QUALITY OF INFANT CARE AMONG NULLIPAROUS TEENAGE MOTHERS IN BURIRUM PROVINCE, THAILAND

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ABSTRACT

Teenage pregnancy has many adverse effects on both mothers and infants. Teenage mothers are not ready to be pregnant or raise a child. The aim of this analytical research was to compare characteristics of mothers, antenatal care, delivery pattern and quality of care compared between teenage and adult mothers. The sample size were 50 mothers in each group (teenage mothers aged less than 20 years old, adult mothers aged 25-30 years old) who were resident near and delivered at Nangrong Hospital, Ampher Nangrong, Buriram Province, Thailand, during December 2005 – June 2006. The descriptive statistics included percentage, mean and standard deviation. Chi-square test and Independent t test was used to test hypotheses at the significance level of $p \leq 0.05$. SPSS/PC$^+$ statistics program was applied.

The results showed that teenage mothers had lower financial, status and lower educational level than adult mothers. Teenage mothers were more unmarried or separated from their husbands. Both findings were of a significant difference (p=0.005). Regarding pregnancy characteristics, teenage mothers had more unplanned pregnancies and had later and fewer ANC visits. However, teenage mothers had more vaginal deliveries. Regarding quality of infant care, there was no statistical difference between groups. It may be because both groups had help and support from their grandmothers. Quality of care of infants (0-3 months) was not different between two groups, except for developmental care, for which adult mothers were better with a statistical significance (p = 0.007). Quality of care of infants (3- 6 months) between two groups were also similar with the addition that physical care by adult mothers was better, with a statistical significance (p = 0.02).

In conclusion, teenage pregnancy has many problems such as being unplanned and later and fewer ANC visits. Although quality of infant care between two groups was mostly similar, because of supports from grandmothers and relatives, prevention of teenage pregnancy by contraception should be encouraged to prevent unplanned pregnancy.

KEY WORDS: QUALITY OF INFANT CARE / TEENAGE MOTHERS

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การเลี้ยงดูทารกของมารดาวัยรุ่นครรภ์แรก ในจังหวัดบุรีรัมย์ (QUALITY OF INFANT CARE AMONG NULLIPAROUS TEENAGE MOTHERS IN BURIRUM PROVINCE, THAILAND)

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บทคัดย่อ

การตั้งครรภ์ในวัยรุ่นมีผลกระทบต่อทั้งมารดาและทารก เนื่องจากมารดายังไม่พร้อมสำหรับการตั้งครรภ์และมีบุตร การศึกษาครั้งนี้มีวัตถุประสงค์เพื่อศึกษา ลักษณะการตั้งครรภ์ของมารดาและการเลี้ยงดูทารก เปรียบเทียบระหว่างมารดาวัยรุ่นและมารดาวัยผู้ใหญ่ในเขตชนบทของประเทศไทย การศึกษาครั้งนี้เป็นการศึกษาเชิงวิเคราะห์เก็บข้อมูลโดยใช้แบบสอบถามจากกลุ่มมารดาวัยรุ่นอายุน้อยกว่า 20 ปีจำนวน 50 รายและมารดาวัยผู้ใหญ่อายุ 25-30 ปีจำนวน 50 รายที่มีภูมิลำเนาและคลอดบุตรที่โรงพยาบาลนางรอง จังหวัดบุรีรัมย์ระหว่างเดือน ธันวาคม พ.ศ.2548- มิถุนายน2549 สถิติวิเคราะห์ข้อมูลด้วยสถิติเชิงพรรณนา ได้แก่ จำนวน อัตรา ร้อยละ ค่าเฉลี่ย ค่าเบี่ยงเบนมาตรฐาน Chi-square test และ Independent t-test โดยใช้โปรแกรมสำเร็จรูป SPSS/PC$^+$

ผลการศึกษาพบว่า มารดาวัยรุ่น มี เศรษฐานะ และ การศึกษา ต่ำกว่ามารดาวัยผู้ใหญ่อย่างมีนัยสำคัญทางสถิติ มารดาวัยรุ่นมักจะไม่ได้สมรสหรือแยกกันอยู่มากกว่า การตั้งครรภ์ พบว่า มารดาวัยรุ่นไม่มีการวางแผนการตั้งครรภ์ ฝากครรภ์ช้าและจำนวนครั้งของการฝากครรภ์น้อยกว่า แต่คลอดทางช่องคลอดได้มากกว่ามารดาวัยผู้ใหญ่อย่างมีนัยสำคัญทางสถิติ ($p = 0.007$) การเลี้ยงดูทารก พบว่ามารดาทั้งสองกลุ่มมีเลี้ยงดูทารกเองและมีญาติเป็นผู้ช่วยเลี้ยงดูในอัตราร้อยละ 26 และร้อยละ 16 ตามลำดับ การเลี้ยงดูทารกอายุ 0 – 3 เดือน พบว่าคุณภาพการเลี้ยงดูทารกของมารดาทั้งสองกลุ่มโดยรวมเมื่อนำมาวิเคราะห์พบว่าไม่แตกต่างกัน ยกเว้นในด้านการกระตุ้นพัฒนาการของทารก มารดาวัยผู้ใหญ่มีคุณภาพการเลี้ยงดูทารกในด้านนี้ดีกว่ามารดาวัยรุ่นอย่างมีนัยสำคัญทางสถิติ ($p = 0.007$) การเลี้ยงดูทารกอายุ 3 – 6 เดือน ผลการศึกษาสอดคล้องกับการเลี้ยงดูทารกอายุ 0 – 3 เดือนและเป็นที่น่าสังเกตพบว่าคุณภาพการเลี้ยงดูทารกมีแนวโน้มลดต่ำลงในเกือบทุกด้าน ส่วนการเปรียบเทียบคุณภาพการเลี้ยงดูพบว่า มารดาวัยผู้ใหญ่ดูแลทารกได้ดีกว่าในด้านร่างกายอย่างมีนัยสำคัญทางสถิติ ($p= 0.02$) สรุป การตั้งครรภ์ในวัยรุ่นมีความไม่พร้อม การฝากครรภ์ช้าและน้อยกว่าวัยผู้ใหญ่ ส่วนคุณภาพการเลี้ยงดูทารกทั้งสองกลุ่มแตกต่างกันไม่มากนัก เนื่องจากได้รับความช่วยเหลือจากญาติเป็นส่วนใหญ่อย่างไรก็ตามควรมีการแนะนำ ส่งเสริมในการเลี้ยงดูแลทารกและส่งเสริมให้มีการคุมกำเนิดให้มากขึ้นในกลุ่มวัยรุ่นเพื่อป้องกันการตั้งครรภ์ที่ไม่พร้อม

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CHAPTER I
INTRODUCTION

Significance of the problem

At present pregnancy among teenage mothers is a major problem facing healthcare providers. As teenage have become sexually active at increasingly younger ages, the rate of ensuing pregnancies has become considerable (1). In Thailand, the live birth rate from mothers ages less than 20 years old contributed to 11.4% of the total live birth in year 2005. The rate was higher than the standard target of less than 10% of total live birth from mother under 20 years(2).

Teenage pregnancy had many adverse effects on both mothers and infants. They had a higher risk of antenatal, intrapartum and postpartum complications than normal adult pregnancy due to immature physical development for pregnancy. Complications of teenage pregnancy are anemia, hypertension, prolonged labor and cephalo pelvic disproportion(3,4,5). Teenage mothers are more likely to have low income, be unmarried or separated, low education level and enroll late for parental care, and less ANC visits(1,6,7) and are more likely to experience poor pregnancy outcome, especially low birth weight, premature infants, morbidity and mortality of fetus(8,9,10,11). First year of life of infant from mother under 20 years old have a risk ratio of 1-1.5 mortality rate compared to infant of mother age 20-29 years(12).

Infantile period is the most important period in developing healthy body, mind and spirit. When a baby growing up to the healthy, strong and to have appropriate personality, despite of his healthy physical condition he also need love, good care and good orientation from his parents especially from his mother who is closest person (13). The mother who know to take care of her baby correctly, confidently and happily, will respond to her baby's need adequately and will have her baby developing to his full capacity (14). However, some studies shows that first time mother has critical period in adjusting herself to be a mother and has to face the unknown experience which will bring her anxiety and worriness(15, 16)

The study of Rush and colleague (17) showed that 50 percents of first time mothers want to return back to hospital because of the babies caring problem. About70% of new mothers have called for advise and recommendation in order to understand their baby need and behavior. When the mothers can not respond to their babies need and have no skill and knowledge to take care their babies correctly, the babies are proned to get sick with the preventable disease (18).

Especially for teenage mothers, they must attempt to balance themselves with these two competing roles. For teenage role, the mothers requires attention to studies, school activities, and time from relationship with peers, which facilitates their self-growth and development as teenage (19). The role as a mother, in contrast, requires time and energy to focus on child care activities and responsibilities, for instance, providing safe environment, nutritious food, suitable clothing, and affectionate stimulation for the child.(20)

The summarized maternal characteristics of teenagers let them face with stress, lack of good support from society, lack sufficiency of maturity and have inappropriate attitude toward baby caring. Additionally, the child who was born to the teenage mothers have risk of having violent behavior more than ones from adult mother (21). The child born from teenage mothers usually suffered from various factors which includes abandoned and maltreated state, health problems, slowness of growing up and low learning development (22). However from the literature review there are limited study in Thailand about quality of care of infants compared between teenage and adult mothers. The percentage of teenage mothers has also been increasing. Thus, the researcher is interested in studying the characteristics of teenage mothers, their antenatal care, their delivery patterns and their quality of care compared which those of adult mothers. The results of this study can be used to be guide lines for health care provides in providing information on birth control and preventive measurement to keep those teenagers out of pregnancy.

Objective of the study

To compare between teenage and adult mothers.

1. Demographic characteristics including, occupation, family income, marital status, and education level.

2. Pregnancy characteristics including, intention to have a baby, use of contraception before pregnancy, gestational age at first antenatal visit, and number of ANC visit.

3. Delivery patterns including type of delivery, and birth weight.

4. Quality of infant care at 0-3 months and 3-6 months including person who rear infant, physical care, developmental care, prevention of accident and hazard, and care during sickness.

Scope and limitation of the study

In this research, the study included purposively teenage mothers aged less than 20 years old and adult mothers aged 25-30 years old both resided in Nangrong district and delivered their babies at Nangrong hospital during December 2005 – June 2006. Data were collected by structured questionnaires interviewed mother or their relatives who took care of the infants at their home. Fifty mothers in each group were recruited purposively according to the inclusion criteria.

Definition of term

Teenage mothers refers to the first time mothers whose aged less than 20 years and delivered their babies at Nangrong hospital during December 2005 – June 2006.

Adult mothers refers to the first time mothers whose aged between 25 – 30 years and delivered their babies at Nangrong hospital during December 2005 – June 2006.

Age means complete years of age of mothers on the day they gave birth.

Occupation means the type of work they did to earn their living.

Education level means the highest level of education attained by the mothers

Family income means the total amount of income in baht earned by the mothers and their husbands as assessed by the mothers

Gestational Age at first antenatal visit means the period of time counted by weeks from the first day of last menstrual period to date of first ANC visit.

Number of ANC visit means the member of time that pregnant women attended the ANC clinic with regular in service

Intention to have a baby refers to the perception of the first – time mother for intention to have a baby that were classified into 2 categories as unplanned or planned.

Type of labor means the types of the delivery classified as vaginal delivery or cesarean section.

Quality of infant care refers to the mother's behavior in taking care of infant aged 0-6 months regarding to physical care, developmental care, developmental care prevention of accident and hazard, and care during sickness.

CHAPTER II
LITERATURE REVIEW

This research is study aimed too compare and between teenage and adult mothers, the characteristics of mothers, antenatal care, delivery patterns quality of infant care. Related literature and research papers were reviewed and presented in the following orders;

Part 1. Teenage pregnancy.

