Attitudes of haemodialysis patients, medical and nursing staff towards patients' physical activity

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Held jointly with Hungarian Society of Nephrology
56th Budapest, Hungary June 13th-16th, 2019 ERA-EDTA Congress

Introduction

Patients with ESRD are less active, have lower levels of physical activity and are increasingly adopting a sedentary life, compared to healthy individuals [1].

Several pioneering studies on the effects of exercise training in hemodialysis (HD) patients have shown that increased physical activity can improve the level of their quality of life and, potentially, clinical outcomes [2-5,6].

It has been supported that certain modifiable factors, such as lack of time, concern about the risks of physical exercise and lack of motivation by nurse and medical staff, may contribute to the sedentary habits of many patients undergoing hemodialysis [1,7].

Methodology

Public and private dialysis units of the Prefecture of Thessaloniki and Ioannina in Greece were invited to participate in the present research.

Subjective assessment questionnaires and the International Physical Activity Questionnaire (IPAQ) were administrated to HD patients and medical staff.

Binary logistic regression model for the estimation of the degree and strength of the relationships between selected variables was applied.

Binary logistic regression model showed that male patients' sex (OR 6.0, 95% 0.4 to 0.7, p<0.05), age older than 70 years (OR 5.1, 95% 0.3 to 0.6, p<0.05), low education level (OR 3.7, 95% 0.3 to 0.4, p<0.05), previous transplantation (OR 1.4, 95% 0.0 to 0.2, p<0.05), HD vintage (OR 2.0, 95% 0.1 to 0.2, p<0.05) and not participating in an interventional exercise program during dialysis session (OR 0.6, 95% 0.0 to 0.0, p=0.02) were positively and independently associated with inactivity in ESRD patients.

The majority of barriers were positively and independently associated with inactivity in ESRD patients (Table 1).

	Inactive patients [Estimate 95% C.I.]	level of statistical significance (p)
No place to exercise	-2.1 (0.0 to 0.4)	p=0.02
No exercise partner	-2.6 (0.0 to 0.3)	p=0.01
Fatigue on dialysis days	4.8 (0.2 to 0.6)	p<0.001
Fatigue on non-dialysis days	8.6 (0.7 to 0.9)	p<0.001
Pain in dialysis days	-3.4 (0.0 to 0.1)	p<0.001
Pain in non-dialysis days	-2.5 (0.0 to 0.2)	p<0.001
Lack of time in dialysis days	-2.6 (0.0 to 0.1)	p<0.001
Lack of time in non-dialysis days	-3.0 (0.0 to 0.2)	p<0.001
Too many medical appointments	-1.3 (0.0 to 1.4)	p=0.12
I don't want to exercise	-4.5 (0.0 to 0.0)	p<0.001
Feeling too old	-4.0 (0.0 to 0.0)	p<0.001
Shortness of breath	-2.1 (0.0 to 0.4)	p=0.02
Fear of getting hurt	-7.0 (0.0 to 0.0)	p=0.01
Sadness	-3.2 (0.0 to 0.1)	p<0.001
Feeling of helplessness	-6.6 (0.0 to 0.0)	p=0.01
Inability to travel	-4.9 (0.0 to 0.0)	p<0.001
Too many medical problems	-4.5 (0.0 to 0.0)	p<0.001
Family concern	-4.0 (0.0 to 0.0)	p=0.21
Physician concern	-3.2 (0.0 to 0.1)	p=0.12
Chest pain	5.3 (0.1 to 17.0)	p=0.64
Amputation	-1.7 (0.0 to 1.7)	p=0.13
Ulcers on legs and feet	-2.0 (0.0 to 1.1)	p=0.07

Table 1. Logistic regression between patient's demographic data and physical inactivity status according to IPAQ.

Nurse's and nephrologist's negative attitudes, were positively and negatively associated with inactivity in ESRD patients, respectively (Table 1 and 2).

Nurses negative attitudes	Inactive patients [Estimate 95% C.I.]	p
I am not worried about the risks that exercise may involve in hemodialysis patients.	-1.2 (1.6 to 12.8)	p=0.72
I do not believe that most hemodialysis patients would increase levels of physical activity if they were advised to do so.	-1.0 (0.0 to 2.1)	p=0.25
I have not time to talk to patients about physical activity.	2.0 (0.1 to 0.1)	p=0.01
I do not believe that hemodialysis patients are interested in the subject of physical activity.	6.4 (0.1 to 5.0)	p=0.01
I do not think exercise is important for ESRD (as important as it is for other medical problems).	5.8 (0.3 to 4.0)	p=0.03
I do not believe it is the role of the physician / nurse to advise hemodialysis patients on physical activity.	5.0 (0.4 to 5.6)	p=0.05
I do not feel comfortable with discussing the issue of physical activity with patients.	-3.3 (0.9 to 11.6)	p=0.56
Our patients do not often ask about physical activity	4.7 (0.4 to 3.5)	p=0.24
We do not often advise.	4.9 (0.4 to 3.3)	p=0.19

Table 2. Logistic regression for nursing staff's negative attitudes regarding ESRD patient's physical activity and patient's physical inactivity status according to IPAQ.

