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Differences in autonomy preference and sociodemographics between HD and PD patients in Germany

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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]. Hence, patient participation in making the decision about their modality is important.
Patients can show different preferences in taking part in decision-making. In general, the literature shows these preferences can vary with regards to age, sex, education, diagnosis, health status or the decision that needs to be made [3]. Sociodemographic differences have also been reported between HD and PD patient populations. PD patients tend to be younger, female and higher educated [4, 5].

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 autonomy 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

The Autonomy Preference Index (API) measured patients' preferences for their participation in medical decision-making (PDM) and information-seeking (PIS) using a 0–100 answer scale, with high values representing a stronger preference [6]. 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 age, sex and school education as well as PDM and PIS were examined.

Results

A total of 929 patients completed our questionnaire.
Patients with missing or inconsistent information about their dialysis modality were excluded. Hence, the population for this analysis consisted of 857 patients, with 92% starting with HD and 8% starting 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. Sociodemographic factors of both patient populations are displayed in Table 1.

Table 1: Sociodemographic characteristics

	HD (n=788)	PD (n=69)
Age, mean	70.3 ± 12.9	59.3 ± 15.6
Sex (%)		
female	312 (40.0)	33 (47.8)
male	468 (60.0)	36 (52.1)
School education (%)		
no school qualifications	18 (2.3)	2 (3.0)
basic school qualifications	366 (47.7)	24 (35.8)
extended secondary school diploma	236 (30.7)	25 (37.3)
A-levels	148 (19.3)	16 (23.9)

Results

There were no sex differences between the HD and PD groups, but the HD patients were significantly older (p<0.0001) and had a lower education level (p=0.0368) than the PD patients.
A Cronbach's alpha-value of 0.81 for both PDM and PIS indicated a high internal consistency and reliability. Table 2 displays descriptive PDM and PIS values. In general, both patient groups showed a lower need for participation in decision-making than for information-seeking. The PD patients showed a significantly higher PDM than HD patients (p=0.0067). Differences according to the PIS were not significant.

Table 2: Descriptive PDM and PIS results

	HD	PD
PDM (median)	37.0 ± 25.8 (31.3)	47.0 ± 29.0 (50)
PIS (median)	93.5 ± 10.6 (100)	95.4 ± 5.6 (96.4)

Regression analysis showed that younger patients and those with a higher educational level had a stronger PDM.
Overall, a combined logistic regression model for the modality choice (HD or PD) showed that only the effect of age was significant (p<0.001).

Conclusions

Both patient groups in our sample had a low preference in participation in decision-making. This could be due to patients' health status, their diagnosis or the severity of the decision they had to make. Patients want to be less involved in life-threatening situations or with a serious illness [3]. Untreated CKD is life threatening, and the decision about the renal replacement therapy is life changing.
Furthermore, our findings showed a difference in PDM between HD and PD patients. These can be explained by the group differences in age and education. Other studies also stated that younger and better-educated patients want to have a more active role in decision-making [3]. This effect is also sustained by the initial significant impact of PDM on the modality choice and can be ascribed to people's age in a multivariate model.
PD can enable patients to maintain an autonomous lifestyle [1, 2]. Hence, patients with a high preference for autonomy (and PDM as a dimension of the API) can benefit from PD. Our findings showed that these are often young patients. But nephrologists should take into account that there are also older patients with a high preference for autonomy who would benefit from PD. With regards to individualised care, this is the advantage of having two completely different treatment options.

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