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Traditional practices of Konya women during pregnancy, birth, the postpartum period, and newborn care

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Background/aim: The purpose of the present study was to identify traditional practices and the extent to which they are practiced by mothers during pregnancy, birth, the postpartum period, and newborn care.

Materials and methods: This study was conducted in the city center of Konya (Turkey). Data were collected through questionnaires completed by volunteers. The research sample comprised 450 mothers, all of whom had given birth to at least one live baby. The forms were completed during face-to-face interviews.

Results: Some traditional pregnancy practices were followed by 70.7% of the participants. Of the women who performed these practices, 57.4% consciously chose foods they craved, tried not to take nutrients believed to be unsuitable in pregnancy, and took nutrients believed to influence the sex of the baby; 85.6% reported breastfeeding their babies in the first 4 h after birth and 9.7% waited for the first call to prayer (azan) to start breastfeeding. Additionally, 72.2% of the mothers reported performing *kırklama* (making the forties), a ceremony performed to celebrate the 40th day after a baby's birth.

Conclusion: Most of the women who participated in the study still followed some traditional practices and rituals during pregnancy and the postpartum period. Therefore, health care professionals should provide health education that accounts for the women's cultural and social environment.

Key words: Traditional practices, pregnancy, birth, postpartum period

1. Introduction

Anatolia has various cultural sources. Historically, it was the center of many ancient civilizations, amalgamating different cultures whose traces are still evident today. These traditions started as a product of the colorful and rich cultural synthesis of the civilizations that existed in the region. The living traditions related to healthcare before and during pregnancy and the methods of helping women through labor have important places in this rich cultural structure. Therefore, to prevent possible misunderstandings and improve the level of modern healthcare, it is important to understand traditional practices (1,2).

The most critical periods in the health of women are pregnancy, birth, and the postnatal period. These periods also greatly affect the babies' health. Women worldwide follow different traditional practices and beliefs at different rates, depending on surrounding cultural and social structures. Although some health systems currently provide expectant mothers with modern healthcare before, during, and after birth, traditional midwives (both internationally and domestically) are often involved both during and after birth due to habit or regional customs, performing various traditional practices to facilitate birth (3–6).

Traditional folk medicine consists of established practices used for centuries along with beliefs developed around those practices and transmitted from generation to generation. These beliefs were sometimes established before, and sometimes along with scientific practices, depending on the times and conditions in which public health departments emerged and developed. Along with the new developments in modern medicine, various traditional folk medicine practices are still used in different regions of Turkey, which may have positive or harmful health effects, such as delaying diagnosis and treatment (7,8).

To obtain maternal mortality data on a national level, the National Study of Maternal Deaths was conducted as part of the Turkish Reproductive Health Program

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in 2005. This was the most comprehensive study on the causes and rates of maternal mortality in Turkey, and it calculated maternal mortality rates in a way that accounted for regional, urban, and rural living area differences. According to the data obtained from the Turkish National Data System, the maternal mortality rate was 28.5% in 2006 and 15.5% in 2011. When examined by region according to the 2011 data, the lowest rates of maternal mortality were in Istanbul (8.4%) and eastern Marmara (8.7%), while the highest rate was in eastern Central Anatolia (23.9%). Seventy-eight percent of literate women and 99% of high school or higher graduates sought prenatal care. According to some estimates, in 2010–2015 the infant mortality rate was 41.8% worldwide. Turkey ranks 120th among the 186 countries studied, with an infant mortality rate of 12.2% (9,10).

In the present study we aimed to determine what traditional practices are followed, and to what extent, by mothers during pregnancy, birth, the postpartum period, and the care of newborns.

