Knowledge Levels of Neonatal Intensive Care Unit Nurses Regarding Retinopathy and Examination Process

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ABSTRACT

Aim: This study aimed to determine the knowledge levels of neonatal nurses in managing ROP (Retinopathy of Prematurity) and the examination process. **Materials and Methods:** The descriptive research model was conducted between August-September 2023. A total of 171 nurses who met the inclusion criteria were included in the study during the specified dates. Data were collected using the 'Nurse Profile Form' and 'The Form of Knowledge and Examination Process on ROP.' **Results:** The average age of the participating neonatal nurses was 34.26 ± 7.16 years. It was found that 74.3% of them had a bachelor's degree, 23.4% had been working in neonatal clinics for 7-10 years, 62% followed current publications related to neonatology, and 95.3% had participated in ROP examinations. Among the descriptive characteristics of the nurses, it was found that the knowledge levels of those with postgraduate education were higher than those with bachelor's degrees. The average score for Theoretical Information Related to Retinopathy was found to be 11.32 ± 1.54, while the average score for The Examination Process (pre-examination, post-examination, and during examination) was 9.94 ± 1.53. Additionally, those who followed current publications related to neonatal intensive care had higher ROP knowledge levels than those who did not ($p < 0.05$). **Conclusion:** In the study, it was determined that neonatal nurses had a good level of knowledge regarding ROP and the examination process. According to the obtained data, it is recommended to support nurses with postgraduate opportunities, as well as to encourage participation in conferences and symposiums, in order to increase in-service training and ensure professional development in hospitals, due to the effectiveness of following education and current publications.
Keywords: Knowledge Level, Newborn, Nurse, Retinopathy.

Yenidoğan Yoğun Bakim Ünitesi Hemşirelerinin Retinopati ve Muayene Sürecine Yönelik Bilgi Düzeyleri

ÖZ

Amaç: Bu çalışmada yenidoğan hemşirelerinin ROP ve muayene sürecinin yönetilmesinde bilgi düzeylerinin belirlenmesi amaçlanmıştır. **Metot:** Tanımlayıcı araştırma modeli ile Ağustos-Eylül 2023 tarihleri arasında yapıldı. Belirtilen tarihler arasında araştırmaya dâhil edilme kriterlerine uyan toplam 171 hemşire ile çalışma tamamlandı. Veriler 'Hemşire Tanıtıcı Formu' ve 'ROP Bilgi ve Muayene Süreci Formu' ile toplandı. **Bulgular:** Araştırmaya katılan yenidoğan hemşirelerinin yaş ortalamalarının 34.26±7.16 olduğu, %74.3'ünün mezuniyetinin lisans olduğu, %23.4'ün 7-10 yıldır yenidoğan kliniğinde çalıştığı, %62'sinin yenidoğan ile ilgili güncel yayınları takip ettiği ve %95.3'ünün ROP muayenesine katıldığı belirlendi. Hemşirelerin tanımlayıcı özelliklerinden eğitim durumu değişkeninde lisansüstü mezunu olanların ROP bilgi düzeyleri lisans mezunu olanlardan daha yüksek olduğu bulundu. ROP Bilgi ortalaması 11.32+1.54, ROP Muayene (İşem öncesi, sırası ve sonrası) ortalaması ise 9.94+1.53 olarak bulundu. Ayrıca yenidoğan yoğun bakım hemşireliği ile ilgili güncel yayınları takip edenlerin ROP bilgi düzeyleri etmeyenlerden daha yüksek olduğu bulundu (p<0.05). **Sonuç:** Çalışmada yenidoğan hemşirelerinin ROP ve muayene sürecine yönelik bilgi düzeylerinin iyi düzeyde olduğu belirlendi. Elde edilen verilere göre, eğitimin ve güncel yayınların takibinin etkili olmasından dolayı hastanelerde hizmet içi eğitimlerin artması ve mesleki gelişimin sağlanması için hemşirelere lisansüstü olanakların, kongre, sempozyum katılımlarının desteklenmesi önerilir.
Anahtar Kelimeler: Bilgi düzeyi**,** Yenidoğan, Hemşire, Retinopati,.