Part 2. Quality of infant care.

Part 3. Factors influencing quality of infant care.

Teenage pregnancy

Teenage is the age when the persons reach puberty, during which they become capable of having children. Persons at this age will experience both physical and psychological changes especially change in sex hormones, which lead to development of sexual organs and the presence of teenage characteristics. Children nowadays enter puberty faster than in the past because of improvements in socioeconomic, health and nutrition of the population. When teenage women get pregnant their development into puberty is interfered and their physical growth, especially height, will be affected (23). The physical condition that is not ready for pregnancy leads to complications during pregnancy, delivery and postpartum stage in the both mother and fetus. Physical complications occurring to the mother include pregnancy-induced complications, preterm delivery and low birth weight neonatal. Psychological and emotional impacts of pregnancy on teenage mothers are mostly related to unplanned pregnancy, unwanted pregnancy and extramarital pregnancy of which the mothers are not ready to having children. Such pregnancy, therefore, induces the sense of fear, guilt and otheconfusion. In addition, emotional development in teenage dose not reach maturity yet thus their problem solving skill and their search for solution are not as good as adults. Physical and psychological changes during pregnancy contribute to teenage'

poor adaptation to the new role, leading to the number of negative affects such as irritability, anger and self harm action. Moreover, pregnancy adolescents may feel ashamed of change in their appearance, such as the change of body figure. Adolescents who are in school will have to discontinue their study and they may be neglected if their family and the society do not accept the pregnancy. As a result, adolescent mothers will feed lonely, isolated and socially unaccepted. The subsequent impact, therefore may induce a number of undesired outcome pregnancy.

Pregnancy is a developmental crisis that leads to physical, psychological and social changes (23). These changes are complex and autonomic, causing a tendency toward development of pathological disorders(24).Adolescent pregnancy, in particular, lead to complication in the mother and the fetus more than pregnancy in the women older than 20 years old. The complications are especially high in adolescent mrs with poor economic status, malnutrition or lack of neonatal care and mother younger than 17 year old age (3). The problems result from growth competition between the mother and fetus. Approximately a quarter of adolescent mothers have deficiencies of calcium, protein, vitamins and iron thus they are more likely to have anemia. Moreover , it is found that pregnant women younger than 19 years old have higher incidence of preterm delivery and delivery low birth weight infants, in comparison with the pregnant women older than 20 years old.

Quality of infant care.

The health status of infant aged 1-6 months

The infanthood aged between newborn and 1 year is the age which has faster growth and faster development, is the age which needs attention, tender care physically and mentally in order to promote completely healthy infant according to development stage, inorder to survive and to be valvuable person in the society

According to the WHO’s definition of the health is a complex phenomenon. Health is a state of completely physical, mental and social well-being and not merely absence of disease. Therefore infant health status is a continuous process till he can lead his own life happily in the society. The infant who receives his basic physical need including health promotion and disease prevention, will become healthy infant physically, will have appropriate growth and have enthusiasm to learn and to develop. (39).

1. Physical care

1.1 Nuritional

Because infancy is a period of rapid growth, nutritional needs are of special significance. During infancy, eating progresses from a principally reflex activity to relativity sophisticated yet messy attempts at self-feeding. Because the infant's gastrointestinal system continues to mature throughout the first year, changes in diet, the introduction of new foods, and even upsets in routines can result in feeding problems.(26)

1.Dietary requirement. The infant needs adequate nutrition to achieve the body requirement in order to promote body growth and development and to supply energy for body activity.

If the diet intake is not achieve the body requirement, the body growth will be retarded. The infant will be come malnutrition which will be the cause of death. In case that the diet intake is over the body requirement, the infant will become overweight. Therefore the best diet for 4 month old infant is breast feeding milk, no other supplement diet is required (27).

It the first month post delivery, mother will have 700 ml milk per day which will increase to at lease 800 ml/day between 2-6 months. After 6 and 24 months, the amount of milk will gradually decrease from 600 ml. per day to 550 ml. per day. The nutritional values and energy still remain.

The benefit of breast feeding for infant.

1. The infant grow well according to his age and receives complete nutrient. The breast feeding infant will have appropriate weight gain no malnutrition and no over weight.

2. Generally, less illness occurs in breast fed babies. Specifically, lower rates of gastroenteritis, allergic disease, atropic dermatitis and infection as have lower rates of hospital admission, and otitis media.

3. The infant is nestled very close to the mother's skin can her the rhythm of her heart beat, feel the warmth of their body, and sense a peaceful security.
and time saving.

4. Money saving

5. It is convenient for the infant to have milk which is at appropriate temperature.

6. The infant who breast fed is higher IQ than that who is not. The IQ test in premature infant feed with breast feeding and opposite group shows that the infant group with in the first weeks who had breast feeding is greater IQ rate than the non breast feeding one at 83 point ($p>.01$) during ages of 7.5 years. In addition, it found that they are positive relationships in the quantity of milk consumed with the brain development

Supplementary Food

The early introduction of solid food is associated with a higher incidence of food allergy. In addition, the solids the infant eats cannot be adequately digested and the nutrients in breast or formula milk will not be taken in because the infant's appetite has been satisfied. In contrast, failure to offer solids by age 6 months may result in difficulty accepting solid feedings at a later time (26).

The feeding of semisolid foods should be delayed until the infant's consumption of foods is no longer a reflexive process and the infant has the fine and gross motor skills needed to consume them. The infant goes through a so-called transitional period during which prepared foods are introduced and given together with human milk or formula. This usually occurs between age 4 and 6 months. The growth and development of each infant vary, and there are milestones that indicate the infant's readiness for solid foods.

Table 1 Supplementary Food (Recommendation of the Nutritional Department, Ministry of public Health, 1994)

Age	Food
4 months	Crushed rice mixed with egg yolk. Start feeding with half a yolk mixed crushed rice.
5 months	Crushed rice and fish. Egg yolk as an on alternative. Crushed and cooked vegetables such as pumpkins and soft-boiled carrots.
6 months	Supplementary food can be feeded instated of milk for a meal. Start to feed with crushed-ripened fruits such as banana and papaya.
8 months	Various kinds of crushed-boiled meat. Fish and egg yolk as an alternative Start to feed with a whole egg. Fruits as snack for a meal

1.2 The need to take care of the body cleanliness with safe and clean environment. The infant should have his body cleaned everyday, for the accumulation of germs will be eliminated. Since the infantile immune system is not fully developed, which their make him get infection early. The important thing is also to cultivate the hygienic habit to infant.

The infant should have taking care as

1. The infant should have a bath 1-2 times a day. The warm water for infant bathing should be tested with back hand or elbow. Bathing should started from the most cleanest part of body first such as face and hair washing then arms, legs and body. The last part should be the genitalia and anus. After that the infant should be dried and be powdered, the powder should not have strong smell. The special infant soap and infant powder should be use

2. The care of mouth, the infant gum and tongue should be cleaned in order to cultivate good hygiene.

3. Nails should be cut regularly in order to prevent scratching any on his face and the accumulation of germs. The nails should be cut twice a week.

4. Clothes, the infant clothes should be soft, clean and dry and seasonal.

5. Bed and pillow should have sun-exposure once a week.

Besides of the body cleanness, the infant should have the environment which clean order hygienic and safe physically and mentally. The house and the bedroom should be cleaned everyday.

2. Developmental care

Even thought historically adults considered infants unable to do much more than eat and sleep, it is now well documented that even young infants can organize their experiences in meaningful ways and adapt to changes in the environment. Evidence shows that infants form strong bonds with their caregivers, communicate their needs and wants, and interact socially. By the end of the first year of life, infants can move about on their own, elicit responses from adults, communicate through the use of rudimentary language, and solve simple problems.

Infancy is characterized by the need to establish harmony between the self and the world. To achieve this harmony, the infant needs food, warmth, comfort, oral satisfaction, environmental stimulation, and opportunities for self-exploration and expression. Competent caregivers satisfy the need of helpless infants, providing a worm, nurturing relationship so that the children experience a sense of trust in the world and in themselves. These challenges make infancy an exciting yet demanding period for both child and parents.(26)

Table 2 Summary of Infant Growth and Development (26)

Physical	Motor	Psychosocial	Sensory/ Cognitive	Language/ Communication
1-2 Months				
Fast growth; weight gain of 1.5 lb (0.68 kg) per month and height gain of 1 inch (2.54 cm) per month during first 6 months. Upper limbs and head grow faster. Primitive reflexes present; strong suck and gag reflex. Obligate nose breather. Posterior fontanel closes by 8 weeks.	**Gross:** May lift head when held against shoulder Head lag. **Fine:** Palma grasp. 1month: Immediately drops object placed in hand. First usually clenched (grasp reflex). 2 months: Holds objects momentarily. Hands often open (grasp reflex fading).	Erikson's stage of trust versus mistrust. Infant learns that world is good and "I am good." This stage is the foundation for other stages. Child is entirely dependent on parents and other caregivers. Needs should be met in timely fashion. Touch is important.	Piaget's sensorimotor phase. 1 month: Notices bright objects if in line of vision. Vision 20/100. Reflexes dominate behavior. 2 months: Begins to follow objects.	Strong cry. Throaty sounds. Responds to human faces. 6-8 weeks: Begins to smile in response to stimuli.

Table 2 Summary of Infant Growth and Development (cont.)

Physical	Motor	Psychosocial	Sensory/ Cognitive	Language/ Communication
3 Months				
Primitive reflexes fading.	**Gross:** Can get hand to mouth. Can lift head off bed when in prone position. Head lag still present but decreasing. **Fine:** Holds objects placed in hands. Grasp reflex absent.	Smiles in response to others. Uses sucking to soothe self.	Follows an object with eyes. Plays with fingers.	Babbles, coos. Enjoys making sounds. Responds to voices, watches speaker.
4-5 Months				
Can breathe when nose is obstructed. Growth rate declines. Drooling begins. Moro, tonic neck, and rooting reflexes have disappeared.	**Gross:** Plays with feet; puts foot in mouth. Bears weight when held in a standing position. Turns from abdomen to back. **Fine:** Begins reaching and grasping with palm. Hits at object, misses.	Mouth is a sensory organ used to explore the environment. Attachment is an on going process throughout infancy. Has increased interest in patent, shows trust, knows patent. Shows emotions of fear and anger.	4 months; Brings hands together at midline. Vision 20/80.Begins to play with objects. Recognizes familiar faces. Turns head to locate sounds. Shows anticipation and excitement. Memory span is 5-7 min. Plays with favorite toys.	Crying becomes differentiated. Babbling is common. Begins consonant sounds: H, N, G, K, P, B (4 months). Make vowel sounds: ie, ah, ooh (5 months).

Table 2 Summary of Infant Growth and Development (cont.)

Physical	Motor	Psychosocial	Sensory/ Cognitive	Language/ Communication
6-7 Months				
Weight gain slows to 1 lb (0.45 kg) per month. Length gain of 0.5 inch (1.27 cm) per month. Birth weight doubles; tooth eruption begins; chewing and biting occur. Maternal iron stores are depleted.	**Gross**: Sits, leaning forward on both hands; when supine, lifts head off table. Turns from back to abdomen. **Fine:** Transfers objects from one hand to another. Picks up object well.	Smiles at self in mirror. Plays peek-a-boo. Begins to show stranger anxiety.	Can fixate on small objects. Adjusts posture to see. Responds to name. Exhibits beginning sense of object permanence. Recognize parent in other clothes, places. Is alert for 1.5-2 hours.	Produces vowel sounds and chained syllables. Begins to imitate sounds. Belly laughs.Babbles (one syllable) with pleasure. Calls for help. “talks” to toys and image in mirror.

