Investigation of Adolescent Mothers' Practices Related to Neonatal Care

Adölesan Annelerin Yenidoğan Bakımına İlişkin Uygulamalarının Değerlendirilmesi

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Özet

Amaç: Adölesan annelerin yenidoğan bakımına ilişkin uygulamalarının değerlendirilmesi amacı ile yapılmıştır.

Gereç ve Yöntem: Tanımlayıcı bir çalışmadır, doğum sonu 2. haftada adölesan annelerle yüz yüze görüşülerek doldurulan anket formu kullanılmıştır. Çalışma kriterlerine uygun 118 gebeden, katılmayı kabul eden Kahramanmaraş ilindeki 100 gebe örneklemi oluşturmuştur.

Bulgular: Adölesan annelerin %17'sinin 15-16, %83'ünün 17-19 yaş aralığında olduğu tespit edilmiştir. Annelerin %70'i vajinal doğum yapmıştır. %71'i evlidir. Annelerin hiçbiri çalışmaz iken, sadece %34'ünün sosyal güvencesi bulunduğu tespit edilmiştir. Adölesan annelerin yenidoğan bakımında yaşadığı bazı sorunlar: %89 gaz problemi, %61 gözlerde çapaklanma, %33 göbek enfeksiyonu, %16 diyare, %20 kabızlık, %24 ateş, %63 sarılık ve %44 ağızda aft (monoliazis). Meme ucunu anne sütü ile temizleyen annelerde hiçbir şey yapmayan annelere oranla bebeklerinde monoliazis gelişme riski 36 kat daha yüksek bulunmuştur (B (regression coefficient)=36.000, p=0.020). Adölesan annelerin yüzde onu bebeklerinin ateşi çıktığında hiçbir şey yapmayıp kendi kendine iyileşmesini beklerken, annelerin 40'ı bebeklerinde sarılık geliştiğinde tıbbi açıdan yanlış uygulamalar yapmışlardır. Annelerin 93'ü yeterli antenatal bakım alırken, %24'ü gebeliklerinde yenidoğan bakımı hakkında eğitim almışlardır.

Sonuçlar: Bu adölesan annelerin yenidoğan bakımında problem yaşadıkları, doğum öncesi ve doğum sonrası aldıkları eğitimlerin bu sorunları gidermede yeterli olamadığı saptanmıştır. Adölesan annelerin yenidoğan bakımı ile ilgili geleneksel uygulamalar yaptıkları belirlenmiştir.

Anahtar kelimeler: adölesan anne; doğum öncesi bakım; doğum sonu bakım; yenidoğan bakımı; ebelik bakımı

Abstract

Objective: To investigate adolescent mothers' practices related to neonatal care.

Materials and Methods: Descriptive study, using questionnaire delivered face to face to adolescent mothers 2 weeks after delivery. The current study included a sample of one hundred and eighteen adolescent mothers were eligible to participate, 100 agreed, living in the city of Kahramanmaras.

Results: Seventeen per cent were 15-16 years old and 83% were 17-19 years old. Seventy percent of the mothers had delivered vaginally. Seventy-one percent were registered as married. None of the mothers was working for financial gain and only 34% had health insurance. Some of the problems seen by the adolescent mothers in the babies were: distention in 89%, sticky eye 61%, umbilical infection 33%, diarrohoea 16%, constipation 20%, fever 24%, jaundices 63.0%, and moniliasis 44%. The risk of moniliasis in babies whose mothers cleaned the tip of the nipple with breast milk was 36 times higher than that of the babies whose mothers did nothing (B (regression coefficient)=36.000, p=0.020). It was seen that 10 of 100 adolescent mothers whose babies had fever had done nothing and waited for it to resolve itself, and 40 of them had applied medically incorrect practices when jaundice occurred in their babies. Ninety three of the mothers had received an adequate number of antenatal visits, and 24% had received education in pregnancy about neonatal care.

Conclusions: These adolescent mothers experienced problems with neonatal care, and the education that they received during pregnancy and postnatal periods was inadequate on some subjects. These adolescent mothers had traditional attitudes about neonatal care.

