30th International Conference on Health Promoting Hospitals and Health Services

Mini Oral Presentation

Improving care of people with multiple health problems and comorbidity II

Adoption, Acceptability, and Effectiveness of Community Software LINE Official Account for Oncological Case Management of Patients with Oral Cancer.

Introduction: Oral cancer is not only one of the most common head and neck tumors but also the key preventive and control project in Taiwan. Patients with oral cancer experience changes to their physical appearance and function than other types of tumor. Effective case management is essential in tumor care; however, related research on oral cancer has focused on care provided after operations and during hospitalization. Some nonemergency factors, such as nutritional supplements, swallowing, and language training, still affect the quality of life and mental health of patients and can affect health issues. Explored the effects of the community software LINE Official Account on the quality of life, symptoms, and active participation in treatment of patients after their discharge from hospital.

Materials and Methods: Experimental Design used, then explored the effects of using LINE Official Account on the quality and quantity of care information, health consultation, and patients' participation rate, and also constructed an oral cancer health-care information app. The app notified the patients in the experimental group and provided one-on-one chatting.

(1) Patients: The inclusion criteria were as follows: (1) having a diagnosis of oral cancer for longer than 6 months regardless of hospitalization or being an outpatient who met the criteria of the *International Classification of Diseases, Clinical Modification, Ninth Edition* (*ICD-9-CM*) disease classification codes 140.0–149.9, (2) older than 20 years, and (3) having a primary caregiver with access to a smartphone.

(2) Research Design: An experimental design was adopted. The patients provided basic data (demographics, disease attributes, and therapeutic history) and data on symptom distress, quality of life, and health-care needs by completing a questionnaire; this was done after case collection and before grouping. The patients were randomly divided into two groups by using a computer-generated simple random number table. A total of 55 patients were in the experimental group, and 45 patients were in the control group. In the experimental group, LINE Official Account was used by the patients to receive self-care information, timely notifications, and one-on-one health-care consultations. By contrast, the control group followed standard health-care practices. In the second and third measurements (Months 3 and 5 after case collection, respectively), the patients answered the same questionnaire as they completed in the first measurement.

(3) **Pretest and Posttest Instruments:** The scales used to gather data from the patients were as follows: Symptom Distress Scale (SDS), Health-care demand scale, European Organization for Research and Treatment of Cancer Quality of Life Questionnaire C30, and LINE Official Account Content.

Result:

Demographic- In total, 100 patients with oral cancer recruited. Disease history ≥6 months but ≤ 1 year (41%) ; Men (91%), ≥ 50 Y/O (72%), married (85%), Junior or senior high school education (69%); Buddhist (85%); had quit smoking, chewing betel nuts, and drinking alcohol (60%–76%). Received surgery, chemotherapy, or radiation therapy once (69%–87%) , not undergoing surgery, chemotherapy, or radiation therapy (87%–95). But there were no significant intergroup differences were found between these data.

Missing subjects- Before second questionnaire, 2 patients each in the experimental group and the control group died. Before third questionnaire, 2 patients in the control group died.

Effects of Participants

(1) Tracking Results of the One-on-One LINE Official Account Consultation System- There were 10 in the experimental group asked questions on the app., and their questions mainly about swallowing problems, nutrition, chemotherapy announcements, psychological support, and registration.
(2) Effects of Timely Notifications from LINE Official Account on Support Group Participation- 10 of which were in the experimental group and one in the control group. The 10 patients in the experimental group all reported that they received notifications over LINE Official Account. The patient in the control group received information from their case manager when returning to the hospital for a consultation. The timely notifications from LINE Official Account effectively informed the patients that they could and should participate in support groups ($P = 0.021$)

Feedback of Participants

(1) Changes in Symptom Distress, Quality of Life, and Health-Care Needs- Control group's symptom distress and health-care needs decrease but quality of life increase. Experimental group's health-care needs decrease but symptom distress and quality of life increase. GEE analysis for the second test indicated a significant difference regarding overall quality of life over 7 days ($P = 0.023$).
(2) Satisfaction with Disease Care Information Provided Over LINE Official Account- There were 45 patients (95.8%) satisfied with messages provided by the Patients Association LINE Official Account, and 45 patients (95.8%) thought our Oral Cancer Patients Support Group LINE Official Account was helpful. Another 32 patients (68.1%) satisfied with the consultation mode when encountering problems at home.

Another 9 patients (19.1%) had once asked a question through our Oral Cancer Patients Support Group LINE Official Account.

Discussion: The care information and health consultation for patients with oral cancer provided over LINE Official Account did not significantly affect the quality of life, symptom distress, or health-related needs of our participants ($P > 0.05$). The two groups' overall quality of life over 7 days did significantly differ ($P = 0.023$). In the control group, the results in the posttest were poorer than those in the pretest ($P = 0.005$). The Deloitte Centre for Health Solutions (2014) , 75% of the British public voluntarily seeks health care information online; enhance communication and contact time with patients by 29%, decrease paperwork by 60%; decrease hospital admissions by 35%, decrease drug use by 53%, and reduce the length of hospital stays by 59%. Patients, their family members, and case managers often consider LINE Official Account to be convenient and worth applying to case management. Overall, the benefits achieved are in line with the SDGs with Good Health and Well-being and decreased social withdrawal among patients with oral cancer.

Conclusion:

(1) Following suggestions for case management- An "Oncology Management Care Map" should be constructed with patients at the center and case managers as their counterparts. Oral-cancer-related care information should be provided to promote patient participation in self-care, provide cross-team care, and give patients crucial information after they are discharged. A one-on-one consultation system without pressure or time constraints should be offered.

(2) Following suggestion for community software- A self-evaluation system should be constructed in which patients can evaluate their condition and upload data; a nurse will then review the patient data and provide guidance. 2. Family members should be allowed to log on, leave messages, learn about patient care, ease the burden on family members, and provide family members with an outlet to express emotions and seek care resources. 3. Small-scale, multifunctional, long-term stations should be established and nursing functions at health centers should be expanded to care for oral cancer wounds and patients with terminal illness.