



Correlation between fatigue and perceived health control in peritoneal dialysis patients

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OBJECTIVES

- This study aimed to assess the correlation between fatigue and perceived health control in peritoneal dialysis patients, with the expectation to improve

METHODS

- A total of 107 patients were surveyed with general questionnaire, Multidimensional Fatigue Symptom Inventory-Short Form (MFSI-SF), and Multidimensional Health Locus of Control Scale (MHLC).
- The questionnaire was dispatched every month when PD patients re-visited the hospital during follow-up, and a unified guidance language was adopted. Anonymous method was applied, and a list of patients with long-term follow-up prepared to avoid duplicate questionnaires. In retrieving the questionnaires, an immediate supplement would be conducted in case of lost or missing items

RESULTS

Table 1. A mean fatigue score of 79.18 ± 1.52 points was obtained for PD patients, indicating a high level of fatigue. The scores for all dimensions in descending order were: 18.22 ± 3.65 (physical fatigue), 17.16 ± 3.32 (emotional fatigue), 15.44 ± 4.50 (mental fatigue), 14.45 ± 4.47 (general fatigue), and 13.91 ± 4.57 (vitality) points.

Table 1 Comparison of fatigue in PD patients with different dialysis duration ($\bar{x} \pm s$)

| Group | Fatigue | General | Emotional | Physical | Mental | Vitality | Mean Rank | χ^2 | P |
|----------------------------|------------|------------|------------|------------|------------|------------|-----------|----------|--------|
| Dialysis < 1 year | 83.32±1.54 | 15.46±4.53 | 19.35±3.69 | 17.54±2.50 | 16.18±4.82 | 14.79±4.32 | 62.12 | 6.626 | 0.036* |
| 1 year ≤ dialysis < 5 year | 76.21±1.43 | 14.12±4.04 | 15.54±3.58 | 17.29±3.36 | 16.69±4.22 | 15.56±4.45 | 48.29 | | |
| Dialysis ≥ 5 year | 87.00±1.65 | 13.91±6.59 | 20.00±3.35 | 21.09±3.21 | 18.18±4.35 | 13.82±5.91 | 68.59 | | |

Note: * p<0.05

Table 2. Correlation analysis between the 3 dimensions of perceived health control and fatigue was performed. The results showed that external authority- and internal controls were negatively correlated with fatigue in PD patients ($r=-0.214$ and -0.440 , respectively, all $P<0.05$); meanwhile external fate control was positively correlated with fatigue ($r=0.299$, $P<0.05$)

Table 2 Correlation between fatigue and perceived health control in PD patients (n=107)

| Items | Internal control | External authority control | External fate control |
|---------------------|------------------|----------------------------|-----------------------|
| Fatigue total score | -0.440* | -0.214* | 0.299* |
| General fatigue | -0.403* | -0.169 | 0.263* |
| Emotional fatigue | -0.131 | -0.046 | 0.137 |
| Physical fatigue | -0.205* | -0.164 | 0.158 |
| Mental fatigue | -0.409* | -0.203* | 0.315* |
| Vitality | -0.459* | -0.186 | 0.245* |

Note: * p<0.05

Table 2. Stratified regression analyses were performed with fatigue considered as a dependent variable; general patient information constituted first level independent variables, while the three dimensions of perceived health control were regarded as second level independent variables. We found that age (general information) affected fatigue, namely, fatigue status increased with age. After controlling the general information, internal- and fate controls were the main factors impacting fatigue in patients with PD.

Table 3 Impact of perceived health control on fatigue in PD patients

| Independent variable | B | Beta | t | p | R ² | ΔR ² | F | p |
|----------------------|--------|--------|--------|-------|----------------|-----------------|--------|-------|
| First level | | | | | | | | |
| Age | 0.186 | 0.200 | 2.091 | 0.039 | 0.040 | 0.031 | 12.767 | 0.000 |
| Second level | | | | | | | | |
| Internal control | -0.846 | 0.353 | 3.857 | 0.000 | 0.228 | 0.213 | | |
| Fate control | 0.639 | -0.226 | -2.468 | 0.015 | 0.271 | 0.250 | | |

CONCLUSIONS

Fatigue is a common but often neglected symptom in maintenance peritoneal dialysis patients. Here, we showed that maintenance PD patients display high fatigue level, with scores in a descending order obtained for ≥5 years, <1 year, and between 1 and 5 years of dialysis. Health control is more likely to rely on medical workers. However, the goal should be to improve internal control and reduce fate control. Therefore, medical workers should make use of their advantages and give full play to the subjective initiative of patients; this would improve the dialysis effect, reduce fatigue and restore normal health status.

REFERENCES:

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