Progress in Self-regulation Fatigue in the Nursing Field

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Abstract: Self-regulation is a key variable in disease self-management in patients with chronic diseases, influencing the establishment of patients' health behavior. The relevant theories, evaluation tools, influencing factors and intervention measures of self-regulation are summarized. This paper aims to strengthen the attention of domestic researchers to patients' self-regulation, help patients to carry out effective disease self-management by improving self-regulation level, and provide reference for subsequent studies.

***Keywords*:** nursing; self-regulation fatigue; review

1. Introduction

Self-regulation fatigue Self-Regulatory Fatigue (SRF) [1] refers to the individual who will consume some limited resources (energy or strength). Since each person's psychological resources are limited, when a part of the psychological resources are used, the next task cannot be performed in a short time. At present, there is limited related research literature in China, but the development of foreign related research is relatively mature. This review includes the application of self-regulation fatigue in different diseases in China, and provides a reference for the research of self-regulation fatigue in the nursing field in China.

2. Overview of self-regulation fatigue related

Self-regulation fatigue is based on self loss [2] theory, the theory points out that psychological resources is limited, when the individual in self control activities, their own psychological energy and psychological resources will produce bad consumption, but this resource in a relatively short time is not renewable, thus will lead to the subsequent self control activities unable to continue. Self-Regulatorary Fatigue (SRF) was first discovered and proposed by a foreign scholar Baumeister in 1998. The consumption of self-control resources leads to a temporary decline in self-control ability. Due to similar self-regulation fatigue and self-loss, Nes et al. [1] differentiated self-regulation fatigue and self-loss in 2013. Self-regulation fatigue more emphasized the individual completion of some excessive consumption of self-control resources, followed by the subsequent persistent fatigue, mainly emphasizing the degree of fatigue

3. An assessment tool for self-regulating fatigue

3.1 Self-regulation Fatigue Scale (Self-regulatory Fatigue Scale, SRF-S)

The scale was first formed in 2013 and was written by Nes [1] et al., with 18 entries. In 2015, Wang Ligang [3] et al. translated and revised it into Chinese version. The scale has 16 items in three dimensions. According to the 5-point scoring method. The higher the score, the worse the degree of self-regulation fatigue, and the total score range is from 16 to 80. The Cronbach's α coefficient of this scale was 0.84.

3.2 Self-loss source scale (ego-depletion source scale, EDS-S)

The scale compiled by Tang Yicheng [4], the scale is based on the theory of Baumeister and Wagner construction, combined with literature analysis and open survey identified 48 items and 11 dimensions.Each entry was scored at 5 points. The internal consistency reliability Cronbach's the α coefficient is 0.941 and the total table retest reliability is 0.663.

3.3 Loss Sensitivity Scale (Depletion Sensitivity Scale, DSS)

The scale was compiled by Chinese scholars Tang Yicheng [5] and others based on the theory of loss sensitivity. The scale contains 8 items, and 2 dimensions. Each item is scored at 7 points. The higher the score, the stronger the loss sensitivity. The Cronbach's α coefficient of the total table is 0.80.

4. The clinical application of self-regulatory fatigue

4.1 Study used in patients undergoing peritoneal dialysis

Several studies [6-10] showed that the self-regulation fatigue score was higher. Moreover, the cognitive control dimension of peritoneal dialysis patients scored higher. Studies have shown that [7,8] has different levels of self-regulation fatigue over different time periods. Zhou Rui et al. [6]found that gender, type of comorbidities, dialysis age, psychological resilience and symptom distress were the main influencing factors of self-regulation fatigue in patients. Zhou Yue et al. [8] found that self-regulation fatigue could predict the activity of disease management in patients. Zhang Tongtong et al. [7] found that self-regulation fatigue not only changed with time, but also negatively correlated with quality of life.

4.2 Studies used in patients with CHD

Several studies [11-15] showed that CHD has self-regulating fatigue, and the cognitive control dimension [11,14,15] had the highest score. Zhang Mengqian [11]found that gender, cultural level, daily life management and emotional management is the influence factors of self depletion in patients with coronary heart disease, research [12,13] shows that the higher the self management level, the lower the self-regulation fatigue.

4.3 For studies used in diabetic patients

Several studies [16-19] showed self-regulation fatigue in diabetic patients. Yi Zihan et al. [16] found that the worse the sleep quality of subjects, the worse the self-regulation fatigue, and the worse the diabetes self-management behavior of patients. Zhang Jiayi [17] analyzed the influencing factors of self-regulation fatigue, and found that patients with low education level, hospital admission due to diabetes and low family income would have high self-regulation fatigue.

4.4 Studies used in hemodialysis, stroke patients and hypertensive patients

The study of stroke [20,21] patients found that the score of self-regulation fatigue was higher, Xu Shixian et al. [21] found that age, marriage status, illness duration and psychological resilience were all the influencing factors.

Lu Wenmei et al. [22] found that this type of patients had a high degree of self-regulation fatigue, among which the emotional control dimension had the highest score, and age, education background and dialysis period were the influencing factors of self-regulation fatigue.

5. Interventional study related to self-regulation fatigue

5.1 Empowerment theory

Empowerment theory [23] refers to the inherent power to help people consciously control their own lives and constantly improve their ability to cope with and solve their own problems in order to better control and manage their lives. Zhang Tongtong [24] also using the theory of empowerment of peritoneal dialysis patients for health education intervention, through face-to-face expert consultation and preliminary test to revise the scheme, the results show that empowerment education can alleviate the fatigue of patients.

5.2 Narrative therapy

Narrative therapy [25] refers to the process in which the consultant listens to the stories of others and uses appropriate methods to help the parties to find out the missing fragments, externalize the problem, so as to guide the visitors to reconstruct the positive story, so as to arouse the internal power of the parties to change.

6. Conclusion

Self-regulation fatigue to the patient's self management behavior, self efficacy, quality of life has a profound influence, so the staff, patients, family members and hospital leadership should focus on self-regulation fatigue, and most patients and cognitive control dimension score is higher, so should strengthen the cognitive ability of patients. The current domestic research method is relatively single, more for the status quo investigation and study, and related interventions in the early exploration stage, so in the future research, to expand samples build individualized, localization of intervention mode, will be beneficial to reduce self-regulation fatigue level, promote their physical and mental health.

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