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CLINICAL ARTICLE

Unintended pregnancy and associated risk factors among young pregnant women

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ABSTRACT

Objective: To assess pregnancy intention and the associated risks among young pregnant women. *Methods:* In a descriptive study, pregnant women aged 15–24 years were recruited at a prenatal clinic in Chiang Mai University Hospital, Thailand, between March 1, 2012, and February 28, 2013. Participants were interviewed by trained interviewers using a standardized questionnaire to elicit information about baseline characteristics, pregnancy intention, and contraception practice. *Results:* Overall, 250 participants were recruited (mean age 20.7 ± 2.4 years), and 163 (65.2%) declared that the pregnancy was unintended. The odds of the pregnancy being unintended were increased in students ($P = 0.006$), women aged 20 years or younger ($P = 0.024$), and women whose partner was a similar age ($P = 0.026$). A higher percentage of women with unintended pregnancy than with intended pregnancy reported having no time to use contraception, a perceived difficulty of regular contraceptive use, fear of parents finding out about sexual activity, and embarrassment about using contraception. *Conclusion:* Pregnancy among young pregnant women in Thailand was often unintended. Educational status, age, and age difference between the couple were independently associated with unintended pregnancy.

1. Introduction

The identification and prevention of unintended pregnancies continues to receive attention. A report evaluating data gathered from nationally representative and small-scale surveys in 80 countries [1] observed that approximately 41% of pregnancies were unintended in 2008. In Asia, the prevalence of unintended pregnancy is thought to vary from 33% to 48% [1]. A substantial number of unintended pregnancies are terminated, and the procedure is unsafe in many cases [2–4]. Unintended pregnancies ending in a live birth are associated with a significantly heightened risk of poor newborn, child, and maternal health [1,5,6]. Understanding whether a pregnancy was intended can be helpful when identifying women who might need a lot of prenatal support [3,5,7].

Whether intended or not, there is ample evidence regarding the negative impact of pregnancy in young women on maternal and child health. Young maternal age is associated with a significantly increased risk of maternal anemia, poor prenatal care compliance, preterm delivery, low birth weight, newborn admission to the intensive care unit, and postpartum complications [6,8–13]. Many pregnancies occurring in young women are unintended [2,3], which further increases the risk of problems. Therefore, the number of unintended pregnancies among young women and the associated risks are important topics of inquiry.

However, before interventions can be designed and tested, it is necessary to identify specific sociodemographic risk factors associated with unintended pregnancy. Accordingly, the aim of the present study was to assess pregnancy intention and the associated risks among young pregnant women in Thailand.

2. Materials and methods

The present descriptive study was prospectively conducted among pregnant women aged 15–24 years who attended a prenatal clinic at the Chiang Mai University Hospital, Chiang Mai, Thailand, between March 1, 2012, and February 28, 2013. The study was approved by the Research Ethics Committee of the Faculty of Medicine, Chiang Mai University. Informed consent was obtained from all participants.

Participants were interviewed by trained interviewers who used a standardized questionnaire to elicit information on baseline characteristics, pregnancy intention, and previous contraception practice. A pregnancy was deemed to be unintended when it was reported to have been either unwanted or mistimed (wanted but at a later time). Beliefs and barriers to contraception were evaluated with an 11-item questionnaire that was adapted from a qualitative study exploring reasons for low contraceptive use among young individuals through focus

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Table 1
Characteristics of the participants.[a]

Characteristics	Values (n = 250)
Women's characteristics	
Mean age, y	20.7 ± 2.4
Primigravida	168 (67.2)
Educational attainment	
No formal education	19 (7.9)
Primary education	18 (7.2)
Secondary education	159 (63.6)
Bachelor degree	21 (8.4)
In graduate school[b]	33 (13.2)
History of induced abortion in previous pregnancy	19 (7.6)
Contraception methods used at time of conception	
None	89 (35.6)
Oral contraceptive pill	118 (47.2)
Condom	21 (8.4)
Depot medroxyprogesterone acetate	13 (5.2)
Emergency contraceptive pill	8 (3.2)
Intrauterine device	1 (0.4)
Partner's characteristics[c]	
Mean age, y	24.5 ± 5.0
Age group, y	
≤20	60 (25.1)
21–30	151 (63.2)
>30	28 (11.7)
Joint characteristics[c]	
Woman 1–4 y older than partner	21 (8.8)
About the same age	48 (20.1)
Women 1–8 y younger than partner	132 (55.2)
Woman ≥9 y younger than partner	38 (15.9)

[a] Values are given as number (percentage) or mean ± SD.
[b] Currently studying for Bachelor degree.
[c] Calculated for 239 participants with available data.

group discussions [14]. The items covered five main categories: misconceptions and fears; gender power relations; sociocultural expectations and contradictions; short-term planning dilemma; and health system barriers [14]. Participants were asked to rate each item as "agree/yes," "disagree/no," or "do not know."

