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PATIENTS' BELIEF IN SELF-CONTROL: DIFFERENCES BETWEEN MODALITIES OF GERMAN DIALYSIS PATIENTS

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Background

Peritoneal dialysis (PD) and haemodialysis (HD) can be equivalent treatment options for patients with chronic kidney disease (CKD). Depending on someone's personality and lifestyle, PD can improve quality of life and enable a patient to maintain an autonomous lifestyle [1, 2].
If an individual interprets an event as the consequence of luck, chance or fate, it is labelled as an external locus of control (ELC). Conversely, if the person expects this event to be the result of his or her own behaviour, it is called an internal locus of control (ILC) [3].
The literature shows differences between HD and PD patient populations in terms of psychological characteristics and sociodemographic factors. The PD patients tend to be younger, female and higher educated [4, 5]. However, the influence of the locus of control on modality choice has not been fully examined. One study found that in-centre HD patients have a stronger internal locus of control than PD patients [6].

Methods

The MAU-PD study (Funding No 01VSF16036) deals with the causes for the low prevalence of ambulatory peritoneal dialysis in Germany. With a multidimensional analysis, we investigate this from the patients', physicians' and nurses' points of view. First, semi-structured qualitative interviews were conducted in order to explore the patients' needs regarding decision-making and everyday life with dialysis. These interviews indicated that patients with a strong need for accepting the responsibility in their life, preferred PD. Among others, we addressed this topic in a nationwide postal survey of adult dialysis patients of two sickness funds in Germany at the end of 2018/beginning of 2019.

Measures

Both ILC and ELC were measured by a 3-item short scale [7]. On the 0–100 answer scale, high values indicate a strong ILC and a weak ELC. Patients were also asked to provide sociodemographic information.

Analysis

In order to identify differences between HD and PD patients in regard to their first choice, the patient population was divided by whether they started with home-based PD or in-centre HD. Population differences in terms of ILC and ELC, as well as sociodemographic factors such as age, sex and school education, were examined.

Results

A total of 965 patients completed our questionnaire.
Patients with missing or inconsistent information about their dialysis modality were excluded. Hence, we included 890 dialysis patients in our analysis with 91% started with HD and 9% started with PD. Forty-four patients who started with PD changed to in-centre HD, 1 to home-based HD. The proportion of patients currently dialysing via PD was 2.8%. The median age was 71 (20–96) and 41% of the participants were female. Table 1 provides descriptive sociodemographic information about the patient populations.

Table 1: Sociodemographic characteristics

Modality	Age (median)	Sex (%)	School education (%)	
HD (n=814)	72	f=325 (40) m=481 (60)	No school qualifications Basic school qualification Extended secondary school diploma A-levels	18 (2) 381 (48) 245 (30) 150 (19)
PD (n=76)	60	f=35 (46) m=41 (54)	No school qualifications Basic school qualification Extended secondary school diploma A-levels	2 (3) 26 (35) 26 (35) 20 (27)

Results

The median ILC was higher with PD patients than with HD patients (PD=83, HD=75). Median ELC was similar in both groups (58). Hence, Wilcoxon Mann-Whitney tests showed significant ILC-differences (p=0.026) in terms of HD and PD populations, but no significant ELC-differences.

Table 2: Descriptive ELC and ILC results

	HD	PD
ELC (median)	56 ± 19.6 (58)	58 ± 16.7 (58)
ILC (median)	74 ± 20.4 (75)	80 ± 17.3 (83)

With respect to sociodemographic factors, the HD and PD patient populations varied in age and school education. The PD patients were significantly younger (p<0.0001) and higher educated (p=0.01) than the HD patients. There were no sex differences between modality groups. Testing the influence of the sociodemographic factors on ILC, the differences in sex (p=0.004) and school education (p<0.001) were significant.
Due to their impact on ILC and the modality choice itself, all mentioned sociodemographic factors and ILC were combined in a multifactorial logistic regression model for the modality choice (HD or PD). In this model, only age had a significant influence (p<0.001) on modality choice.

Conclusion

In contrast to what was found in previous studies [4, 5], HD and PD patients in our sample vary only in age and school education, but not in sex. This difference may be attributed to the specific characteristics of the two sickness funds we used in our sample.
First, the effect of ILC on modality choice seem to confirm our qualitative findings. But the results of the multifactorial logistic regression model show that the effect of ILC doesn't remain significant. With regard to potential sociodemographic confounders, the difference between the two modality groups can only be ascribed to patients' age.
PD can enable patients to maintain an autonomous lifestyle [1, 2]. Hence, patients with a strong belief their autonomous ability to manage their own disease can benefit from PD. The ILC measures the general belief in somebody's own skills. To what extent this general characteristic leads to an intention to accept responsibility for their own treatment, has to be further examined. Our results indicate, that there's no general correlation.
Nevertheless, the PD can be an option for patients who want to accept this responsibility. With regards to individualised care, this is the advantage of having two completely different treatment options.

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