Key words: adolescent mothers; antenatal care; postnatal care; neonatal care; midwifery care

INTRODUCTION

The World Health Organization (WHO) describes the adolescent period as the 10 to 19 years interval that comprises the period of development of emotion, thought, and behaviour, and preparation of social maturation together with physiological and psychological alterations in an individual (1).

The adolescent period has been categorised as early adolescence (<15 years age), mid-adolescence (15-16 years age), and late adolescence (>17 years age) (2). Adolescents do not receive adequate or suitable information about reproduction and sexual health (3).

According to Turkey Demographic and Health Survey 2008 (TDHS, 2008), the proportion of the female population 15 to 19 years old is 9.2% (4). In Turkey, pregnancy in women younger than 18 years is seen frequently because of early marriages most-

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Table 1: Socio-demographic characteristics of the adolescent mothers and details of antenatal and postnatal care visits. (N = 100)

Characteristics of women	N	%
Age (year)		
15-16	17	17.0
17-19	83	83.0
Education		
Uneducated	7	7.0
Primary school	90	90.0
High school	3	3.0
Educational level of her husband		
Uneducated	-	-
Primary school	68	68.0
High school	28	28.0
University	4	4.0
Marriage age		
14	4	4.0
15-16	37	37.0
17-19	59	59.0
Marital status		
Married (religious)	29	29.0
Officially married	71	71.0
Health insurance		
Yes	34	34.0
No	66	66.0
Occupation		
Employed	0	0.0
Housewife	100	100.0
Parity		
Primiparous	89	89.0
Multiparous	11	11.0
Delivery type of last labor		
Vaginal delivery	70	70.0
Cesarean section	30	30.0
Characteristics of the care		
Antenatal care (N=100)		
Yes	99	99.0
No	1	1.0
Adequacy of antenatal care* (N = 99)**		
Yes	93	93.9
No	6	6.1
Neonatal care education (N=100)		
Yes	24	24.0
No	76	76.0
Postnatal care (N=100)		
Yes	54	54.0
No	46	46.0
Place of postnatal care (N=54)***		
Home	26	48.1
Hospital	42	76.4

*Inadequacy was defined as 1-3 antenatal care visits, adequacy was defined as 4 or more antenatal care visits.

**Number of mothers who received antenatal care.

***As 14 of the mothers indicated that they had received postnatal care both at home and at the hospital *n* is increased

ly due to cultural reasons. So, according to 2007 Turkey Youth Sexual and Reproductive Health Survey in Turkey (2007), 7.5% of female children aged between 15 and 19 years are married and 73.1% of these have experienced pregnancy (5). In addition, according to Turkey Demographic and Health Survey 2008 the overall level of teenage childbearing was 9.3% in 1998, and 7.5% in 2003, 6% 2008 (4, 6, 7). According to the same study, the adolescent mothers rate of the 15-19 age group was totally 3.9%, 5% in urban areas and 9% in rural areas (4).

In adolescent pregnancy, medical complications such as toxaemia, anaemia, difficult and delayed labour, and bleeding that increase maternal death develop (8). 2014 World Health Statistics indicate that 3 million girls aged 15 to 19 undergo unsafe abortions every year. Moreover babies born to adolescent mothers face a substantially higher risk of dying than those born to women aged 20 to 24 (9).

For this reason, WHO (2002) advises that pregnant women should receive at least 4 antenatal examinations during their pregnancy (10). In addition, the Ministry of Health of Turkey advises that antenatal care should start in the first trimester of pregnancy, and at least six examinations be performed during pregnancy, with a higher number for women with high risk pregnancies (11).

According to TDHS (2008), the proportion of pregnant women receiving antenatal care was 92.0% (4). In addition, the data for 2005 show that number of examinations per pregnant woman and per woman in the puerperium increased to 2.41 and 0.91, respectively (12). In Kahramanmaras there were 2.69 care examinations for pregnant women and 0.86 for women at puerperium (13). According to TDHS-2008 data, 84.8% of mothers received postnatal care and 89.7% of infants (4).

The neonatal period comprises the period until 28 days after delivery. The midwife and nurse, while meeting the neonate's care needs, also evaluate his/her physical adaptation (14, 15). For this adaptation to be healthy, it is important to meet the care needs of the neonate. It is also necessary to meet the parent education needs of adolescent mothers. To meet these needs, support from family members and medical staff is required (16, 17).