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INTRODUCTION

Retinopathy of Prematurity (ROP) is a disease characterized by incomplete vascularization of the retina, the etiology and pathogenesis of which are not fully understood, and it results in visual impairment in premature and low birth weight infants (Sancak et. al, 2019; Taplak & Erdem, 2018). There is a proportional increase in the incidence and severity of ROP with decreasing gestational age and birth weight (Sancak et al., 2019). In recent years, due to the increased frequency of preterm births and scientific and technological advancements in neonatology, the survival period has extended up to the 23rd gestational week. However, this situation has increased the incidence of retinopathy (Bilgeç & Erol, 2018; Müstakim et al., 2017). In a multicenter study conducted in our country by the Turkish Neonatology Society, the frequency of ROP in very low birth weight preterm infants was found to be 42%, and the frequency of advanced-stage ROP was 11%. ROP was detected to occur in 6.1% of infants born at gestational weeks 33-35, with an advanced-stage ROP rate of 6 per thousand (Koç et al., 2021). ROP is a preventable cause of childhood blindness. Therefore, the examination and treatment of ROP are of great importance (Sankar et al., 2022). ROP examination can lead to changes in the respiratory pattern, cardiac arrhythmias, feeding intolerance, and pain in premature infants (Dolgun & Bozlak, 2017; Metreş, 2014). Newborn screening is a collaborative process involving multiple individuals and institutions, with midwives, nurses, obstetricians, and pediatricians in the maternity clinic forming the initial link in this chain. Ensuring that nurses and midwives responsible for screenings perform their roles accurately and timely regarding obtaining heel blood samples from all newborns, as well as screening for hearing, vision, and developmental hip dysplasia, will enhance the success of the screening process (Demir Acar & Alparslan, 2021; Fingerhut & Olgemöller, 2009; Lloyd-Puryear et al., 2006). Therefore, neonatologists, pediatricians, and nurses who care for preterm infants play an important role in reducing the frequency of ROP, potential complications, and mortality rates. They must have a good understanding of ROP pathophysiology, staging, risk factors, and appropriate care principles (Metreş, 2014). Neonatal nurses are healthcare professionals who provide primary care to premature infants and play a significant role in the prevention and management of ROP. Since ROP is a multifactorial disease, nursing care interventions targeting many risk factors can reduce the frequency of the disease (Sankar et al., 2022; Thuileiphy et al., 2021). The first goal of newborn screening programs is early diagnosis and intervention of congenital metabolic diseases with high rates. In this process, nurses should raise awareness in families by explaining to parents that screening tests are used to diagnose various diseases that can be treated or controlled, the importance of

early diagnosis, the processes of affected babies, and the procedural steps, and should provide counseling on follow-up and guidance (Erdim & İnal, 2018). Therefore, the active use of nurses' clinical knowledge and skills, ensuring service management, providing counseling to parents, and taking on educational and advocacy roles contribute to a holistic care experience. In practice, neonatal nurses aim to improve the quality of care by controlling pain, monitoring oxygen saturation, ensuring infection control, maintaining thermoregulation, providing optimal nutrition, and delivering individualized developmental care services (Kalyan & Moxon, 2016).

While nurses play a significant role in reducing risk factors for retinopathy and managing the process, their knowledge and skills regarding ROP have not been adequately explored. This study aims to determine the knowledge levels of neonatal nurses in managing ROP and the examination process.

MATERIALS AND METHODS

Research type and time

This research was conducted with a descriptive research model between August and September 2023.

Population and sample of the study

The population of the study consisted of neonatal nurses working in Neonatal Intensive Care Units in Konya, and the sample comprised neonatal nurses who had internet access during the specified dates and voluntarily participated in the research. In Konya, there are 48 nurses in the City Hospital, a total of 105 nurses in two university hospitals, and 55 nurses in state hospitals. A total of 171 nurses who met the inclusion criteria (working in the Neonatal Intensive Care Unit, working for at least 3 months in the Neonatal Intensive Care Unit, and willing to participate in the study) were included in the study during the specified dates. A post-hoc power analysis was conducted using G-Power 3.1.9.7 to determine that the sample size was sufficient, and it was found that the study had an effect size of 0.5, with a power of 0.90 at a significance level of 0.05 within a 95% confidence interval.

Criteria for inclusion in the study

Working in the NICU,
Working in the NICU for at least 3 months,
Volunteering to participate in the study.

Data collection tools

Data were collected using the 'Nurse Profile Form' and the The Form of Knowledge and Examination Process on ROP,' both of which were created by the researcher and reviewed by experts.

