



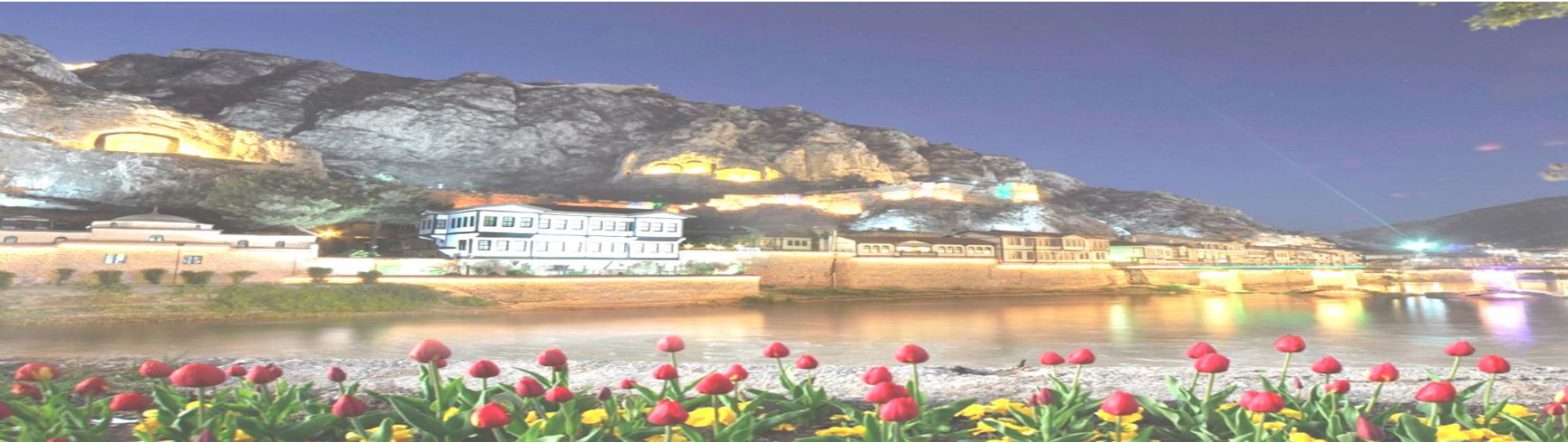
**Republic of Turkey, Amasya University**

# **COMPARISON OF SLEEP QUALITY AND AN ADEQUATE DIALYSIS INDEX IN PATIENTS UNDERGOING HEMODIALYSIS**

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# INTRODUCTION

- Chronic renal failure (CRF), a disease with high prevalence, is an important health problem that deteriorates patients' quality of sleep.
- Among predialysis patients with chronic renal failure, it was reported that 77.8% of patients had poor sleep quality (Sadeghi et al. 2010).

# INTRODUCTION

- Limitations in life activities, metabolic changes due to adverse effects of the disease such as pain, dyspnea, fatigue, cramps, associated with chronic metabolic acidosis, and some emotional problems may cause sleep disorders in patients undergoing hemodialysis.

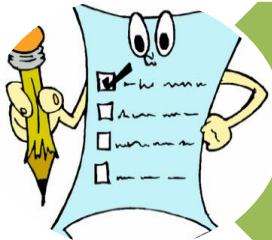
# INTRODUCTION

- Providing dialysis efficiency improves the quality of life of the individual and contributes to the resolution of sleep problems.
- In patients with uremia, deep sleep periods are shortened and total sleep times are reduced (Sert et al. 2015).
- In order to increase the quality of life of patients, it is aimed that basic physiologic requirements for health such as nutrition and sleep should be met and restored (Chang & Yang 2011).

# METHODS



The aim of the study is to compare the sleep quality and good dialysis index on hemodialysis patients.



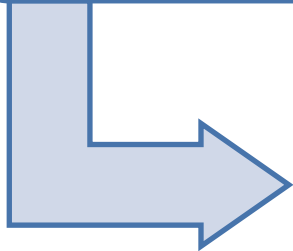
The type of the study is descriptive and cross-sectional.