Due to the recommendations made by the Ministry of Health of Turkey, puerperal women must be visited three times; once in the first 24 hours after labour (if delivered at home), and later on, once at two weeks and once at four weeks (11, 17, 18). During the home visits the midwife assesses the mother and baby and informs the mother about baby care, hygiene, and neonatal care. It has been noted that in Turkey adolescent mothers experience difficulties with baby care (7). Thus the role of the midwife is of even greater importance.

This study was performed to assess adolescent mothers' neonatal care practices.

MATERIALS AND METHODS

Table 2. Distribution of frequency of breast feeding due to receiving education about neonatal care during pregnancy and receiving care at the hospital during the postnatal period.

Frequency of breast feeding										
	At 3-4 hour intervals	**At 1-2 hour intervals**	**Every time the baby cried**	**Total**						
Variables	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**	**X^2**	**P**
Was training received?										
Yes	0	0.0	4	16.7	20	83.3	24	100.0	2.272	0.321
No	4	5.3	13	17.1	59	77.6	76	100.0		
Total	4	4.0	17	17.0	79	79.0	100	100.0		
Was care received?										
Yes	2	4.8	10	23.8	30	71.4	42	100.0	6.080	0.048
No	1	7.7	0	0.0	12	92.3	13	100.0		
Total	3	5.5	10	18.2	42	76.4	55	100.0		

This descriptive study was conducted at Primary Health Centers (PHCs) located in the city of Kahramanmaras. At the time of the study there were 15 centers providing first level health services to the entire population (536,000 people) within the city of Kahramanmaras. The study was planned to involve all adolescent mothers (15-19 years old) in the regions covered by these 15 PHCs two weeks after the baby's birth (19). Sampling was not performed.

Every midwife at the PHC was responsible for the population in a specific region. The midwives working at the PHC care for an average of 2000 people. For each pregnant woman, puerperal woman and baby living in the region of that Primary Health Center, a separate follow-up card is prepared by the midwife and registration and follow-up are carried out.

Because midwives working at three PHCs did not agree to cooperate, we were not able to contact the adolescent mothers in those regions. By analysing the follow-up cards of puerperal women in 12 PHCs, we determined that there were 118 adolescent mothers who had given birth at least 2 weeks before in those regions. From these 118 mothers we were unable to contact 18 (15.2%); 4 of them due to change of address, 12 due to not finding them at their address, 1 due to the death of her baby, and 1 due to her baby being in hospital. Therefore, 100 (84.8%) adolescent mothers were included in the study.

A questionnaire was developed and consisted of 52 questions; 8 were related to the mother's socio-demographic characteristics, 8 to pregnancy, labour history, and characteristics of the postnatal periods, and 36 were related to the investigation on the mother's neonatal care practices. The questionnaire was performed at the adolescent mothers' home in a face to face manner by the first author and the midwife working at the PHC.

Data were recorded and analysed using the Statistical Package for the Social Sciences software (SPSS Inc., USA, version 11.5) and MINITAB 13.0 were used for the statistical analysis. Chi-square, logistic regression, and two ratio tests were performed to analyze the data. Statistical significance was defined as $p<0.05$.

Ethical considerations

The study was approved by the appropriate health-administration organization. The written approval for the study was obtained from the Health Department of Kahramanmaras. The mothers were verbally informed about the study by the first author. The aim of the study was explained, and women were asked if they were willing to participate. Those who gave verbal consent were included in the study. No participants refused to take part in this study.

Table 3. Distribution of mothers' hand washing before breast feeding due to receiving training about neonatal care during pregnancy and receiving care during the postnatal period at home (N=100).

Hand washing before breast feeding								
	Yes	No	Total					
	N	%	N	%	N	%	X^2	P
Was training education received during pregnancy?								
Yes	16	66.7	8	33.3	24	100.0	5.990	0.014
No	29	38.2	47	61.8	76	100.0		
Total	45	45.0	55	55.0	100	100.0		
Was care received at home during postnatal period?								
Yes	17	65.4	9	34.6	26	100.0	5.967	0.015
No	9	32.1	19	67.9	28	100.0		
Total	26	48.1	28	51.9	54	100.0		

RESULTS

Table 4. Distribution of the practices used by the mothers when a problem was seen in their babies (N=44).

