

Traditional methods used by mothers living in different regions of turkey for increasing breast milk supply and weaning

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Summary. Background: It is a known fact that traditional practices mothers use in increasing breast milk supply and weaning differ in different parts of countries and even among communities sharing the same city. This study was conducted to find out the use of herbal tea and some foods to increase breast milk, the traditional methods used for weaning and the factors influencing these.

Methods: This study is descriptive and cross-sectional. Three cities in Turkey with different levels of development in terms of geographical and socio economic regions were chosen. The data of the study were collected through a questionnaire form developed by the researchers.

Results: It was found that the mothers who received breast milk increasing training the most were in eastern region, while mothers in western region fed their babies with formula since they thought their milk was not enough and this result was found to be statistically significant ($p < 0.05$). In our study, it was found that 42.1% of the mothers resorted to some plants and foods to increase breast milk. When the mothers were asked about how they weaned their babies, it was found that 38.2% pasted things like hair and wool or put tomato paste on the breast, 26.9% applied bitter food on the nipple while 27.7% stated that the babies stopped breastfeeding spontaneously. It was found that mothers resorted to traditional methods to increase breast milk and to wean and that there were regional differences.

Keywords : breastfeeding, traditional practices, weaning, plant, food

Introduction

Breast milk is the most suitable food for infants since its content changes depending on the needs of the newborn, since it is protective against infections, since it meets the physiological and psychosocial needs of babies alone in the first 4-6 months and since it is economical. For the healthy development and weight gain of babies, breast milk should also increase regularly. In order to increase breast milk, interventions such as starting to breastfeed babies early, visual stimulus (mother's seeing the infant, taking in her arms and breastfeeding frequently), emptying the breasts, mother's having a rest, not getting tired and sleeping for a sufficient period of time are important. In addition to these, herbal products and some foods to in-

crease breast milk have been used frequently from the past to the present (1-3). It is known that different traditional methods are used in societies for weaning. Generally, mothers wean in two ways. They use either gradual weaning method or sudden weaning method. The most frequent method used in sudden weaning is changing the taste or appearance of the breast (4,5). It is known that traditional practices mothers use in increasing breast milk supply and weaning differ in different parts of countries and even among communities sharing the same city (6-8). It is known that these differences exist in our country, too. Knowing the plants and foods consumed by mothers to increase breast milk and the traditional methods used for weaning and the factors influencing the use of these methods will be a guide in planning the trainings and counselling given

to families, ensuring the efficiency of these and assessing the possible negative effects of these on the health of the mother and the infant.

Aim

This study was conducted to find out the use of herbal tea and some foods to increase breast milk, the traditional methods used for weaning and the factors influencing these in three different regions of Turkey.

This study was conducted to find out the use of herbal tea and some foods to increase breast milk and the traditional methods used for weaning by mothers living in different regions of turkey.

Methods

Design

This study is descriptive and cross-sectional.

Setting and Sample

The study was conducted in three different regions of Turkey (Manisa- west, Samsun- North and Malatya- east). Of these cities, which had different levels of geographical and socio economic development, the city chosen from the west was classified as the developed city in the first group, the city chosen from the north was classified as the moderately developed city in the second group, and the city chosen from the east was classified as the less developed city in the third group (9). The sample of the study consisted of a total of 584 mothers who referred to the paediatric polyclinics of the state hospitals (between 6. July – 3. August 2015 and mothers of healthy child between 3-6 years) in these three cities (Manisa Merkez Efendi State Hospital, Samsun Maternity and Children Hospital, and Malatya Research and Training Hospital) and who agreed to participate in the study.

Measurement

The data in the study were collected through a questionnaire form developed by the researchers. The questionnaire form included a total of 37 questions about the socio-demographic characteristics of the mothers (6 questions), state of breastfeeding (8 questions), the foods mothers consumed to increase breast milk (17 questions) and methods of weaning (6 ques-

tions). The questionnaires were answered by the mothers in person. Data collection took an average of 20-25 minutes for each mother.