Nurse Profile Form: This form, prepared by the researcher, consists of 9 questions that include personal and professional characteristics such as age, educational background, income status, years of experience in the profession, and years of experience in the Neonatal Intensive Care Unit (NICU). To restrict participation from individuals in other cities, a checkbox stating, 'I work in Konya' and 'I work in

another city' has been added to the first section of the form for filtering purposes, considering that the research is conducted only in Konya.

The Form of Knowledge and Examination Process on ROP: Since there was no measurement tool measuring the ROP knowledge level in the literature, research data was obtained with this information form. This form, prepared by the researcher in line with the literature (Finer & Leone, 2009; Koç et al., 2021; Sankar et al., 2022; Thuileiphy et al., 2021), consists of 26 questions covering topics such as risk factors for ROP, nursing care before, during, and after the examination. The theoretical information related to Retinopathy and the examination process is addressed in two categories. The Theoretical Information on Retinopathy consists of a total of 14 questions (1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 17, 19, 20, 21), while the Information on the Examination Process (pre-examination, post-examination, and during examination) consists of a total of 12 questions (11, 12, 13, 14, 15, 16, 18, 22, 23, 24, 25, 26). For the form, the opinions of 5 experts in the field of pediatric health and diseases nursing were received and finalized. The form includes "True" and "False" statements. Each correctly answered statement in the form was given 1 point and each incorrectly answered statement was given 0 point. Minimum 0 and maximum 26 points can be obtained from the form. The higher the scores obtained from the form, the higher the level of knowledge. Content validity agreement among experts was found to be 0.89. KR-20 internal consistency coefficient was found to be 0.71.

Research variables
Dependent variables: Knowledge level scores taken from The Form of Knowledge and Examination Process on ROP.
Independent variables: Demographic characteristics of neonatal nurses.

Data collection
The research was conducted with internet-accessible nurses working in the relevant hospitals during the specified dates. The researcher created an online survey link using Google Forms, which included the 'Nurse Profile Form' and The Form of Knowledge and Examination Process on ROP.' The Google Forms survey link was distributed to neonatal nurses working in Neonatal Intensive Care Units through a social media application. Using a snowball method, nurses were asked to share the survey link with other neonatal nurses in their surroundings and units in Konya.

Data analysis
The analysis of the research was carried out using the SSPS (Statistical Package for Social Sciences) for Windows 25.0 program. Statistical analyses, including descriptive statistics, means, independent t-tests, and ANOVA, were conducted for data evaluation. Significance was accepted at $\alpha=0.05$ within a 95% confidence interval.

Ethical considerations
To conduct the research, approval was obtained from the Ethics Committee for Scientific Research in Health Sciences of a university (2023/483). Before commencing data collection in the research, nurses working in Neonatal Intensive Care Units were provided with information about the purpose and scope of the research, and their online consent was obtained. Nurses participating in the research were assured that their individual information would not be disclosed to others and would not be used elsewhere. The research adhered to the relevant ethical principles, including the 'Principle of Informed Consent,' 'Principle of Voluntariness,' and 'Principle of Privacy,' as the use of human subjects necessitates the protection of individual rights.

RESULTS
The distribution of data concerning the personal and professional characteristics of the nurses is presented in Table 1. The participants had an average age of 34.26±7.16, with 93.6% of them being female, 74.3% holding a bachelor's degree, 73.7% being married, 27.5% having 11-15 years of experience in the profession, 23.4% working in the neonatal clinic for 7-10 years, 35.1% obtaining neonatal intensive care nursing certification, 62% following current publications related to neonatology, and 95.3% participating in ROP examination.

Table 1. Distribution of data regarding nurses' personal and professional characteristics (n=171).

Descriptive Characteristics		($\bar{X}$±SS)	
Age		34.26±7.16	
		n	**%**
Gender	Female	160	93.6
	Male	11	6.4
Educational Level	High School/Associate Degree[a]	19	11.1
	Bachelor's Degree[b]	127	74.3
	Postgraduate Degree[c]	25	14.6
Marital Status	Married	126	73.7
	Single	45	26.3
Years of Experience in the Profession	1-3 years	20	11.7
	4-6 years	26	15.2
	7-10 years	35	20.5
	11-15 years	47	27.5
	16 years and above	43	25.1

Table 1. (continued) Distribution of data regarding nurses' personal and professional characteristics (n=171).