2. Materials and methods

The data for this descriptive study were collected between November 2012 and December 2012 in the city center of Konya, the seventh most populous city in Central Anatolia. The population of the study consisted only of mothers residing in Konya's city center who had given birth to a live baby in the past year. Since the average sample of a study is 0.60 in the literature, the sample of the present study was determined by taking the cluster effect as 1.7 with a deviation of 0.10 within a 95% confidence interval. Consequently, 450 women were planned to be included in the study. Assuming that the participants have a similar way of life, the study was conducted on women aged 18–49 years, who resided in the city center, had given birth to a baby in the last year, and attended one of five family health centers (chosen randomly from the simple numbers table) for child immunizations or routine child monitoring. Following a literature review, we prepared a questionnaire with 9 demographic statistics questions and 19 questions regarding regional traditional practices during pregnancy, birth, the postpartum period, and newborn care. The Research Ethics Board of Meram Medical Faculty approved the study (Permission number: 2012/265). Participation in the study was voluntary; the women were informed about the aim of the study prior to soliciting their informed consent. The women were interviewed face-to-face at the family health centers to ensure data quality.

The data were recorded as numbers and percentages. Some data such as age, educational status, income level, and replies to the questions were evaluated with descriptive statistics, and a chi-square test was used to compare the categorized data. $P < 0.05$ was considered significant.

3. Results

The average age of the mothers participating in the study was 35 ± 8 years and varied between 18 and 49 years. Of all participants, 90.4% were married; 61.6% were primary school graduates, of whom 18.2% were working. Moderate income levels were reported by 63.1% of the participants; 85.6% stated that they had social security status. Of all participants, 77.3% belonged to nuclear families and 41.2% had three or more children (Table 1). Regarding the place of delivery, 75.0% of the mothers had all their births in a hospital, 14.0% had their most recent birth in a hospital, and 11.0% had their first birth in a hospital.

In order to conceive as quickly as possible, 16.7% of the participants engaged in some cultural practices; having their waists manually stretched and going to thermal springs were the most frequent ones at 66.6%, while the remaining 33.4% visited tombs of saints, took various herbal products, and vowed to make an offering.

During pregnancy 70.7% of the participants participated in traditional practices. For example, 41.8% of them ate the foods they craved, 32.4% attempted to predict the sex of their babies from the shape of their bellies, and 6.9% avoided the intake of food that they considered unsuitable during pregnancy (Table 2).

To facilitate delivery, 52.7% of the participants used traditional practices, while 47.3% did not. Amongst the former, drinking water or eating rice blessed by prayer was the most commonly reported practice (41.8%), followed by performing birth exercises recommended by midwives (27.8%) (Table 3).

Of all participants, 72.7% used traditional practices on themselves or their babies after birth to avoid *albasması* (which translates as "redness" and refers to postpartum emotional issues). The most commonly reported practice among new mothers was tying red scarves or ribbons around their heads (39.8%). Not allowing the mother or baby to go out for 40 days was the next most reported practice (38.9%). The percentage of those who did not stay alone at home was 37.6%. Other practices reported by the mothers were putting a broom under the bed, putting the Quran somewhere in the room, and pinning an amulet on the puerperant's and baby's clothes (7.2%, 8.9%) (Table 4).

A total of 85.6% of the participants began breastfeeding in the first 4 h after birth: 64.8% of the participants stated that they had begun between half an hour and 1 h after childbirth, while 9.7% recounted waiting until after the first call to prayer (*azan*) after birth. Of the mothers, 54.9% swaddled the baby and 40.0% salted it. While 87.1% reported taking the baby directly to a doctor for newborn jaundice, 39.1% reported that they covered the baby's face with a yellow cloth and 32.2% reported that they pinned a gold coin to the baby's clothes so it touched the baby's skin (Table 5).

Table 1. Sociodemographic characteristics of the mothers.

	n	%
Age (years)		
27 and below	131	29.1
28–38	140	31.1
39 and above	179	39.8
Marital status		
Widow/separated from her husband	43	9.6
Married	407	90.4
Educational level		
Literate	45	10.0
Primary school	277	61.6
High school	90	20.0
University +	38	8.4
Income level		
Low	82	18.2
Middle	284	63.1
High	84	18.7
Working condition		
Not working	368	81.8
Working	82	18.2
Social security status		
Yes	385	85.6
No	65	14.4
Family type		
Nuclear	348	77.3
Extended	102	22.7
Number of children		
One	101	22.4
Two	164	36.4
Three or more	185	41.2

Mothers used more than one method to avoid the "evil eye". Of those methods, pinning an "evil eye" bead on the baby's clothes was most commonly reported (45.1%). Pinning an amulet to the baby's clothes and having a Muslim clergyman (*hodja*) pray was also common (42.6%). Cutting branches from an oleaster tree and placing them over the baby's bed was reported by 33.6% of the respondents, and fumigating the baby's room with harmal seeds was reported by 36.7% (Table 5).