Data Collection and Analysis

The data obtained were analyzed with Chi-square, percentage and arithmetic mean in SPSS 16.0 program.

Ethical aspect of the study

Governmental agency permissions were taken from the hospitals to collect the data. Oral and written consents were taken from the mothers who volunteered to participate in the study. In order to be able to obtain accurate data, it was explained in the consent form that it was not obligatory to write name on the consent form and all information would remain anonymous. The study approved by the ethics committee of the Ondokuz Mayıs University in Samsun (30.92014/5931).

Results

When the mothers' socio-economic characteristics were analyzed, it was found that 29.3% were between 29 and 59, 48.8% lived in the city centre, 28.9% were high school graduates, 71.4% were housewives, 70.5% lived in a nuclear family and 50.9% had two children (Table 1).

When the mothers' states of breastfeeding were analyzed, it was found that 80.3% breastfed within the first two hours after birth, 61.1% had vaginal delivery, 52.9% were trained about breast milk previously and 50.2% had been trained to increase breast milk. It was found that 52.7% breastfed alone for six months, 33% started formula since breast milk was not enough and 22.7% started formula by deciding on their own. 72.4% of the mothers thought that infants had to be breastfed in the first six months, while 47.4% thought that infants had to be breastfed until the age of one. It was found that the mothers who received breast milk increasing training the most were in eastern region, while mothers in western region fed their infants with formula since they thought their milk was not enough and this result was found to be statistically significant ($p < 0.05$) (Table 2).

In our study, 42.1% of the mothers were found to resort to some plants and food to increase breast milk.

When the plants mothers resorted to increase breast milk were analyzed, it was found that 25.5% used fennel tea, 18.2% used linden tea, 17.8% used herbal tea and 11.1% used aniseed. It was found that herbal products (fennel, herbal tea, aniseed) were used more in the west than the other regions to increase breast milk and this result was found to be statistically significant ($p < 0.05$) (Table 3).

When the foods mothers used to increase breast milk were analyzed, it was found that 73.8% used fruit juice, 45.2% used onion, 44.7% used milk, 38.4% used dessert, 31.3% used grape, 29.5% used lettuce, 28.1% used date, 27.4% used fig, 22.8% used mulberry, 22.6% used mint and 21.1% used dill. It was found that different foods are used more in the west (onion, lettuce, mint, dill) to increase breast milk and this result was found to be statistically significant ($p < 0.05$). It was found that fruit juice, milk and dessert were used more in the east to increase breast milk when compared with the other regions; however, no statistically significant difference was found ($p > 0.05$) (Table 4).

When the mothers were asked about how they weaned, 38.2% stated that they pasted things like hair and wool or put tomato paste on the breast, 26.9% applied bitter food on the nipple while 27.7% stated that the babies stopped breastfeeding spontaneously, 22.9% stated that the infant stopped breastfeeding since they started giving formula and 22.6% stated that they weaned with pacifier. When compared with the mothers in other regions, the mothers in the eastern region were found to resort to methods of pasting hair and wool, applying tomato paste and bitter food more and this result was found to be statistically significant ($p < 0.05$) (Table 5).

Discussion

Socio-economic characteristics of the mothers as of regions were presented (Table 1). Despite the numerous benefits of breast milk for both mother and her baby, exclusive breastfeeding for the first 6 months are

Table 1. The Mothers Socio-economic Characteristics (N: 334)