Play

One sign of infants’ cognitive development is the beginning evidence of play. Early signs of play are related to infants’ motor and cognitive development. They mouth, shake, inspect, and reach for objects. Infants observe and engage other members of the family. In fact, human involvement is the most important component of play. A familiar game that we all have played is peek-a-boo. Not only is the game fun, but it is also associated with the development of object permanence.

3. Prevention of Accident and hazard

During the baby age, it is the age that the baby depends on the mother or someone to take care. It is also the age of unskilled control and use of the body. This unskilled control and use of the body result in accidents and injuries all the time. If the

prevention is always aware of and or all types of accident prevention are known and familiar with, it will prevent and reduce severity injury (28).

Table 3 Type of the injury and prevention behavior in each infant age

Age	Types of injury	Prevention behavior
Newborn-3 months	- Falls	- Do not leave the infant alone - Do not put the infant near the curb of the bed - Around the baby there should be a side pillow as a blockate
	- The head, arms and legs stuck between the cot bars	- The bars should be cramp that the head, arms and legs cannot be squeezea through Hold infant for feeding : do not prop bottle
	- Aspirate	- Do not offer solid food. Never take baby powder directly on infant; place powder in hand and then on infant's skin, store container closed and out of infant's reach
	- Burns	- Check bath and formula temperatures carefully. Avoid drinking or pouring hot liquids while holding infant. Keep infant away from hot objects
	- Body injuries	- All ways close safety pins. Avoid sharp objects or toys.
3- 6 months	- Falls	- Restrain in a high chair Keepcrib rails raised to full high Do not leave on bed or in infant seat unattended
	- Burns	- Place hot objects (candoles, incense)on high surface. Keep faucet's out of reach. Cover electrical outlets.

Table 3 Type of the injury and prevention behavior in each infant age (cont.)

Age	Types of injury	Prevention behavior
3-6 months	- Bodily injury	- Don't allow infant's to play with fork or knife while being fed Use nonbreakable and splinter proof eating
	- Poisons	- Evaluate house, toys and furniture for lead painst Don't store toxic substance near food Clean toys ever day and keep in the safety place

Immunization

One of the most dramatic advance in pediatrics has been the decline of infection diseases because of the widespread use of immunization for preventable diseases.

The recommended age for beginning primary immunization of infant is at birth. Children born prematurely should receive the full dose of each vaccine at the appropriate chronologic age. At present the vaccination is very effective with little side effect. The mothers should take their children to have vaccination at the appointed time with the physician. The vaccines for first 6 months old infant are BCC, DPT and OPV.(29)

Table 4 Recommended Schedule for Immunization of Healthy Infant (Department of Communicable Disease Control, Ministry of Public health 1994)

Recommended Age	Immunization
Birth	BCG, HBV_1
1-2 months	HBV_2
2 months	DPT_1, OPV_1
4 months	DPT_2, OPV_2
6 months	DPT_3, OPV_3, HBV_3

4. Care during sickness

If a child who chronic infection disease and communicable disease may not grow as rapidly or develop as fully as the healthy child. Currently with good health supervision and prevention could protect the child health and growth .The problem of illness in infant and child under 5year age is respiratory tract infection and gastrointestinal tract infection especially diarrhea. Data from the Statistic Department, Ministry of Public health in 1993 showed that death rate from pneumonia in children aged 0-5 years old is 15.3 per 100,000 and the rate of diarrhea is as high as

Respiratory infection: As the infants' respiratory tracts are shot and straight so the foreign body or disease may enter and cause infection easily, in particular

1. Common cold.

Colds are more severe in young children than in order children and adults. Children 3 months to 3 years have fever early in the course of infection, sneezing, runny nose (first, a clear discharge; later a thicker, slightly colored one) decreased appetite, cough, on and off irritability, slightly swollen glands. If children have s typical cold with out complications, the symptoms should gradually disappear after three to four days

Treatment. Make sure the infant gets extra rest and drinks extra or increased amounts of fluid. If he as a fever, give him acetaminophen and sponge used a cool-mist humidifier in his room. If congestion does occur, used a red bulb syringe No. 1 to

suct the mucous from his nose especially before feeding and when it's obviously blocked.

Prevention. The best prevention is to keep him away from people who have colds.

2. Gastrointestinal tract Disease

The common problem of gastrointestinal tract is diarrhea is the major cause of infant mortality in developing countries. WHO define the characterize of diarrhea is very watery stools more than 3 times a day or mucous bloody stool at least 1 time a day, or usually high liquid content in the stool only 1 time a day .

Diarrhea in infants is always serious because infants have such a small extracellular fluid reserve that sudden losses of water exhaust the supply quickly the loss of extracellular sodium leads to a decrease in plasma volume and possible circulatory collapse (26)

Factors influencing quality of infant care

Age. Age is considered a factor affecting maternal role attainment because the social acceptance of the maternal roles is that it is inappropriate for the psychosocially immature teenager(30).Accordingly, young mothers lack knowledge about child growth and development and have normal development needs that may conflict with their infant. This has been supported by several studies. Having an infant before the age of 20 has been linked with child abuse(30). Similarly, Jones and colleagues (31) suggested that there is a lack of readiness for the role in the younger mother, found that mother under 19 held their infants less than older mother, and were less aware of, and responsive to, their signals than older mothers were (30) who established that adolescent mothers were more insecure in their maternal role than older mothers. Moreover, the first-time mother in her thirties has the potential for greater maturity and achievement of roles apart from mothering.

Educational level. The mothers to have the chance to study good knowledge and train herself from several resources. Russell(30) indicated that high educated mother was in the crisis of adjustment to motherhood less than mother who had less education. Winoker and colleagues (32) found that years of education was key to

helping individual intellectual development. Intellect was important for understanding any information. The highly education mothers could learn about infant behavior easily, interpret, and respond to their infant's needs appropriately.

Family income. Family income might affect maternal role identity(30). Because of good income, the mother should be able to sustain and support life basic needs. The mother could provide what she needed for herself and not to worry about economic problems (33) Low income, on the other hand, was terrible to face the uncertainly of family economic status.

Pregnancy planning , Pregnancy planning indicates the mother's intention, readiness and preparedness to get pregnant. Pregnant women who have planned pregnancy, therefore, will accept the pregnancy and are enthusiastic to seek for themselves and their children. They will eat nourishing foods to enhance gestation health and start receiving antenatal services at the early state of pregnancy. They also seek knowledge from various resources to ensure good outcome pregnancy. On the other hand, women who have unplanned pregnancy experience the senses of fear, guilt and confusion(34). These women do not accept the pregnancy and may conduct self-harm action or may take certain drugs to induce abortion. If their attempts to terminate the pregnancy do not success, the pregnancy will continue but the action may lead to fetal disorders. Pregnant adolescents do not take nourishing food to promote gestation health, do not seek knowledge about pregnancy and self care and do not receive antenatal care services; thus they are risk of complications during pregnancy due to physiological changes, leading to poor health status of both mother and infant(35).

Gestational age at first antenatal care clinic visit The reception of antennal services care at early stage of pregnancy indicates the mother's interest in caring in for her pregnancy. During each antenatal care visit, pregnant women will receive medical examination to ensure good health status of the mother and the fetus; thy will also receive knowledge and advice about appropriate self care during pregnancy. Regular antennal check up contributes to normal progress of pregnancy, leading to the delivery of healthy infant with normal birth weight. On the contrary, pregnant women who have delayed antenatal care or have the first antenatal visit at gestation age of 13 weeks or older (36), or in the second or the third trimester of pregnancy, are likely to have low birth weight infants more than pregnant women who received the first

antenatal care in the first trimester of pregnancy (37). Jaruwan(38)found significant relation between gestation age at the first antenatal visit and infant's birth weight. It is found that pregnant women who had the first antenatal visit at younger gestation age tend to have infants with birth weight more than 3,000 grams at a higher rate than women who had the first antenatal visit at later age of gestation(39).

Number of Antenatal Care. Antenatal or asking for advice concerning health during first stage of pregnancy and later on is very important to pregnant women for preparing themselves to be mother(40) A mother should have regular antenatal check-up periodically. During the first 7 months, she should come for antenatal care every 4 weeks. When pregnancy reaches the 8^{th} month, the check up should be every 2-3 weeks. And as pregnancy approaches the 9^{th} month, weekly check up is required. Therefore, during the hold time of pregnancy, a mother should receive prenatal care at least 8-10 times the study of Ali M and Lulesequed S(11) who studied factors influencing adolescent birth outcomes and found that adolescent mothers missed significantly more prenatal visit and received less tetanus toxoid than non adolescents. Although gestation ages and the proportion of small-for-age infant were comparable in both groups, the study of Phoungpaka A(41)which studied comparative outcome between adolescent pregnancy and pregnancy in mothers aged 20-30 years at Pharpokklao hospital in Chantaburi Province and found nearly two third of adolescent pregnancy had 4 or more ANC visit compared to 93% of adult pregnancy.

Maternal experiences. The mother who had opportunities in learning about infant care, responsibilities of a mother, alteration of her physical, and mentally condition after giving birth would adapt her role easier(16). Though difference experiences will have directly effect on adaptation in the first time mothers, so the mother who lack of experiences seem to be lack of confidence to perform her role function(42)

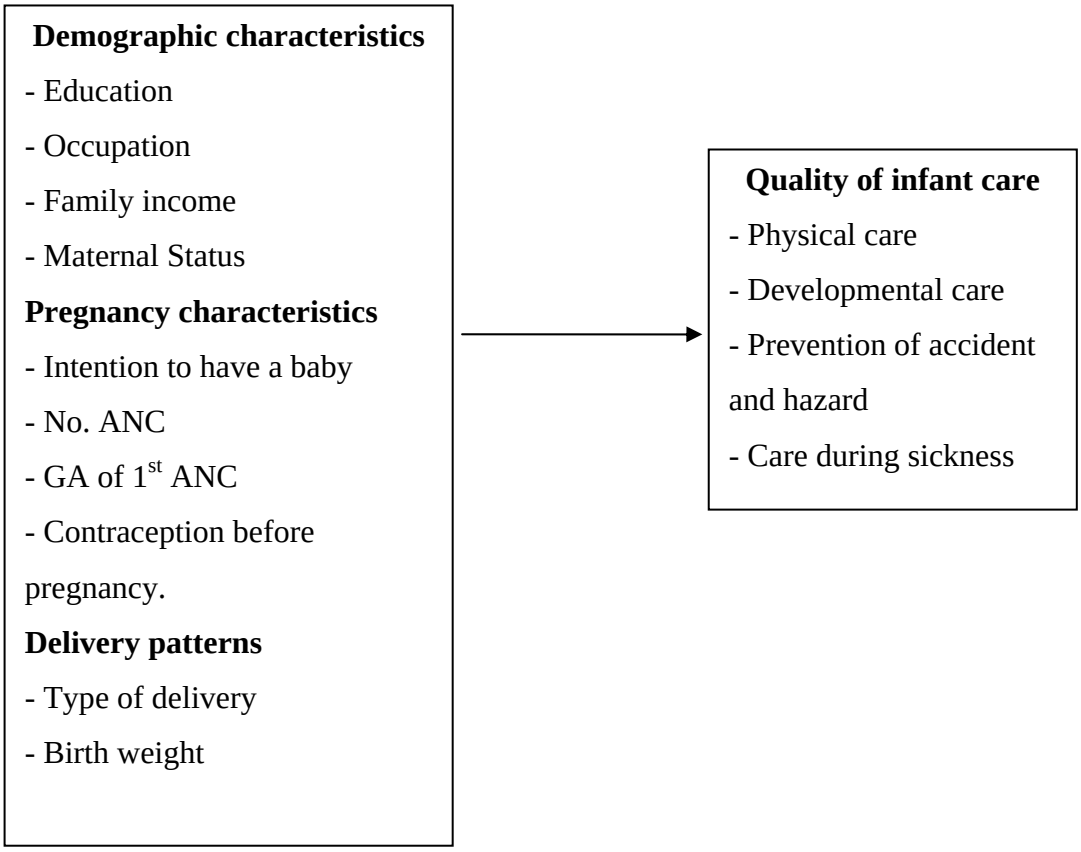
Maternal status. Good relationship between couples was basic principal to parenthood adaptation. Because satisfactory in maternal and adaptation in maternal life style were the first developmental tasks to be an infant's mother. Mother would feel confidence in her role and her responsibility. Satisfaction in maternal status might affect on spouse support and maternal role adaptation of the first time mother,

especially within 6 weeks after delivery. Maternal satisfied mothers would have less anxiety during postpartum period than the unsatisfied mothers.

