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Prevention of malnutrition in community-dwelling elderly through self-monitoring

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Abstract

Purpose

Appropriate nutrition for the elderly is important for maintaining physical function and ensuring independence of living functions, leading to the maintenance and improvement of quality of life. This study introduces self-monitoring as a means to prevent malnutrition in community-dwelling elderly and examines its effectiveness. The self-monitoring method in this study involves the use of a simple device by the elderly which does not lead to an economic burden. Examining the effectiveness of such a self-monitoring health management method can contribute to the development of more effective programs for community-dwelling older adults.

Preliminary survey：Self-monitoring of health care for the elderly

This study aims to examine whether self-monitoring of health by community-dwelling elderly individuals can lead to the effective continuation of self-care. Participants comprised eight community-dwelling elderly individuals (mean age = 72.1, SD = 3.7). The participants self-monitored the implementation of a diet, oral hygiene, and physical activity for four weeks, and a semi-structured interview was conducted. The data were analyzed qualitatively. The results obtained were related to self-confidence, feedback, and usability. It was found that self-monitoring leads to the continuation of desirable health management behavior among the elderly.

First study：Self-monitoring criteria and their associations with nutritional status among community-dwelling elderly

This study aims to examine the association between nutritional indicators and self-monitoring items related to health management behavior in daily life. This study was conducted on 147 community-dwelling elderly persons aged 65 years and above who completed a self-administered questionnaire on health care behavior. We also gathered information on age and sex, and participants' medical history, current medical history, height, weight, and blood tests results from the health checkup database. Of the analyzed participants, 44 were men (40.4%) and 65 were women (59.6%), with an average age of 74.8 ± 6.7 years. Twenty-three participants (21.1%) had a BMI less than 21.5. People with a BMI less than 21.5 rarely eat protein-containing foods for lunch (p = 0.038). Based on these results, it is important to increase the intake of protein-rich foods rich for lunch to prevent malnutrition among community-dwelling elderly people.

Second study：Motivations for choosing protein-rich foods and their cooking methods among self-monitoring elderly: insights based on meal format and BMI

The purpose of this study is to investigate the relationship between food intake and BMI for the intake of foods high in protein. This study was conducted on 110 community-dwelling elderly persons aged 65 years and above who completed a self-administered questionnaire on the intake of high-protein food. Of the analyzed participants, 25 were men (33.8%) and 49 were women (66.2%), with an average age of 77.8 ± 5.6 years. Foods rich in chicken, pork, beef, minced meat, fish, egg, and soy protein did not have a common selection motive in terms of food form and BMI classification.

Third study：Self-monitoring aimed at preventing malnutrition among community-dwelling elderly

This study aims to implement eight weeks of self-monitoring into the daily life of community-dwelling elderly, and verify the effects in a randomized controlled trial. This study was conducted with 39 community-dwelling elderly persons aged 65 years and above who completed self-monitored their diet, oral hygiene. The self-monitoring method used in this study was effective for health management and was considered less burdensome. However, since there was no association with nutritional indicators, further verification is necessary.

Forth study：Long-term effects of self-monitoring in community-dwelling elderly

This study aims to evaluate the self-monitoring experience and its long-term effects on life and health management behavior. Of the 33 participants analyzed in Study 3, 25 were selected for this study conducted in 2015. The survey comprised a semi-structured interview and a self-administered questionnaire. A verbatim record was obtained from the interview and based on whether the self-monitoring experience was still being followed, the participants were classified into two groups. The group with self-monitoring continuing had significantly higher subjective health feelings and TMIG Index of Competence scores compared to the group who did not have such experiences.

Conclusion：

The self-monitoring method in this study could be used in daily life by community-dwelling elderly. This method was useful for managing health and was thought to be less burdensome. The self-monitoring group had significantly higher subjective health feelings and TMIG Index of Competence scores than the group that did not engage in self-monitoring. Thus, self-monitoring is an effective health management method aimed at preventing malnutrition

in community-dwelling elderly people. In particular, self-monitoring is an method for community-dwelling elderly people who can opt for a health management method that suits their needs.