. The results indicated that students demonstrated a moderate level of knowledge regarding pregnancy prevention (mean = 0.81) alongside generally positive attitudes. Nevertheless, notable gaps in preventive behaviors remained, with the majority exhibiting only moderate levels of pregnancy prevention practices (69.50%). Pearson's correlation analysis revealed statistically significant yet weak negative associations between knowledge and pregnancy prevention behaviors ($r = -0.15$, $p < .05$), as well as between attitudes and behaviors ($r = -0.07$, $p < .05$).

These findings underscore the need to strengthen comprehensive reproductive health education and to develop evidence-based counseling interventions aimed at improving the consistency and accuracy of pregnancy prevention behaviors among university students.

Keywords: pregnancy prevention knowledge, attitudes, preventive behaviors, students.

1. Introduction

Thai society has undergone significant cultural and behavioral changes in the digital era. Various media channels, many containing persuasive or provocative sexual content, have contributed to increased risky sexual behaviors. Meanwhile, adolescents often lack adequate media literacy and sufficient knowledge about pregnancy prevention and readiness for family life (Surasak Thaneepanichskul, 2019). Teenage mothers frequently face economic and social challenges, and adolescent pregnancy can disrupt developmental progress. Many adolescents are forced to assume adult responsibilities prematurely, sometimes leaving school due to unplanned pregnancy. Such circumstances may lead to family conflict, stress, stigma, and reduced opportunities for education and future employment (Suwachai Intaraprasert & Surasak Thaneepanichskul, 2017).

A major cause of adolescent pregnancy is inadequate contraception. Many adolescents feel embarrassed or reluctant to seek reproductive health services, resulting in poor access to accurate contraceptive information and improper use of available methods (Department of Reproductive Health, 2020). Sexual activity without protection, lack of knowledge, and alcohol or substance use further increase the likelihood of unprotected intercourse (Pimwadee Rojruengnon et al., 2017). These behaviors contribute not only to unintended pregnancy but also to the spread of sexually transmitted infections (STIs), including gonorrhea and HIV/AIDS. Unsafe abortion remains a serious public health concern and a leading cause of morbidity and mortality among adolescent girls, as it can result in hemorrhage, severe infection, or permanent infertility (Pantip Boonkerd; Thongnopkun et al., 2017).

Birth rates among Thai adolescents increased sharply between 2000 and 2012. Although the rate declined gradually between 2013 and 2018, adolescent pregnancy remains a significant public health issue (Department of Reproductive Health, 2020). Given these concerns, this study was designed to explore students' knowledge, attitudes, and pregnancy prevention behaviors, as well as the relationships among these variables.

Research Objectives

1. To investigate the knowledge, attitudes, and pregnancy prevention behaviors among female college students.
2. To examine the relationships among knowledge, attitudes, and pregnancy prevention behaviors.

2. Literature Review

Adolescent pregnancy remains a persistent public health concern in Thailand, where sociocultural norms, limited access to reproductive health services, and gaps in sexual health education continue to contribute to high rates of unintended pregnancy. Reports from UNFPA Thailand (2013, 2014) and the Department of Reproductive Health (2020) indicate that although adolescent birth rates have gradually declined, they remain above desirable levels and pose challenges for national health systems. Cultural discomfort surrounding discussions of sexuality further restricts adolescents' ability to acquire accurate information (Ministry of Education, 2008). Research identifies multiple factors contributing to unintended pregnancy. Poor communication with parents, peer influence, and reliance on inaccurate online information are common issues among adolescents (Chanon, n.d.; Maliwan et al., n.d.). Stigma and embarrassment surrounding contraceptive use also discourage adolescents from seeking reproductive health services (Tipsongkhrua, 2010). These structural and psychological barriers reduce opportunities for informed decision-making and safe sexual behaviors.

Contraceptive knowledge plays an important role in pregnancy prevention, yet several studies reveal persistent misconceptions. Mekharat (2020) and Khuannasu et al. (2023) report that adolescents often understand basic contraceptive methods but lack accurate knowledge regarding correct usage and emergency contraception. Laloons and Maneesorn (2020) show that limited knowledge frequently leads to inconsistent contraceptive practices. Attitudes also shape

pregnancy prevention behaviors. Positive attitudes toward contraception and self-worth are associated with safer sexual practices (Attria & Wongkongdech, 2022; Benjawan & Thipawan, 2019). However, cultural norms and fear of judgment create ambivalence, even among university students with adequate knowledge (Uankaew et al., 2024). Behaviorally, adolescents continue to engage in practices that increase pregnancy risk, including inconsistent condom use and reliance on withdrawal (AIDS Journal, 2020). Emotional trust in romantic relationships often leads to decreased condom use (Laloons & Maneesorn, 2020). Intervention studies highlight promising strategies. Integrated programs that enhance knowledge, attitudes, and life skills have demonstrated effectiveness in improving preventive behaviors (Paktharnkla et al., 2024; Donwiset & Rujiranukul, 2019; Uankaew et al., 2024).

