Original Article

The Relationship between Health Literacy and Breastfeeding Attitude in Primiparous Women

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Abstract

Objective: This research was conducted to determine the relationship between health literacy and breastfeeding attitude in postpartum mothers.

Methods: The sample of this descriptive research consisted of 311 primiparous women in the postpartum period who were hospitalized in the Postpartum service of Sivas Numune Hospital. Data were collected by the researcher between May 4 and July 20, 2018, through face-to-face interviews. The statistical significance was taken as 0.05.

Results: The mean age of the participants was 25.3±4.2; 36.9% were high school graduates; 56.9% were unemployed; 61.4% were living in the province; 56.6% had a moderate economic status. Women's total health literacy scale score was 12.1±3.9 and the total breastfeeding attitude scale score was 103.8±11.2. There was a statistically significant difference between women's health literacy scores in terms of age, educational level, spouse educational level, perception of economic status, working status, birth week and bottle feeding ($p<0.05$). There was a significant difference between breastfeeding attitude scores and educational level, family type, planned pregnancy and spouse educational level ($p<0.05$). There was no significant correlation between health literacy scores and breastfeeding attitude scores ($p>0.05$).

Conclusion: Primiparous mothers' health literacy levels did not affect their breastfeeding attitude. Primiparous mothers experiencing pregnancy for the first time experience postpartum physical, psychological, social changes and affections and they may have difficulty in practicing health-related information. Therefore, health practices and breastfeeding should be supported by postpartum midwifery support. Postpartum follow-up studies are recommended for health literacy research in primiparous mothers.

Keywords: Primiparous Women, health literacy, breastfeeding attitude, midwifery

Introduction

The health literacy levels of individuals have great importance in increasing the health level of societies. Women are the main focus in increasing the health literacy of society since their health and knowledge directly affect their children and family members before and during pregnancy and during and after delivery (Kilfoyle,et al; 2016;Kohan et al;2016). The ability of a woman to obtain, perceive, experience basic information about health and make original and professional health decisions for herself and her baby will be influenced by her health literacy level. Maternal health literacy defined by Renkert and Nutbeam (2001) as "the cognitive and social skills which determine the motivation and ability of women to gain access to, understand and use information in ways that promote and maintain their health and that of their children". Health literacy of a mother is an important factor in child health; therefore, it may also be effective in triggering breastfeeding behavior (Connelly and Speer, 2017; Gonenc, 2015). There are limited studies examining mothers' breastfeeding behaviors and health literacy. This research was conducted to determine the relationship between health

literacy and breastfeeding attitude in postpartum mothers.

Materials and Methods: The population of this descriptive study consisted of primiparous women who were hospitalized in the Postpartum Service of Sivas Numune Hospital. According to the 2017 hospital records, 3816 women had a vaginal delivery. The research sample consisted of 311 primiparous women in the postpartum period who were hospitalized in the Postpartum Service of Sivas Numune Hospital between May 4 and July 20, 2018, who were included in the sample with the improbable random sampling and who met the inclusion criteria. The data were collected by the researcher through face-to-face interviews. The statistical evaluations of the data were made with the SPSS 22.0 program. The normal distribution of the data was tested using the Kolmogorov-Smirnov test. Since the findings did not show normal distribution, the Mann Whitney U test was used for two independent groups and the Kruskal Wallis test was used for more than two independent groups. Correlations were determined using the Spearman correlation coefficient test. The statistical significance was taken as 0.05.

Data Collection Tools: The data were collected using the "Personal Information Form", "Adult Health Literacy Scale" and "Breastfeeding Attitude Scale".

Personal Information Form: The form was prepared by the researcher following the literature to identify the characteristics of women in the postpartum period and consists of 29 questions regarding the demographic characteristics (age, family type, educational level, working status) and the characteristics of postpartum women and newborns (birth week, the status of wanting the baby, the gender of the baby, etc.).

