The Effects of an Oral Care Program on Oral Health of Institutionalized Elderly

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INTRODUCTION

Institutionalized elderly overlooked the oral care because of multiple chronic diseases and decline self-care skills, impact the oral health quality of life, oral health status and nutritional status, resulting in oral-related diseases. There are few oral care program interventions. The purpose of this study was to develop an oral care program and to examine the effects of this program among institutionalized elderly.

METHODS

Setting and sample

This was a quasi-experimental pre-and-post study design. Convenience eligible subjects were recruited and randomly assign into experimental or control group by flipping coins. Fifty-four convenience subjects were recruited from two northern long-term care facilities, randomly assigned to the experimental group (n = 24) and the control group (n = 30).

The inclusion criteria were 1) age 65 and older, 2) conscious clear and be able to understand the instauration, 3) be able to communicated with Taiwanese and Mandarin, 4) be able to walk without assistants, 5) is oral intake 6) agree to participate in this study.

Elderly who was diagnosis dementia and head-neck cancer were excluded.

Instrument

Demographic data
The medical record was reviewed for age, gender, race, and education.

General Health Status
General health status were assessed by Mini-Mental Status Examination (MMSE), number of disease, medical history, and the number of teeth and Activities of Daily Living (ADL).

General Oral Care
General oral care was assessed by the frequency of changing toothbrush, frequency of brush teeth, timing of brushing and tool for cleaning dentures.

Subjective Oral Health Status
Subjective oral health status was measured by Oral Health Impact Scale – 14 (OHIP-14) . The 14 items divided into seven domains.

Objective Oral Health Status
Objective oral health status was measured by Oral Health Assessment Tool (OHAT).

Dental plaque
The dental plaque was assessed by dentist with dental disclosing solution.

Intervention

The intervention was defined as oral care program. The duration of oral care program was four weeks, the participants was received oral care twice right after breakfast and dinner every day. Every participant was taught individually according to their own oral hygiene, physical and cognitive ability, for a minimum of half an hour by a research assistant. In this context, feasible brushing techniques and handling of tooth/interdental space brushes were taught, and advice about tooth pastes and mouth rinses was given.

In addition, handling of their prosthesis was explained to prosthesis wearers. Participants received a tooth brush and a denture brush, toothpaste, mouth rinse, and an information brochure on oral care program. In the control group, the participants were received the usual care without any interventions. For ethical reasons, at the end of the study, the participants in the control group were also received the same oral care program.

Procedure

After informed consent from residents in long-term care facilities, research assistants used instruments to collect data pre and post the oral care program. The dental plaques were assessed by a dentist pre and post the oral care program. Residents in the experimental group were received 4 weeks oral care program and the control group received the usual care.

RESULTS

Variables	Experimental group (n=30)	Control group(n=24)	Statistic
	$M \pm SD$	$M \pm SD$	χ^2/F
Objective Oral Health Status OHIP-14			
pre-test	20.93±6.05	19.21±6.41	-1.276
post-test[a]	18.16	21.06	3.010
Objective Oral Health Status OHAT			
pre-test	4.43±1.41	3.54±1.10	-.783
post-test [a]	2.89	4.11	21.094**
Plaque Satus	N=22	N=21	
pre-test	8.14±5.08	7.05±3.97	-.891
post-test [a]	6.19	8.02	4.438*

1.[a]：covariance with age and education
2. *p <.05 **p<.001

DISSCUSSION & CONCLUSION

In this study, analysis of covariance (ANCOVA) using adjusted OHIP-14 post-test means was performed to examine the dental intervention effects. The results failed to reach statistical significance. However, the adjusted OHIP-14 post-test mean of the experimental group was significantly reduced compared with that of the pre-test. This suggested that the participants receiving care through the oral-health care program showed improved oral health-related quality of life. Thus, the oral health care program intervention can gradually improve the oral health-related quality of life. The statistically insignificant results were possibly associated with limitations created by the small sample.

Our findings that oral care effectively reduced dental plaque were consistent with those of previous studies. Specifically, the experimental group exhibited significantly improved dental plaque following enrollment in the oral hygiene program.

Key words: Oral care, Elderly, Institutionalized