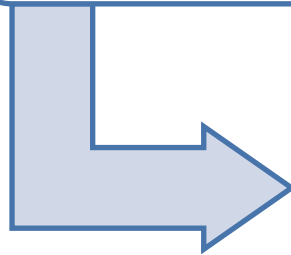
The sample of the study consisted of all the patients who were treated in the hemodialysis unit of an education and research hospital in Amasya (n = 50).

# Data collection tools:

The Patient  
Information  
Form (PIF)

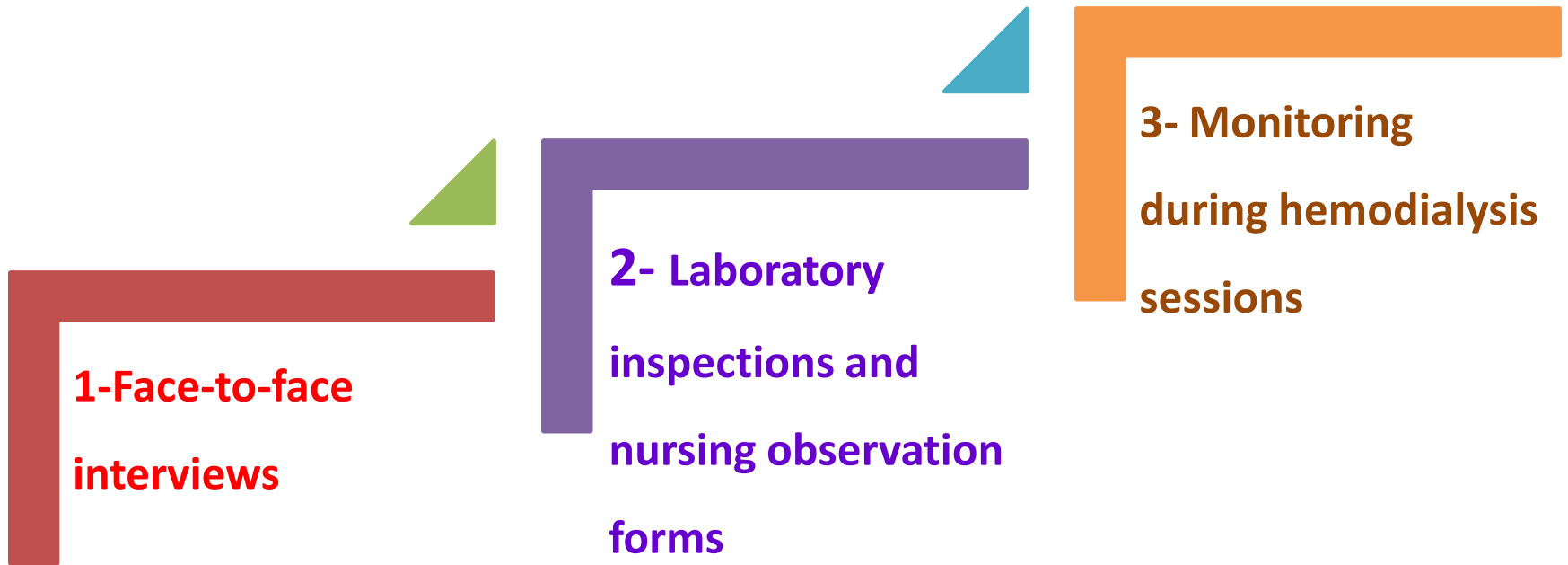


Pittsburg  
Sleep Quality  
Index (PSQI)



Good  
Dialysis  
Index (GDI)

# Method of The Study



## Ethical Considerations:

- Written permission was obtained from the General Secretary of the Union of Public Hospitals of Turkey, where the hospital data was collected is bounded to, and the local ethics committee of the university where the research was conducted verbal permission was given by the patients who constituted the sample group considering the willingness to participate in the research.

# RESULTS

## 1. Patients' characteristics associated with sociodemographic features, disease and hemodialysis treatment:

Average age was 64.46 years, 56% of the patients were woman, 64% were married, 44% were primary school graduates, and 56% were housewives.

