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## Hiperbilirubinemi Nedeniyle Hastaneye Yatırılan Yenidoğanların Annelerinin Kaygı Düzeyi

### Anxiety Level of Mothers of Newborns are Hospitalized With a Diagnosis of Hyperbilirubinemia

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#### Amaç:

Bu çalışma, hiperbilirubinemi nedeniyle hastaneye yatırılan term yenidoğanların annelerinde kaygı düzeyi ve ilişkili faktörlerin belirlenmesi amacıyla yapılmıştır.

#### Gereç ve Yöntem:

Çalışma, bir devlet hastanesinin Yenidoğan Yoğun Bakım Ünitesinde yürütülmüştür. Hiperbilirubinemi nedeniyle tedavi gören sağlıklı term yenidoğana sahip ve çalışmaya katılmaya gönüllü anneler (N:120) çalışma kapsamına alınmıştır. Araştırmanın verileri, tanımlayıcı bilgi formu ve Durumluk Kaygı Ölçeği (STAI-1) ile annelerle yüz yüze görüşülerek toplanmıştır. Verilerin analizinde One-Way ANOVA testi, bağımsız gruplarda t testi ve pearson korelasyon testi kullanılmıştır.

#### Bulgular:

Çalışmada annelerin durumluk kaygı ölçeği (STAI-1) toplam puan ortalaması  $48,33 \pm 15,636$  olarak bulunmuştur. Araştırmada; ekonomik düzey, gebelik süresi, doğum şekli, sağlık çalışanları desteği, bebeğin yenidoğan sarılığı olmasına yol açabilecek neden, bebeğin ışık tedavisi almasının ve bebekten kan alınması gibi uygulamaların anneyi kaygılandırma durumu ile durumluk kaygı puan ortalaması arasında istatistiksel olarak anlamlı bir fark olduğu belirlenmiştir ( $p < 0,05$ ).

#### Sonuç:

Araştırma bulguları sonucunda annelerin hafif kaygı düzeyinde olduğu ve bazı faktörlerin annelerin kaygı düzeyini etkilediği belirlenmiştir

**Anahtar Kelimeler:** anne, fototerapi, hiperbilirubinemi, kaygı, yenidoğan

#### ABSTRACT

##### Objective:

This study was conducted to determine anxiety levels and related factors in mothers of term newborns hospitalized for hyperbilirubinemia.

##### Material and Methods:

The study was conducted in the Newborn Intensive Care Unit of a public hospital. Mothers (n = 120) who had healthy term newborns treated for hyperbilirubinemia and volunteered to participate in the study were included in the study. The data of the study was collected through face-to-face interviews with the mothers using the descriptive information form and the State-Trait Anxiety Inventory (STAI-1). One-Way ANOVA test, independent samples t test and Pearson correlation test were used for data analysis.

## Results:

In the study, the mean score of state-trait anxiety inventory (STAI-1) of the mothers was found to be  $48.33 \pm 15.636$ . In the study; It was found that there was a statistically significant difference between ( $p < 0.05$ ) the anxiety level of the mother and the state-trait anxiety inventory of the applications such as economic level, gestation period, delivery type, healthcare professional support, the reason that the newborn may have hyperbilirubinemia, taking phototherapy of the baby and taking blood from the baby.

## Conclusion:

As a result of the research findings, it was determined that mothers had mild anxiety level and some factors affected mothers' anxiety level.

**Key words:** *mother, phototherapy, hyperbilirubinemia, anxiety, newborn*

## INTRODUCTION

Hyperbilirubinemia is an important problem frequently encountered in the newborn period (17, 2, 7). There is no clear data on the prevalence of hyperbilirubinemia in newborns in our country (9). When the risk factors of hyperbilirubinemia are examined; diabetic mother baby, male sex, sibling history of phototherapy, premature, ompholite, factors with unknown cause, ABO incompatibility, Rh incompatibility, urinary infection, sepsis, glucose-6-phosphate-dehydrogenase (G6PO) enzyme deficiency, hypothyroidism, hypernatremic dehydration, insufficient nutrition, polycythemia, cephal hematoma, history of difficult birth, down syndrome (1, 19, 9). Early diagnosis and treatment is very important in hyperbilirubinemia (9). Phototherapy is generally used in treatment approaches for hyperbilirubinemia in newborns (3, 13).