Of the mothers, 72.2% performed the *kırklama* (40 days) ceremony. When the different practices were examined, washing their babies with water in which they had put 40 pebbles ranked first at a rate of 50.9%; washing the baby after pouring water through a colander with 40 holes ranked second at a rate of 37.1% (Table 5).

There was no significant difference in turning to traditional practices for fast conception and during pregnancy based on age, income level, type of family, number of children, and educational background of the participants ($P > 0.05$). The rates of not using traditional methods to facilitate birth were higher in mothers who were 39 years of age or older than in mothers of the other age groups (44.3%, 39.3%, 55.9%; $\chi2 = 9.356$; $P = 0.009$). Performing physical exercises recommended by midwives in order to facilitate birth was higher in women with only one child than in the other women (26.7%, 12.2%, 10.3%; $\chi2=15.406$; $P < 0.001$), while the practice of not visiting another puerperant (18.8%, 26.2%, 35.1%; $\chi2 = 9.104$; $P = 0.011$) and not going out for 40 days (27.7%, 40.2%, 43.8%; $\chi2 = 7.291$; $P = 0.026$) was lower in women with only one child. Salting the baby was higher in two groups: those with 3 or more children (30.7%, 36.0%, 48.6%; $\chi2 = 10.518$; $P = 0.005$) and those who were 39 years old or older (32.1%, 35.7%, 49.2%; $\chi2 = 10.772$; $P = 0.005$). The rate of not swaddling the baby was higher in nuclear families (48.0%, 36.3%; $\chi2 = 4.368$; $P = 0.037$) and in women 39 years of age and older than in the other groups (59.5%, 48.6%; 32.4%; $\chi2 = 23.342$; $P < 0.001$). Covering the baby's face with yellow cloth in order to get over jaundice was lower in the high income group than in the other income groups (40.2%, 43.0%, 25.0%; $\chi2 = 8.832$; $P = 0.012$). The rates of those who believed that they could get over jaundice by covering the baby's face with a yellow cloth (46.7%, 43.0%, 28.1%; $\chi2 = 9.289$; $P = 0.010$), those who pinned gold on the baby's cloth in such a way that it would touch the baby's skin (40.0%, 37.9%, 17.2%; $\chi2 = 18.592$; $P < 0.001$), and those who performed the *kırklama* ceremony were lower among the high school or higher graduates (80.0%, 76.2%, 60.9%; $\chi2 = 11.637$; $P = 0.003$).

4. Discussion

In Anatolian culture having a child ensures the continuity of the family and strengthens a woman's status and value in society. Conversely, not having a child may lead to difficulties and even the dissolution of marriage. In Anatolia it is fairly common for women to be blamed for not being able to have a baby, while men who consult doctors for fertility problems are looked down upon. Therefore, the women are expected to seek the means of becoming pregnant, including traditional practices falling within folk medicine and traditional cures. Sacred, magical solutions include visiting *hodjas*, magicians, or entombed saints. Practices related to folk medicine and traditional cures involve stretching the woman's waist, going to thermal springs, and using various herbal remedies and vaginal suppositories (11).

Table 2. Traditional practices followed by women during pregnancy*.

Practices	n*	%
Consumption of craved foods in the period of craving	188	41.8
Predicting the sex of the baby from the shape of the mother's abdominal region	146	32.4
Predicting the sex of the baby from changes on the mother's face	122	27.1
Eating quince in order to have a dimply baby or eating apples in order to have ruddy cheeked baby	90	20.0
Consumption of nutrients believed to influence the sex of the baby	39	8.7
Not taking nutrients believed to be unsuitable	31	6.9

*Gave more than one answer.

