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Breastfeeding Practices of Health Professionals and Care Workers in Turkey

Hakan Yaman[1] and Mustafa Akçam[2]

[1] University of Akdeniz, Medical School, Department of Family Medicine, Antalya, Turkey
[2] Süleyman Demirel University, Medical School, Department of Pediatrics, Isparta, Turkey

A B S T R A C T

Breastfeeding has a significant positive impact on the health of infants and is the best nutrition source. Health professionals/care workers play a considerable role in the promotion of breast-feeding. The knowledge and attitude level of health professionals/care workers and its influence on their own breastfeeding behaviour was investigated. Two hundred sixty three of 345 health care workers (response rate=76.2%) working in Children and Birth Hospitals and primary health care centres in a rural city (Isparta) in south Turkey participated in this study. A questionnaire was administered. Descriptive statistics and χ^2 test have been used (alpha=0.05) to analyse the data. Seventy four (41.1%) of the respondents with children (n=180) exclusively nursed their children for less than 4 months; 62 (34.4%) nursed beyond 6 months. Physicians with children (n=14, 53.8%) were used to exclusively breastfeed less than 4 months (χ^2 (4)=9.76, p= 0.045). This study showed a difference between health professionals/care workers attitudes and knowledge level and their or their spouses breastfeeding behaviour. The reason why knowledge level of health professionals did not translate into their own or their spouses' breastfeeding practices needs to be evaluated in further studies.

Keywords: *breastfeeding, education, training, parent, Turkey*

Introduction

Breastfeeding has a significant positive impact on the health of infants and is the best nutritional source. It is moreover associated with diminishing the risk and severity of some diseases in the mother and has at the same time benefits for the community[1]. Following the recommendations of UNICEF, many countries in the world have started a campaign to promote breast-feeding. UNICEF and WHO ha-

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TABLE 1
BREASTFEEDING RATE OF TURKISH CHILDREN, 1998

Age (months)	Not Breastfed (%)	Exclusively Breastfed (%)	Breastfed + Water (%)	Breastfed + Complementary Food (%)
0–1	3.9	14.2	32.6	49.3
2–3	9.8	5.9	29.5	54.8
4–5	17.7	2.0	11.1	69.2
6–7	28.5	0	8.4	63.0
8–9	39.7	0	1.6	58.7
10–11	49.4	0	1.5	49.1
12–13	48.0	0	0	52.0
24–25	88.2	0	0	11.8

ve defined their own strategy to promote breast-feeding as »Ten Steps to Successful Breast-feeding«[2]. The breastfeeding promoting strategy includes all levels of the population, but targets primarily mothers who make their first contact with their babies[3]. The quality of this encounter predicts the success and length of breastfeeding[4]. Human milk is the gold standard nutrient for healthy, newborn infants, and should be the only nutrient for all babies through the first 6 months of life, and should be continued up 2 years of age[5].

The breastfeeding rate in Turkey for the years 1998–2002 has been reported as 7% for exclusive breastfeeding (<6 months), 34% for complementary breastfeeding (6–9 months), and 21% as still breastfeeding (20–23 months)[6]. The 1998 Turkish Demographic and Health Survey showed the following tabulated results concerning breastfeeding practices in the Turkish population (Table 1)[7]. A local study performed in Istanbul/Turkey revealed that the average duration of exclusive breast-feeding in an urban setting was 58 days. Although 83% of mothers expressed their intention to breastfeed when interviewed 4–5 hours after delivery, only 18% of all these mothers were practising exclusive breastfeeding at the end of 1 month[8].

Since 1987 the »Baby-friendly Hospital Initiative« has run to promote breastfeeding and to begin at an early stage. Despite most of the health professionals at the hospitals and primary care centres might have training opportunities in breast-feeding promotion[5], we were interested to determine the relation between health care personnel knowledge of breastfeeding and their, or their spouses, breastfeeding experiences.

Methods

A survey was conducted among health professionals/ care workers of a Children and Birth Hospital (n=1) and primary health care centres (n=50) in a rural city (Isparta) in south Turkey during spring and summer 2002.

The 95% confidence level (p=0.05) was used to indicate statistical significance. Confidence interval was set as 5% and the sample size formula was as follows:

$$ss = \frac{Z^2 \cdot (p) \cdot (1 - p)}{c^2}$$

where:
Z = Z value (e.g. 1.96 for 95% confidence level)

p = percentage picking a choice, expressed as decimal (.5 used for sample size needed)
c = confidence interval, expressed as decimal (e.g.,.04 = ±4)

The sample was stratified according to sex, occupation, and working site of the total health professional/care workers population in Isparta (n=3500). The needed sample size was 345, who were selected by stratified random sampling. Two hundred sixty three people participated (response rate 76.2%). Participants were contacted in their working sites and were asked to fill out the questionnaire. Questionnaires were collected the day after by the staff of the health directorate. The respondents' identity was strictly confidential and anonymous.