It was found that %96 of the patients attended hemodialysis session 3 times a week, and %62 of them had been receiving hemodialysis treatment for 1-4 years



## 2. Patients' characteristics related to sleep activity:

60% of the patients were found to have sleep disordered activities in their normal lives, and only 6% of the patients were using sleep aids

It was found that %82 of the patient scored 5 or more points (n = 41) and had poor sleep quality



## 3. Comparison of PSQI and GDI scores of patients:

It was detected that there was a statistically significant relation between them ( $p < 0.05$ )

A negative linear relation was detected between PSQI and GDI.

**Table 1.** Patients' characteristics associated with sociodemographic features, disease and hemodialysis treatment (N=50)

Sociodemographic characteristics		n(%)
Age (years)	20-45	4(8)
	46-71	26(52)
	72 and above	20(40)
(Min: 22, Max: 86 years; Mean: 64.46 years; SD: 14.612)		
Sex	Female	28(56)
	Male	22(44)
Marital Status	Married	32(64)
	Single	18(36)
Educational Status	Illiterate	21(42)
	Literate	5(10)
	Primary School	22(44)
	Secondary School	2(4)
Occupational Status	Housewife	28(56)
	Unemployed	2(4)
	Employed	2(4)
	Retired	18(36)
Additional Chronic Disease	Yes	36(72)
	No	28(14)
Type of additional chronic disease*	Diabetes and/or hypertension	33(66)
	Other	3(6)
Hemodialysis frequency/week	2 times/week	3(6)
	3 times/week	47(96)
Hemodialysis Duration/day	4 hours/day	50(100)

\*Patients with additional chronic diseases (n=36)

**Table 2.** Patients' characteristics related to sleep activity (N=50)

Characteristics related to sleep activity		n(%)
Normal sleep habit	Regular	20(40)
	Irregular	30(60)
Use of sleep aids	Yes	3(6)
	No	47(94)
Average sleep duration during hemodialysis (1st week)	No sleep	5(10)
	30 min	16(32)
	60 min	20(40)
	90 min	6(12)
	120 min	2(4)
	150 min	1(2)
Average sleep duration during hemodialysis (2nd week)	No sleep	14(28)
	30 min	28(56)
	60 min	3(6)
	90 min	4(8)
	120 min	1(2)
Average sleep duration during hemodialysis (3rd week)	No sleep	9(18)
	30 min	30(60)
	60 min	5(10)
	90 min	4(8)
	120 min	2(4)
Pittsburg Sleep Quality Scale Total Score	< 5 score	9(18)
	≥ 5 score	41(82)

**Table 3.** Distribution of patients' scores of Pittsburgh Sleep Quality Scale and Good Dialysis Index (N=50)

<b>Scales</b>	<b>Mean±SD (Min-Max)</b>	<b>p*</b>
<b>GDI<sup>a</sup></b>	14.22± 2.12 (11-18)	0.005 (t=5.234)
<b>PSQ<sup>b</sup></b>	9.44± 4.45 (1-19)	<0.001 (F=8.503)

a: GDI: Good Dialysis Index

b: Pittsburgh Sleep Quality Index

\*ANOVA test

# CONCLUSION

- This study showed that there is a positive and coherent relationship between PSQI and GDI, and detected that sleep quality deteriorates with the decrease in dialysis efficacy.
- Sleep activity during hemodialysis treatment is a basic requirement to be addressed.
- In this direction, it is suggested that the nurses should continuously evaluate the patient's clinical sleeping problems, act in the purpose of increasing the sleep quality and use objective measurement tools and methods to identify sleep disorders.

## RELEVANCE TO CLINICAL PRACTICE

- Good Dialysis Index makes both objective and subjective evaluations.
- In this regard, GDI can be used as an easy and reliable tool to evaluate dialysis adequacy by clinical specialists and nurses in holistic treatment of hemodialysis patients.
- Different researches can be done with GDI.

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# Question – Contribution

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**THANK YOU...**