Table 3. Practices used to facilitate birth (n=237).

Practices	n	%
Drinking water or eating rice blessed by prayer	99	41.8
Doing physical exercises and breathing techniques recommended by midwives	66	27.8
Giving a massage to the mother on the back	35	14.8
Applying hot soil-sand to perineum/basting with olive oil	15	6.3
Making a bar of soap pass under the mother's cloth	12	5.1
Performing practices to facilitate the separation of the placenta	10	4.2

Regarding the methods used to conceive quickly, 66.6% believed that they might easily become pregnant after having their waists stretched and going to thermal springs. The practice of traditional midwives stretching the waist is often found in folk medicine; while not a scientifically proven method, it is commonly used in Central Anatolia. Yalçın (12) reported that 76.4% of women had their waists stretched by traditional midwives in the city of Karaman. Our results are consistent with these findings. The practice of going to thermal springs was also reported; the women surveyed believed that it was necessary to stay for a week at a spa. They stated that a woman should bathe in thermal spring water at least once or twice daily because it prepared the uterus for pregnancy. They also reported that thermal springs were beneficial, provided a woman did not lift heavy objects or do heavy work after returning from the spring. These beliefs are similar to the folk practices in Kayseri (13).

Some practices, such as visiting entombed saints, making vows, or using herbal remedies and suppositories to conceive as quickly as possible were performed. Herbs such as blackberries, mallow, cloves, black seeds, nettle seeds, and rhubarb were mixed with honey and eaten to conceive quickly. Herbs (parsley water, onion water) believed to be healing to the uterus were mixed with cotton and placed in the vagina, or a woman would seat herself for a set period over a cauldron in which such herbs were boiled. Practices based on superstition such as making vows, animal sacrifices, conferring with *hodjas*, or having an amulet written are still prevalent.

Almost 20% of all respondents reported they had engaged in traditional practices to conceive quickly. This rate is similar to those reported in numerous other studies conducted in different regions of Turkey (13–17).

One of the most common traditional practices for a mother's nourishment during pregnancy was ensuring she got the food she craved on the same day. Cravings, which are caused by hormonal changes during pregnancy, are defined as extreme desire for or aversion to some foods. It is a behavior that has gained a cultural dimension and become a traditional practice learned from others. Changes in taste perception usually occur as a result of hormonal changes and revert to normal after the first month of pregnancy (rarely after birth). Cravings are usually harmless unless an extreme repugnance occurs that causes malnutrition (18). Some studies have examined cravings in Turkish epics such as "Manas," "Dede Korkut," "Tahir and Zohra," "Asuman and Zeycan," and "Kerem and Aslı"(19–23).

It was an Anatolian folk belief that whatever a pregnant woman desired had to be provided to her. This belief is completely connected to nutrition. Some studies reported a belief that the baby might have a deficiency if the mother's

Table 4. Traditional practices performed on mothers and babies after birth to avoid *albasması* (redness)

Practices	n*	%
Tying a red scarf or ribbon on the head of the women for *albasması*	179	39.8
Not allowing a puerperant and her baby to go out for 40 days after birth	175	38.9
Not leaving a puerperant alone at home	169	37.6
Not allowing two puerperants to visit each other	127	28.2
Other practices	72	16.1

*Gave more than one answer.

Table 5. Traditional infant care practices applied by mothers.