		West	North	East	Total
		n(%)	n(%)	n(%)	N(%)
Age (years)	15-19	14(7.0)	4(2.0)	10(5.5)	28(4.8)
	20-24	46(23.1)	36(17.6)	39(22.5)	121(20.7)
	25-29	56(28.1)	49(24.0)	66(36.5)	171(29.3)
	30-34	45(22.6)	52(25.5)	35(19.3)	132(22.6)
	35-39	38(19.1)	63(30.9)	31(17.1)	132(22.6)
Living area	City centre	113(56.8)	59(28.9)	113(62.4)	285(48.8)
	District	48(24.1)	88(43.1)	41(22.7)	177(30.3)
	Village	38(19.1)	57(27.9)	27(14.9)	122(20.9)
Education level	Literate	54(27.1)	14(6.9)	3(1.7)	71(12.2)
	Primary school	20(10.1)	80(39.2)	41(22.7)	141(24.1)
	Secondary school	28(14.1)	54(26.5)	44(24.3)	126(21.6)
	High school	60(30.2)	45(22.1)	64(35.4)	169(28.9)
	University	37(18.6)	11(5.4)	29(16.0)	77(13.2)
Working status	Yes (Employed)	95(47.7)	27(13.2)	45(24.9)	167(28.6)
	No (Unemployed)	104(52.3)	177(86.8)	136(75.1)	417(71.4)
Family type	Nuclear family	121(60.8)	155(76.0)	136(75.1)	412(70.5)
	Patriarchal family	78(39.2)	49(24.0)	45(24.9)	172(29.5)
Number of children	Single child	32(16.1)	50(24.5)	41(22.7)	123(21.1)
	Two child	109(54.8)	108(52.9)	80(44.2)	297(50.9)
	More child	58(29.1)	46(22.5)	60(33.1)	164(28.1)

Table 2. The Mothers States of Breastfeeding

		West	North	East	Total	Test , p
		n(%)	n(%)	n(%)	n(%)	
First breastfeeding	Within two hours after the birth,	143(75.7)	166(81.4)	160(88.4)	469(80.3)	5.970
	Later	56(28.1)	39(19.6)	21(11.6)	115(19.7)	0.051
The state of having training previously on how to increase breast milk	Yes	100(50.5)	77(37.7)	116(64.1)	293(50.2)	28.961*
	No	99(49.7)	127(62.3)	65(35.9)	291(49.8)	0.000**
The period of time with breast milk alone	No breast milk	22(16.1)	27(13.2)	45(24.9)	106(18.2)	7.284
	Less than six months	58(29.1)	76(37.3)	36(19.9)	170(29.1)	0.122
	First six months	105(52.8)	101(49.5)	100(55.2)	308(52.7)	
Reasons for giving formula	Because milk was not enough,	78(39.2)	56(27.5)	59(32.6)	193(33.0)	28.247*
	Since the milk was insufficient,	10(5.0)	37(18.1)	18(9.9)	65(11.1)	0.002**
	Since the mother did not have any milk	2(1.0)	10(4.9)	4(2.2)	16(2.7)	
The number of people who decided to start formula	Mother	60(30.2)	60(29.4)	42(23.2)	162(27.7)	12.767
	Midwife-nurse	16(8.0)	5(2.5)	17(9.4)	38(6.5)	0.057
	Doctor	14(7.0)	38(18.6)	22(12.2)	74(12.6)	
According to the mother, how long should a mother breastfeed?	Six month	131(65.8)	149(73.0)	143(79.0)	423(72.4)	5.460
	Five months	36(18.1)	21(10.3)	22(12.2)	79(13.5)	0.243
	Four months	32(16.1)	34(16.7)	16(8.8)	82(14.0)	
According to the mother, how long should breast milk be given?	Until 1 year-of-age	50(25.1)	121(59.3)	106(58.6)	277(47.4)	8.055
	Between 1 and 2 years old	135(66.8)	59(29.0)	63(34.8)	257(44.0)	0.428
	Older than two years	14(6.1)	24(11.8)	12(6.6)	51(8.6)	

