

One Year Postpartum Adaptation of Teen Mothers: Comparison between Students and Other Occupations

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Abstract:

Objectives: To compare the one-year postpartum adaptation of teen mothers between the student occupation and other occupations in the aspects of school reenrollment, childrearing, breastfeeding, and contraception.

Patients & Methods: This cross sectional study collected data from pregnant adolescents aged 11-20 years who attended antenatal and postpartum care and delivered at Adolescent Postpartum Clinic in Maharat Nakhon Ratchasima Hospital during January 1, 2012 to December 31, 2014. Data were obtained from telephone interviews with participants one year after childbirth, medical records of participants, and reports from Adolescent Postpartum Clinic. Data were compared between two groups in terms of school reenrollment, childrearing, breastfeeding, and contraception using Chi-Square test. The differences were considered statistically significant when P value < 0.05. **Results:** There were 129 in the student group and 137 in the non-student or other occupation group. From the student group, 69 participants (53.5 %) reenrolled in school, compared with 21 in the non-student group (15.4 %). Only 3 in the student group (2.3 %) that was significantly lower than 20 in the non-student group (14.6 %) breastfed their children for more than six months (RR = 0.14; 95 % CI = 0.03 - 0.58). In terms of childrearing, 89 in the student group (69.0 %) and 106 in the non-student group (77.4 %) reared their children themselves. In addition, the contraception after one year of childbirth was not different between both groups. The most common contraceptive method of the participants was contraceptive pill, followed by contraceptive injection. **Conclusions:** The student group had more requirement for school reenrollment but shorter period of breastfeeding and lower rate of childrearing than the non-student group with statistical significance. Nonetheless, there was no difference between the two populations in the aspect of contraception after one year of child birth.

Key words: Postpartum adaptation, Teen mothers

บทคัดย่อ: การปรับตัวหลังคลอดบุตร 1 ปี ของมารดาวัยรุ่น: เปรียบเทียบระหว่างอาชีพ นักเรียน นักศึกษากับอาชีพอื่น

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วัตถุประสงค์: เปรียบเทียบการปรับตัวหลังคลอดบุตร 1 ปี ในการกลับไปศึกษาต่อการเลี้ยงดูบุตร การให้นมบุตร และการคุมกำเนิด ระหว่างมารดาวัยรุ่นอาชีพนักเรียน นักศึกษา กับอาชีพอื่น **ผู้ป่วยและวิธีการ:** การวิจัยแบบภาคตัดขวาง ศึกษากลุ่มสตรีตั้งครรภ์วัยรุ่นอายุระหว่าง 11-20 ปี ที่มาคลอด และรับบริการที่คลินิกสตรีตั้งครรภ์วัยรุ่นหลังคลอด โรงพยาบาลมหาราชนครราชสีมา ระหว่างวันที่ 1 มกราคม 2555-31 ธันวาคม 2557 โดยรวบรวมข้อมูลจากการสอบถามผู้ป่วยทางโทรศัพท์หลังคลอด 1 ปี เพิ่มประวัติผู้ป่วย และบันทึกข้อมูลคลินิกสตรีตั้งครรภ์วัยรุ่นคลอด เปรียบเทียบการกลับไปศึกษาต่อการเลี้ยงดูบุตร การให้นมบุตร และการคุมกำเนิด โดยใช้ Chi-Square test โดยถือว่ามีความสำคัญทางสถิติเมื่อ $p \text{ value} < 0.05$ **ผลการศึกษา:** กลุ่มนักเรียน นักศึกษา 129 คน กลุ่มอาชีพอื่น 137 คน พบว่าหลังคลอดบุตร 1 ปี กลุ่มนักเรียน นักศึกษา กลับไปศึกษาต่อ 69 คน (ร้อยละ 53.5) กลุ่มอาชีพอื่น ศึกษาต่อ 21 คน (ร้อยละ 15.4) ระยะเวลาการให้นมบุตรในกลุ่มนักเรียน นักศึกษา ให้นมบุตร > 6 เดือน 3 คน (ร้อยละ 2.3) อาชีพอื่น 20 คน (ร้อยละ 14.6) แตกต่างกันชัดเจน (RR 0.14; 95% CI = 0.03-0.58) การเลี้ยงดูบุตร กลุ่มนักเรียน นักศึกษา เลี้ยงดูบุตรเอง 89 คน (ร้อยละ 69) กลุ่มอาชีพอื่น 106 คน (ร้อยละ 77.4) ส่วนการคุมกำเนิด 1 ปีหลังคลอด ไม่แตกต่างกัน โดยผู้ป่วยเลือกใช้ยาเม็ดคุมกำเนิดมากที่สุด รองลงมาคือ ยาฉีดคุมกำเนิด **สรุป:** กลุ่มอาชีพนักเรียน นักศึกษามีความประสงค์กลับไปศึกษาต่อสูงกว่ากลุ่มอาชีพอื่น ส่วนระยะเวลาในการให้นมบุตร และการเลี้ยงดูบุตรเอง พบว่ากลุ่มอาชีพอื่น มากกว่ากลุ่มนักเรียน นักศึกษา อย่างมีความสำคัญทางสถิติ แต่ไม่พบความแตกต่างกันในเรื่องของการคุมกำเนิดหลังคลอดบุตร 1 ปี