Practices	n	%
Breastfeeding for the first time (n = 432)		
In the first half/complete hour	280	64.8
After 2 to 4 h	90	20.8
After the first call to prayer (*azan*)	42	9.7
After the third call to prayer	20	4.6
Salting the baby	180	40.0
Swaddling the baby	247	54.9
Practices performed for newborn jaundice*		
Taking baby directly to the doctor	392	87.1
Covering the baby's face with a yellow cloth.	176	39.1
Pinning a gold coin on the baby's clothes or bathing in water containing a gold coin	145	32.2
Having Muslim clergymen pray for the baby or fetching sanctified water from dervish convents and making the baby drink it	66	14.7
Practices performed to protect from the "evil eye"*		
Pinning an "evil eye" bead on the baby's clothes	203	45.1
Pinning an amulet on the baby's clothes and having Muslim clergymen pray	192	42.6
Burning Harmal seeds in baby's room	165	36.7
Cutting some branches from oleaster tree and keeping them over the baby's bed.	151	33.6
The ceremony performed on the 40th day (n = 326)		
Washing the baby with water containing 40 pebbles	166	50.9
Washing the baby after pouring water through a colander with 40 holes	121	37.1
After the bath, pouring the holy water onto the mother's and baby's heads while prayers are read	39	11.9

*Gave more than one answer.

desire is not satisfied. The same belief is still prevalent in the Konya area as well. In our study, 41.8% of the women whose desired foods were supplied reported that this food was procured by their relatives. In a study conducted in Afyonkarahisar, most women were provided with the foods they craved (24).

Foods consumed by pregnant women are believed to affect the sex of the baby. It is also believed that if a pregnant woman desires something sour, she will give birth to a girl, and if she desires something sweet, she will bear a boy. We found that this belief still persists in Konya (8.7%). This low rate may be a result of the fact that all of the women who volunteered to participate in our study lived in the city center and 77.3% of them were members of nuclear families.

Another folk belief is that one can determine the sex of a baby by looking at the changes in the face of the pregnant woman; 27.1% of respondents believed that the baby will be a girl if the mother becomes ugly and a boy if she becomes beautiful. Another belief was that the sex of the baby could be determined by looking at the pregnant woman's abdomen. Of the participants, 32.4% believed that a mother would give birth to a boy if her abdomen was big and droopy, or she would have a girl if her hips were big and her abdomen pointed. Similarly, 20.0% believed that the baby would be dimpled if the pregnant woman ate quince, or it would be ruddy-cheeked if she ate apples. Similar beliefs are also seen in Karaman and Kayseri (12,25).

Some foods were considered harmful for pregnant women or the child's physical appearance by 6.9% of the participants (e.g., those who eat rabbit meat may have a hare-lipped baby, those who eat strawberries may have a baby with strawberry-like marks on the skin, and those who eat peaches may have a hairy baby). Participants reported being prevented from eating such foods by the elders in the family. This type of traditional belief is still extensively observed in different parts of Anatolia, especially in neighboring provinces such as Gaziantep, Kayseri, and Mersin. Some of the foods traditionally considered harmful during pregnancy, such as eggs, liver, fish, strawberries, and peaches, are highly nutritious; therefore, it is important that pregnant women receive nutritional education from health professionals (13,17,26).

There is an Anatolian custom of allowing pregnant women to practice pica (the eating of nonfood materials such as soil and paper), but this custom is currently in decline. Pica is harmful for both mother and baby and may cause anemia, tachycardia, fatigue, vertigo, abortion, or even fetal death. The cause of this eating disorder is usually anemia that develops naturally during pregnancy. Pica diagnosis during pregnancy is inexpensive and should be included in prenatal care because its early diagnosis can facilitate the treatment of pregnant women at high risk for iron deficiency (27,28).

Of all the traditional practices for facilitating birth, the consumption by the pregnant woman of water and rice upon which prayers have been recited was in the lead (41.8%). Doing birth exercises recommended by midwives was the next most common method (27.8%), followed by back massages (14.8%). Applying hot soil-sand to the perineum, basting it with olive oil, passing a bar of soap under the mother's cloth, and performing practices to facilitate the separation of the placenta occurred less frequently. Similar beliefs and practices are also seen in Karaman, Mersin, Şanlıurfa, and the Aegean Region. The practice of massage to facilitate birth was found both in our study and in other studies that examined practices in various regions of Anatolia (2,12,29,30).

In the current study performing birth exercises recommended by midwifes is considered a healthy practice. When evaluated from a medical perspective, massage can be viewed as a harmless practice that may help increase one's labor pain endurance. In this age of highly developed medicine, we cannot attest the scientific efficacy of the other traditional practices, and thus cannot approve of them.

