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**Quality of Sleep and the Quality of Life in Chronic Kidney Disease Patients
Undergoing Hemodialysis in A Tertiary Hospital in the Philippines**

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Objectives : Chronic Kidney Disease (CKD) has long been shown to be a significant health burden globally and to all Filipinos. Aside from the known physical health burden and complication of CKD, the impact to psychosocial and mental aspects is also recognized. Among these is sleep, as sleeping problems are found to be common in patients with CKD especially those undergoing renal replacement therapy. The objective of this study was to examine the impact of quality of sleep on the quality of life among hemodialysis patients in The Medical City Ortigas.

Methods : Quality of sleep and quality of life were measured using validated self-administered questionnaires; the Pittsburgh Sleep Quality Index (PSQI) and the Kidney Disease Quality of Life-Short Form v1.3 (KDQOL) respectively.

Results : Among the respondents 67 (78.82%) were found to be poor sleepers (PSQI >5) with a mean global PSQI of 9.25. Age appeared to be a significant factor as the percentage of bad sleepers belong to the 46-65 and >65 age groups. In contrast, sex, marital status, employment, hemodialysis shift, BMI, kt/V, hemodialysis type, albumin, phosphorus, and hemoglobin levels did not have significant association with quality of sleep. Correlations between the global PSQI score and the domains of KDQOL computed via Pearson r coefficient showing an inverse correlation between PSQI and the mental (-.392) and physical (-0.320) component summaries.

Conclusions : Poor sleep is common in hemodialysis patients and is associated with poorer quality of life.

Table 4.png

Table 4. Correlation between Quality of Sleep Score and Quality of Life Score

	Global PSQI Score vs		
	n	Pearson r	p value
Symptom/problem list (12)	85	-0.322	0.0027*
Effects of kidney disease (8)	85	-0.134	0.2200
Burden of kidney disease (4)	85	-0.135	0.2179
Work status (2)	85	-0.211	0.0530
Cognitive function (3)	85	-0.315	0.0033*
Quality of social interaction (3)	85	-0.188	0.0854
Sexual function (2)	28	-0.044	0.8233
Sleep (4)	85	-0.282	0.0090*
Social support (2)	85	-0.123	0.2634
Dialysis staff encouragement (2)	85	0.067	0.5405
Overall health (1)	85	-0.209	0.0551
Patient satisfaction (1)	85	-0.182	0.0956
Physical functioning 10)	85	-0.186	0.0883
Role limitations--physical (4)	85	-0.318	0.0031*
Pain (2)	85	-0.281	0.0092*
General health (5)	85	-0.267	0.0136*
Emotional well-being (5)	85	-0.207	0.0571
Role limitations--emotional (3)	85	-0.406	0.0001*
Social function (2)	85	-0.314	0.0034*
Energy/fatigue (4)	85	-0.2	0.0670
SF-12 Physical Health Composite	85	-0.32	0.0028*
SF-12 Mental Health Composite	85	-0.392	0.0002*

Table 4.png

Table 5. Characteristics of good sleepers compared to bad sleepers in terms of categorical variables and quality of life

	Good Sleepers		Bad Sleepers		p value
	n	%	n	%	
Age Group					
18 to 45	4	22.2	3	4.5	0.0275*
46 to 65	5	27.8	35	52.2	
>65	9	50	29	43.3	
Sex					
Male	10	55.6	29	43.3	0.3564
Female	8	44.4	38	56.7	
Marital status					
Married	10	55.6	49	73.1	0.1531
Not married	8	44.4	18	26.9	
Employment					
Working	8	44.4	25	37.3	0.5838
Non working	10	55.6	42	62.7	
Hemodialysis type					
Low-flux	6	33.3	29	43.3	0.7718
Hi-flux	11	61.1	33	49.3	
HDF	1	5.6	5	7.5	
Hemodialysis shift					
1st shift	5	27.8	25	37.3	0.3513
2nd shift	4	22.2	22	32.8	
3rd shift	7	38.9	17	25.4	
4th shift	2	11.1	3	4.5	
BMI					
Underweight	1	5.6	3	4.5	
Normal	6	33.3	18	26.9	0.7278
Overweight/obese	11	61.1	46	68.7	
Kt/V					
Adequate	12	66.7	50	74.6	0.5023
Inadequate	6	33.3	17	25.4	
Hemoglobin					
Low	10	55.6	41	61.2	
Normal	7	38.9	20	29.9	0.7111
High	1	5.6	6	9.0	
Albumin					
Low	7	38.9	25	37.3	
Normal	11	61.1	42	62.7	0.9031
High	0	0.0	0	0.0	
Phosphorus					
Low	2	11.1	10	14.9	
Normal	11	61.1	32	47.8	0.6638
High	5	27.8	25	37.3	

Quality of Life	Good Sleepers		Bad Sleepers		p value
	mean	sd	mean	sd	
Symptom/problem list (12)	62.85	23.77	50.65	21.31	0.0385*
Effects of kidney disease (8)	52.09	18.50	52.01	16.71	0.9863
Burden of kidney disease (4)	26.39	18.63	20.15	14.99	0.1408
Work status (2)	47.22	40.12	30.60	35.84	0.0922
Cognitive function (3)	66.67	21.45	55.22	17.05	0.0191*
Quality of social interaction (3)	61.11	15.04	55.92	15.39	0.2055
Sexual function (2)	67.50	20.92	65.76	17.36	0.8459
Sleep (4)	56.67	18.13	46.90	11.74	0.007*
Social support (2)	71.30	23.43	68.91	20.90	0.6756
Dialysis staff encouragement (2)	76.39	14.15	76.12	9.91	0.9261
Overall health (1)	54.44	19.77	43.28	14.91	0.0104*
Patient satisfaction (1)	57.41	21.56	45.27	20.06	0.0276*
Physical functioning (10)	35.00	28.28	26.12	21.28	0.1477
Role limitations—physical (4)	41.67	46.18	21.64	37.41	0.0588
Pain (2)	73.47	23.78	70.86	17.98	0.6115
General health (5)	40.83	19.42	32.16	12.16	0.0217*
Emotional well-being (5)	59.33	21.18	54.63	18.52	0.3559
Role limitations—emotional (3)	57.41	45.45	41.79	44.70	0.1933
Social function (2)	60.42	28.84	53.36	18.79	0.2142
Energy/fatigue (4)	50.83	21.64	48.73	11.06	0.5704
SF-12 Physical Health Composite	37.36	9.77	33.53	6.79	0.0577
SF-12 Mental Health Composite	45.56	9.66	42.35	9.15	0.1958