Statistical analysis was done via SPSS version 17.0 (SPSS Inc, Chicago, IL, USA) and STATA version 10 (StataCorp, College Station, TX, USA). Data are summarized as mean ± SD or number (percentage). Univariate analysis was carried out to identify variables potentially associated with unintended pregnancy, including age, gravidity, education level, and age difference between the couple. These variables were then included (if $P < 0.20$) in a stepwise logistic regression analysis to determine which, if any, were independently associated with unintended pregnancy. No correction was made for multiple testing.

3. Results

During the study period, 250 participants were recruited. The mean age of the participants was 20.7 ± 2.4 years, and most were younger than their partners (Table 1). Some were currently students (Table 1). Approximately one-third of the participants had not been using contraception at the time of conception (Table 1). Among the women who had been using contraception, the most common method was the oral contraceptive pill (Table 1).

Despite their attendance at a prenatal clinic, 163 (65.2%; 95% confidence interval [CI] 58.9%–71.1%) participants reported that they had not intended to become pregnant. Table 2 shows the characteristics associated with unintended pregnancy. Four dichotomous variables were assessed via a stepwise logistic regression analysis to evaluate their independent impact on the risk of unintended pregnancy. Three variables were independently associated with increased risk of unintended pregnancy: status of education (being a student vs completed education), participant's age (≤20 y vs >20 y), and age difference between the woman and her partner (small vs large). Participants who were students were at the highest risk of unintended pregnancy (odds ratio [OR] 8.02; 95% CI 1.84–34.91). Younger participants had almost twice the risk of unintended pregnancy as compared with older participants (Table 2). Pregnant women whose age was slightly different from that of their partner were more likely to have an unintended pregnancy than were those who were much younger than their partner (OR 2.30; 95% CI 1.11–4.79).

Overall, the major obstacles to contraceptive use were fears related to adverse effects (Table 3). Approximately half of all the participants worried about the adverse effects of contraceptives for either herself or the fetus in case of pregnancy. The proportion of women who reported major concerns about the safety of contraceptives was similar between those who intended to become pregnant and those who did not (Table 3). However, the proportion who reported that they did not have time to use contraception was higher among women with an unintended pregnancy than among those who had planned their pregnancy (Table 3). Compared with women with an intended pregnancy, a higher percentage of participants with unintended pregnancy reported a perceived difficulty of regular contraceptive use, fear of contraceptives being discovered by parents, that they were embarrassed to use contraceptives, and no effective contraceptive service (Table 3). Barriers related to partners and social and religious issues were not reported by many participants (Table 3).

Table 2
Predictors for unintended pregnancy.[a]

Variables	Total no. of women	No. (%) with unintended pregnancy	Univariate analysis *P* value	Multivariate analysis	
				Adjusted OR (95% CI)	*P* value
Currently in graduate school					
Yes	30	28 (93.3)	<0.001	8.02 (1.84–34.91)	0.006
No	209	127 (60.8)			
Participant age, y					
≤20	110	79 (71.8)	0.030	1.94 (1.09–3.43)	0.024
>20	129	76 (58.9)			
Extent of age difference, y					
Low[b]	201	137 (68.2)	0.017	2.30 (1.11–4.79)	0.026
High[c]	38	18 (47.4)			
Gravidity					
1	155	109 (70.3)	0.091	1.26 (0.69–2.28)	0.440
≥2	84	46 (54.8)			

Abbreviations: OR, odds ratio; CI, confidence interval.
[a] Includes 239 women who provided data on partner's age.
[b] Included 21 women 1–4 y older than partner, 48 women about the same age, and 132 women 1–8 y younger than partner.
[c] Woman at least 9 y younger than partner.