Some traditional practices for facilitating the placenta's separation such as pressing on the abdomen, making the pregnant woman sit over a steam of milk or water to expose her perineum and relax her muscles, or making her smell garlic or onion are rare but still seen. Erer et al. (17) found that, of all the traditional practices used by midwives, massaging the abdominal region was practiced by 37.3%, having the pregnant woman go up and down stairs was practiced by 12.0%, and having her stand and jump to facilitate separation of the placenta was practiced by 17.5%. The study demonstrated that most of these traditional practices did not provide the women with any benefits, but were nevertheless still practiced (17).

We determined that these practices were rarely seen in the area of our study, which is a positive sign for the mothers' health (Table 3). Along with modern medicine, some traditional methods are widely used, and licenses and certificates to apply them are issued in a number of countries including China and Thailand. As a result of this formal education, significant decreases in maternal and infant mortality and in postpartum complications were observed (31,32).

Of the mothers who volunteered in our study, 72.7% stated that they and their babies underwent some traditional practices to avoid *albasması*. Psychological problems faced by puerperants are called *albasması* in Turkish. This expression refers to hallucinations or depressive moments experienced by puerperants. It may be translated roughly as "redness." This psychological problem affects not only the mother, but also her baby. It is believed to be caused by a female spirit, a jinn, elf, or malicious woman also called an *alkarısı* ("woman in red") or *alanası* ("red mother") who appears in front of puerperant women, frightens them, and harms their newborn babies. The new mother may faint or be tongue-tied after seeing this evil spirit or jinn. To prevent this, by tradition, the mother and her baby are not to be left alone, and the baby is not taken out before it is 40 days old. By tradition, a red scarf or ribbon is tied to the puerperant's head, and the mother and baby's eyes are tinged with kohl to protect them from harm. An amulet engraved with holy scripts is also pinned to their clothes (33,34).

Of the puerperants, 60%–80% may experience other psychopathological issues, also called "maternity blues," such as insomnia, panic, restlessness, fear, unnecessary worries about her baby, and frequent crying jags during

the initial 5 or 6 days after birth. A puerperant may recover from these without professional support. However, in 10% of puerperants this temporary situation may develop into a sense of hopelessness, inefficiency, worthlessness, and self-blame. The mother worries and obsesses over her health on the one hand, and on the other feels no emotional connection to her baby and has no desire to hug the baby or look after it. This dilemma may cause her to feel guilty. If there is no psychological support or treatment during this period, the mother may hurt the baby or herself (35–37).

This disorder, also known as postpartum depression, resembles the symptoms of *albasması*. Moreover, some diseases such as infections and extreme anemia may worsen a puerperant's condition. Traditional practices performed to treat *albasması* seem to have religious or magical characteristics. These beliefs may have originated from protective behaviors intended to protect mothers and babies from any harmful environmental elements and infectious diseases that could harm them in the periods when they are more vulnerable. Apart from treating diseases, traditional beliefs about dealing with the mother and baby and not leaving the puerperant alone may be effective in preventing postnatal depression. The beliefs related to *albasması* are very old and can be found in early Turkish culture (32,38,39). Folk beliefs similar to *alkarısı* are also seen in Greek mythology, European folklore, and in India, Germany, and England (6, 40–42).

The traditional treatment of *albasması* reported in our study is prevalent in the city center of Konya. One form of this treatment is tying a red ribbon on the head of a new mother in maternity hospitals and 39.8% of the volunteers in the study reported that they had tied a red scarf or ribbon on the head of a puerperant. Furthermore, 38.9% reported that the puerperant and baby were not allowed to go out, 37.6% reported that the puerperant was not left alone at home for 40 days, and a smaller group (28.2%) said that the puerperant was not allowed to visit another puerperant lest they both become subject to *albasması*. A total of 16.1% of the participants engaged in practices such as putting a broom under the bed, putting the Quran somewhere in the room, pinning an amulet on the puerperant's and baby's clothes, and applying kohl to the mother's and baby's eyes (Table 4). Studies conducted in Karaman and Izmir also reported similar results, except for the kohl practices (12,43).

