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Health Workers' Knowledge and Attitudes Regarding Lactational Amenorrhea at Family Health Centers

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ABSTRACT

Introduction: The Lactational Amenorrhea Method (LAM) is an effective, low-cost postpartum family planning strategy when applied under three essential criteria: amenorrhea, exclusive and frequent breastfeeding, and an infant younger than six months. Healthcare professionals play a key role in providing accurate counseling on LAM; however, knowledge gaps may limit the method's effective use.

Objective: This study aimed to evaluate the knowledge and attitudes of healthcare workers employed at Family Health Centers in Şanlıurfa regarding LAM.

Method: This descriptive study was conducted between September and October 2024 among 166 healthcare workers from 28 Family Health Centers. Data were collected using an online questionnaire assessing sociodemographic characteristics, awareness of LAM, and knowledge of LAM criteria.

Results: Although 87.3% had heard of LAM and 85.5% reported being familiar with the method, correct knowledge of key criteria was limited. While 65.1% correctly identified the effective postpartum period for LAM, only 4.8% demonstrated full knowledge of breastfeeding requirements, and merely 1.2% correctly identified all menstrual bleeding characteristics indicating method failure.

Conclusion: Despite high awareness of LAM, substantial gaps exist in healthcare workers' detailed knowledge of the essential criteria for its effectiveness—particularly regarding menstrual bleeding characteristics. Regular training programs and updated counseling protocols are recommended to strengthen healthcare workers' knowledge and enhance the quality of postpartum family planning services in regions with high numbers of breastfeeding women.

Keywords: Lactational Amenorrhea Method, Breastfeeding, Family Planning, Healthcare Workers, Postpartum Contraception.

INTRODUCTION

Breast milk is the optimal source of nutrition for all infants and provides the best start in life (1). Breastfeeding offers numerous benefits, including protection against infections, reduction of sudden infant death syndrome, prevention of mortality related to necrotizing enterocolitis, and decreased incidence of long-term conditions such as diabetes and obesity. For mothers, it contributes to increased sleep duration and quality, reduced risk of postpartum depression, and a decreased risk of breast and ovarian cancers (2).

In addition to these well-documented maternal and infant health advantages, breastfeeding can serve as a safe and cost-effective family planning method during the first six months postpartum (3). In breastfeeding mothers, stimulation of the nerves in the nipple and areola triggers a neuroendocrine response in which signals are transmitted to the hypothalamus, leading to prolactin release from the anterior pituitary and oxytocin release from the posterior pituitary. This suppresses the hypothalamic-pituitary-ovarian axis, reducing the secretion of luteinizing hormone and follicle-stimulating hormone, and consequently delaying the return of menstruation (4). For the Lactational Amenorrhea Method (LAM) to be effective, the following three criteria must be met:

1. The mother must remain amenorrheic (not menstruating). LAM is effective only while the mother has not resumed menstruation. The onset of vaginal bleeding is an indicator that ovulation may have returned and the method is no longer reliable. In a WHO-supported multicenter study, the end of

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amenorrhea was defined as two days of continuous vaginal bleeding; or two days of spotting followed by one day of bleeding; or three days of continuous spotting that the woman perceived as similar to or heavier than her usual menstruation (5).

2. The infant must be younger than 6 months. LAM is considered effective only during the first 6 months postpartum; after this period, the introduction of complementary foods and decreased breastfeeding frequency reduce its protective effect (6).

3. The infant must be exclusively and frequently breastfed. Breastfeeding intervals should not exceed four hours, the total daily breastfeeding duration should be at least one hour, and the infant should receive only breast milk with no supplements (3, 7). Under these conditions, LAM provides up to 98% protection against pregnancy during the first six months postpartum (8).

To ensure that LAM and other family planning methods are accurately understood and correctly practiced, comprehensive counseling and health services must be delivered by healthcare professionals (9). In this regard, improving the knowledge, skills, and attitudes of all primary healthcare workers—especially those interacting closely with women and pregnant individuals—is of utmost importance (10). The present study aims to evaluate the knowledge and attitudes of healthcare workers employed at Family Health Centers in Şanlıurfa regarding LAM and to raise awareness on this topic.