Adult Health Literacy Scale: The scale was developed by Sezer (2012) to determine the competence of adult individuals in health literacy and is evaluated by the interviewer. The scale consists of 22 questions about health information and medication use and 1 figure on knowing the location of body organs. Of the scale questions, 13 are answered yes/no, 4 are fill-in-the-blank questions, 4 are multiple-choice questions and 2 are matching questions. The interviewer fills out the scale by marking on it (Sezer, 2012). Each question type is scored differently. In yes/no questions, positive expressions are scored 1 and negative expressions are scored 0 points. Correct answers are scored 1 in fill-i-the-blank questions and wrong answers are scored 0. In multiple-choice questions, two or more correct answers are scored 1 and wrong answers or correct answers with wrong answers are scored 0. In matching questions, those who correctly match more than two are scored 1 and the others are scored 0. Cronbach's alpha coefficient of the scale was 0.77. The score obtainable from the scale ranges between 0-23. Health literacy level increases as the score increases (Sezer, 2012). In this study, the Cronbach's alpha value was 0.73.

Breastfeeding Attitude Scale: The scale was developed by Arslan and Cronbach's alpha coefficient was found as 0.63 (Arslan, 2015). The 5-point Likert type scale consists of 46 items and evaluates various aspects of attitudes that direct mothers' breastfeeding behavior. Questions 2, 4, 6, 7, 8, 11, 13, 15, 19, 23, 24, 26, 27, 28, 29, 30, 31, 32, 37, 38, 42, 43 express positive attitudes and are scored as 4 (I strongly agree), 3 (I agree), 2 (Indecisive), 1 (I weakly agree) and 0 (I disagree). Questions 1, 3, 5, 9, 10, 12, 14, 16, 17, 18, 20, 21, 22, 25, 33, 34, 35, 36, 39, 40, 41, 44, 45 and 46 express negative attitudes and are scored reversely as 0 (I strongly agree), 1 (I agree), 2 (Indecisive), 3 (I weakly agree) and 4 (I disagree). The highest score obtainable from the scale is 184. Items regarding positive attitudes are scored 88 points and items regarding negative attitudes are scored 96 points. Breastfeeding behavior is considered positive as the score increases (Arslan, 2015). In this study, the Cronbach's alpha value was 0.65.

Ethical Aspect of the Research: Permission was received from Cumhuriyet University Non-Invasive Clinical Research Ethics Committee (2018-02/44) and Sivas Numune Hospital (dated 04.05.2018, numbered 19448395-044). The research objective was explained to the women and their consent was taken.

Results

The mean age of the women was 25.3±4.2 and 46.9% were in the 25-30 age group. Of the women, 36.9% were high school graduates, 56.9% were unemployed, 61.4% were living in the province and 56.6% had moderate economic status.

Table 2 shows the distribution of the findings regarding some characteristics of women and newborns. Of the women, 42.5% gave birth

between the 39th and 40th weeks; 66.6% had planned pregnancy. Of the mothers, 40.8% received support from their husbands during breastfeeding, 9.6% used bottles and the rate of receiving support from midwives was low (21%) (Table 2).

The total health literacy scale score of the women was 12.1±3.9 and the total breastfeeding attitude scale score was 103.8±11.2.

There was a statistically significant difference between mothers' Health Literacy Scale scores and age, educational level, spouse educational level, perception of economic status, working status, family type, birth week, bottle use ($p<0.05$) (Table 3).

There was no statistically significant correlation between health literacy scale scores and breastfeeding attitude scale scores ($p>0.05$).

There was a significant difference in breastfeeding attitude scores and educational level, family type, planned pregnancy and spouse educational level ($p<0.05$) (Table 4).

Table 1: Distribution of Women by Sociodemographic Characteristics (n=311)

Variables		**n**	**%**
Age group	**19-24**	132	42.5
	25-30	146	46.9
	31 and above	33	10.6
Marital status	**Married**	311	100
Educational level	**Primary school**	19	6.1
	Secondary school	71	22.8
	High school	115	36.9
	University	106	34.1
Spouse educational level	**Primary school**	20	6.4
	Secondary school	38	12.2
	High school	134	43.1
	University	119	38.3
Working status	**Yes**	134	43.1
	No	177	56.9
Spouse working status	**Yes**	307	98.7
	No	4	1.3
Family type	**Nuclear**	251	80.7
	Extended	60	19.3
Perception of economic status	**Good**	122	39.2
	Moderate	176	56.6
	Poor	13	4.2
Place of residence	**Province**	190	61.4
	District	97	31.2
	Village/Town	20	6.4

Table 2: Distribution of findings regarding some characteristics of women and newborns (n=311)