The fact that these traditional practices are observed in the city center demonstrates the impact of traditional approaches related to puerperants in big cities.

When practices related to infant nutrition in our country are examined, it can be seen that the practice of delaying breastfeeding for a fixed period is common. By custom, breast milk is not given to the baby until the first or third call to prayer (*azan*) is recited. The baby is nourished with sugary water in the meantime (44).

The present study found that a great majority of newborn babies (64.8%) were breastfed within the first 30 or 60 min. The percentage of mothers who waited for the first or third call to prayer was low (14.3%). The mother's desire to start breastfeeding quickly is considered a positive behavior in terms of infant health. This practice is highly important for increasing the mother's milk, providing an emotional bond between the mother and baby in the early minutes after birth, and supplying the baby's energy needs.

Among the traditional folk practices seen in our study, salting the baby was reported by 40.0% of the respondents (Table 5). Salting was traditionally done to prevent body odor, decrease sweating, strengthen the muscles and bones, prevent infections, and ensure that injuries heal quickly. Salting involves putting salt in the baby's bath water or rubbing salt onto the sweating parts of the baby's body to prevent unpleasant sweat smells. The same folk methods for salting are also seen in China and India (45).

Considering the sensitivity of a baby's skin, salting a newborn is harmful because it may cause pain, hypernatremia, and body dehydration, and may injure or redden the skin (46,47).

In spite of these drawbacks, the high rates reported for salting babies show that this tradition is very widespread in Anatolia. A study conducted by Erer et al. (17) in Mersin reveals that salting is the most widely used practice (86.5%), and its high rate may be due to the older participants in that study group (aged $\geq$ 50 years).

In our opinion, educating mothers about the dangers of salting in the prenatal period will be beneficial for babies' health.

Swaddling involves wrapping the infant's body tightly and supporting its head to straighten its arms and legs. Women swaddle their babies as tightly as possible, assuming that the more tightly they swaddle their babies, the stronger they will become. Swaddling also aims to keep the baby's body symmetric and warm. In addition, it is done to protect the baby from dangerous movements (1). Swaddling to straighten the baby's arms and legs was reported by 54.9% of the respondents in our study. The results of studies by Çalıskan (48), Bölükbaş (49), and Yilmaz (50) also support our results, showing that swaddling is the most widely used practice in different parts of Turkey. However, this practice accelerates hip dislocation in babies with tendencies toward congenital hip dysplasia. As the swaddled baby's legs and arms are tied, it cannot move easily and so it feels uncomfortable and cries (51,52). Moreover, the beneficial effects of sunshine on a baby's health should not be overlooked. The disadvantage of swaddling babies is that the cloth/fabric prevents the babies from getting enough sunshine and vitamin D. Eventually, this may causes rachitism. Thus, the risk of developing rachitism due to lack of vitamin

D is widespread in Eastern Anatolia (53). Swaddling is a traditional practice that can adversely affect a baby's health, and women expecting babies should be educated about its dangers.

Newborn jaundice is a common symptom in newborn babies and, in most instances, is relatively benign. In 50%–70% of healthy babies, newborn jaundice (which may occur in the first week after birth and is believed to be a temporary, benign phenomenon) may lead to death or disability from the development of bilirubin encephalopathy (kernicterus) if high bilirubin levels are not detected early and treated (54).

Although traditional practices to prevent newborn jaundice may vary in some regions of Anatolia, they are generally similar, involving covering the baby's face with a yellow scarf, pinning a gold coin on the baby's clothes, or putting a gold coin into the baby's bath. Here it is significant that the color yellow is believed to protect babies from jaundice. Traditional religious practices also exist, such as having a *hodja* read prayers over a cup of water and making the baby drink water brought from the tombs of saints (47–49,55).