Watcharasin (1990) found that, the first time mother who had difference maternal status, planning of pregnancy, education level, and income would have significant statistically difference in adaptation to parenthood.

Social Support. Close up participation of supporting from relatives, closed friends, neighbours and medical personals could support mothers' confidence to perform her role and satisfaction in childrearing .Social Support meant that the person in society were giving and sharing their help and tender care to each other in society in many different ways such as; tender loving care, pay attention to one another, acceptation of ones' activities, tightening relationship, social activities participation or being a part of society, acceptation of their value, information received and variety of helping such as maternal, financial, time working party. Thus, social support would help the person to solve the problems being encountered.

Conceptual Framework



CHAPTER III
MATERIALS AND METHODS

Research design

This research was analytical research which studied characteristics of mothers, antenatal care, delivery pattern and quality of infant care compared between teenage and adult mothers.

Population and sample

Teenage mothers aged less than 20 years old, adult mothers aged 25-30 years old who were resident and delivered at Nangrong hospital Ampher Nangrong, Buriram Province during December 2005 – June 2006.

Inclusion criteria

1. The first time mothers.
2. Had healthy infant, no asphyxia, no complication, no deformity of body.
3. Willingness to cooperate.

Sample size

The following formula was used for calculating the sample size by Daniel's formula.(43)

$$n = \frac{n_0}{1 + \frac{n_0}{N}} \qquad , n_0 = \left(\frac{z}{d}\right)^2 \pi (1- \pi)$$

n = sample size

N = Teenage mothers aged less than 20 years old, adult mothers aged 25-30 years old who were resident and delivered at Nangrong hospital Ampher Nangrong,

Buriram Province during December 2005 – June 2006

125 mothers

π = proportion of quality care of infant of teenage mother

0.7

Z = standard normal deviation at 0.05 = 1.96

d = allowable error in this studies 15 % = 0.12

$$n_0 = \left(\frac{1.96}{0.12} \right)^2 \times 0.7 \times 0.3$$

$$= 56.023$$

$$n = \frac{56.023}{1 + \frac{56.023}{125}}$$

$$= 38.689$$

Adding 20% of cases for incomplete data or loss to follow up the total number of cases should be 50 in each group.

Variables and Measurements

Variables

1. Independent variables under control were:

1.1 Demographic characteristics

- Level of education
- Type occupation
- Family income
- Marital status

1.2 Pregnancy characteristics

- Gestational age of ANC

- Number of ANC
- Intention to have a baby

1.3Delivery patterns

- Type of labor
- Birth weight

2. Dependent variable was quality of care of infant.

Research instrument

The instrument used in data collection was a questionnaires developed based on the review of related literatures. The items included in the questionnaires and the content was in accordance with the research objectives. The questionnaires were validated by three experts, and were tried out with a groups of 10 subject who had characteristics similar to those of subjects in present study. The reliability of the test of quality care of infant was 0.7.

The questionnaire had been validated to ensure its quality as follows:

1. Content validity: A panel of three experts reviewed the questionnaire for accuracy, completeness, and language appropriateness.

2. Reliability: The questionnaire was revised based on the comments and suggestion of experts before being tried out with 10 mothers who had characteristics similar to those of subjects in present study.

The reliability of the test of quality care of infant was 0.7. There fore, it could be concluded the questionnaire was reliable for the objectives of the research.

The research instrument could be divided into four parts as follows:

Part 1 : Demographic characteristics.

Part 2 : Pregnancy characteristics.

Part 3 : Delivery patterns.

Part 4 : Quality of infant care.

4.1 Persons who rear infant.

4.2 Quality of infant care at 0-3 months this part consisted of 23 questions related to quality of infant care i.e. physical care, developmental care, prevention of accident and hazard and care during sickness. The mothers got 1 point

for each correct answer. Level of quality of infant care were categorized into 3 levels answer to median ± SD scores.

4.3 Quality of infant care at 3-6 months this part consisted of 23 questions related to quality of infant care i.e. physical care, developmental care, prevention of accident and hazard and care during sickness. The mothers got 1 point for each correct answer. Level of quality of infant care were categorized into 3 levels answer to median ±SD scores.

Physical care (8 items, total scores = 100)

- Low means score ≤ 49
- Fair means score 50 -79
- High means score ≥ 80

Developmental care (6 items, total scores = 100)

- Low means score ≤ 49
- Fair means score 50 -79
- High means score ≥ 80

Prevention of accident and hazard (5 items, total scores = 100)

- Low means score ≤ 49
- Fair means score 50 -79
- High means score ≥ 80

Care during sickness (4 items, total scores = 100)

- Low means score ≤ 49
- Fair means score 50 -79
- High means score ≥ 80

Overall of quality of infant care was calculated by averaging scores in 4 parts (adding scores of 4 parts and divided by four) The level of overall of infant care were categorized into 3 levels.

- Low means score ≤ 49
- Fair means score 50 -79
- High means score ≥ 80

Data collection procedure

Data collection procedure was conducted in the following sequence:

1. A letter is issued by the Faculty of Graduate Studies, Mahidol University, will be sent to committee on Human Right Related to research. Involving Human Subjects Faculty of Medicine Ramathibodi Hospital, Mahidol University, to ask for documentary proof of ethical Clearance Committee on Human Right.
2. The researcher will interview the mothers who had characteristics similar to those of subjects in present study.
3. The researcher will check the questionnaires for completeness of data.
4. Data analysis.

Data analysis

1. Data Preparation

   1.1 Collecting Data Preparation

   1.2 Collection and verifying data then record into diskette. Analyze data with computer by SPSS/PC+ (Statistical Package for the Sciences/ Personal Computer Plus)

2. Statistics

   The statistics used for data analysis as followed:

   2.1 Descriptive statistics: percentage, mean and standard deviation were calculated to characteristic of mothers.

   2.2 Analysis statistics: Data was analyzed by using Chi-square test, Independent t test was used to test hypotheses at the significant level of $p< 0.05$

CHAPTER IV
RESULTS

The purpose of this analytical research was to study characteristics of mothers, antenatal and delivery pattern and quality of care compared between teenage and adult mothers. The sample size were 50 mothers in each group (teenage mothers aged less than 20 years old, adult mothers aged 25-30 years old) who was resident and delivered at Nangrong hospital Ampher Nangrong Buriram province during December 2005 – June 2006. Data was analyzed by using SPSS PC^{+} for window. Results of this study were presented in this chapter as follow:

Part 1: Demographic characteristics.

Part 2: Pregnancy characteristics.

Part 3: Delivery patterns.

Part 4: Quality of infant care at 0-3 months and 3-6 months.

Part 1: Demographic characteristic.

1.1 Age Half of teenage mothers (50.0%) were 15-17 years old compared to half of adult mother (54.0%) were 25-27 years old. Mean age of teenage mother was 17.28 ±1.33years. Mean age of adult mother was 27.20±1.88 years.(Table5)

1.2 Occupation of mothers Nearly half **(**48.0%) of teenage mothers were employee or civil servants compared to 36.0% of adult mothers. About 42% of teenage mothers were housewife compared to 36.0% of adult mothers. There was no statistically significant difference between two groups. (Table5)

1.3 Family income Half of teenage mothers (54.0%) had monthly income less than 5000 baths compared to 22.0% of adult mothers. Mean of income of teenage mothers was 5514±4727.64 baths compared to 9842±6209 baths of adult mothers. The difference was statistically significant (p = 0.001).) (Table5)

1.4 Financial dependency Half of teenage mothers(56.0%) were in financial dependent of source of income from their parents or relatives compared to 20.0%of adult mothers. The difference was statistically significant (p = 0.000) (Table5).

1.5 Characteristics of family size Most of mothers in both groups were extended family.(86.0% of teenage mother and 76.0% of adult mothers respectively. (Table5)

1.6 Marital status About 22.0% of teenage mothers were divorced or separated compared to only 2.0% of adult mothers. The difference was statistically significant (p = 0.002). (Table5)

1.7 Education of mother Nearly half of adult mothers (43.8%) had education level of high school or higher compared to 20.4% of teenage mothers The difference was statistically significant (p = 0.014). (Table5)

1.8 Education of husband More than half of husband of adult mothers had education level of high school or higher(58.1%) compared to only 35.7% of husband of teenage mothers. The difference was statistically significant (p = 0.038). (Table5)

Table 5 Demographic characteristics

Demographic	Teenage (n=50)	Adult(n=50)	x^2	t	p-value
	No. (%)	No. (%)			
Age (years)					
15- 17	25(50.00)	0(0.00)			
18- 19	25(50.00)	0(0.00)			
25 – 27	0(0.00)	27(54.00)			
28 – 30	0(0.00)	23(46.00)			
Mean ± SD	17.28±1.33	27.20±1.88			
Occupation of maternal					
House wife	21(42.00)	17(34.00)			
Employee / Civil servant	24(48.00)	18(36.00)			
Farmer	4(8.00)	7(14.00)			
Merchant	1(20.00)	8(16.00)	1.478		0.224

Table 5 Demographic characteristics (cont.)

Demographic	Teenage (n=50) No. (%)	Adult(n=50) No. (%)	x^2	t	p-value
Family income (Baht / month)					
< 5000	27(54.00)	11(22.00)			
5,000 -10,000	15(30.00)	22(44.00)			
>10,000	8(16.00)	17(34.00)			
Mean ± SD	5514±4727.64	9842±6209		-3.335	0.001*
Financial dependency					
Yes	28(56.00)	10(20.00)			
No	22(44.00)	40(80.00)	13.75		<0.001*
Characteristics of family size					
Single	7(14.00)	12(22.00)			
Extended	43(86.00)	38(76.00)	1.624		0.202
Marital status					
Living together	39(78.00)	49(98.00)			
Married	0(0.00)	18(36.00)			
Not married	39(78.00)	31(62.00)			
Divorced / Separated	11(22.00)	1(2.00)			.002**
Education of mother	(N=49)	(N=48)			
≤ Primary school	13(26.50)	18(37.50)			
Secondary school	26(53.10)	9(18.80)			
≥High school	10(20.40)	21(43.80)	6.06		0.014*
Education of husband	(N=42)	(N=43)			
≤Primary school	13(31.00)	13 (30.20)			
Secondary	14(33.30)	5(11.60)			
≥High school	15(35.70)	25(58.10)	4.29		0.038*

* p – value of Chi – square test

** Fisher Exact Test

Part 2: Pregnancy characteristics (Table6)

2.1 Intention to have a baby Nearly two thirds of teenage mothers (72.0%) were unplanned or uncertain on this pregnancy. On the contrary 78% of adult mothers planned the pregnancy. The difference was statistically significant
($p = 0.000$).(Table6)

2.2 Use of contraception before pregnancy Half of teenage mothers (56.0%) did not use contraception before pregnancy. On the contrary 56.0% of adult mother use contraception before pregnancy. The difference was not statistically significant. (Table6)

2.3 Gestational age at first antenatal visit About 20.0% of teenage mothers came to first antenatal visit at 10 weeks or less than compared to 44.0% of adult mothers. The mean gestational age at first antenatal visit of teenage mothers was 15.94±5.95weeks compared to12.0±6.45weeks of adult mothers. The difference was statistically significant ($p = 0.002$). (Table6)

2.4 Number of ANC visit About 34.0% of teenage mothers had 9 times or more ANC visit compared to 52.0% of adult mothers. The mean of number ANC visit of teenage mothers was 7.63±2.49 compared to 8.86±3.23 of adult mothers. The difference was statistically significant ($p = 0.037$) (Table6)

Table 6 Pregnancy characteristics

Pregnancy characteristics	Teenage (n=50) No. (%)	Adult(n=50) No. (%)	x^2	t	p-value
Intention to have a baby					
Un planned / Uncertain	36(72.00)	12(24.00)			
Planned	14(28.00)	39(78.00)	25.09		.000*
Use of contraception before pregnancy					
No	28(56.00)	22 (44.00)			
Yes	22(44.00)	28(56.00)			
Pills	20(40.00)	27(54.00)			
Injectable	2(4.00)	0(0.00)			
Condom	0(0.00)	1(2.00)	1.44		0.2

Table 6 Pregnancy characteristics (cont.)

