



Systemic Education Program Development and Education Activities for Patients Undergoing Catheterization

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ARTICLE HISTORY

Received July 25, 2024

Accepted July 29, 2024

Published August 09, 2024

Introduction

With the age of aging, the number of elderly people with urination disorders is increasing. According to the data from the Health Insurance Review and Assessment Service, the number of patients treated with neurogenic bladder is increasing by 8 percent annually (2014-2018y). In terms of age distribution, 38.7% are in their 70s or older, accounting for a third, followed by 60s (21.6%) and 50s (16.1%). Among those diagnosed with neurogenic bladder, there is an increasing number of patients who are not able to urinate at all and who are urinating using urinary catheter. Most people who urinate using a urinary catheter have a lot of elderly people, and the understanding and management of urine catheter are poor. This affects the patient's poor health and poor quality of life. So we have developed and educated systematic education on catheter management for patient.

Purpose

The purpose is to develop a patient education program specifically tailored for elderly patients undergoing urinary catheterization, intends to assess the program's efficacy in enhancing elderly patients' comprehension and proficiency in managing catheterization procedures. By employing customized educational resources suited to the cognitive needs of elderly individuals and conducting training sessions using a simulated urinary catheterization model, these activities seek to bolster elderly patients' knowledge and catheter care capabilities. The objective is to devise and assess effective educational approaches for elderly patients, with the overarching goal of enhancing comprehension and management of urinary catheter and quality of life for this demographic requiring urinary catheterization.

Methods

Between March 2019 and November 2019, a total of 70 elderly patients receiving urinary catheter care were educated through the use of three systematic educational leaflets. Recognizing the unique needs of the elderly population, the educational materials were designed to be easily comprehensible, focusing on essential information related to catheter care.

Educational Leaflets: Handwashing and Catheter Care: The first leaflet emphasized the importance of handwashing, proper placement of urine drainage bags, adequate water intake, and recognizing warning signs for potential complications.

Fluid Intake and Self-Check List: The second leaflet introduced a self-check list highlighting the significance of fluid intake in maintaining urine flow and preventing urinary tract infections (UTIs) and catheter blockages. Given the increased risk of constipation among the elderly, the importance of maintaining adequate fluid intake was underscored.

Self-Dressing Methods: The third leaflet detailed self-dressing techniques for patients, particularly those utilizing a Supra Pubic Catheter. Procedures were outlined in a step-by-step manner, complemented by illustrative visuals for enhanced understanding.

Nurse Education and Use of Urological Models: To accommodate the low smartphone ownership and limited mobile device proficiency among elderly patients, nurses utilized bladder models for educational purposes. These models, featuring foley catheters inserted into bladders of different genders, provided a tangible representation of catheter care processes and potential discomfort, aiding in the patients' understanding.

Results

A total of 70 participants were included in this study to evaluate the effectiveness of the educational intervention. A pre- and post-activities survey was conducted using a 7-point Likert scale ranging from 0 (not at all) to 6 (extremely) to measure participants' responses. The data collected was analyzed using SPSS WIN 18.0 program.

The results indicate that the activities had a significant positive impact on most aspects measured, particularly in understanding of Catheter Problem Management ($p < .01$), understanding and implementation of educational content ($p < .001$), quality of life due to urinary symptoms ($p < .05$), and overall satisfaction with the hospital ($p < .01$). The only area without significant improvement was the satisfaction with the education time (Table 1).

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Table 1: Comparison of Survey Results Before and After Activities (N=70)

	Mean ± SD		P-value
	Pre education	Post education	
Understanding of Catheter Problem Management	4.6 ± 1.3	5.2 ± 1.0	0.002**
Quality of Life due to urinary symptoms	2.6 ± 1.3	2.8 ± 1.4	0.023*
Satisfaction of education time	3.5 ± 1.8	3.7 ± 1.5	0.441
Understanding of educational content	3.8 ± 1.8	4.2 ± 1.2	0.001***
Implementation of educational content	3.9 ± 1.9	4.8 ± 1.1	0.001***
Satisfaction with the hospital	4.0 ± 1.9	4.8 ± 1.3	0.002**

M=Mean; SD=Standard deviation.

* $p < .05$, ** $p < .01$, *** $p < .001$

Conclusions

The activities implemented in this study demonstrated significant positive impacts on various aspects of patient care and education. The structured educational sessions, practical demonstrations, and comprehensive materials provided participants with the necessary knowledge and skills to effectively manage catheter-related issues and urinary symptoms.

Statistical analysis revealed highly significant improvements in understanding of Catheter Problem Management ($p = 0.002$), understanding of educational content ($p = 0.001$), and implementation of educational content ($p = 0.001$). Additionally, there was a notable enhancement in the quality of life due to urinary symptoms ($p = 0.023$) and overall satisfaction with the hospital ($p = 0.002$). However, the satisfaction with the education time did not show a statistically significant change ($p = 0.441$), indicating a potential area for further refinement.

Overall, the activities were effective in enhancing patient education and satisfaction, contributing to better health outcomes and quality of life. Follow-up support and feedback mechanisms will be needed to ensure continuous improvement and adjustment of training content to meet the needs of participants. Future studies should focus on optimizing the duration and delivery of educational sessions to further improve participant satisfaction and engagement [1-4].

*SMG-SNU Boramae Medical Center has joined the International Health Promotion Hospital and conducts health promotion activities every year. This article is an activity conducted by the health promotion hospital in 2019.

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