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Associations between the Fatigue and Physical function in Hemodialysis patients

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Objectives: To examine the association between the subjective and objective measures of fatigue and physical function in haemodialysis patients using Fatigue Assessment Scale (FAS) and Six Minute Walk Test (6MWT)

Methods: The observational study included patients with chronic kidney disease who were on regular haemodialysis. The subjective assessment of fatigue was assessed through the Fatigue Assessment Scale (FAS), which had the components of physical and mental symptoms. The physical function was assessed using the Six-Minute Walk Test(6MWT), and both were analyzed descriptively by mean, standard deviation, and spearman's correlation.

Results: Forty-eight (n=48) haemodialysis patients (mean age 47.7±13.6,85% male) were enrolled based on the inclusion and exclusion criteria. The majority of the patients had decreased physical function (mean 6MWT % 57.5±18.6) and moderate FAS (2.28 ± 0.68). A mean distance (437±145) was observed during the 6MWT. Two patients found difficulty walking more than 120 meters and had to stop due to severe fatigue. None of the patients reported a decrease (<85%) in oximetry oxygen saturation (SpO₂). The subjective fatigue statements reported through FAS were Never (n=2), sometimes (n=31), Regularly (n=12), often (n=2) and always (n=1). Most of the participants felt sometimes fatigued (n=31). Analysis was done using IBM SPSS statistics application version 28.0.0.0(190) (IBM Corporation). A Spearman's rank-order correlation was run to determine the relationship between FAS and 6MWT. A very weak, positive correlation between FAS and 6MWT was statistically significant ($r_s(46) = .071, p = .633$).

Conclusions: The physical function was decreased in the haemodialysis patients, with fatigue reported as moderate level. An association with FAS decreases with a decrease in the 6MWT leading to decreased function was very weak. Other factors like muscle strength, clinical presentation, and the severity of the disease may also be considered.

Table 1: Patients' characteristics

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Age (Mean, SD)*	47.7±13.6
Gender	Men n=41(85% male) Female n=7 (15% Female)

*in years

Table 4: Association between the FAS and 6MWT

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			FAS	6MWT
Spearman's rho	FAS	Correlation Coefficient	1.000	0.071
		Sig. (2-tailed)		0.633
		N	48	48
	6 MWT	Correlation Coefficient	0.071	1.000
		Sig. (2-tailed)	0.633	
		N	48	48

FAS – Fatigue Assessment scale, 6MWT – Six Minute Walk Test