* Pearson Chi-square, ** p<0.05

Table 3. The use of Herbal Tea to Increase Breast Milk

	West		North		East		Test , p
	Have used n(%)	Have not used n(%)	Have used n(%)	Have not used n(%)	Have used n(%)	Have not used n(%)	
State of using herbs or foods to increase breast milk	127(63.8)	72(36.2)	65(31.9)	139(68.1)	54(29.8)	127(70.2)	0.618 0.734
Fennel tea	75(37.7)	124(62.3)	29(14.2)	175(85.8)	43(23.8)	138(76.2)	18.539* 0.000**
Linden tea	80(40.2)	119(59.8)	14(6.9)	190(93.1)	12(6.6)	169(93.4)	2.130 0.345
Herbal tea	69(34.7)	130(65.3)	20(9.8)	184(90.2)	15(8.3)	166(91.7)	12.674* 0.002**
Aniseed	40 (20.1)	159(79.9)	2(1.0)	202(99.0)	23(12.7)	158(87.3)	7.979* 0.019**

*Pearson Chi-square, ** p<0.05

still below the desired level in Turkey (10-13). When mothers' states of breastfeeding were analyzed, it was found that most of the mothers breastfed within the first two hours after birth and they breastfed alone for six months (52.7%) and no statistically significant difference was found between regions. Balcı et al.(2012)

stated that 74.9% of the mothers breastfed alone for six months and Gökdoğan and Akdolun (2010) stated that 65% of the mothers breastfed alone for six months. In their study, Ergenekon et al. (2006) found that none of the mothers breastfed alone in the last six months(14-16). Aydın and Olgun (2000) found that

Table 4. The use of Food to Increase Breast Milk

	West		North		East		Test, p
	Have used n(%)	Have not used n(%)	Have used n(%)	Have not used n(%)	Have used n(%)	Have not used n(%)	
Fruit juice	135(67.8)	64(32.2)	150(73.5)	54(26.5)	145(80.7)	35(19.3)	0.242 0.886
Onion	126(63.3)	73(36.7)	51(25.0)	153(75.0)	148(81.1)	94(51.9)	10.168* 0.006**
Milk	97(48.7)	102(51.3)	71(34.8)	133(65.2)	93(51.4)	88(48.6)	1.309 0.520
Dessert	58(29.1)	141(70.9)	80(39.2)	124(60.8)	80(47.5)	95(52.5)	0.027 0.986
Grape	55(27.6)	144(72.4)	65(31.9)	139(68.1)	63(34.8)	118(65.2)	0.439 0.803
Lettuce	88(44.2)	111(55.8)	34(16.7)	170(83.3)	50(27.6)	131(72.4)	8.535* 0.014**
Date	79(39.7)	120(60.3)	35(17.2)	169(82.8)	50(27.6)	131(72.4)	3.535 0.171
Fig	70(35.2)	129(64.8)	41(20.1)	163(79.9)	49(27.1)	132(72.9)	1.021 0.600
Mulberry	72(36.2)	127(63.8)	22(10.8)	182(89.2)	39(21.5)	142(78.5)	4.189 0.123
Mint	78(39.2)	121(60.8)	179(87.2)	185(90.7)	35(19.3)	146(80.7)	6.428* 0.040**
Dill	70(35.2)	129(64.8)	22(10.8)	182(89.2)	31(17.1)	150(82.9)	10.994* 0.004**

*Pearson Chi-square, ** p<0.05

Table 5. Methods of discontinuing breast feeding

	West		North		East		Test, p
	Have used n(%)	Have not used n(%)	Have used n(%)	Have not used n(%)	Have used n(%)	Have not used n(%)	
Pasting hair, wool, putting tomato paste	64(35.4)	117(64.6)	29(14.2)	175(85.8)	130(65.3)	69(34.7)	7.594* 0.022**
Spontaneous weaning	46(25.4)	135(74.6)	83(40.7)	121(59.3)	33(16.6)	166(83.4)	3.459 0.177
Applied bitter food on the nipple	55(30.4)	126(69.6)	22(10.8)	182(89.2)	80(40.2)	119(59.8)	6.628* 0.036**
Starting to give formula	23(12.7)	158(87.3)	45(22.1)	159(77.9)	66(33.2)	133(66.8)	5.171 0.075
Taking the infant away from the mother	33(18.2)	148(81.8)	31(15.2)	173(84.8)	70(35.2)	129(64.8)	3.528 0.171
Pacifier	19(10.5)	162(89.5)	23(11.3)	181(88.7)	90(45.2)	109(54.8)	3.232 0.199

* Pearson Chi-square, ** p<0.05

40.1% of the mothers stopped breastfeeding before six months due to various reasons(17).