คำสำคัญ: การปรับตัวหลังคลอดบุตร, มารดาวัยรุ่น

Introduction

Adolescence is the transitional stage from childhood to adulthood and adolescents will experience significant changes, both physically and psychologically. It also is the period of development of the reproductive system, resulting in the capability to conceive. Undoubtedly, adolescent pregnancy does not only pose negative effects to the pregnant adolescents themselves but also to their families and the society.⁽¹⁾

Indeed, adolescent pregnancy is regarded as a major problem across the globe, particularly in developing countries. With that respect, the World Health Organization⁽²⁾ uses adolescent pregnancy as an indicator of the level of the development of population health in each country. In 2011 from Saiyairak Hospital of the Department of Health, Ministry of Public Health, the pregnancies of women under 20 years of age contributed to 18.7%⁽³⁾ of total pregnancies in Thailand. Moreover, Maharat Nakhon Ratcha-

sima Hospital (MNRH)⁽⁴⁾ reported that the rate of adolescent pregnancy was 15.0 % in 2011 and up to 18.0 %⁽⁵⁾ in 2015.

MNRH acknowledged the problem of adolescent pregnancy and established the Adolescent Pregnancy Clinic in 2012 and later the Adolescent Postpartum Clinic to promote positive attitudes and provide knowledge in the aspects of breastfeeding, contraception, sex education and sexually transmitted diseases and to reduce recurrent pregnancies and sexual risk behaviors. By this way, one-third of teen mothers were not students. Knowingly, teen mothers with student occupation (student group) had a higher risk of poor quality antenatal care than other occupations (non-student group) but no difference between both groups regarding their childrearing and contraception. Up to 58.7 % of the student group decided to reenroll in school, as compared with 33.3 % of the non-student group.⁽⁶⁾ Accordingly, we study the adaptation of teen mothers one year after childbirth, comparing between the student and other occupations (non-student group) which has never been studied in Thailand before.

Up to 25 %⁽⁷⁾ of adolescents gave a second birth within one year. Hence, this research is aimed to evaluate the adaptation of the pregnant adolescents at one year after childbirth.

Patients and Methods

This cross-sectional included 456 pregnant adolescents aged 11-20 years⁽²⁾ who received antenatal care, gave birth, and received postpartum care at Adolescent Postpartum Clinic in MNRH during Jan 1, 2012 to Dec 31, 2014. All these participants used to be studied at three-month postpartum period⁽⁸⁾ and then the study was performed at one-year postpartum

period. This research was approved by Human Research Ethics Committee (Certificate No. 101/2015).

The sample size was calculated using the formula for 2 independent proportions. From the previous study,⁽⁶⁾ the pregnant adolescents in a student group had a higher risk of postpartum adaptation in the aspect of returning to school. The researcher expected to obtain consents from randomly selected 112 (80 %) of potential participants for each group (100 x 89/80).

A total of 456 potential participants were interviewed by phone after one year of childbirth according to the telephone consent form (as attached to the full report). They were categorized into 2 groups, the student and other occupations (non-student) groups. Among them, 190 ones (41.7 %) could not be accessed due to changes of telephone numbers and non-response. During each telephone interview, information was recorded in the questionnaire without voice recording. The data included age, number of pregnancies, occupation, marital status, childrearing, breastfeeding, school reenrollment, past and present contraception. Data were presented in descriptive statistics or table and analyzed using chisquare test. If p-value < 0.05, it was considered statistical significance.

Results

The sample consisted of 129 for student and 137 for non-student (other occupations) groups. For demographic characteristics, there were statistically significant differences between the two groups in terms of mean age, number of pregnancies, and educational level. The mean age of student group was 16.9±1.4 years vs. 18±1.2 years of non-student group. Moreover, 96.9 % of the student group and 82.5 % of the non-student group had their first pregnancy.