A questionnaire including 25 questions was administered to the participants. This questionnaire included questions on age, gender, marital status, work place, age of the youngest child, self or spouse breastfed infant, involvement in postnatal care, training in breastfeeding promotion, source of information concerning breastfeeding, knowledge about breastfeeding, and personal experience with breastfeeding.

Knowledge questions were selected by the authors and divided into statements and knowledge questions. Statements were answered with Yes, No or Undecided; and knowledge with multiple choice answers. Correct answers were determined according to evidence based knowledge concerning breastfeeding.

The questionnaire was piloted with 10 persons known to the authors. These people were selected to ensure that all features of the questionnaire were tested. This included the flow of the questions, the clarity of the questions, the range of responses, and the time taken to complete the questionnaire. Some minor changes were made to aid the flow and clarity of questions.

Descriptive statistics and χ^2 test have been used. The level of significance has been set at 0.05.

Results

Descriptive statistics show that the sample was mainly: female (84%, n=221), in age range 20–60; single (31.6%, n=56) or married (68.4%, n=207); physicians (20.5%, n=54), nurses and/or (66.2%, n=174) or auxiliary staff (13.3%, n=35); 180 (68.4%) were parents and raised children; the remaining 83 (31.6%) were either single or married without children. The frequency of the ages of their youngest children was 15 (5.7%) for 0–12 months, 24 (9.1%) for 13–24 months, 26 (9.9%) for 25–26 months, 48 (18.3%) for 4–6 years, and 67 (25.5%) for children >6 years.

TABLE 2
SOCIODEMOGRAPHIC CHARACTERISTICS OF PARTICIPANTS (N=263)

	N	%
Age		
20–25	57	21.7
26–30	68	25.8
31–35	58	22.1
36–55	80	30.4
Sex		
Female	221	84.0
Male	42	16.0
Marital Status		
Single	56	21.3
Married	207	78.7
Self or Spouse Breast-fed Infant		
Yes	180	68.4
No	83	31.6
Work Place		
Hospital	141	53.6
Primary Care Center	122	46.4

TABLE 3
NUMBER AND PERCENTAGE OF RESPONDENTS' KNOWLEDGE ABOUT BREASTFEEDING

Statement	Correct		Incorrect		Were undecided	
	%	N	%	n	%	n
Breastfeeding decreases infant death	92.8	244	3.0	8	4.2	11
Breastfeeding benefits mothers' health	95.8	252	0.8	2	3.4	9
Content of colostrum is different from human milk	97.0	255	1.1	3	1.9	5
Breastfeeding should be initiated as early as possible	92.0	242	6.8	18	1.2	3
Newborn should first be nursed with human milk	96.6	254	2.7	7	0.8	2
Knowledge						
Beneficial effects of breastfeeding	95.1	250	4.5	12	0.4	1
Protective effects of breastfeeding against certain diseases	65.0	171	40.0	84	3.0	8
Benefits of colostrum	58.9	155	37.7	99	3.4	9
Frequency of breastfeeding of the newborn	74.1	195	23.2	61	2.7	7
Duration of exclusive breastfeeding	91.2	240	8.4	22	0.4	1
Time of weaning	46.4	122	53.2	140	0.4	1

All physicians and nurses were involved in postnatal care and attended training in breastfeeding promotion (Table 2).

Two hundred thirty seven (90.1%) respondents mentioned school, 58 (22.1%) books, magazines and television, 23 (8.7%) peers and 13 (4.9) elder family members as sources on breastfeeding information.

Answers to certain knowledge-based questions and statements are listed in table 3. No significant relation could be found between responses and profession, gender, marital status and self or spouse breastfeeding.

Statements concerning contraindicated conditions are displayed in table 4. All answers have been added to the table.

Answers to the questions regarding personal experience (n=180, married-parents) with their children showed the following results: no difference could be found between hospital and primary care staff concerning the duration of exclusive and total breastfeeding [χ^2 (10) = 12.48, p=0.33 vs. χ^2 (6) = 15.84, p=0.2]. Twelve respondents began complementary breastfeeding <2 weeks after birth. Of these, respondents

TABLE 4
CONTRAINDICATIONS FOR BREASTFEEDING IN THE NURSING MOTHER (N= 263)

Conditions	n	%
Maternal infectious disease	114	43.3
Drugs passing to milk	70	26.6
Tuberculosis	52	19.8
Psychosis	26	9.9
Breast pathologies (mastitis, abscess, soreness etc.)	24	9.1
Hepatitis	23	8.7
AIDS	22	8.4
Drug dependency	5	1.9
Other (metabolic conditions of the newborn, lip and oral anomalies etc.)	32	12.2
No contraindications	7	2.7
No answer	21	8.0

from primary care dominated (n=9, 75%); whereas at month 4 respondents from the hospital began mainly with breastfeeding (n=51, 69.9%) [χ^2 (9) = 19.72, p=0.02].