Descriptive Characteristics		n	%
Years of Experience in the Neonatal Clinic	1-3 years	39	22.8
	4-6 years	38	22.2
	7-10 years	40	23.4
	11-15 years	31	18.1
	16 years and above	23	13.5
Participation Status in Neonatal Intensive Care Nursing Certification Training	Yes	60	35.1
	No	111	64.9
Following Current Publications Related to Neonatal Intensive Care Nursing	Yes	106	62.0
	No	65	38.0
Participation in ROP Examination	Yes	163	95.3
	No	8	4.7

The nurses participating in the study were found to respond well to the definition of ROP (Correct answers 98.2%) and its risk factors (Correct answers 72.5%, 66.7%, 93.6%, etc.). Nurses demonstrated a good level of knowledge in topics related to nursing care before ROP examination (Correct answers 73.7%, 95.9%, etc.), during the examination (Correct answers 94.2%, 87.7%, 92.4%, etc.), and after the examination (Correct answers 88.9%, 77.8%, etc.).

Table 2. Distribution of responses given by nurses to The Form of Knowledge and Examination Process on ROP questions (n=171).

The Form of Knowledge and Examination Process on ROP Questions	Correct Respondents		Wrong Respondents	
	n	%	n	%
1. Retinopathy of Prematurity (ROP) is a disease characterized by incomplete vascularization of the retina, observed in premature and low birth weight infants. Its etiology and pathogenesis are not entirely understood, and it can lead to vision loss.	168	98.2	3	1.8
2. In developed countries, ROP is primarily a concern for preterm infants born before 32 weeks of gestation, while in developing countries, severe ROP has been reported to occur up to 34 weeks of gestation.	162	94.7	9	5.3
3. The risk of ROP increases as gestational age decreases.	124	72.5	47	27.5
4. Retinopathy is only observed in premature infants.	114	66.7	57	33.3
5. ROP is divided into 5 stages.	106	62	65	38
6. ROP examination can be performed by all ophthalmologists.	127	73.7	45	26.3
7.Hyperoxia/hypoxia, hypercapnia/hypocapnia, and sudden fluctuations in blood gases are risk factors for ROP.	160	93.6	11	6.4
8.The number of blood transfusions, exchange transfusions, and hyperglycemia/insulin use are not among the risk factors for ROP.	83	48.5	88	51.5
9.Initial examination for infants with a gestational age above 32 weeks should be performed when the postnatal 4 weeks are completed.	146	85.4	25	14.6
10.For infants with a gestational age below 25 weeks, the first examination should be conducted when the postnatal 6 weeks are completed, without waiting until 31 weeks for preterm infants.	139	81.3	32	18.7
11.Obtaining consent from parents is not necessary for ROP examination and follow-up.	126	73.7	45	26.3
12.Pupils should be dilated with 2.5% phenylephrine and 0.5% tropicamide, one drop of each, every 5 minutes, 2-3 times before the ROP examination procedure.	164	95.9	7	4.1
13. The ROP examination procedure induces physiological, behavioral, and hormonal changes in preterm infants.	114	66.7	57	33.3
14. The best time for pupil dilation is 45 to 60 minutes after the last drop.	146	85.4	25	14.6
15. The ROP examination is a painful procedure and a significant source of stress for preterm infants.	159	93	12	7
16. During and after the examination, providing touch, music, mother's milk, or oral sucrose is beneficial in reducing pain.	161	94.2	10	5.8
17. Premature infants do not feel pain.	165	96.5	6	3.5
18. The same eyelid speculum and sclera depressor can be used for every patient.	148	86.5	23	13.5
19. Breast milk does not affect the development of ROP or severe ROP in preterm infants.	114	66.7	57	33.3
20. The development of ROP increases according to the oxygen therapy and its duration.	168	98.2	3	1.8
21. Excessive oxygen administration leads to ROP in infants.	162	94.7	9	5.3
22. After the examination, the target oxygen saturation range should be 90-94% in premature babies who require oxygen.	152	88.9	19	11.1
23. The ROP examination procedure should be conducted in a monitored manner.	150	87.7	21	12.3
24. Sterilization of the examination equipment with isopropyl alcohol or chlorhexidine is sufficient.	89	52	82	48
25. Emergency resuscitation equipment should be readily available during ROP examinations, as there may be deterioration in the infants' vital signs.	158	92.4	13	7.6
26. Following the ROP procedure, the infant should be monitored in the incubator for 2 hours before discharge.	133	77.8	38	22.2