In our study the percentage of those who reported taking their babies directly to a doctor for newborn jaundice was high (87.1%). This is considered a positive trend in the city of Konya. Nevertheless, along with consulting a physician, 39.1% of the mothers reported covering the baby's face with a yellow cloth, 32.2% reported pinning a gold coin to the baby's clothes or throwing a gold coin into the baby's water, and 14.7% reported having a *hodja* pray for the baby or having the baby drink water brought from saints' tombs (Table 5). A transcultural approach supports such harmless practices.

Thus, families and expectant mothers should be educated about the need to breastfeed babies frequently and take them directly to a health center if they experience newborn jaundice. Used in this context, the traditional and harmless practices mentioned above may not cause a problem.

The longstanding belief in the "evil eye" still persists in daily life almost all over the country. The "evil eye" is defined as a negative effect such as disease, mutilation, or death of an animate being, or the sudden breaking or deterioration of an object, caused by the harmful power that a person has in his soul and eyes (56,57).

It is thought that this harmful power is stronger in certain people, and that it impacts babies more since they are defenseless against it. Mothers attribute behavioral changes and signs of disease in their babies to the "evil eye". Therefore, a great number of traditional practices and methods have been developed to protect against it. Various practices such as pinning or tying an amulet or an "evil eye" bead on the baby's cloth are believed to ward off the "evil eye". In Turkish culture, the blue color is associated with traditional values, particularly protection from evil spirits. The color of eternity and the sky, in Turkish "*gök*", also means blue. Blue is also believed to be the color of rebirth and renewal in Turkish culture. Some people carry "a blue bead" as protection against the "evil eye". Since it is believed that people with blue eyes may harm those they look at, carrying a bead in the same color as the harmful eye is thus believed to protect against it (58,59).

Pinning an "evil eye" bead on a baby's clothes was the most commonly reported "evil eye" protection in our study (45.1%); having a *hodja* pray and pinning an amulet on the baby's clothes came second (42.6%). These findings are similar to those reported by other researchers. Practices favored in the Konya region and used much more than in other areas of Anatolia included burning harmal seeds in the baby's room (36.7%) and cutting branches from oleaster trees and placing them over the baby's bed (33.6%) (Table 5). In Karabulutlu's study of the Kars area, these practices were rarely seen (60).

According to traditional Turkish culture, the newborn is bathed on the 3rd, the 20th, or the 40th day after birth. Babies were believed to become stronger and better protected from evil spirits when they and their mothers refrained from taking baths until the end of the 40th day of the baby's life (1). Similar practices are also observed in Chinese, Indian, and Iranian societies, where mothers and their babies are not allowed to go out before the ritual of forties is held (61).

To perform the kırklama ritual, a mother puts 40 pebbles in her baby's bath water or washes her baby after pouring the water through a colander with 40 holes. After the bath, holy water is poured onto the mother's and baby's heads while prayers are read. Although the ritual is practiced in different ways in some regions, it is prevalent all over the country and the baby's 40th day is considered a special occasion, commemorated by most families (62).

The prohibitions imposed on the baby during its first days are lifted after the bath. The practices of celebrating the 40th day is a harmless traditional practice through which the family gathers to demonstrate how much they value the baby and the mother, and neighbors and relatives share the pleasure of the occasion. Our survey found that *kırklama* was still practiced by 72.2% of the respondents.

In conclusion, traditional practices concerning birth and baby-care vary in different regions over time and even within the same culture. Most of these traditions are kept alive to this day by many people. Considering the fact that maternal and infant mortality rates remain high even today and traditional birth practices still prevail, it will be beneficial for health care professionals to provide education to women and midwives.

There is a need for scientific research on the kinds of traditional practices in all regions of the country and for the identification of all harmful consequences. After evaluating the results of such research and determining the problems faced by people in rural areas, a central training program should be implemented to raise public awareness about the labor process and newborn care. It will be beneficial to educate the public about pregnancy, birth, and infant care. Some harmless traditions may be retained since they create opportunities for family gatherings and strengthens social bonds. However, harmful traditional practices should be discouraged and eliminated in the interest of women's and babies' health. Social networks and the media should also be effectively utilized to raise public awareness about related health issues.

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