Variables		n	%
Birth week	**37th and 38th week**	81	26.0
	39th and 40th week	132	42.5
	41st and 42nd week	98	31.5
Status of planning pregnancy	**Yes**	207	66.6
	No	104	33.4
Smoking	**Yes**	36	11.6
	No	275	88.4
Alcohol use	**Yes**	2	0.6
	No	309	99.4
Medication addiction	**Yes**	1	0.3
	No	310	99.7
Gender of baby	**Girl**	158	50.8
	Boy	153	49.2
Bottle use	**Yes**	30	9.6
	No	281	90.4
Supporting person during breastfeeding	**Spouse**	127	40.8
	Relative	163	52.4
	Midwife	21	6.8

Table 3: Comparison of Mean Adult Health Literacy Scale Scores of Women According to Some Characteristics (n=311)

Characteristics		n	Mean*	SD	Statistical Analysis
Age group	**19-24**	132	10.91	3.99	H=20.042 **P=0.001**
	25-30	146	12.97	3.64	
	31 and above	33	12.76	3.28	
Educational level	**Primary school**	19	9.68	3.61	H=37.516 **P=0.001**
	Secondary school	71	10.72	3.66	
	High school	115	11.79	3.78	
	University and over	106	13.72	3.56	
Spouse educational level	**Primary school**	20	10.4	4.28	H=34.208 **P=0.001**
	Secondary school	38	9.61	3.51	
	High school	134	11.92	3.55	
	University and over	119	13.32	3.8	
Perception of economic status	**Good**	122	12.78	3.68	H=10.142 **P=0.006**
	Moderate	176	11.77	3.92	
	Poor	13	9.54	3.84	
Working status	**Yes**	134	13.37	3.93	Z=-5.171

	No	177	11.09	3.55	**P=0.001**
Family type	**Nuclear**	251	12.48	3.91	Z=-3.891 **P=0.001**
	Extended	60	10.37	3.25	
	None	9	11	3.04	
Birth week	**37th and 38th week**	81	10.78	3.68	H=37.516 **P=0.001**
	39th and 40th week	132	12.12	3.81	
	41st and 42nd week	98	13.08	3.87	
Smoking	**Yes**	36	13.06	3.42	Z=-1.583 **P=0.113**
	No	275	11.95	3.92	
Status of planning pregnancy	**Yes**	207	12.3	4.04	Z=-1.658 **P=0.097**
	No	104	11.62	3.51	
Bottle use	**Yes**	30	14.23	3.11	Z=-3.391 **P=0.001**
	No	281	11.84	3.89	

***Mean Health Literacy Scale Score**

Table 4. Comparison of Mean Breastfeeding Attitude Scale Scores of Women According to Some Characteristics (n=311)

Characteristics		**n**	**Mean***	**SD**	**Statistical Analysis**
Age group	**19-24**	132	102.29	10.38	H=5.622 **P=0.06**
	25-30	146	105.48	11.37	
	31 and above	33	102.42	12.83	
Educational level	**Primary school**	19	96.47	8.24	H=24.091 **P=0.001**
	Secondary school	71	101.48	9.25	
	High school	115	102.92	10.78	
	University and over	106	107.62	12.11	
Spouse educational level	**Primary school**	20	98.7	8.43	H=20.733 **P=0.001**
	Secondary school	38	100.08	10.36	
	High school	134	102.53	10.11	
	University and over	119	107.28	12.1	
Perception of economic status	**Good**	122	103.97	12.15	H=1.141 **P=0.565**
	Moderate	176	103.89	10.64	
	Poor	13	101	9.67	
Working status	**Yes**	134	104	11.71	Z=-0.352 **P=0.725**
	No	177	103.65	10.83	
Family type	**Nuclear**	251	104.95	11.37	Z=-4.104 **P=0.001**
	Extended	60	99	9.07	
Birth week	**37th and 38th week**	81	102.67	12.39	H=2.067 **P=0.356**
	39th and 40th week	132	104.19	10.63	
	41st and 42nd week	98	104.21	10.97	
Smoking	**Yes**	36	103.64	12.55	Z=-0.002 **P=0.998**
	No	275	103.82	11.04	
Status of planning pregnancy	**Yes**	207	104.72	10.77	Z=-2.62 **P=0.009**
	No	104	101.96	11.86	
Bottle use	**Yes**	30	103.87	8.7	Z=-0.458 **P=0.657**
	No	281	103.79	11.45	