Nurses scored a minimum of 13 and a maximum of 25 on the Form of Knowledge and Examination Process on ROP, indicating that their ROP knowledge levels were at a good level (21.26±2.49), as shown in Table 3. In the section providing theoretical information on retinopathy, it was observed to receive a minimum of 8 and a maximum of 14, while in the section regarding the examination process, it was found to range from a minimum of 4 to a maximum of 12. The average score for Theoretical Information Related to Retinopathy was found to be 11.32 ± 1.54, while the average score for The Examination Process (pre-examination, post-examination, and during examination) was 9.94 ± 1.53.

Table 3. Mean scores of nurses' ROP knowledge.

	Minimum	Maximum	Mean	Standard deviation
The Form of Knowledge and Examination Process on ROP	13.00	25.00	21.26	2.49
The Theoretical Information Related to Retinopathy	8.00	14.00	11.32	1.54
The Examination Process (pre-examination, post-examination, and during examination	4.00	12.00	9.94	1.53

When the comparison of nurses' descriptive characteristics with the Form of Knowledge and Examination Process on ROP score was examined, variables such as gender, marital status, years of experience in the profession, years of working in the neonatal clinic, participation in neonatal intensive care nursing certification training, and participation in ROP examinations were not found to be statistically significant (p>0.05). However, variables related to education level and the follow-up of current publications in neonatal intensive care nursing were found to be significant (p<0.05). In terms of education level, postgraduate graduates had higher ROP knowledge levels than those with a bachelor's degree. Additionally, among the nurses participating in the study, those who followed current publications related to neonatal intensive care nursing had higher ROP knowledge levels compared to those who did not follow current publications (Table 4).

Table 4. Comparison of nurses' descriptive characteristics with the Form of Knowledge and Examination Process on ROP score.

Descriptive Characteristics		($\overline{X}$±SS)	Test and p
Gender	Female	21.30±2.44	t=0.743
	Male	20.72±3.19	p=0.459
Education Level	High School/Associate Degree[a]	20.68±2.51	F=3.817
	Bachelor's Degree[b]	21.11±2.56	**p=0.024**
	Postgraduate Degree[c]	22.48±1.71	**c>b**
Marital Status	Married	21.17±2.52	t=-0.827
	Single	21.53±2.42	p=0.410
Years of Experience in the Profession	1-3 years	21.85±2.75	
	4-6 years	21.34±2.89	F=0.545
	7-10 years	20.82±2.49	p=0.703
	11-15 years	21.27±2.61	
	16 years and above	21.30±1.99	
Years of Experience in the Neonatal Clinic	1-3 years	20.61±3.41	
	4-6 years	21.71±1.99	F=1.227
	7-10 years	21.10±2.41	p=0.301
	11-15 years	21.45±2.06	
	16 years and above	21.69±1.94	
Participation in NICU Nursing Certification Training	Yes	21.48±2.18	t=0.825
	No	21.15±2.65	p=0.411
Staying up to date with current publications in Neonatal Intensive Care Nursing	Yes	21.80±2.09	t=3.695
	No	20.40±2.84	**p=0.001**
Participation in ROP examination	Yes	21.26±2.44	t=0.022
	No	21.25±3.53	p=0.982

DISCUSSION

Neonatal nurses are the primary healthcare team members who spend the most time with premature infants. Due to their characteristics, the nursing role is of great importance in providing quality patient care (Metreş, 2014). The primary and most important responsibilities of nurses in ROP are to minimize or delay the occurrence of blindness, vision disorders, as well as family problems caused by low birth weight babies and premature births (Dolgun, 2017). Although there are limited studies on the subject, the data obtained were discussed in the literature.