Overall, the literature shows that adolescent pregnancy is shaped by interrelated factors knowledge, attitudes, behaviors, and sociocultural influences indicating the need for comprehensive, context specific prevention strategies.

3. Methodology

This study employed a cross-sectional descriptive research design to examine the knowledge, attitudes, and pregnancy prevention behaviors among female students at Suan Sunandha Rajabhat University, Samut Songkhram Campus. The target population consisted of 1,064 female students aged 18 years or older who were enrolled in academic years 1 through 6. Participants were eligible for inclusion if they were female, at least 18 years old, and willing to participate in the study. Exclusion criteria included male and LGBTQ+ students, as well as individuals who were unwilling or unable to complete the questionnaire. Data were collected through a structured questionnaire comprising two main sections: demographic information (such as age, academic year, GPA, family status, living conditions, daily expenses, and sexual experience) and items assessing knowledge, attitudes, and behaviors related to unintended pregnancy.

Data analysis was performed using SPSS Version 23, with the significance level set at 0.05. Descriptive statistics—including mean values, standard deviation, frequency, and percentage—were used to summarize participant characteristics and responses. Inferential statistical techniques were employed to examine associations among key variables; these included the chi-square test for exploring relationships between demographic factors and pregnancy prevention behaviors, as well as Pearson's product-moment correlation coefficient for analyzing the relationships among knowledge, attitudes, and preventive behaviors. This analytical approach allowed for a comprehensive understanding of the factors influencing pregnancy prevention among the student population.

4. Results

The demographic characteristics of the participants revealed a predominantly young population of female students aged between 18 and 21 years, accounting for 75.18% of the sample. Most participants were studying in the first to fourth years of their academic programs, and more than half (52.13%) reported a cumulative GPA ranging from 3.00 to 3.50. The findings also showed that the majority lived with their parents (73.76%), while the most common type of residence during their studies was private dormitories (38.30%). Concerning sexual experience, 41.13% indicated that they had previously engaged in sexual intercourse. These demographic data highlight a relatively homogeneous group in terms of age, lifestyle, and educational background, providing a clear context for interpreting their knowledge, attitudes, and behaviors toward pregnancy prevention.

Table 1: Demographic Characteristics of Participants

Variable	Category	Frequency (n)	Percentage (%)
Age	18-21 years	800	75.18
GPA	3.00-3.50	555	52.13
Family Status	Living with parents	785	73.76
Accommodation	Private dormitory	408	38.30
Sexual Experience	Yes	438	41.13

Regarding knowledge related to pregnancy prevention, participants demonstrated a moderate level of understanding, with an average knowledge score of 0.81. They generally showed familiarity with various contraceptive methods, including oral contraceptive pills, condoms, emergency contraceptive pills, contraceptive rings, and strategies for preventing sexually transmitted infections (STIs). The highest-performing items within the knowledge section included checking the expiration date on a condom before use (0.98) and appropriately selecting a contraceptive method (0.96), indicating strong awareness of fundamental practices in safe sexual behavior. Despite this adequate level of knowledge, the findings suggest the persistence of knowledge gaps that may influence real-life decision-making, particularly concerning emergency contraception and the consistent application of preventive methods.

Participants' attitudes toward pregnancy prevention reflected an overall positive orientation, with an average score of 3.54. The attitude items that received the highest ratings emphasized self-worth and responsibility, such as the statement "I should love myself and recognize my self-worth" (mean = 4.27), suggesting an appreciation for self-care and personal responsibility among the students. Additionally, the belief that wearing a condom can prevent pregnancy and STIs was strongly endorsed (mean = 4.24), demonstrating awareness of the dual protective role of condoms. However, despite predominantly positive attitudes, some students still exhibited uncertainty or inconsistent views about sexual health practices, which may contribute to behavioral inconsistencies even in the presence of adequate knowledge and generally positive attitudes.

Table 2 : Highest Scoring Knowledge and Attitude Items

Construct	Item	Mean
Knowledge	Checking condom expiration date	0.98
Knowledge	Choosing appropriate contraceptive method	0.96
Attitude	Self-worth (‘I should love myself’)	4.27
Attitude	Condoms prevent pregnancy & STIs	4.24

In terms of pregnancy prevention behaviors, the participants displayed a moderate level of engagement, with an overall behavior score of 3.38. Many reported consistently practicing preventive behaviors during sexual intercourse, particularly by using protection every time (mean = 4.00). However, certain concerning behavior patterns were also evident. For example, some participants reported not using protection with a romantic partner (mean = 3.75), reflecting potential trust-based risk-taking that may undermine effective prevention. Additionally, behaviors related to having multiple sexual partners (mean = 3.72) indicated further risk exposure.