Different problems and the practices that were used	N	%
Moniliasis (N=44)		
Doing nothing	26	59.1
Suckling mother's hair, feeding water containing sugar	1	2.3
Feeding 'Polat sugar"	1	2.3
Feeding quince seed juice	1	2.3
Cleaning with carbonated water	6	13.6
Taking baby to a doctor and giving drugs	9	20.4
Total	44	100.0
Diarrohoea (N=16)		
Waiting for it to resolve itself	13	81.3
Taking baby to a doctor	3	18.7
Total	16	100.0
Constipation (N=20)		
Waiting for it to resolve itself	7	35.0
Feeding with olive oil	3	15.0
Feeding with anise tea	1	5.0
Taking baby to a doctor and giving drugs	9	45.0
Total	20	100.0
Fever (N=24)		
Performing cold poultice with a wet handkerchief	4	16.6
Taking baby to a doctor and using anti-pyretic	10	41.7
Doing nothing	10	41.7
Total	24	100.0
Jaundice (N=63)		
Covering the baby with a yellow cloth	20	31.8
Taking baby to a doctor	23	36.5
Taking baby to a preacher	1	1.5
Doing nothing	19	30.2
Total	63	100.0
Rash (N=54)		
Using powder	13	24.1
Applying olive oil	2	3.7
Applying rash cream	37	68.5
Taking baby to a doctor	2	3.7
Total	54	100.0
Umbilical cord infection/bleeding (N=33)		
Doing nothing	10	30.3
Taking baby to a doctor and dressing with antiseptic	17	51.5
Applying olive oil to the umbilical stump	3	9.1
Applying powder, umbilical dust, and burnt cloth to the umbilical stump	3	9.1
Total	33	100.0

*Polat sugar: means hard sugar.

The socio-demographic characteristics of adolescent mothers and details of care visits are shown in Table 1. Seventeen were 15 to 16 years of age. When the educational status of the mothers was examined, most of the mothers (90%) had completed primary school, and 68% of their husbands had completed primary school.

The age at marriage of 59 of the mothers was 17 to 19 years of age. Seventy-one of the mothers were officially registered as married. None of the mothers was employed outside the home for financial gain and only 34 had health insurance. Eighty-nine of the mothers were primaparous, 70 had delivered vaginally. Furthermore in Table 1, 24 of the mothers received education about neonatal care during pregnancy. It was also determined that 54 of the mothers received postnatal care.

As seen in Table 2, the proportion of mothers who received postnatal care and breast fed their babies at 1-2 hour intervals was significantly higher than that of the mothers who did not receive care ($p<0.05$).

In our study, 8 adolescent mothers reported that they did not wash their hands before breast feeding, 39 reported that they cleaned the nipple tip with water, 2 reported cleaning the nipple tip with carbonated water, and 10 said they did nothing.

As seen in Table 3, the proportion of mothers who received education about neonatal care during pregnancy and care at home during the postnatal period and who washed their hands before breast feeding was significantly higher than that of those who did not receive any training or care ($p<0.05$).

Table 3. Distribution of mothers' hand washing before breast feeding due to receiving training about neonatal care during pregnancy and receiving care during the postnatal period at home (N=100).

For 13 of the 100 babies of these adolescent mothers, there were some reported abnormalities: prematurity in 3 babies, polydactylism in 2, lower respiratory tract infection in 2, hernia in 2 and hypothyroidism in 1. In addition, distention was reported in 89 of the babies, sticky eye in 61, moniliasis in 44, umbilical infection in 33, rash in 54, diarrohoea in 16%, constipation in 20, fever in 24, and jaundice in 63.

As seen in Table 4, mothers whose babies had problems waited for it to resolve itself. Furthermore, 23 of the babies who had jaundice were taken to a doctor and 37 of the babies having rash had rash cream applied.

In our study we did not determine any significant relationship between maternal age and practices used during umbilical infections ($p>0.05$).

The logistic regression analysis of the effect of the practices that mothers used before breast feeding on the occurrence of moniliasis is given in Table 5. The risk of moniliasis in babies whose mothers cleaned the tip of the nipple with breast milk was 36 times higher than that in babies whose mothers did nothing ($p=0.020$).