In this study, which investigated the knowledge levels of nurses in managing ROP and the examination process, it was observed that nurses had a good level of ROP knowledge. In a descriptive study conducted by Thuileiphy and colleagues, the lack of knowledge among nurses about premature retinopathy, its

prevention, and management was examined, and it was concluded that the knowledge scores of nurses were weak or moderate (Thuileiphy et al., 2021). In another study, it was found that knowledge levels increased after a supportive educational program related to ROP (Sankar et al., 2022). The majority of the patients cared for are premature infants. Knowing ROP, which is one of the most important health problems of premature, is an indicator of the quality of care provided. In the study, nurses had a good level of knowledge about nursing care before, during, and after ROP examination. Nurses were found to have the necessary knowledge in areas such as adjusting the oxygen dose during care applications according to the gestational age and individual needs of the newborn, moisturizing the oxygen with sterile distilled water and administering it heated (31-34°), using pulse oximeters and monitors in oxygen concentration monitoring, and continuously monitoring and recording blood gases according to clinical protocols. Moreover, the importance of ensuring that the baby returns to its former comfort as soon as possible after the examination was emphasized in the literature (Finer & Leone, 2009; Metreş, 2014).

The education level and the follow-up of current publications affect the quality of care provided by nurses. Nurses with a postgraduate degree and those who follow publications related to neonatal nursing had higher ROP knowledge scores. In a study, it was observed that as the level of education increased, knowledge and skills improved (Hakmal et al., 2012). Giving oxygen to premature newborns without monitoring oxygen saturation (SPO2) and conducting uncontrolled oxygen administration is known to increase the risk of ROP development (Darlow & Husain, 2019; Srivatsa et al., 2021). In addition, it is observed that fluctuations in SPO2 values rather than low or high SPO2 values increase the risk of ROP development (Das et al., 2018). Therefore, monitoring oxygen targets is of great importance in preventing ROP-related blindness (Sankar et al., 2022). In this study, a high number of nurses reported the accuracy of information that sudden changes in blood gases and excessive oxygen affect ROP. Based on this information, the number of nurses who correctly answered the target oxygen saturation range for premature infants is high. The results have shown that the level of education is essential, as evidenced by the overall average score of the nurses, indicating that their knowledge levels are good. In the study, nurses who participated reported that ROP examination was a painful procedure for premature, and they felt pain to a high degree. The vast majority of nurses stated that the application of non-pharmacological methods for pain management is beneficial. In a qualitative study conducted to determine the knowledge level of neonatal nurses about pain management during ROP examination, neonatal nurses expressed that they observed that the neonate was exposed to severe pain during ROP examination (Metres et al., 2019). In the literature, it has been shown that nurses use pharmacological and non-pharmacological agents together and that individualized developmental care practices reduce the stress of the baby, minimize oxygen use, and lead to faster recovery after the procedure, normalizing physiological parameters (Olsson & Eriksson, 2011). Breast milk is an important source of nutrition for both term and premature in terms of growth and development (Thuileiphy et al., 2021). In this context, many scientific studies have supported the protective role of breastfeeding against the development of ROP in premature (Ginovart et al., 2016; Manzoni et al., 2013; Muneer et al., 2018). In the study, neonatal nurses correctly answered to a high extent that breast milk is protective against ROP, and the findings are consistent with the literature.

Limitations and strengths of the study
Conducting the research in one city in Turkey and online may be considered as limitations of the study. Scientific and technological advancements in healthcare have led to an increase in the number of premature births. Quality nursing care plays a critical role in managing health issues such as retinopathy in premature. A notable gap in the literature is the determination of neonatal nurses' knowledge levels regarding premature retinopathy. The aim of our study is to fill this gap. The strength of our research is that it fills the gap in the literature. This study can serve as a guide for planning basic neonatal care training for neonatal nurses and enhancing the quality of care, which is another strength of our research.

CONCLUSION
In this study, neonatal nurses demonstrated a good level of knowledge regarding ROP and the examination process. Educational background and their engagement in following current publications related to neonatal nursing were found to influence ROP knowledge. Based on these findings, it is recommended that neonatal intensive care nurses, who spend more time with premature infants in neonatal intensive care units, should be encouraged to participate in training to acquire the highest level of competence. They should perform the care of premature infants in accordance with evidence-based practices and stay updated on new technological developments.

Conflict of Interest
The authors declare no potential conflicts of interest with respect to the research, authorship and/or publication of this article.

Author Contributions

Plan, design: SK, GK; **Material, methods and data collection:** SK, GK; **Data analysis and comments:** SK; **Writing and corrections:** SK, GK.

Ethical Approval
Institution: Necmettin Erbakan University, Ethics Committee for Scientific Research in Health Sciences
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