The level of education for the non-student group was mostly secondary education while that of student group was higher than secondary education. However the majority in the non-student group conceived after finishing secondary education. In contrast, the student group mostly conceived during their secondary education or higher (pregnant while studying). Indeed, during this age range (secondary education), the rates of sexual intercourse and pregnancy are high. For the body mass index, gestational age, number of antenatal visits, route of delivery, and underlying diseases,

there were no differences between the two groups, as shown in Table 1.

There was no difference between the two groups at the immediate, 3-month and 1-year postpartum contraception. The most commonly used contraception in the immediate and 3-month postpartum were contraceptive injection due to its long duration whereas that in the one-year postpartum was contraceptive pill for the non-student group and contraceptive injection for the student group. Recurrent pregnancy on her intention after one year of

Table 1 Baseline characteristic

	Students (N=129)	Other occupations (N=137)	p-value
Age : mean (SD*)	16.9 (1.42)	18.0 (1.24)	<0.001
11-14	6 (4.7)	1 (0.8)	
15-17	77 (59.7)	38 (27.7)	
18-20	46 (35.6)	98 (71.5)	
BMI**: mean (SD)	20.4 (3.45)	20.6 (3.60)	0.670
Gravida			<0.001
Primigravida	125 (96.9)	113 (82.5)	
Multigravida	4 (3.1)	24 (17.5)	
Gestational age: mean (SD)	37.3 (2.86)	37.7 (2.62)	0.283
Antenatal care			0.380
No ANC***	4 (3.1)	1 (0.7)	
Early (before 12 wk.)	41 (31.8)	47 (34.3)	
Late (after 12 wk.)	84 (65.1)	89 (65.0)	
Route of delivery			1.000
Vaginal delivery	89 (69.0)	95 (69.3)	
Cesarean section	40 (31.0)	42 (30.7)	
Underlying disease			0.764
No	123 (95.4)	132 (96.4)	
Yes	6 (4.7)	5 (3.7)	
Education			<0.001
Primary education	2 (1.6)	5 (3.7)	
Secondary education	99 (76.7)	124 (90.5)	
Higher than secondary	28 (21.7)	8 (5.8)	

*SD = standard deviation

**BMI = body mass index

***ANC= antenatal care

childbirth was apparent in only one in the non-student group. Regarding the most appropriate contraceptive method, based on the efficiency, frequency of contraceptive usage, and convenience, long-acting reversible contraception (LARC) was most frequently used

which was not different between the two groups, as shown in Table 2.

Only 3 in the student group (2.3 %) breastfed for more than six months that was significantly lower than 20 in the non-student group (14.6 %). During

Table 2 Outcome (Contraceptions)

	Students (N=129)	Other occupations (N=137)	p-value
Contraception(Immediate postpartum)			0.273
No contraceptions	0 (0.0)	2 (1.5)	
Condom	1 (0.8)	2 (1.5)	
Combined oral contraceptive pill	35 (27.1)	47 (34.3)	
Injection	92 (71.3)	86 (62.8)	
Implant	1 (0.8)	0 (0.0)	
Contraception (3 month postpartum)			0.127
No contraceptions	9 (7.0)	11 (8.0)	
Condom	1 (0.8)	6 (4.4)	
Combined oral contraceptive pill	46 (35.7)	54 (39.4)	
Injection	70 (54.3)	65 (47.5)	
Implant	3 (2.3)	0 (0.0)	
IUD*	0 (0.0)	1 (0.7)	
Contraception (1 year postpartum)			0.459
No contraceptions	13 (10.1)	15 (11.0)	
Condom	2 (1.6)	3 (2.2)	
Combined oral contraceptive pill	52 (40.3)	62 (45.3)	
Injection	57 (44.2)	54 (39.4)	
Implant	5 (3.9)	1 (0.7)	
IUD	0 (0.0)	1 (0.7)	
Tubal resection	0 (0.0)	1 (0.7)	
LARC** (Injection, Implant, IUD)			0.324
No	67 (51.9)	81 (59.1)	
Yes	62 (48.1)	56 (40.8)	
Reason for contraception(1 year postpartum)			0.867
Convenience	47 (36.4)	54 (39.4)	
Long duration of contraception	61 (47.3)	55 (40.2)	
No side effects	2 (1.6)	4 (2.9)	
Poor compliance for oral pills	10 (7.8)	14 (10.2)	
Other methods have side effects	8 (6.2)	7 (5.1)	
Suggested by relatives	1 (0.8)	1 (0.7)	
Complete family	0 (0.0)	2 (1.5)	