In our study, it was found that almost half of the mothers (50.2%) had received training about breast milk and how to increase breast milk. Statistically sig-

nificant difference was found between regions in terms of mothers' being trained about breast milk and how to increase breast milk. It was found that the rate of being trained was higher in the east. In their studies, Dinç et al (2015) found that 72.6% of the mothers

and Gökdoğan et al.(2010) found that 22.2% of the mothers were informed about breastfeeding and about practices/precautions to increase breast milk(4,15).

It was found that 33% of the mothers started formula since their breast milk was not enough and 27.7% of the mothers started formula by deciding on their own (Table 2). Gölbaşı and Koç (2008) stated that a great majority of mothers (82,4%) gave additional food to their infants in addition to breast milk and 41.4% stated that they started additional food since they thought their infant was not full or their milk was not enough(18). Aydın and Olgun (2000) stated that 40.1% of the mothers stopped breastfeeding before six months due to various reasons and 57.1% of these mothers stated that their milk was not enough while 27% stated that their children did not suck. In their study, Ergenekon et al (2006) found that 40.2% of the mothers started additional food before four months (16,17).

In our study, it was found that 42.1% of the mothers resorted to some plants and food to increase breast milk. When the plants mothers used to increase breast milk were analyzed, it was found that 17.8% used herbal tea, 25.2% used fennel tea, 18.2% used linden tea and 11.1% used aniseed (Table 6). A statistically significant association was found between regions in terms of the use of herbal tea, fennel and aniseed. In the West, the consumption of herbal tea, fennel and aniseed was found to be higher when compared with the other cities. The mothers stated that they consumed some foods to increase breast milk. When the foods most consumed were examined, it was found that these were fruit juice (73.8%), onion (45.2%), milk (44.7%) and desserts (38.4%). A statistically significant different was found between regions in terms of foods used to increase breast milk. It was found that different foods (onion, lettuce, mint, dill) were used more to increase breast milk when compared with the other regions and this result was found to be statistically significant ($p < 0.05$).

Studies have shown that about 30-60% of the mothers use herbal tea to increase breast milk (19-21). Generally mothers stated that herbal teas such as fennel, linden, aniseed, galactagogue herbal mixture tea, cydonia vulgaris increased breast milk (2,22). A great number of studies have been conducted to research which teas and foods are used in order to increase breast milk in different parts of