Table 5. Effect of the practices that mothers used before breast feeding on occurrence of moniliasis in babies (N=100).

Variables	B	P	Confidence interval
Doing nothing	0/27.000	0.157	-
Washing hands	27.000	0.013	1.979-368.383
Cleaning nipple tip with water	5.040	0.144	0.577-44.014
Cleaning nipple tip with carbonated water	9.000	0.213	0.284-285.510
Cleaning nipple tip with breast milk	36.000	0.020	1.772-731.562
Washing hands and cleaning nipple tip with water	7.500	0.070	0.851-66.125
Washing hands and cleaning nipple tip with breast milk	-	0.999	-

DISCUSSION

The age-specific fertility rate in adolescent women in Turkey is still high (7). According to the data from the USA, the age-specific fertility rate of the 15-19 age group in 2000 was 48.7‰ (20). TDHS-2003 emphasized that the level of adolescent fertility is strongly associated with women's educational level (7). With regard to women who are pregnant or who have already given birth, teenage proportion among women with less than primary education and among those with high school education or above are 15% and 3%, respectively (21). In Turkey 0.4% of female children aged between 12 and 14 are married and 19.0% of these have already given birth (22). Since 66.0% of the mothers do not have any health insurance, they are not able to benefit from any health care services. Women aged between 15 and 19 have shorter delivery intervals compared to the adult group according to TDHS-2003 (7). Mean delivery interval for the 15 to 19 age group is 23 months, while for the 30 to 39 age group it is 45 months (7).

Table 6. Distribution of other knowledge and practices of mothers related to infant care.

The traditional practices performed by mothers (N=100)*	**N**	**%**
Rubbing the baby with salt	54	54.0
Wrapping the baby's limbs tightly	82	82.0
Applying make-up around the eyes and eyebrows	34	34.0
Wrapping the baby with soil	1	1.0
Waiting for three calls to prayer from mosque before first breast feed	2	2.0
The first practices that mothers used when they had a problem with their babies (N=100)	**N**	**%**
Taking baby to a health institution	42	42.0
Asking advice from those around her	51	51.0
Thinking it normal, and waiting for it to resolve itself	4	4.0
Taking baby to a preacher	3	3.0

* N was increased because more than 1 practice was used.

The rates of vaginal delivery among adolescents reported in the literature are higher (23, 24).

It was determined that 99.0% of the adolescent mothers participated in our study had gone to routine antenatal visits and 93.9% had received an adequate number of antenatal care visits (Table 1). According to the data of WHO published in 2002, the rate of receiving antenatal care is 98.0% in developed countries, 68.0% in developing countries, and 72.0% worldwide (10). In Turkey 80.9% of pregnant women receive antenatal care, with 26.4% receiving it one to three times and 53.9% four times or more, while 18.6% do not receive it. While the rate of women receiving antenatal care in the western region of Turkey is 91.5%, it is 61.2% in the eastern region (7). According to 2008 data the antenatal care rate is 94.7% in urban areas and 84.1% in rural areas. Moreover, 1.7% of the antenatal care given in urban areas and 4.7% of the antenatal care given in rural areas is provided by midwives, while the remainder is provided by physicians in both areas (4). In our study the antenatal care rate among the participants was considerably higher compared to the TDHS data. This may be attributed to the fact that the study was performed within a city and the participants had easier access to health care units.

McLafferty and Grady performed a study about prenatal clinics in the USA and determined many municipalities opening special prenatal clinics in inaccessible areas, but also pointed out the necessity for those in the vicinity of people of lower socioeconomic status and requiring more prenatal care for them to be more effective and successful (25).

In our study 24% of the mothers were educated about neonatal care throughout their antenatal period. This education must be given as part of antenatal care by midwives. Nguyen and co-workers in a study about home visits to pregnant adolescents and adolescent mothers showed that home visits by public health nurses had beneficial effects on the health status of mothers and their babies (26). Koniak-Griffin et al. found an improvement in mothers' and babies' health status in connection with the more frequent visits performed by the public health nurses' in the antenatal and postnatal periods when a comparison was made to those with less frequency (27).