No significant difference was found between exclusive breastfeeding and complementary food experience between the occupations [χ^2 (10) = 25.55, p=0.27 vs. χ^2 (10) = 18.78, p=0.41]. Exclusive breastfeeding mainly ended at 3–4 (n=64, 35.6%) and 4–6 months (n=69, 38.3%). Auxiliary staff seemed to stop earlier with exclusive breastfeeding compared to physicians and nurses. The distribution of exclusive breastfeeding practices in different occupations can be seen in table 5.

The duration of breastfeeding showed significant difference between occupational groups [χ^2(12) = 39.28, p=0.026]. Auxiliary staff either stopped breastfeeding earlier or breastfed longer up to 1–2 years compared to physicians and nurses. The distribution of duration of breastfeeding according to occupation is shown in Table 6.

A question asking why some of the parents weaned before 12 months, 81 (45%) (34, 18.9% missing answers) was answered as such: insufficient milk (n=27, 33.3%), maternal employment (n=21, 25.9%), weak or un-sustained suck (n=26, 32.1%), and other answers (nipple abnormalities, maternal health problems, deliberate decision etc.) (n=7, 8.6%).

Discussion

We noted a remarkable number of female participants, despite a stratified sample. The mainly descriptive data and the small sample size are the main limitations of this study. But the results presented here give insight into the breastfeeding experiences of health professionals/care workers, which has not been treated before.

By examining the knowledge and attitudes of health professionals to breastfee-

TABLE 5
DISTRIBUTION OF DIFFERENT EXCLUSIVE BREASTFEEDING PRACTICES ACCORDING TO THE OCCUPATION

	<2 weeks	1 month	1–2 months	3–4 months	4–6 months	>6 months	Total
Physicians	1 (3.9)	2 (7.7)	5 (19.2)	8 (30.8)	10 (38.5)	–	26 (100)
Nurses	12 (9.5)	3 (2.4)	8 (6.3)	48 (37.8)	52 (41.0)	4 (3.2)	127 (100)
Auxiliary Staff	4 (16.0)	5 (20.0)	2 (8.0)	8 (32.0)	7 (28.0)	–	25 (100)
Total	20 (11.1)	10 (5.6)	15 (8.3)	64 (35.6)	69 (38.3)	4 (2.2)	180 (100)

TABLE 6
DISTRIBUTION OF BREASTFEEDING DURATION ACCORDING TO OCCUPATION

	1 month	2–3 months	4–6 months	7–9 months	10–12 months	1–2 years	>2 years	Total
Physicians	1 (3.9)	4 (15.4)	4 (15.0)	5 (19.2)	7 (26.9)	5 (19.2)	–	26 (100)
Nurses	12 (9.2)	4 (3.1)	27 (20.8)	16 (12.3)	20 (15.4)	46 (35.4)	5 (3.9)	1130 (100)
Auxiliary Staff	4 (16.7)	2 (8.3)	5 (20.8)	–	1 (4.2)	11 (45.8)	1 (4.2)	24 (100)
Total	17 (9.4)	10 (5.6)	36 (20.0)	21 (11.7)	28 (15.6)	62 (34.4)	6 (3.3)	180 (100)

ding, we found that nearly 68% of respondents had breastfed or had a spouse who had breastfed. Schools were mentioned as the highest (90.1%) source of information and no one indicated that it was solely experience that had taught them the most about breastfeeding. This in fact is a positive finding, because relying on personal experience as the primary source of information may narrow the assistance to patients or may limit the strategies to solve problems that the clinician did not experience[9].

Respondents had high statement scores. But questions asking for knowledge like; protective effect of breast-feeding against certain diseases, benefits of colostrums; or questions on frequency of breastfeeding of the newborn and time of weaning, revealed lower scores. Freed et al[10], presented in a study with a larger sample that more than 25% of physicians (paediatricians and obstetricians) disagreed with the statement that »exclusive breastfeeding is the most beneficial form of nutrition for the first four month of an infant's life«. Only 4.1% of nurse and nurse-midwives disagreed with this statement[9]. Other studies showed that maternity nurses demonstrated limited knowledge related to breastfeeding[11,12].