Nephrologists' negative attitudes	Inactive patients [Estimate 95% C.I.]	p
I do not believe that most hemodialysis patients would increase levels of physical activity if they were advised to do so.	-8.3 (0.8 to 1.1)	p<0.001
I have not time to talk to patients about physical activity.	-1.6 (-1.1 to -0.5)	p<0.001
I do not believe that hemodialysis patients are interested in the subject of physical activity.	-3.5 (-0.3 to 0.3)	p<0.001
Our patients do not often ask about physical activity	-3.5 (-1.1 to 1.1)	p<0.001
We do not often advise.	-2.8 (-1.4 to 1.4)	p=0.14
Often, they do not ask, and we do not advise.	-4.6 (-1.5 to 1.5)	p=0.03
We do not often provide exercise equipment	-3.6 (-1.4 to 0.7)	p=0.47

Table 3. Logistic regression between nephrologists' negative attitudes regarding ESRD patient's physical activity and patient's physical inactivity status according to IPAQ.

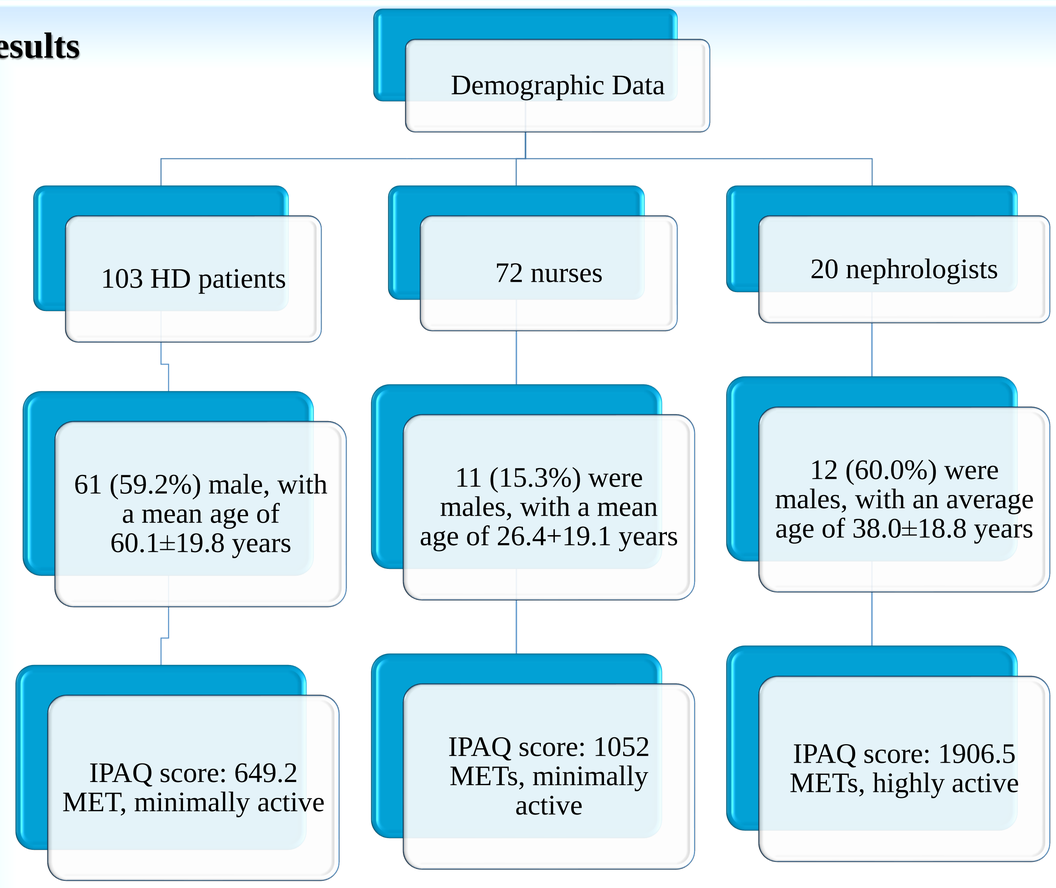
Finally, logistic regression, by dichotomizing nurses into active and inactive according to IPAQ, showed that female nurse's sex (OR 5.1, 95% 0.0 to 0.0, p<0.05), age (OR 4.2, 95% 0.7 to 0.9, p<0.05) and working in a private clinic (OR 2.9, 95% 0.0 to 0.0, p=0.04) were positively and independently associated with active nurses' status.

For nephrologists we showed a positive association only between age and inactivity (OR 2.8, 95% 0.5 to 0.9, p=0.02).

Aims

- ✓ to assess the levels of physical activity of patients and medical staff of different dialysis centers,
- ✓ to investigate the attitudes of both HD patients and medical staff on the participation and promotion of physical activity,
- ✓ to identify the obstacles that discourage the participation of patients in renal exercise rehabilitation programs.

Results



Conclusions

- ✓ HD patients are faced with a multitude of barriers that suppress their active lifestyle and regular participation in physical activity.
- ✓ Medical and nursing staff appear to play an important role on the participation of ESRD patients in physical activity and in adoption of a healthy lifestyle with regular exercise.
- ✓ The main finding of this study was that patients' attitudes towards physical activity are mostly based on their socio-economic level and negative medical and nursing staff attitudes towards their physical activity level.
- ✓ Those negative perceptions are strongly associated with patient's inactivity status.

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