Table 3 : Correlation Between Knowledge, Attitudes, and Behaviors

Variables	Pearson's r	p-value	Strength
Knowledge vs. Behavior	-0.15	< .05	Very low negative
Attitudes vs. Behavior	-0.07	< .05	Very low negative

Statistical analyses supported the behavioral findings, showing no significant relationships between personal demographic factors and prevention behaviors ($p > 0.05$). Pearson correlation analysis further revealed very low negative correlations between knowledge and behaviors ($r = -0.15$) and between attitudes and behaviors ($r = -0.07$), suggesting that although students may possess knowledge and positive attitudes, these alone do not necessarily translate into consistent protective behaviors.

5. Discussion

Personal Factors : The results showed that most students were between 18–19 years of age and were primarily first-year students with cumulative GPAs ranging from 3.00–3.50. The majority came from intact, two-parent families and resided in mixed-gender private dormitories with friends. Most students reported having adequate daily expenses and no previous sexual experience. These demographic characteristics suggest a relatively stable socioeconomic and familial context, which may influence their perceptions and practices related to pregnancy prevention.

Knowledge of Pregnancy Prevention : Students demonstrated moderate to good levels of knowledge about pregnancy prevention, with an average score of 0.81. They showed correct understanding of key contraceptive methods such as condom use and oral contraceptive pills. However, notable misconceptions were also observed. Some students believed that emergency

contraceptive pills could be taken before sexual intercourse, and others assumed that individuals with chronic illnesses should always take oral contraceptives—an inaccurate belief, particularly for those with heart disease or hypertension. These findings correspond with Supa Paktharnkla et al. (2024), who similarly reported that while students possess basic contraceptive knowledge, misunderstandings remain, especially regarding emergency contraception and natural methods. This highlights the need for enhanced, accurate, and comprehensive contraceptive education.

Attitudes Toward Pregnancy Prevention : The study found that students generally held positive attitudes toward pregnancy prevention, reflected by an average attitude score of 3.54. They acknowledged the importance of contraception and recognized condoms as effective in reducing the risk of pregnancy and sexually transmitted infections. Nonetheless, certain ambivalent attitudes emerged. Some students felt that premarital sex is becoming more socially acceptable (mean = 3.55), while others expressed embarrassment or shame when using contraception (mean = 3.57), indicating persisting cultural norms and social stigma. These findings align with Anchalee Uankaew et al. (2024), who found that although adolescents today exhibit more open attitudes toward sexuality, feelings of embarrassment about contraceptive use are still influenced by cultural expectations. Strengthening positive, non-stigmatizing attitudes toward contraception is therefore essential to encourage safer sexual behavior.

Pregnancy Prevention Behaviors : Pregnancy prevention behaviors among students were at a moderate level (mean = 3.38). While many reported using protection consistently during sexual intercourse (mean = 4.00), several behaviors of concern were identified. These included not using contraception with romantic partners (mean = 3.75) and engaging in sexual activity with multiple partners (mean = 3.72). These patterns mirror findings published in the *AIDS Journal* (2020), which reported that adolescents tend to use contraception more reliably with casual partners than with serious romantic partners. The findings suggest that emotional trust within intimate relationships may compromise rational decision-making about contraceptive use.

Comparative Interpretation and Implications : The persistence of risky behaviors despite adequate knowledge and positive attitudes emphasizes a critical gap between understanding and practice. This study's results correspond with those of Karuhadej and Danpradit (2022), who reported that adolescents' sexual-risk behaviors are influenced more by family dynamics and interpersonal relationship quality than by knowledge alone. Limited emotional support or unstable family environments may reduce consistent contraceptive use among young people. Additionally, the tendency to reduce contraceptive use with romantic partners—also noted in the *AIDS Journal* (2020)—suggests that relational factors play a significant role in shaping preventive behaviors. These findings reinforce the need for comprehensive educational interventions that emphasize consistent pregnancy prevention practices across all relationship contexts, not only in casual encounters but also within trusted and committed relationships.

6. Recommendations

1. Practical Recommendations Strengthen and promote educational activities that increase knowledge about contraception and improve accessibility to pregnancy prevention devices.

2. Policy Recommendations Develop comprehensive sexual education policies in universities, support sexual health counseling centers, and advocate to reduce stigma surrounding the use of contraceptive methods.

3. Recommendations for Future Research Future studies should investigate additional factors that influence contraceptive behaviors, compare behaviors among different population groups, and analyze the effectiveness of various educational approaches in improving reproductive health knowledge.

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