Pregnancy characteristics	Teenage (n=50) No. (%)	Adult (n=50) No. (%)	t	p-value
Gestational age at first antenatal visit (weeks)				
No ANC	1(2.00)	0(0.00)		
ANC	49(98.00)	50(100.00)		
≤ 10	10(20.00)	22(44.00)		
10 – 20	31(62.00)	23(46.00)		
≥ 20	8(16.00)	5(10.00)		
Mean ± SD	15.94±5.95	12±6.45	3.155	0.002*
Number of ANC visit.				
0	1(2.00)	0(0.00)		
≤ 4	3(6.00)	3(6.00)		
5 – 8	29(58.00)	21(42.00)		
≥ 9	17(34.00)	26(52.00)		
Mean ± SD	7.63±2.49	8.86±3.23	2.122	0.037*

* p – value of Chi – square test

** Fisher Exact Test

Part 3: Delivery patterns. (Table7)

3.1 Type of delivery Most of teenage mothers had vaginal delivery (96%).Only 4.0% of teenage mothers had caesarean section compared to 22% of adult mothers. The difference was statistically significant (p = 0.007) (Table7)

3.2 Birth weight Most of infant of teenage mothers (90.0%) weighed 2500 – 3500 grams compared to 80% of infants of adult mothers. Only 2% of infant of teenage mothers weighed > 3500 grams compared to 12% of infant of adult mothers The mean weight of infant of teenage mother was 2905±342.19 grams compared to 3067±443.03 grams of infant of adult mother. The difference was statistically significant (Table7)

Table 7 Delivery patterns

Delivery patterns	Teenage (n=50) No. (%)	Adult(n=50) No. (%)	x^2	t	p-value
Type of labor					
Vagina	48(96.00)	39(78.00)			
NL	42(84.00)	32(64.00)			
V/E / F/E	6(12.00)	7(14.00)			
C/S	2(4.00)	11(22.00)	0.015		0.007**
Birth weight (grams)					
< 2500	4(8.00)	4(8.00)			
2500 – 3500	45(90.00)	40(80.00)			
> 3500	1(2.00)	6(12.00)			
Mean ± SD	2905±342.19	3067.60±443.03		-0.996	0.322

* p – value of Chi – square test

** Fisher Exact Test

Part 4: Quality of infant care (Table 8)

4.1 Persons who rear infant

4.1.1 Person who rear infant When the infant aged 0-3 months more mothers of adult group rear infant by themselves(94.0%) than mothers of teenage group (82.0%). The difference was not statistically significant. The same result was found when the infants aged 3-6 months. Totally there were 13 teenage mothers who did not rear their infant at 3-6 months compared to 8 of adult mothers. There was no statistically significant**.** (Table8)

4.1.2 Reasons why the mother did not rear infant by themselves Of all 13 mothers of teenage group who did not rear infant aged 3-6 months by themselves, 3(23.1%) gave the reason of incapability, 4 (30.3%) were ignorant and 6(26.0%) had to go to work. All of adult mothers who did not rear infant by

themselves had the reason of going to work. There was no statistically significant**.** (Table8)

4.1.3 Number of person in rearing infant Most of mothers in both groups had 2 or more persons help rear the infant (86.0% of teenage mother and 90.0% of adult mothers respectively). There was no statistically significant**.** (Table8)

4.1.4 Role of father in rearing infant About 42.0% of husband of teenage mothers did not participate in rearing infant. On the contrary 66.0% of husband of adult mothers help rear the infants. There was no statistically significant**.** (Table8)

Table 8 Postpartum characteristics

Postpartum characteristics	Teenage (n=50) No. (%)	Adult(n=50) No. (%)	x^2	p-value
Person who rear infant (0-3 months)				
Mother	41(82.00)	47(94.00)		
Grandmother / Other Relative	9 (18.00)	3(6.00)	3.409	0.065
Person who rear infant (3-6 months)				
Mother	37(74.00)	42(84.00)		
Grandmother / Other Relative	13(26.00)	8 (16.00)	1.507	0.220
Reasons why the mothers did not rear infant				
	n=13	n=8		
Not capable	3(23.10)	0(0.00)		
Ignorant	4(30.30)	0(0.00)		
Have to work	6(46.20)	8(100.00)	3.041	0.081
Number of person in rearing infant				
1	7(14.00)	5(10.00)		
$\geq$ 2	43(86.00)	45(90.00)	0.379	0.538
Role of father in rearing infant				
Yes	29(58.00)	33(66.00)		
No	21(42.00)	17(34.00)	0.679	0.410

4.2 Quality of infant care (0-3 months) (Table 9)

4.2.1 Physical care Although in most of the physical care of infants, adult mothers gave better quality, but there were no statistical significance difference of quality of care in physical care of infants(0-3 months) between adult and teenage mothers. (Table9)

4.2.2 Developmental care In most of the developmental care, adult mothers had better quality of care, but there were no statistically significant different quality of care in developmental care of infants (0-3 months)between adult and teenage mothers. (Table9)

4.2.3 Prevention of accident and hazard The mother in both groups did not provide different quality care of prevention of accident and hazard. There were no statistically significant difference in quality of care of prevention of accident and hazard for infant 0-3 months. (Table9)

4.2.4 Care during sickness About 50-60% of infants in both groups ever got sick during 0-3 months of aged. Although among most of the care during sickness, teenage mothers provided better quality, but there were no statistical significant difference of quality of care during sickness of infants between adult and teenage mothers. (Table9)

Table 9 Quality of care of infant (0 –3 months)

Quality of care (0 –3 months)	Number and % of good quality				x^2	p-value
	Teenage (n=50)	Level	Adult (n=50)	Level		
Physical care						
1. Exclusive breastfeeding	36(72.00)	F	32(64.00)	F	0.735	0.396
2. Infant burb after feeding.	40(80.00)	H	43(86.00)	H	0.638	0.424
3. No solid food feeding.	28(56.00)	F	32(64.00)	F	0.667	0.414
4. Infant bath at least once a day	50(100.00)	H	50(100.00)	H	-	1.00
5. Shampooing the infant's hair during bath	50(100.00)	H	50(100.00)	H	-	0.00

Table 9 Quality of care of infant (0 –3 months) (cont.)

Quality of care (0 –3 months)	Number and % of good quality Teenage (n=50)	Level	Adult (n=50)	Level	x^2	p-value
6. Soft ,shampoo special for the infant.	13(26.00)	L	19(38.00)	L	1.010	0.315
7. Special baby soap or detergent for infant's clothes.	30(60.00)	F	37(74.00)	F	2.216	0.137
8. Care gum and mouth of the infant.	23(46.00)	L	24(48.00)	L	0.40	0.814
Developmental care						
1. Frequency call of infant's name.	48(96.00)	H	50(100.00)	H	2.041	0.153
2. Hug when infant cry	49(98.00)	H	50(100.00)	H	1.010	0.315
3. Play with infant.	49(98.00)	H	50(100.00)	H	1.010	0.315
4. Provide appropriate toy for the infant.	35(70.00)	F	39(78.00)	F	0.832	0.362
5. Sing or play music for infant	34(68.00)	F	40(80.00)	H	1.871	0.171
6. Use hospital gift to help development of the infant.	34(97.10)	H	43(100.00)	H	1.245	0.265
Prevention of accident and hazard						
1. Not bring the infant to crowded places.	35(70.00)	F	32(64.00)	F	0.407	0.523
2. Leave infant alone	41(82.00)	H	46(92.00)	H	2.210	0.137
3. Infant never fall down from bed	45(90.00)	H	43(86.00)	H	0.379	0.538
4. No small toys or pieces of toys	49(98.00)	H	50(100.00)	H	1.010	0.315
5. Standard vaccination	50(100)	H	50(100.00)	H	-	1.00

Table 9 Quality of care of infant 0 –3 months (cont.)

Quality of care (0 –3 months)	Number and % of good quality				x^2	p-value
	Teenage (n=50)	Level	Adult (n=50)	Level		
Care during sickness.						
1. Infant never be ill	18(36.00)	L	21(42.00)	L	0.378	0.539
2. Infant never had cold	27(54.00)	F	28(56.00)	F	0.40	0.841
3. Infant never had fever	27(54.00)	F	26(52.00)	F	0.40	0.841
4. Infant never had diarrhea	42(84.00)	H	48(96.00)	H	4.00	0.046*

* p – value of Chi – square test

** Fisher Exact Test

L = Low, F= Fair, H = High

4.3 Level of quality care (0-3 months) Table 10

4.3.1 Total of quality care About thirty six percent of adult mothers had high total quality care compared to 34.0% of teenage mothers. The mean score of care of adult mothers was 74.95±10.72 compared to73.08±12.88 of teenage mothers. The difference was not statistically significant. (Table10)

4.3.2 Level of physical care About 26.0% of adult mothers had high level of physical care compared to 20.0% of teenage mothers. The mean score of physical care of adult mothers was 74.25±26.65 compared to 67.25±17.47 of teenage mothers. The difference was not statistically significant. (Table10)

4.3.3 Level of developmental care Most of adult mothers (88%) had high level of developmental care compared to 70.0% of teenage mothers. The mean score of developmental care of adult mothers was 90.66±11.74 compared to 83.0±15.60 of teenage mothers. The difference was statistically significant.(p = 0.007) (Table10)

4.3.4 Level of prevention of accident Most of adult mothers (88.0%) had high level of prevention of accident care compared to 86.0% of teenage mothers.

The mean score of prevention of accident of adult mothers was 88.4±14.04 compared to 88.0±14.56 of teenage mothers. The difference was not statistically significant. (Table10)

4.3.5 Level of sickness care About 28% of adult mothers had high level of sickness care compared to 34.0% of teenage mothers. The mean score of sickness care of adult mothers was 49.0±35.7 compared to 54.0±36.19 of teenage mothers. The difference was not statistically significant. (Table10).

Table 10 Score of quality of infant care (0 – 3 months)

Level of quality care (0 – 3 months)	Teenage (n=50) No. (%)	Adult (n=50) No. (%)	t	p-value
Level of quality care (total scores = 100)				
Low (≤ 49)	3(6.00)	0(0.00)		
Fair (50-79)	30(60.00)	32(64.00)		
High (≥ 80)	17(34.00)	18(36.00)		
Mean ± SD	73.06±12.88	74.95±10.72	-0.798	.427
Level of physical care (total scores = 100)				
Low (≤ 49)	5(10.00)	2(4.00)		
Fair (50-79)	35(70.00)	35(70.00)		
High (≥80)	10(20.00)	13(26.00)		
Mean ± SD	67.25±17.47	74.25±26.65	-1.553	0.124
Level of developmental care (total scores = 100)				
Low (≤ 49)	1(2.00)	0(0.00)		
Fair (50-79)	14(28.00)	6(12.00)		
High (≥80)	35(70.00)	44(88.00)		
Mean ± SD	83.0±15.60	90.66±11.74	-2.775	0.007*

Table 10 Score of quality of infant care 0 – 3 months (cont.)