* IUD = Intrauterine device

**LARC = long-acting reversible contraception

Table 3 Outcome (Breast feeding)

	Students (N=129)	Other occupations (N=137)	p-value
Duration of breastfeeding			<0.001
< 6 months	126 (97.7)	117 (85.4)	
> 6 months ³	(2.3)	20 (14.6)	
Nursemaid			<0.001
Parents	89 (69.0)	106 (77.4)	
Grandparents	30 (23.3)	8 (5.8)	
Relatives	10 (7.8)	23 (16.8)	

the breastfeeding period, no one reenrolled in school due to the necessity to rear and breastfeed their children. Likewise, there was statistically significant difference between the two groups in childrearing: 89 in the student group (69.0 %) vs. 106 in the non-student group (77.4 %), as demonstrated in Table 3.

At one-year postpartum, 69 participants (53.5 %) in the student group and 21 in the non-student group (15.4 %) reenrolled in school. There was no difference between the two groups in marital status, i.e., majority from each group lived with the boyfriends, as illustrated in Table 4.

Discussions

Although 66.6 % of participants in the student group and 22.6 % in the non-student group planned

to reenroll in school, only 53.5 % of the former actually reenrolled (28.7 % in non-formal and 24.8 % in formal education) and only 15.4 % of the latter reenrolled (11.0 % in non-formal and 4.4 % in formal education). Non-formal education was more popular amongst the participants because it is specifically designed for those who miss the opportunity to complete formal education or those who want to improve themselves, with emphasis on enhancing their competency. Moreover, it has flexible class schedules, no limitation of the age of students and also issues the diploma. In the previous study, 58.7 % of teen mothers from students and 33.3 % from other occupations decided to reenroll within one week after childbirth.⁽⁶⁾ Our study conforms this observation. The majority of adolescents intend to reenroll in school after childbirth for selfdevelop-

Table 4 Outcome (Social)

	Students (N=129)	Other occupations (N=137)	p-value
Spouse			0.391
Stay together	116 (89.9)	120 (87.6)	
Separate	5 (3.9)	3 (2.2)	
Divorce	8 (6.2)	14 (10.2)	
Educational Planning			<0.001
Do not study	43 (33.3)	106 (77.4)	
Non-formal education	47 (36.4)	24 (17.5)	
Formal education	39 (30.2)	7 (5.1)	

ment and career advancement, so the education should be promoted. The interdisciplinary teams and the community should provide assistance or social services to these adolescent parents.⁽⁹⁾ Nonetheless, some adolescents do not wish to reenroll in school due to pregnancy that demotivates them from education but want to earn instead due to financial problem and childrearing.⁽¹⁰⁾

After delivery, participants mostly used contraceptive pill and contraceptive injection but few did not. From abroad, the most popular contraceptive method before pregnancy was contraceptive pill and the reason for discontinued contraception was unintended pregnancy and the forgetfulness of the pill. But the most common contraceptive method used by the adolescents in the postpartum period was contraceptive injection. LARC should be promoted amongst the adolescents because of its high efficiency and convenience. Secura et al showed⁽¹¹⁾ the discontinuation rate of LARCs (IUDs and implants) amongst adolescents was lower than that of non-LARC method in a 24-month follow-up. Moreover, 82 % and 67 % of the adolescents continued the LARC vs. 49 % and 37 % in the non-LARC in 1^(11,12) and 2 years, respectively.⁽¹³⁾ In Thailand, the Bureau of Reproductive Health, Department of Health launched a project on adolescent pregnancy pre-vention by offering free contraceptive implants and intrauterine devices for women under 20 years of age. It was aimed to provide adolescents the contraceptive services. But adolescents at MNRH preferred non-LARC after one year of childbirth, as shown in Table 2.

For duration of breastfeeding, the most frequent period the breastfeeding lasted for in the student group was three months (31.8 %) vs. six months in the non-student group (32.1 %). In fact, breastfeeding for

up to six months will provide health benefits to both mother and child.⁽¹⁴⁾ The contributing factors of exclusive breastfeeding for a period of six months include: older age, having a spouse, high educational level, housewife occupation, and sufficient support from family and medical team.⁽¹⁵⁾ Compared with the previous study, factors influencing the decision of teen mothers for breastfeeding consisted of physical fitness for breastfeeding, positive feelings of mothers towards breastfeeding, and social support such as the length of maternity leave and availability of lactation room.⁽¹⁶⁾ The students in our study could not breastfeed for a long time since they had to reenroll in school.