***Mean Health Literacy Scale Score**

Table 5. Correlation between Breastfeeding Attitude Scale and Adult Health Literacy Scale Scores (n=311)

		Total Adult Health Literacy Scale Score
Total Breastfeeding Attitude Scale Score	**r**	0.035
	p	0.538

Discussion

The mean health literacy scale score of women was found to be 12.1. Turkoglu conducted a study in 2016 using the same scale found the health literacy scale score as 12.98. Likewise, Sezer used the same scale and found the mean health literacy scale score as 13.10 (Turkoglu, 2016; Sezer and Kadioglu 2014). Both studies had similar results with our study in terms of health literacy scale score. In our study, a statistically significant difference was determined between the Adult Health Literacy Scale scores in terms of age, educational level, spouse educational level, perception of economic status, working status, family type, birth week, breastfeeding frequency and bottle use ($p<0.05$).

Likewise, Ucpunar and Piyal (2014) stated that educational, family type, income status and working status affect the health literacy level of individuals. Studies evaluating the relationship between health literacy level and educational level report that educational level is one of the factors affecting health literacy (Schillinger, 2002; Turkoglu, 2016; Sezer, 2012).

In our study, it was seen that the mean health literacy increased as the birth week increased. This suggests that mothers try to obtain more health information about themselves and their baby every day until the birth process.

Health literacy includes accessing, learning and applying the correct information about health in one's life. In our study, those who did not use a bottle had a significantly lower health literacy scale score than those who used a bottle. Moreover, it was seen that the health literacy of those living in an extended family was lower. Mothers who have high health literacy may use a bottle since it is easy to use and they may be influenced by factors such as encouraging family elders. These may be effective in not being able to apply the health information they have. Likewise, smoking is another variable that mothers with high health literacy have problems about in practice.

The mean breastfeeding attitude scale score of the women was found to be 103.8. Kurnaz (2014) found the mean scale score as 110.86 and Golbasi and Koc (2008) found as 111.36. These results support our findings. In our study, there was a significant difference between the Breastfeeding Attitude Scale scores and educational level, family type, planned pregnancy and spouse educational level ($p<0.05$) whereas there was no significant difference in terms of age groups ($p>0.05$). Yigitbas et al. conducted a study in 2012 and reported that there was a significant difference between educational status and breastfeeding attitude. There was a statistically significant difference between the groups when the breastfeeding attitude scale scores were evaluated in terms of spouse educational level whereas there was no significant difference between spouse educational status and breastfeeding attitude scores (Yigitbas et al., 2012). Similar to our study, Kurnaz (2014) stated that breastfeeding attitudes can be increased by improving the educational level of spouses and providing employment opportunities to spouses. Planning pregnancy or wanting the baby are among the factors affecting breastfeeding behaviors and attitudes (Yurtsal et al; 2016). A previous study determined that women who plan their pregnancy establish mother-infant relationships faster, adapt to motherhood role easier and achieve more positive outcomes in breastfeeding (Calik et al., 2017).

In our study, there was no statistically significant correlation between health literacy scale scores and breastfeeding attitude scale scores. Kaufman et al. (2001) investigated the effect of functional health literacy on initiating and continuing breastfeeding in women in a public health clinic and applied the Rapid Estimate of Adult Literacy in Medicine (REALM) to 61 mothers aged 18 and above. They stated that there was a

correlation between functional health literacy and breastfeeding (Kaufman et al., 2001). Aydın and Aba carried out a study in 2019 with 263 mothers who applied to the pediatry polyclinics of the district state hospital and who had a baby aged 6 months or below. They found a statistically significant correlation between mothers' mean breastfeeding self-efficacy score and mean health literacy score (Aydın and Aba, 2019). Our study finding differs from other studies. This difference is thought to occur since this study was conducted with primiparous mothers and the tools used to evaluate health literacy were different. Primiparous mothers experience childbirth for the first time; therefore, they have a new family member and new responsibilities. They have to adapt to the physical and psychological changes (Ustgorul S and Yanıkkerem E., 2017) and the new order in the family and changes in the body image. In this transition period, they are also influenced by the people supporting them (Hung CH, Chung HH. 2001). For this reason, at first, they may have difficulty in applying the health information they have. Postpartum follow-up studies are recommended for health literacy research in primiparous mothers.

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