Gözüm et al determined that earlier and more frequent follow-up visits during the postpartum period had a positive effect on mothers' and babies' health status (28). In the earlier and frequently followed-up group 94.6% of babies were only breast fed; however, this rate was 68.4% in the infrequently followed-up group and the remaining 36.1% were fed with breast milk and other supplements, and 46.1% of the mothers in this group experienced some problems.

In the study performed by Binns et al. (2004), which involved Aboriginal mothers, it was determined that paternal support was important in terms of breast feeding, and the ideas of fathers about breast feeding were effective (29). However, in Turkey, rather than the fathers, the ideas of an old woman like the woman's mother and mother-in-law in a family influence breast feeding practices.

In the present study we did not find any significant relationship between the mothers' educational status and the way that they fed their babies ($p>0.05$). Similarly, in a study evaluating the relation between practices of mothers about breast feeding and the educational status of mothers, there were no relationship between the educational status of mothers' and the time to start

breast feeding, period of breast feeding, or time to start supplementary food (30).

We determined that care given in hospital during the postnatal period had a positive effect on the frequency and practices of breast feeding. However, care given at home during pregnancy and postnatal period had no effect on these attitudes, which led us to think that postnatal care provided by midwives was not of adequate frequency or quality (Table 2).

We determined that hand washing before breast feeding was significantly increased among the adolescent mothers who received education about neonatal care during their pregnancy and received care at home during the postnatal period compared to ones who did not receive either. It was seen that the education and the care given to mothers had a positive effect on this practice (Table 3).

Table 4 shows that the practices used by mothers whose babies had problem were sometimes incorrect and traditional. In the study performed by Caliskan and Yaramis it was observed that 51.0% of the mothers cleaned the mouth of babies with their hair when the babies had moniliasis and 13.0% bathed their babies with cold water when they had fever (31). In the study performed by Cetin , the reason for the delayed reference to a health center on the presence of signs of an infection in 62.4% of parents was the idea that it would resolve spontaneously (32). A similar attitude was observed in our study. In the study to evaluate the knowledge of mothers about diarrhea and fever, and the rate of mothers who gave correct answer to all questions was 67.6% (33). Coskun et al. determined that 40.0% of mothers cover their babies with a yellow cloth and switch on a yellow light to prevent jaundice (34). In the study performed by Atherton and Mills it was recommended that the best practice for preventing and treating rash was to clean and dry the baby's perineum properly and to change the diaper as soon as it becomes dirty (35).

Since the adolescent mothers had inadequate knowledge and experience of infant care, mothers devoid of adequate postnatal care had applied the practices performed by their relatives in the past when they had a problem with their infant.

In our study, as the age of the mothers increased the likelihood of the correct application of the practices increased when umbilical infection and bleeding occurred.

As seen in Table 5, the babies of mothers who clean the nipple tip with breast milk have a 36-fold higher risk for the occurrence of moniliasis than those with mothers that doing nothing (p=0.020). Recent studies in the literature on breast care report that it is adequate to keep the breast clean and dry. The reason for this is that Montgomery's tubercules of the breast secrete an antibacterial substance that has a protective effect on the nipple tip and areola (36).

The traditional attitudes that mothers apply to their babies in Table 6 show similarities with previous studies (33, 34, 37). The mothers must be warned about the disadvantages of these traditional attitudes by the midwives who make home visits.

The practices that the mothers in our study applied when they had a problem with their babies (see, Table 6) were similar to those described in the literature (38). Karakaya and Gencalp reported that 73.6% of adolescent mothers were experiencing anxiety and problems when raising a baby (23).

In our study it was shown that adolescent mothers' baby care practices depended on their environment. These results indicated that adolescent mothers' efficiency and sufficiency were low when it came to neonatal care (Table 6). Most of the mothers in our study stated that they did not understand why their babies cried.

In Conclusion; Although adolescent mothers receive antenatal and postnatal care and training about neonate care, the practices that they apply when they have a problem are not correct at all. Mothers still continue to hold traditional attitudes because of the lack of the information about infant care. Mothers that have not yet become an adult require support referring to the care of their babies. To decrease the number of adolescent mothers it is necessary to prevent adolescent pregnancies, to increase marriage age, and to educate teenagers and their families. Furthermore, in our study it was thought that home visits by midwives and training given at hospital were not sufficiently understood by the mothers or their relatives.

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