For childrearing, the majority in both groups reared their children themselves due to their perception towards the importance of parenthood despite the support from grandparents who should have knowledge on childcare and support adolescent parents to live their lives with goals.⁽⁹⁾

Both personal and environmental factors influence the adaptation of teen mothers. In other words, the teen mothers who well adapt will have a clear parenting method and can fully perform their roles in the aspects of childrearing, education and occupation. The guidelines on postpartum adaptation should reinforce teen mothers to accept the reality, have an optimistic attitude, participate in group activities, prepare themselves for parenting and seek for family and social support.⁽¹⁷⁾

The strength of this research is primarily the follow-up of the same participants that was extended from three months to one year after the delivery for identifying the adaptation of the participants. Nonetheless, the limitation of this research is the data that were obtained from telephone interviews which may

be incomplete and have a limitation of time. Some participants could not be accessed (41.7 %) due to changes of the telephone numbers and non-response.

Conclusion

The teen mothers who were students had a higher intention to reenroll in school after one year of childbirth than those in other occupations. Moreover, the teen mothers of other occupations had a longer duration of breastfeeding (6 months) and more childrearing by themselves than the students (3 months). However, there was no difference between two groups in term of the one-year postpartum contraception.

References

1. Pechkwang D, Kaewjiboon J, Boontha R, Junsuk K. Impacts of pregnancy and factors affecting pregnancy among teens who received prenatal care at Phayo hospital. Boromarajonani College of Nursing, Phayao; 2011.
2. World Health Organization. Definitions, in Adolescent Pregnancy. Department of Reproductive Health and Research World Health Organization Geneva. 2004; 5.
3. Department of Health, Ministry of Public Health of Thailand. Saiyairak hospital project; 2011. Available from: http://www.saiyairakhospital.com/newdemo/admin/user_report.html.
4. Kitiyodom S. Maternal youth and pregnancy outcomes: Early and middle adolescent versus late adolescent compared with women beyond the teen years. Maharat Nakhon Ratchasima Hospital Med Bull 2013; 37: 62-74.
5. Bureau of Reproductive Health. Fact Sheet on Statistics on Adolescent Births, Thailand. Bangkok: Department of Health; 2016.
6. Kitiyodom S. Decisions of pregnant adolescents towards antenatal care attendance and their immediate postpartum adaptation: Comparison between students and other occupations. J Med Assoc Thai 2015; 98: S43-50.
7. Desirae MD, Karen HJ. Adolescent pregnancy in America: Causes and responses. VJSNE 2007; 30: 4-12.
8. Songsathaporn L, Kitiyodom S. Postpartum long-acting reversible contraception use in adolescent at Maharat Nakhon Ratchasima Hospital. Thai J Obstet Gynaecol 2016; 24: 26-34.
9. American Academy of Pediatrics: Care of adolescent parents and their children. Pediatr 2001; 107: 429-34.
10. Pungbangkadee R, Ratinthorn A. Factors and consequences of repeat pregnancy among teenagers: A case study in Bangkok Metropolis. J Nurs Sci 2014; 32: 23-31.
11. Secura GM, Madden T, McNicholas C. Provision of no-cost, long-acting contraception and teenage pregnancy. N Engl J Med 2014; 371: 1316-23.
12. Winner B, Peipert JF, Zhao Q. Effectiveness of longacting reversible contraception. N Engl J Med 2012; 366: 1998-2007.
13. Birgisson NE, Zhao Q, Secura GM, Madden T, Peipert JF. Preventing unintended pregnancy: the Contraceptive CHOICE Project in review. J Womens Health (Larchmt) 2015; 24: 349-53.
14. Kramer MS, Kakuma R. (2012). Optimal duration of exclusive breastfeeding: Cochrane Database of Systematic Reviews. John Wiley & Sons, Ltd. DOI: 10.1002/14651858.CD003517
15. Jintrawet U, Tongsawas T, Somboon L. Factors associated with the duration of exclusive breastfeeding among postpartum mothers. Nursing J 2014; 41: 133-44.
16. Nesbitt SA, Campbell KA, Jack SM, Robinson H, Piehl K, Bogdan JC. Canadian adolescent mothers' perceptions of influences on breastfeeding decisions: a qualitative descriptive study. BMC Pregnancy Childbirth 2012; 12: 149. Doi.org/10.1186/1471-2393-12-149

17. Jeungklinchan P, Junprasert T. Adapting process and child rearing in a teen single mother: a case study of Sahathai Foundation's Clients. *Golden Teak Humanity Social Sci J (GTHJ)* 2014; 20: 73-90.