METHOD

This descriptive study was conducted between September and October 2024 among healthcare workers employed at Family Health Centers in the central districts of Şanlıurfa (Haliliye, Eyyübiye, and Karaköprü). Participants who agreed to take part completed an online questionnaire titled “Information Survey on Lactational Amenorrhea as a Family Planning Method for Healthcare Workers.” The questionnaire consisted of 14 questions assessing sociodemographic characteristics, awareness and knowledge of LAM, and knowledge of LAM criteria.

A pilot study was first conducted with 50 healthcare workers to determine the sample size. Based on the percentage of correct responses, a minimum sample size of 138 participants was calculated using a 10% correct response rate, 95% confidence level, and 5% margin of error. The final study included 166 healthcare workers.

The dependent variable was the level of knowledge about lactational amenorrhea. Independent variables included sociodemographic characteristics such as profession, years of professional experience, sex, and age.

Descriptive statistics for continuous variables were presented as mean, standard deviation, minimum, and maximum values; categorical variables were summarized using frequencies and percentages. The Mann–Whitney U test or independent samples t-test was used for continuous variables, while the Chi-square test was applied to examine relationships between categorical variables. The significance level was set at $p < 0.05$, and analyses were performed using SPSS version 27.

Ethical approval for the study was obtained from the Harran University Clinical Research Ethics Committee at its meeting numbered HRÜ/24.11.32. Online informed consent was collected from all participants.

RESULTS

A total of 166 healthcare workers from 28 Family Health Centers participated in the study. The mean age of participants was 35.51 ± 8.38 years (median: 34, range: 23–62), and the mean length of professional experience was 12.06 ± 7.10 years (median: 11, range: 1–34). Most participants were employed in Family Health Centers in the Haliliye district (43.4%). Of all participants, 69.3% were female, 37.3% were physicians, 87.3% reported having heard of LAM, and 85.5% stated that they were familiar with the concept. Participant characteristics are presented in Table 1.

Correct response rates for questions assessing essential criteria for LAM effectiveness are shown in Table 2.

Table 1. Sociodemographic Characteristics

Variable	n	%
Gender		
Female	115	69.3
Male	51	30.7
Profession		
Physician	62	37.3
Nurse	63	38.0
Midwife	30	18.1
Health Officer	2	1.2
EMT	3	1.8
Other	6	3.6
Workplace District		
Haliliye	72	43.4
Eyyübiye	44	26.5
Karaköprü	50	30.1
Heard of LAM		
Yes	145	87.3
No	21	12.7
Knowledge of LAM		
Yes	142	85.5
No	24	14.5
Total	166	100

Table 2. Correct Response Rates

Knowledge Of The Most Effective Period (First 6 Months)	65.1
Minimum Daily Breastfeeding Duration (60 Minutes)	8.4
Maximum Breastfeeding Interval (4 Hours)	12.7
Appropriate Month To Start Complementary Feeding (6th Month)	92.2
Effect Of Expressed Milk On Method Effectiveness (Does Not Reduce Effectiveness)	50.0
Week At Which Bleeding May Indicate Menstruation (8th Week)	19.9
Understanding That Spotting May Represent Menstruation	1.2

The lowest correct response rate was observed for the question assessing knowledge of “bleeding characteristics” (1.2%), while the highest rate was for “appropriate timing for initiation of complementary feeding” (92.2%). When the three combined criteria were evaluated—effectiveness period, menstrual bleeding characteristics, and breastfeeding requirements—the correct response rates were 65.1%, 1.2%, and 4.8%, respectively (Table 3).

Table 3. Correct Responses According to Combined Three Main Criteria

Criteria	Correct Response (%)
Knowledge Of The Most Effective Period	65.1
Knowledge Of All Bleeding Characteristics	1.2
Knowledge Of All Breastfeeding Characteristics	4.8

No significant associations were found between LAM knowledge and sociodemographic characteristics such as gender, sex, profession, or years of professional experience ($p > 0.05$) (Tables 4 and 5).