Level of quality care (0 – 3 months)	Teenage (n=50) No. (%)	Adult (n=50) No. (%)	t	p-value
Level of prevention of accident (total scores = 100)				
Low (≤ 49)	7(14.00)	6(12.00)		
High (≥80)	43 (86.00)	44(88.00)		
Mean ± SD	88.0±14.56	88.4±14.04	-0.140	0.889
Level of sickness care (total scores = 100)				
Low (≤ 49)	21(42.00)	23(46.00)		
Fair (50-79)	12 (24.00)	13(26.00)		
High (≥80)	17 (34.00)	14(28.00)		
Mean ± SD	54.0±36.19	49.0±35.7	-0.696	0.488

* p – value of Chi – square test ** Fisher Exact Test

4.4 Quality of infant care 3-6 months (Table 11)

4.4.1 Physical care The quality of physical care of infant 3-6 months decrease slightly when compared with care of infant 0-3 month (66.0 ± 16.56 VS 67.25 ± 17.47). Although in most of the physical care of infant, adult mothers gave better quality, but there were no statistical significance difference of quality in physical care of infants between adult and teenage mothers. (Table11)

4.4.2 Developmental care The quality of developmental care of infant 3-6 months decrease slightly when compared with care of infant 0 -3 month(84.38 ± 15.93 VS 83.0 ± 15.60). Most of the developmental care, adult mothers had better quality of care, but there were no statistically significant different quality of care in developmental care of infants between adult and teenage mothers. (Table11)

4.4.3 Prevention of accident and hazard The quality of prevention of accident and hazard for infant 3-6 months increase slightly when compared with care of infant 0-3 month(81.2 ± 17.33 VS 88.0 ± 14.56). Although in most of prevention of accident and hazard for infant, adult mothers had better quality. There were no

statistical significance quality of prevention of accident and hazard between adult and teenage mothers. (Table11)

4.4.4 Care during sickness About sixty percent of infants in both groups ever got sick during 3 – 6 months of aged most of care during sickness, teenage mothers provided better quality, but there were no statistically significant different quality of care during sickness of infants between adult and teenage mothers. (Table11)

Table 11 Quality of care of infant (3-6 months)

Quality of care (3-6 months)	Number and % of good quality				x^2	p-value
	Teenage (n=50)	Level	Adult (n=50)	Level		
Physical care						
1. Exclusive breastfeeding	22(44.00)	L	26 (52.00)	F	6.41	0.423
2. Infant burb after feeding	37(74.00)	F	43(86.00)	H	2.250	0.134
3. No solid food feeding	48(96.00)	H	49(98.00)	H	1.010	0.315
4. Infant bath once a day	50(100.00)	H	50(100.00)	H	-	1.00
5. Shampooing the infant's hair during bath	50(100.00)	H	50(100.00)	H	-	1.00
6. Soft ,shampoo special for the infant	14(28.00)	L	20(40.00)	L	1.604	0.205
7. Special baby soap or detergent for infant's clothes	22(44.00)	L	32(64.00)	L	4.026	0.045*
8. Care gum and mouth of the infant	22(44.00)	L	22(44.00)	L	0.00	1.00
Developmental care						
1. Frequent call infant's name	48(96.00)	H	50(100.00)	H	2.041	0.153
2. Hug when infant cry	49(98.00)	H	50(100.00)	H	1.010	0.315
3. Play with infant	49(98.00)	H	49(98.00)	H	0.00	1.00

Table 11 Quality of care of infant 3-6 months (cont.)

Quality of care (3-6 months)	Number and % of good quality				x^2	p-value
	Teenage (n=50)	Level	Adult (n=50)	Level		
4. Provide appropriate toy for the infant	36(72.00)	F	43(86.00)	H	2.954	0.086
5. Sing or play music for the infant	38(72.00)	F	40(80.00)	H	0.233	0.629
Prevention of accident and hazard						
1. Not bring the infant to crowded places	26(52.00)	F	22(44.00)	L	0.641	0.423
2. Leave infant alone	42(84.00)	H	43(86.00)	H	0.078	0.779
3. Infant never fall down from bed	39(78.00)	F	35(70.00)	F	0.832	0.362
4. No small toys or pieces of toys	49(98.00)	H	50(100.00)	H	1.010	0.315
5. Standard vaccination	47(94.00)	H	48(96.00)	H	0.211	0.646
Care during sickness						
1. Infant never be ill	17(34.00)	L	16(32.00)	L	0.045	0.832
2. Infant never had cold	28(56.00)	F	28(56.00)	F	0.000	1.000
3. Infant never had fever	22(44.00)	L	22(44.00)	L	0.000	0.000
4. Infant never had diarrhea	41(82.00)	H	34(68.00)	F	2.613	0.106

L = Low, F= Fair, H = High

4.5 Level of quality care (3-6 months) (Table 12)

4.5.1 Total of quality care About 28 % of adult mothers had high total quality care compared to 32 % of teenage mothers. The mean score of care of adult mothers was 73.27±10.38 compared to71.38±13.25 of teenage mothers. The difference was not statistically significant. (Table12)

4.5.2 Level of physical care About 30 % of adult mothers had high level of physical care compared to 18.0% of teenage mothers. The mean score of physical care of adult mothers was 73.25±14.06 compared to 66.0±16.56 of teenage mothers. The difference was statistically significant (p= 0.020) (Table12)

4.5.3 Level of developmental care Most of adult mothers (86.0%) had high level of developmental care compared to 76.0% of teenage mothers. The mean score of developmental care of adult mothers was 91.66±12.25 compared to 84.33±15.93 of teenage mothers. The difference was statistically significant. (p = 0.011) (Table12)

4.5.4 Level of prevention of accident Most of mother in both groups had high level of prevention of accident(74% of adult and 74.0% of teenage mothers) The mean score of prevention of accident of adult mothers was79.2±16.14 compared to 81.2±17.33 of teenage mothers. The difference was not statistically significant. (Table12)

4.5.5 Level of sickness care About 28 % of adult mothers had high level of sickness care compared to 34.0% of teenage mothers. The mean score of sickness care of adult mothers was 49.0±35.7 compared to 54.0±36.9 of teenage mothers. The difference was not statistically significant. (Table12)

Table 12 Score of quality of infant care 3-6 months

Level of quality (3-6 months)	Teenage (n=50) No. (%)	Adult (n=50) No. (%)	t	p-value
Level of quality care (total scores = 100)				
Low (≤ 49)	3(6.00)	0(0.00)		
Fair (50-79)	31 (62.00)	36(72.00)		
High (≥80)	16(32.00)	14(28.00)		
Mean ± SD	71.38±13.25	73.27±10.38	-0.796	0.428

Table 12 Score of quality of infant care 3-6 months (cont.)

Level of quality (3-6 months)	Teenage (n=50) No. (%)	Adult (n=50) No. (%)	t	p-value
Level of physical care (total scores = 100)				
Low (≤ 49)	2(4.00)	0(0.00)		
Fair (50-79)	39 (78.00)	35(70.00)		
High (≥80)	9(18.00)	15(30.00)		
Mean ± SD	66.0±16.56	73.25±14.06	-2.35	0.020*
Level of developmental care(total scores = 100)				
Low (≤ 49)	1(2.00)	0(0.00)		
Fair (50-79)	11(22.00)	7(14.00)		
High (≥80)	38(76.00)	43(86.00)		
Mean ± SD	84.33± 15.93	91.66±12.25	-2.579	0.011*
Level of prevention of accident (total scores = 100)				
Low (≤ 49)	2(4.00)	2(4.00)		
Fair (50-79)	11(22.00)	11(22.00)		
High (≥80)	37(74.00)	37(74.00)		
Mean ± SD	81.2±17.33	79.2±16.14	0.597	0.552
Level of sickness care (total scores = 100)				
Low (≤ 49)	21(42.00)	23(46.00)		
Fair (50-79)	12(24.00)	13(26.00)		
High (≥80)	17(34.00)	14(28.00)		
Mean ± SD	54.0±36.19	49.0±35.7	0.695	0.488

* p – value of Chi – square test

** Fisher Exact Test

CHAPTER V
DISCUSSION

In this chapter, the discussion of research results are divided in two part:

1. Discussion of research methodology
2. Discussion of research result

Part I: Discussion of research methodology

1. Research design

The present research was a analytical study which aimed to study characteristics of mothers, antenatal care, delivery pattern and quality of neonatal care compared between adolescent and adult mothers. Study design was appropriate because it had comparison groups. Study in the past usually concentrated on group of teenage mothers and came to an inconvineing conclusion. This study, in addition, collected data at the community level of their home where quality of neonatal care can be actually accessed. Adult mothers of age 25-30 years were appropriate as a control groups because they should be old enough and ready to have babies.

2. Sample size This study included 50 cases each of adolescent mothers and adult mothers. The calculation of sample size used Daniel's formula which applied the percentage of good quality care of neonatal to be 75%. Adding 20% of cases for incomplete data or loss to follow up the total number of cases should be 50 in each group. The sample size was adequate for analysis and conclusion according the objectives.

3. Research instrument

The instrument used in data collection was a questionnaires developed based on the review of related literatures. The items included in the questionnaires and the content was in accordance with the research objectives. The questionnaires were validated by three experts, and were tried out with a groups of 10 subject who had

characteristics similar to those of subjects in present study. The reliability of the test of quality care of infant was 0.7.

Part II: Discussion of research results

The results will be presented according to the objectives.

1. Demographic characteristics of the mothers.

Teenage mothers had lower financial, status and lower educational level than adult mothers. Teenage mothers were more unmarried or separated from their husbands, and were more unemployed.

The results of this study was in accordance with the study of Wasunna A and Mohamed K(6)who studied socio-demographic and obstetric characteristics of adolescent mothers at Kenyatta National Hospital, Narirobi. They found adolescent mothers were more likely to be unmarried ($p=0.0001$) have less formal education ($p< 0.0001$) be unemployed (76%). The study of Eden E who that found the vast majority of teenage mothers were not married and often dropped out school and could not hold full time employment.

In Thailand, Wonrawong C(7) studied changes to maternal role compared between first time adolescent and adult mothers during postpartum period. They found adolescent mothers had lower financial, status and lower educational level than adult mothers. Adolescent mothers were more unmarried, were more unplanned to have a baby and more were farmer.

The study of Kumsuk W and Noisiri U(44) who found adolescent mothers had low financial, had educational level primary school, were extended family and were living with the husband.

2. Pregnancy characteristics.

Regarding pregnancy characteristics, teenage mothers were more unplanned to have a baby, did not use contraception before pregnancy, and had late and less ANC visits.

The results of this study were in accordance with the study of Ali M and Lulesequed S(11)who studied factors influencing adolescent birth outcomes and

found that adolescent mothers missed significantly more prenatal visit and received less tetanus toxoid than non adolescents. Although gestation ages and the proportion of small-for-age infant were comparable in both groups.

Brabin K and Verhoeff FH(45)studied improving antenatal care for pregnant adolescents in southern Malawi and found that most adolescent nulliparae first attended for antenatal care at 20-23 weeks of gestation, while adolescent multiparae tended to report at 24-27 weeks. The mean number of antenatal visit was high at 5.3 visits.

In Thailand, the study of Phoungpaka A(37) which studied comparative outcome between adolescent pregnancy and pregnancy in mothers aged 20-30 years at Pharpokklao hospital in Chantaburi Province and found nearly two third of adolescent pregnancy had 4 or more ANC visit compared to 93% of adult pregnancy. The difference was statistically significant.