In the treatment process, the mother has a very important role in maintaining and raising the well-being of the baby (15). Be hospitalized with a diagnosis of hyperbilirubinemia may cause the mother to think that she has not performed her roles adequately, to feel inadequate and to feel guilty. In addition, the process of adapting to a different environment, order and people, the medical tools used, the applications to the baby, the new responsibilities that the mother has to fulfill, the fear of unknownness about how the process will proceed causes the mother to experience anxiety (8, 16). In this case, the emotional bond between the mother and the baby is interrupted. Maternal care that is important for the baby cannot be provided effectively. The mother feels unsuccessful, the level of anxiety increases, and she has trouble cooperating with the medical team (4, 15).

Mothers of babies hospitalized for hyperbilirubinemia are faced with treatment (phototherapy) and many causes of anxiety. Anxiety affects the mother and the baby negatively and causes the baby's healing process to prolong. The aim of this study; To determine the status of showing difference the anxiety level of mothers of healthy term newborns hospitalized due to hyperbilirubinemia, sociodemographic characteristics, descriptive characteristics of newborns, obstetric characteristics, social support systems and their knowledge and experience. In this study, the state anxiety level of the mothers of the babies receiving phototherapy and affecting factors will be determined.

## MATERIAL AND METHODS

This descriptive study was conducted between April and October 2019 with mothers of infants hospitalized for hyperbilirubinemia in the newborn intensive care unit of a public hospital. The sample of the research which was calculated with G-Power program, it was determined as minimum 90 people with 0.05 significance level, 0.4 sensitivity and 80% power and 120 samples were reached. Random sampling method was used in sampling. As sample selection criteria; Infants who had no health problems other than hyperbilirubinemia (37GW + 6days-

41GW + 6days), who had phototherapy for at least eight hours and who spoke Turkish, had no psychiatric disorder or speech disorder and agreed to participate in the study. Data were collected by the researcher from the mothers of the babies who fulfilled the research criteria at the appropriate times when they were present in the clinic, after informing about the research and with the permission of the researcher.

#### Data Collection Tools

##### Descriptive Information Form

According to the literature (8, 5, 16), the patient information form prepared by the researcher consisted of three sections and a total of nineteen questions.

##### State-Trait Anxiety Inventory

State Trait Anxiety Inventory was developed by Spielberger et al. (1970), In 1985, it was translated into Turkish by Necla Öner and LeCompte also its validity and reliability have been made. The reliability coefficients determined by alpha correlations in the Turkish version of the scale for the state anxiety scale between .83-.92 and between .83 and .87 for trait anxiety scale. In the State Anxiety Scale, there are 20 expressions that individuals can use to express their feelings. Depending on how one feels and the severity of his / her emotions, he / she should select one of the options "None" (1), "Somewhat" (2), "Quite"(3), "Completely" (4). A high score indicates a high level of anxiety and a small score indicates a low level of anxiety (14). In this study, State Anxiety Scale was used to determine how mothers feel at a given moment and under certain conditions.

##### Ethical Dimension of Research

Prior to the study, written permission was obtained from the Ethics Committee of the Institute of Health Sciences of Selçuk University and the institution where the research was to be conducted, Informed consent was obtained from the mothers.

##### Data Analysis

The data were analyzed by Statistical Package for Social Science (SPSS) 25.0 package program. Number, percentage, mean, standard deviation, min-max analysis were used in descriptive data. One-Way ANOVA test, independent samples t test and pearson correlation test were used in the study. Statistical significance level was accepted as  $p<0.05$ .

#### RESULTS

Some descriptive and obstetric characteristics of the mothers are given in Table 1. In the Study; Anxiety scores of mothers who good economic level compared to those with moderate economic level, had a baby between 39-40 weeks and delivered by cesarean were significantly higher ( $p<0.05$ ) (Table1).