Table 4. Effects of Profession and Gender on Knowledge of LAM Criteria

	Effective Period				Bleeding				Breastfeeding			
	Correct		Incorrect		Correct		Incorrect		Correct		Incorrect	
	n	%*	n	%*	n	%*	n	%*	n	%*	n	%*
Profession												
Physician	39	62.9	23	37.1	2	3.2	60	96.8	3	4.8	59	95.2
Others	69	66.3	35	33.7	0	0.0	104	100	5	4.8	99	95.2
	Chi-square:0,079 p:0.778				Chi-square:- p:0.138				Chi-square:- p:1.000			
Gender												
Male	29	56.9	22	43.1	2	3.9	49	96.1	2	3.9	49	96.1
Female	79	68.7	36	31.3	0	0	115	100	6	5.2	109	94.8
	Chi-square:1,687 p:0.194				Chi-square:- p:0.093				Chi-square:- p:1.000			

* Row percentage.

Table 5. Effects of Age and Years in Profession on LAM Knowledge

	Age		Years in Profession	
	Mean ± SD	Median (Min–Max)	Mean ± SD	Median (Min–Max)
Knowing the Most Effective Period				
Correct	34.85±7.38	34(23-60)	11.65±6.34	11(1-34)
Incorrect	36.74±9.95	35(24-62)	12.83±8.32	11.50(1-34)
	MWU=2911.500 p=0.455		MWU=3033.500 p=0.738	
Knowing Bleeding Characteristics				
Correct	40±7.07	40(35-45)	12±4.24	12(9-15)
Incorrect	35.46±8.40	34(23-62)	12.06±7.13	11(1-34)
	MWU=97.000 p=0.321		MWU=654.500 p=0.281	
Knowing Breastfeeding Characteristics				
Correct	40.63±13.39	38.50(26-60)	16.75±10.66	15(4-34)
Incorrect	35.25±8.03	34(23-62)	11.82±6.83	11(1-34)
	MWU=491.500 p=0.289		MWU=471.500 p=0.226	

DISCUSSION

Globally, an estimated 1.5 million women are believed to misuse LAM, leading to unintended pregnancies (11). To increase awareness of correct LAM use, women should receive comprehensive counseling regarding all postpartum contraceptive options, including LAM (12). Healthcare providers bear the responsibility of offering accurate and complete information to support informed decision-making (13).

In our study, the least understood criterion for LAM effectiveness was “bleeding characteristics” (1.2%), while the most accurately answered question concerned the appropriate month to begin complementary feeding (92.2%). When the three main criteria were combined, only 1.2% of participants knew all bleeding characteristics, 4.8% knew all breastfeeding characteristics, and 65.1% knew the effective timeframe. A study conducted in Turkey previously reported that 58.1% of healthcare workers possessed adequate knowledge about LAM (14). Similarly, Özsoy et al. found that four out of five postpartum mothers did not believe that breastfeeding could serve as a contraceptive method and were highly willing to receive counseling on this subject (15). These findings highlight significant gaps in knowledge and counseling practices regarding LAM among healthcare professionals in Turkey.

Our results also showed no significant association between LAM knowledge and variables such as sex or profession. Similarly, Balkaya et al. reported that healthcare workers’ knowledge of less commonly used contraceptive methods was not affected by age, profession, or years of experience (14). However, other studies have shown that family planning knowledge may vary depending on region, professional experience, and workplace characteristics (15-17). The absence of such variation in our region may stem from a general lack of education and experience concerning LAM—a method that is relatively less used and less known—among healthcare providers who are expected to deliver counseling

CONCLUSION

The knowledge and training of healthcare personnel regarding family planning counseling should be regularly updated, taking into account regional needs and available resources. In regions with a high number of postpartum and breastfeeding women, LAM can be highly effective if properly practiced. Strengthening the knowledge and attitudes of healthcare providers toward LAM in such regions would not only enhance the effectiveness of this inexpensive method but also help protect the health benefits of breastfeeding for infants.

DESCRIPTIONS

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