The study of Chayathab S(46) found that adolescent mothers (65%) were unplanned to have a baby. Nearly half (47%) of adolescent mothers came to first antenatal visit at 13 -24 weeks and only 75% of adolescent mothers had 4 or more ANC visits.

Nadjir C (47) which studied teenage pregnancy, first delivery and the out comes Rajavithi Hospital and found that half of adolescent mothers (54.4%) came to first antenatal visit at 24 weeks or more compared to 35.7% of adult mothers. About 24.7% of adolescent mothers had 6 times or more ANC visit compared to 60.0% of adult mothers. The difference was statistically significant.

The explanation for these results of different pregnancy characteristics of adult mothers were that adolescent mothers had lower financial, status, lower educational level that they were not to ready to be married and be pregnant. They were more unplanned to have a baby and did not known what to do to themselves during pregnancy. These they were late to seek medical advice and care.

3. Delivery patterns

Most of teenage mothers had vaginal delivery (96%) Only 4.0% of teenage mothers had caesarean section compared to 22% of adult mothers.

The results of this study were in accordance with the study of Ziadeh S(48)who studied obstetric outcome of teenage pregnancies in North Jordan and found that the normal mode of delivery was commoner in teenagers (89.5%) in comparison to control group(72%), probably because of higher number of low birth weight babies But in our study, there was no statistically significant difference in birth weight of the babies between adolescent and adult mothers.

The studied of Leppert P(49) on pregnancy out comes among adolescent and older women receiving comprehensive parental care found that women aged 20-36 years are more likely than adolescent mothers to have a Caesaren section.

The findings were also in accordance with the study done by Lao TT (50) who studied obstetric out come of teenage pregnancies and found that no significant differences in the types of labour althouh there were fewer Caesaren section and instrumental deliveries teenage pregnancies.

In Thailand, the study of Phoungpaka A(37)studied comparative outcome between adolescent pregnancy and pregnancy in mothers aged 20-30 years at pharpokklao hospital Chantaburi Provine and found that abnormal delivery in adolescent pregnancy(16.3%) was significantly lower than the comparison group (28%). The study of Chayathab S found Eighty percent of adolescent mothers had vaginal delivery and only 17.5% had casearen section.

Nadjir C(47) found that abnormal delivery was found more among adult mothers than adolescent mothers, (21.7 % of adult mothers and 6.8% of adolescent mothers respectively)

But these results contradicted to the study of Pritchard JA. (4) who studied pregnancy complications in teenage mothers and found that the incidence of Caesaren section is higher in teenage mothers. This may be The pelvis of the teenage mother may not have grown enough to allow vaginal delivery of a normal size baby or the babies are often too large to be delivered vaginally especially when she was 14 years old or younger. The study of Winter JT. (51) who studied teenage pregnancy found that risk for medical complications are greater for girls 14 or less years of age, as an underdeveloped pelvis can also lead to difficulties in childbirth. Obstructed labour is normally dealt with by Caesaren section. Pregnancy of adolescent can lead to

eclampsia, obstetric fistula, infant mortality, or maternal death but it was not found in our study.

4. Quality of infant care

4.1 Overall care In this study, overall quality of care of infants both at 0-3 months and 3-6 months were not different between two groups

The explanation of there findings was quality of infant care between two groups were mostly similar due to pattern of family and child-rearing in Thailand. Characteristics of family in Thailand were extended family and supports from grandmothers and relatives help rear infants. This pattern was the same between groups of teenage and adult mothers.

The study of Kumhomkul Y (52) studied factor related to child rearing practice of teenage mothers in Nonthaburi Province and found quality of child rearing of most of adolescent mothers (82.7%) were at moderate level. The factors significantly associable while child rearing practice away teenage mothers were occupation, experience in child rearing, education level and social support. Our study did not have the objectives to find factors on child rearing according adolescent mothers. Our hypothesis was that a significant proportion of adolescent mothers got help on child-rearing from their mothers or relatives. Both adolescent and adult mothers got help from them (16% of adult and 26% of adolescent mothers respectively).

The study of Tewsakul C (53) on child rearing behavior of adult mothers in Wachira Phuket Hospital that found the most of mothers who were 20-25 years old, had education level of primary school, most were house wife and their families classified as nuclear families, their quality of child rearing behaviors of mothers (95%) were appropriate in all aspects i.e. health promotion, disease prevention and basic care.

The study was done at Well Baby Clinic in the hospital. Mothers who brought their babies to have vaccination at hospital should have batter education self care and better care of their families. On the contradny mothers who stay at home or got help from their mothers may not take care of their family as good as those who go

to hospital. Bias also occurrnd when patients felt fear and cordial to answers what the doctor would like to hear.

This finding is contradict to the study of Furstenberg FF(54)who studied the infants of adolescent mothers have an increased incidence of developmental disabilities and poorer developmental outcomes than offspring of older mothers. Deficits in cognitive and social development in the children of adolescent mothers may persist into adolescence.

The study of Sandar L(55) which found early motherhood can effect the physical development of the infant. The occurrence of developmental disabilities and behavioral issues is increased in children born to teen mothers. Adolescent mothers are likely to stimulate their infant through affectionate behaviors such as touch, smiling, and verbal communication, or to be sensitive and accepting toward his or her needs.

This contradictory results may be explained by the socio economic difference between location of study. In Thailand most families are still extended type which grandmothers or grandfathers still play role in rearing of their grandson or granddaughter. This pattern of family relationship occurred not related to maternal ages, whenever they are teenager or age over 35. Those the differences between quality of infant care were not found between different mothers ages especially among adolescent mothers.

Quality of physical care both at 0-3 months and 3-6 months in most of the items of physical care of infants, adult mothers gave better quality except in exclusive breast feeding. The difference was not statistically significant. This finding may be explained by the fact that more adolescent mothers were employee and had low family incomes.

Quality of care during sickness both at 0-3 months and 3-6 months 50-60% of infants in both groups ever got sick and infant of adult mothers had more diarrhea. Although among most of the items of care during sickness, adolescent mothers provided better quality. The difference was not statistically significant. This finding may be explained by the fact that may be teenage mothers were more exclusive breastfeeding.

CHAPTER VI
CONCLUSION

Pregnancy among teenage mothers is a major problem facing healthcare provides today. Teenage pregnancy had many adverse effect on both mothers and infants. Teenage mothers were not ready to be pregnant on raise a child. The study was designed to compare quality of infants care between teenage and adult mothers. The objectives of this analytical research was to study characteristics of mothers, antenatal case delivery pattern and quality of care compared between teenage and adult mothers. Teenage and adult mothers who were resident and delivered at Nangrong hospital Ampher Nangrong, Buriram Province during December 2005 – June 2006. They were interviewed by the researcher by using questionnaires at home. Data from records was also collected. Fifty mothers in each group (teenage mothers aged less than 20 years old, adult mothers aged 25-30 years old) were recruited in this study during February 2007. The descriptive statistics included percentage, mean and standard deviation. Chi-square test, Independent t test was used to test hypotheses at the significant level of $p \leq 0.05$ SPSS/PC$^+$ statistic program was applied.

The results showed that teenage mothers had lower financial, status and lower educational level than adult mothers. Teenage mothers were more unmarried or separated from their husbands. Both finding were of statistical significance difference ($p=0.005$). Regarding pregnancy characteristics, teenage mothers were more unplanned to have a baby, had late and less ANC visits. However teenage mothers had more vaginal delivery. Regarding quality of infant care, there was no statistical difference two between groups. It may be because both groups had help and support from their grandmothers. Quality of care of infants (0-3 months) were not different between two groups, except for developmental care of which adult mother were better with statistical significance ($p = 0.007$). Quality of care of infants (3-6 months) between two groups were also similar with the addition that for physical care by adult mother was better with statistical significance ($p = 0.020$).

In conclusion, teenage pregnancy had many problems such as, unplanned pregnancy, late and less ANC visit. Although quality of infant care between two groups were mostly similar because of supports from grandmothers and relatives. Prevention of teenage pregnancy by contraception should be encouraged to prevent unplanned pregnancy.

Recommendation for Application

1. To encourage more supportive family attitude to help though open communication and providing guidance to them about sexuality, contraception and the risks and responsibilities of intimate relationships, pregnancy and care of infants.
2. Prevention of adolescent pregnancy by contraception should be encouraged to prevent unplanned pregnancy.
3. Recommendation of better care for infant sickness chose be provide.

Recommendation for further Research

1. Long term study of infants born to teenage mothers.
2. Long term study of reproductive life of teenage mothers.

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APPENDIX

แบบสอบถามเลขที่.....

แบบบันทึกการสัมภาษณ์

การวิจัยเรื่อง การเลี้ยงดูทารกของมารดาวัยรุ่นครรภ์แรก ในจังหวัดบุรีรัมย์

ส่วนที่ 1 ข้อมูลจากห้องคลอด

วันที่คลอด.....

มารดาชื่อ.....

อายุ.....ปี บ้านเลขที่.....

วิธีการคลอด.....

ภาวะแทรกซ้อน.....

น้ำหนัก.....grams เพศ.....APPGAR SCORE……..

ส่วนที่ 2 แบบบันทึกการสัมภาษณ์การดูแลทารก

<u>คำชี้แจง</u> กรุณาเติมคำในช่องว่างให้ชัดเจนและถูกต้องตามความเป็นจริงและขีดเครื่องหมาย / ลงในช่องว่างให้ตรงกับความเป็นจริง

ข้อมูลส่วนบุคคลของมารดาและครอบครัว

ผู้ตอบแบบสอบถามชื่อ.....

1. ความสัมพันธ์ของผู้ตอบแบบสอบถามกับทารกแรกเกิด

( ) แม่ ( )ปู่

( )ยาย ( )พ่อ

( )ย่า ( )น้า ,อา , ป้า

( )ตา ( )เพื่อนบ้าน

2.ที่อยู่ปัจจุบัน.....

3.มารดาของทารกจบการศึกษาในระดับ

( ) ระดับประถมศึกษา ( ) ปวส. หรือ อนุปริญญา

( ) ระดับมัธยมศึกษาตอนต้น (ม. 3) ( ) ปริญญาตรี

( ) ระดับมัธยมศึกษาตอนปลาย (ม. 6)หรือ ปวช. ( ) ปริญญาโท

( ) อื่นๆ ระบุ..... ( ) ไม่ทราบ

4. บิดาของทารกจบการศึกษาในระดับ

( ) ระดับประถมศึกษา ( ) ปวส. หรือ อนุปริญญา

( ) ระดับมัธยมศึกษาตอนต้น (ม. 3) ( ) ปริญญาตรี

( ) ระดับมัธยมศึกษาตอนปลาย (ม. 6) หรือ ปวช. ( ) ปริญญาโท

( ) อื่นๆ ระบุ..... ( ) ไม่ทราบ

5. ปัจจุบันมารดาของทารกอาชีพอะไร

( ) ไม่ได้ประกอบอาชีพ

( ) แม่บ้าน

( ) รับราชการ

( ) รับวิสาหกิจ

( ) รับจ้างทำงานบริษัทหรือรับจ้างอื่นๆ

( ) ค้าขาย

( ) ทำธุรกิจส่วนตัว ระบุ.....

( )เกษตรกรรม

( )อื่นๆ ระบุ.....

( ) ไม่ทราบ

6.รายได้ของครอบครัว.....บาท/เดือน (คิดรายได้รวมทั้งสามีและภรรยา)

7.ถ้ามารดาของทารกไม่มีรายได้ มารดาได้รับค่าใช้จ่ายจากใคร.....