Table 1. Comparison of state anxiety scores according to some characteristics of mothers (N:120)

Sociodemographic Characteristics	N	%	Mean±S.D	Test value / p
Level of Education				
Primary school graduate *	28	23,3	42,71±11,737	F: 1,948
Secondary school graduate	31	25,8	48,74 ± 16,767	0,126
High school graduate	36	30,0	49,31 ± 16,942	
Universty graduate	25	20,8	52,68 ± 15,135	
Economic level				
Bad	8	6,7	43,75 ± 9,099	F: 8,984
Middle	63	52,5	43,59 ± 14,350	<0,001
Good	49	40,8	55,16 ± 15,727	
Gestation period				
259-272 days (37 weeks-38 weeks + 6 days)	78	65,0	46,10 ± 15,286	t: -2,154
273-280 days (39 weeks to 40 weeks)	42	35,0	52,45 ± 15,618	0,033
Delivery method				
Normal delivery	56	46,7	44,79 ± 14,641	t: -2,364
Cesarean	64	53,3	51,42 ± 15,930	0,020

\*There are 2 illiterate in primary school graduates category.

In the study, the mean score of the State-Trait Anxiety Inventory (STAI-1) of the mothers was  $48.33 \pm 15.636$ . Descriptive information about mothers' social support, knowledge and experiences is given in Table 2. In the study, Not receiving support from healthcare professional, as a reason that could lead to hyperbilirubinemia; Anxiety scores of the mothers who stated that they had blood incompatibility, malnutrition and the reasons for not knowing, phototherapy and the baby taking blood from the baby were significantly higher ( $p < 0,05$ ) (Table

2).

Table 2. Comparison of state anxiety scores according to social support systems, knowledge and experience of mothers (N:120)

Characteristics	N	%	Mean±S.D	Test value / p
Family and immediate surroundings support				
No	10	8,3	43,20 ± 7,052	t: -1,083
Yes	110	91,7	48,79 ± 16,130	0,281
Healthcare professionals support				
No	18	15,0	55,00 ± 15,507	t: 1,989
Yes	102	85,0	47,15 ± 15,435	0,049
The reason that the newborn may have hyperbilirubinemia				
Blood incompatibility	26	21,7	52,62 ± 17,408	F: 4,589
Malnutrition	59	49,2	50,22 ± 15,659	0,012
Not know	35	29,2	41,94 ± 12,341	
Mother's previous hospitalization experience				
No	35	29,2	45,60 ± 15,342	t: -1,228
Yes	85	70,8	49,45 ± 15,707	0,222

A history of infants with previous hyperbilirubinemia					t: 1,656
No	87	72,5	49,77±16,120	0,100	
Yes	33	27,5	44,52±13,789		
The state of anxiety for the mother when the baby is receiving phototherapy					
No	54	45,0	40,94±13,051	t: -5,155	
Yes	66	55,0	54,36±15,047	<0,001	
The anxiety of the mother such as taking blood from the baby					
No	43	35,8	36,21±11,706	t:-7,764	
Yes	77	64,2	55,09±13,328	<0,001	

There was no correlation between maternal age, number of children, birth weight of the baby and mean anxiety score (Table 3).

Table 3. Comparison of the relationship between some characteristics and mean state anxiety inventory (N: 120)

Characteristics	R	p value
Maternal age	0,069	0,454
Number of children	-0,046	0,618
Birth weight of the baby	0,017	0,853

## DISCUSSION

Mothers of babies who receive phototherapy due to hyperbilirubinemia have different levels of anxiety and are thought to have many factors that may affect this condition. The presence of the newborn in the intensive care setting causes mild (6), moderate (11) and high (10) anxiety in mothers. In this study, it was determined that mothers experienced mild anxiety. The findings obtained from the study were similar to other studies in the literature on the subject (8). In the study, mothers with good and moderate economic status, between 39-40 weeks and giving birth by cesarean section had higher anxiety levels. In the literature, it has been reported that some characteristics raise the anxiety level of mothers (16, 18). In addition, these results may be due to the sample characteristics in the study. In this study, mothers who do not receive support from healthcare professionals, who know the causes of hyperbilirubinemia, and who are concerned about phototherapy and bloodletting procedures have high anxiety levels. In many studies, it is known that features such as laying the baby in the newborn and performing invasive procedures cause anxiety in mothers (12, 6, 8, 16).

## CONCLUSIONS AND RECOMMENDATIONS

In the results of study; It was determined that mothers had mild anxiety and some traits increased anxiety level. Family-centered care is very important in nursing practice. Mothers have the right to be informed about their child, to participate in the care of the child and to be involved in the decision-making process. The fact that healthcare professionals communicating with the mother explains hyperbilirubinemia and allows the mother to express her thoughts about this condition may be an important factor in reducing the anxiety of the mother.

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