our country. When these studies are examined, Tanrıverdi et al. (2014) reported that in zmir (western region), 95% of the mothers stated that water was effective in increasing breast milk, 81,3% stated that ayran was effective, 79,3% stated that cow's milk was effective, 78,7% stated that tahini halva was effective, 77,7% stated that onion was effective, 68,3% stated that grape molasses was effective, 63,7% stated that black eyed pea was effective, 61% stated that cracked wheat was effective, 48% stated that stinging nettle was effective, 37% stated that parsley was effective, 25,3% stated that liver was effective, 15% stated that chestnut was effective and 2% stated that coke was effective in increasing breast milk(23). Gökdoğan and Akdolun (2010) reported that in Kütahya (western region) 36,1% of the mothers used herbal tea (generally fennel tea 76.9%, galactagogue herbal mixture tea 13,8%, linden tea 4.6%, sage tea and stinging nettle 3.1%) and some foods (milk 24.1%, dessert 20.8%, fig 18.1%, onion 17.6%), while Dinç et al.(2015) reported that in Çanakkale (Marmara region-northwest), mothers thought linden (29.2%), fennel and sage tea (22.2%), humana tea (14.6%) and aniseed (11.8%) increased breast milk (24). In the same study, it was found that as for foods, mothers thought that milk puddings (%58), onion/garlic (%42), milk (%38.2), fruit juice (%37.7), Lohusa sherbet (%22.2), cracked wheat (%16.6) and dry grapes (%16.5) increased breast milk(4,15). Ilık et al. (2010) found that in Mersin (southern region), the most used milk increasing practice was lohusa sherbet (55,30%) (25). Karabulutlu (2014) found that in Kars (eastern region), the most used methods to increase breast milk after birth were eating liquid food (75%), drinking weak and sweet tea (70%), eating desserts (61.3%) and cracked wheat pilaf (60%) (26). In their study, Erkaya et al. (2015) found that in Trabzon (northern region), 81% of the mothers used special methods to increase their breast milk and believed that water (93,0%), vegetable (87,7%), soup (69,1%), stewed fruit (48,1%), fruit (39,2%), fennel tea (34,7%), Humana Stil Tea (27,4%), milk puddings (26,6%) and cracked wheat increased breast milk(27). Eri (2006) reported that in Tokat (northern region), 89% of the mothers used special methods to increase their breast milk and consumed weak tea (63.7%) and dessert (62.4%)(28). Demirta (2005) found that in Ankara (Central Anatolian region), mothers consumed scallion-onion, stewed fruit, soup, halva, cracked wheat pilaf, green vegetables and dessert at most to have much milk(20). In a study

conducted to examine the traditional practices in increasing breast milk in Turkey and Iran, Katebi (2002) found that habits of eating onion, black eyed peas, tahin halva, cracked wheat pilaf, potato and drinking linden and salty water were found in Central Anatolia, while mothers ate wheat, dry grapes, hazelnut and peanut in Iran. (29).

When the mothers were asked about how they weaned their babies, it was found that 38.2% pasted things like hair and wool or put tomato paste on the breast, 26.9% applied bitter food on the nipple while 27.7% stated that the babies stopped breastfeeding spontaneously (Table 5).

When Ünsal et al (2005) (n:5003) (zmir- western region) 36.32% stated that the infant stopped breastfeeding and 24.2% stated that the mother no longer had breast milk. In a study conducted on nurses, Yapıcıo lu et al. (2002) found that the most important reasons were gradually decreasing milk as a result of starting work (64,4%) and having nursed for a sufficient period of time (%20.0) (30,31). The reason why midwives stopped breastfeeding were insufficient milk (%28.7), starting work (%20.4), believing that the infant was breastfed for a sufficient period of time (%19.4) and the infant not wanting to be breastfed (Kaynar et al.,2005). In another study, Dinç et al., (2015) (Marmara region, North-west) found that the methods mothers used were giving additional food with feeder (%25.3), distracting with water and fruit juice (%14), putting hair on nipple (%10) and putting tomato paste on nipple (%10). (32).

Knowing the traditional practices to increase breast milk during the process of breast feeding is important in terms of ensuring that infants are breastfed effectively for a long period of time and in terms of mother's breast health during the period of weaning.

Limitations

The research results can be generalized only to the sample group, studies are needed in larger groups for generalization of the country

Conclusion and Suggestions

In the study, it was found that mothers resorted to some plants and foods to increase breast milk and that there were regional differences. Again, mothers

were found to resort to various traditional methods for weaning and this also showed differences between regions. Thus, it is of great importance for nurses to know about traditional practices for increasing breast milk and weaning and to train mothers on these.

Acknowledgment

The authors would like to thank all nurses and surgeons who helped them in performing this study.

Availability of data and materials

The dataset used during the current study are available from the corresponding author on reasonable request.

Declaration of conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Competing interests

The authors declare that they have no competing interests.

Authors' contributions

All authors contributed to the design of the study and interpretation of data. BTE performed the data analysis and drafted the manuscript. All authors read, critically revised, and approved the final manuscript.

Funding

The author(s) received no financial support for the research, authorship, and/or publication of this article.

Consent for publication

Not applicable.

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