จำนวนเท่าไร.....บาท/เดือน

8. สถานภาพครอบครัว ของมารดาของทารก

( ) อยู่ด้วยกันกับสามี (ทุกประจำ)

( ) อยู่ด้วยกันกับสามี (เป็นบางครั้งเนื่องจากสามีต้องไปเกณฑ์ทหาร หรือ ทำงานต่างจังหวัด)

( ) แยกกันอยู่กับสามี (หม้าย หย่าร้าง)

( )ไม่เคยมีสามี (ระบุสามีไม่ได้)

9.ลักษณะครอบครัวที่อาศัยอยู่ในปัจจุบัน

( ) ครอบครัวเดี่ยว (ประกอบด้วยมารดา บิดา บุตร)

( ) ครอบครัวขยาย (ประกอบด้วยมารดา บิดา บุตร และญาติพี่น้องคนอื่นๆอยู่ด้วย)

10. มารดาของทารกได้แต่งงานหรือไม่

( )ตกลงใจอยู่ด้วยกันสม่ำเสมอ และจดทะเบียนสมรส

( )ตกลงใจอยู่ด้วยกันสม่ำเสมอ แต่ไม่จดทะเบียนสมรส

( )ไม่ได้แต่งงานแต่ชอบพอกัน

( )ไม่ได้แต่งงาน และแยกกับฝ่ายชายแล้ว

( )ไม่ได้แต่งงาน ตั้งครรภ์โดยไม่ตั้งใจ

11.ก่อนตั้งครรภ์ได้คุมกำเนิดหรือไม่

( )คุมกำเนิด วิธีใด.....

( )ไม่ได้คุมกำเนิด

12.มารดาตั้งใจที่จะมีบุตรคนนี้หรือไม่

( ) ตั้งใจ ( ) ไม่แน่ใจ

( ) ไม่ตั้งใจ

13.ฝากครรภ์ที่ไหนบ้าง

1).....จำนวน.....ครั้งตอนอายุครรภ์.....เดือน

2).....จำนวน.....ครั้งตอนอายุครรภ์.....เดือน

3).....จำนวน.....ครั้งตอนอายุครรภ์.....เดือน

14.ฝากครรภ์ครั้งแรกเมื่ออายุครรภ์เท่าไร.....

<u>ส่วนที่ 3</u> แบบสอบถามเกี่ยวกับการดูแลทารก

<u>คำชี้แจง</u> แบบสัมภาษณ์ชุดนี้ มีวัตถุประสงค์เพื่อต้องการทราบถึงพฤติกรรมการดูแลทารกตั้งแต่แรกเกิดจนถึงปัจจุบัน โดยจะวัดเกี่ยวกับการดูแลทารกทางด้านร่างกาย การส่งเสริมพัฒนาการ การป้องกันอันตรายที่จะเกิดขึ้น และการดูแลทารกเมื่อเจ็บป่วย โดยแบบวัดชุดนี้จะมีข้อความสั้นๆให้ท่านตอบ คำตอบที่ได้ไม่มีถูกหรือผิด และคำตอบจะเป็นความลับ

การดูแลด้านร่างกาย

ประเมินทารกแรกเกิด - 3 เดือนแรก

1. ตั้งแต่ทารกแรกเกิด – 3 เดือน ผู้ที่เลี้ยงดูทารกเป็นประจำ คือใครระบุ.....
หากไม่ได้เลี้ยงดูทารกเป็นประจำใครช่วยกันเลี้ยงบ้าง.....

2. ตั้งแต่ทารกแรกเกิด – 3 เดือน มารดามีคนช่วยเลี้ยงดูทารกหรือไม่

( )ไม่มี

( )มี ผู้ที่ช่วยเลี้ยงดูทารกมีใครบ้าง 1.....

2…….

3……..

3.บทบาทของบิดาของทารก

( )ช่วยเลี้ยงทารก ( )เลี้ยงทารกเอง ( )ไม่เคยเลี้ยงเพราะ.....

<u>กรณีไม่พบหรือมารดาของทารกไม่ได้เลี้ยงดูทารก</u>

5. ใครเป็นผู้เลี้ยงดูทารก.....

6. เลี้ยงดูทารกตั้งแต่เมื่อไร.....

7. มารดาของทารกไม่ได้เลี้ยงทารกเพราะอะไร.....

8.ตั้งแต่แรกเกิด – 3 เดือนท่านให้ทารกกินนมอะไร

( ) นมแม่เพียงอย่างเดียว

( ) นมผสมอย่างเดียว เพราะ.....

( ) นมแม่และนมผสม เพราะ.....

( ) นมข้นหวานร่วมกับอย่างอื่น

9.เมื่อทารกกินนมอิ่มแล้วท่านอุ้มพาดบ่าหรือทำให้เรอ หรือไม่ บ่อยแค่ไหน

( )บ่อยๆ 4-7 ครั้ง / สัปดาห์

( )นานๆครั้ง 1-3 ครั้ง / สัปดาห์

( ) ไม่เคย

10. ท่านให้อาหารอื่นนอกเหนือจากนมแก่ทารก หรือไม่ ( )ให้ ( )ไม่ให้

อะไรบ้าง.....

ให้เมื่อทารกอายุเท่าไร.....

11. ท่านอาบน้ำให้ทารกบ่อยแค่ไหน

( ) อย่างน้อยวันละ 1 ครั้ง ( ) อาบวันเว้นวัน

( )อาบวันละ 2 ครั้ง ( )อื่นๆ.....

12. ท่านใช้สบู่ ยาสระผม สำหรับเด็กโดยเฉพาะหรือไม่ บ่อยแค่ไหน

( )บ่อยๆ 4-6 ครั้ง / สัปดาห์

( )นานๆครั้ง 1-3 ครั้ง / สัปดาห์

( ) ไม่เคย

13. ท่านสระผมให้ทารกหรือไม่

( )บ่อยๆ 4-6 ครั้ง / สัปดาห์

( )นานๆครั้ง 1-3 ครั้ง / สัปดาห์

( ) ไม่เคย

14. ท่านซักเสื้อผ้าทารก ด้วยสบู่หรือน้ำยาซักผ้าสำหรับเด็ก หรือไม่

( )บ่อยๆ 4-6 ครั้ง / สัปดาห์

( )นานๆครั้ง 1-3 ครั้ง / สัปดาห์

( ) ไม่เคย

15. ท่านทำความสะอาดช่องปาก เหงือก และลิ้น ของทารกด้วยผ้านุ่มๆชุบน้ำเช็ด หรือไม่

( )บ่อยๆ 4-6 ครั้ง / สัปดาห์

( )นานๆครั้ง 1-3 ครั้ง / สัปดาห์

( ) ไม่เคย

( ) ไม่เคย

( ) ไม่เคย

ด้านการส่งเสริมพัฒนาการของทารก

ประเมินทารกแรกเกิด – 3 เดือนแรก

1.ท่านเรียกชื่อทารกทุกครั้งที่อุ้มหรือเล่นกับทารก หรือไม่ บ่อยแค่ไหน

( )บ่อยๆ 4-7 ครั้ง / สัปดาห์

( )นานๆครั้ง 1-3 ครั้ง / สัปดาห์

( ) ไม่เคย

2. เมื่อทารกร้องไห้ ท่านทำอย่างไร.....

บ่อยแค่ไหน ( )บ่อยๆ 4-7 ครั้ง / สัปดาห์

( )นานๆครั้ง 1-3 ครั้ง / สัปดาห์

( ) ไม่เคย

3. ท่านเล่นกับทารกหรือไม่ บ่อยแค่ไหน

( )บ่อยๆ 4-7 ครั้ง / สัปดาห์

( )นานๆครั้ง 1-3 ครั้ง / สัปดาห์

( ) ไม่เคย

4. ท่านจัดหาของเล่นให้ทารกหรือไม่ ( )ให้ ( )ไม่ให้

อะไรบ้าง.....

5. ท่านเปิดเพลง ร้องเพลง ให้ทารกฟังหรือไม่ บ่อยแค่ไหน

( )บ่อยๆ 4-7 ครั้ง / สัปดาห์

( )นานๆครั้ง 1-3 ครั้ง / สัปดาห์

( ) ไม่เคย

6. ท่านใช้ประโยชน์จากถุงของขวัญอะไรบ้าง

1)..... 3).....

2)..... 4).....

บ่อยแค่ไหน ( )บ่อยๆ 4-6 ครั้ง / สัปดาห์

( )นานๆครั้ง 1-3 ครั้ง / สัปดาห์

( ) ไม่เคย

ด้านการป้องกันอันตรายที่จะเกิดขึ้น

ประเมินทารกแรกเกิด – 3 เดือน

1.ท่านเคยพาลูกไปบริเวณที่มีคนมากๆเช่น ตลาด ศูนย์การค้า โรงภาพยนตร์ หรือไม่

( ) ไม่เคย

( ) นานๆครั้ง 1-3 ครั้ง/สัปดาห์

( )บ่อยครั้ง 4-6 ครั้ง/สัปดาห์

2.ท่านเคยปล่อยให้ทารกอยู่คนเดียวโดยไม่มีใครดูแล หรือไม่ บ่อยแค่ไหน

( ) ไม่เคย

( ) นานๆครั้ง 1-3 ครั้ง/สัปดาห์

( )บ่อยครั้ง 4-6 ครั้ง/สัปดาห์

3.ทารกเคยตกเตียง หรือไม่ บ่อยแค่ไหน

( ) ไม่เคย

( ) นานๆครั้ง 1-2 ครั้ง

( )บ่อยครั้ง มากกว่า 3 ครั้ง

4.ท่านป้องกันสิ่งแปลกปลอมเข้าปากและจมูก หรือไม่ ( )ป้องกัน ( )ไม่ป้องกัน

ทำอย่างไร.....

5. ท่านพาทารกไปฉีดวัคซีนหรือไม่ ( )ไป ( )ไม่ไป

ครบทุกครั้งหรือไม่ ( )ครบ ( )ไม่ครบ

ทารกได้รับวัคซีนกี่ครั้ง.....ครั้ง

ถ้าไม่ได้ไปฉีดวัคซีนหรือฉีดวัคซีนไม่ครบ เพราะเหตุใด.....

ขอดู สมุดบันทึกสุขภาพ ( )มี ( )ไม่มี

มีบันทึกการฉีดวัคซีนครบหรือไม่ ( )ครบ ( )ไม่ครบ

การดูแลทารกเมื่อเจ็บป่วย

ประเมินทารกแรกเกิด – 3 เดือนแรก

1.ตั้งแต่แรกเกิด – 3 เดือน. ทารกเคยเจ็บป่วยหรือไม่ ( )เคย ( )ไม่เคย

ถ้าเคยเจ็บป่วยเป็นอะไร 1)..... อายุ.....

2).....อายุ.....

3).....อายุ.....

4).....อายุ.....

ท่านดูแลทารกอย่างไร ( )ซื้อยาเอง

( )ไปสถานีอนามัย

( )ไปคลินิก

( )ไปโรงพยาบาล

2. ทารกเคยเป็นหวัดมีน้ำมูกหรือไม่ ( )เคย ( )ไม่เคย

ท่านดูแลทารกอย่างไร 1).....

2).....

3) .....

3. ทารกเคยเป็นไข้หรือไม่ ( )เคย ( )ไม่เคย

ท่านดูแลทารกอย่างไร 1).....

2).....

3) .....

4. ทารกเคยท้องเสียหรือไม่ ( )เคย ( )ไม่เคย

ท่านดูแลทารกอย่างไร 1).....

2).....

3) .....

BIOGRAPHY

NAME	Miss Watcharaporn Hoontanee
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INSTITUTIONS ATTENDED	Boromarajonani Collage of Nursing, Surin, 1992-1995: Dipoma in Nursing Mahidol University, 2005-2007 Master of science (Human Reproduction and Population Planning)
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