Answers given to an open question asking contraindications to breastfeeding showed that most (43.3%) would interrupt breastfeeding with a maternal infection. The guideline of the American Academy of Family Physicians states that »…for most maternal infections breastfeeding helps to protect the infant against disease. Only a few maternal infections preclude breastfeeding: HIV, tuberculosis, active herpes simplex, and chickenpox infections…«[13]. The answer »drug passing to the milk« revealed also a relatively high frequency (26.6%). The statement again recommends, that almost all prescriptions and over-the-counter medications taken by mother are safe during breastfeeding. Exceptions are: drug abuse, anticancer drugs, and radioactive compounds. Among antidepressants, cardiovascular medications, immunosuppressants, and many other medications, certain drugs are preferred to others[13]. The answer rate of all health professions concerning breast pathologies (mastitis, abscess, soreness) and cessation was 9.1% for cessation. Helling P[9], showed that 8.6% of nurses recommended cessation in case of mastitis and 51.6% in breast abscess. Physicians answers ranged between 4–19% for interruption breastfeeding with mastitis and 34–47% with abscess[10].

Efforts to promote and initiate breastfeeding are continuing, but there is further need for strategies to support the continuation of breastfeeding. In the United States, in 1998 only 64% of new mothers initiated breastfeeding at birth and just 29% continued to breastfed at six months[14]. Ryan[15] stated that on 21.6% receive breast milk at age 6 months. The frequency of our respondents was higher; a certain amount (38.3%) did exclusively nurse between 4–6 months. Factors like age, education, ethnicity, and income are attributed to predict the choice to breastfeed[11]. Working conditions and social support might be other factors that influence breastfeeding behaviour[5,16].

The majority of respondents stated that they weaned beyond 4 months. Compared to other studies[13,14], these are satisfying results. Especially auxiliary staff and spouses were used to wean beyond 12 months. This is converse to the statement that in the USA older, college-educated, white women of high socioeconomic status have higher breastfeeding rates[15]. One of the reasons might be decreased participation of women with low socioeconomic level in the labour force, so that their daily activities are confined to housework and child care[8].

Lack of milk was the most frequent stated reason for stopping nursing. Even if this complex complaint is poorly understood, it is still the most common reason for cessation. Various explanations like lack of close contact between mothers and infants (modern and urban lifestyle), overuse of supplemental feedings and a rationalization by women who decline to breastfeed have been proposed[17]. Maternal employment was the second most common reason for cessation of breastfeeding. This caused secondary insufficient milk, which frequently results when breastfeeding mothers are separated from their infants[17].

This study showed a difference between health professional's attitudes and knowledge level and their or their spouses breastfeeding behaviour. The reason why knowledge level of health professionals did not translate into their own or spouses breastfeeding practices needs to be evaluated in further studies. But breastfeeding as a deeply rooted cultural phenomenon in developing countries requires more culturally sensitive and specific promotion strategies[8], which also includes health professionals.

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H. Yaman

Akdeniz Üniversitesi, Tip Fakültesi, Aile Hekimligi AD, 07070 Antalya, Turkey
e-mail: hakanyaman@akdeniz.edu.tr

NAVIKE DOJENJA MEĐU ZDRAVSTVENIM I SOCIJALNIM DJELATNICAMA U TURSKOJ

S A Ž E T A K

Dojenje ima značajan pozitivan učinak na dojenčad i najbolji je izvor hranjivih tvari. Zdravstveni i socijalni djelatnici imaju značajnu ulogu u promicanju dojenja. U ovom radu proučavali smo znanje i stavove zdravstvenih djelatnica i učinak istih na njihovo ponašanje vezano uz dojenje. U ovoj studiji sudjelovalo je 266 od 345 zdravstvenih djelatnica (postotak odaziva 76,2%) koje rade u dječjim bolnicama, rodilištima i primarnim zdravstvenim centrima u ruralnom okruženju južne Turske (Isparta). Podijeljen im je upitnik. Koristili smo deskriptivnu statistiku i Chi-kvadrat test. 74 (41,1%) ispitanica s djecom (N=180) dojile su svoju djecu manje od 4 mjeseca; 62 (34,4%) dojile su duže od 6 mjeseci. Liječnice s djecom (N=14, 53,8%) dojile su manje od 4 mjeseca (Chi kvadrat (4)=9,76, p=0,045). Ovaj rad pokazuje razliku između stavova zdravstvenih djelatnica i njihovog ponašanja u vezi s dojenjem. Razlog zbog kojeg zdravstvene djelatnice ne prenose svoje znanje na navike dojenja potrebno je istražiti u daljnjim istraživanjima.