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Validity and usability of templates for a tablet-type database system created for community health nurses in Thailand

Naoko Arakawa¹, Katsumasa Ota², Lukawee Piyabanditkul³ and Masatoshi Ishikawa⁴¹Chubu University, Japan²Nagoya University, Japan³Khon Kean University, Thailand⁴Tokyo-Seitoku University, Japan

Background: Community Health Nurses (CHNs) in Thailand are the key players in the health promotion and follow-up for rural residents with chronic diseases. Our previous study showed there were major six target groups: diabetes, hypertension, stroke, maternity, neonate and tuberculosis among them. However, because CHNs were recording residents' information using paper-based formats, they could not well utilize data collected from the residents.

Purpose: The purpose of the study is to develop an easy to use database system that could directly input data from residents using a tablet device and examine its validity and usability.

Methods: Through five rounds of reciprocal development processes with CHNs who worked at a health-promoting hospital in rural Northern-east Thailand, we revised designs, structures and data-entry format of a tablet-type database system for the six target groups. In the final study, we asked four CHNs to use our system in their daily activities for five months to evaluate the usability.

Results: Four CHNs who participated in this trial, collected data from 101 patients. Most of the data were collected from diabetes patients (n=64) and 65% had suffered nerve damage in the peripheral nervous system. CHNs provided education to patients on diet (94%), exercise (91%), curative medicine (78%), self-control (45%), sleep (42%) and stress management (35%). CHNs could notice the detailed statistical trends for the first time, whereas previously they had just impressions through their activities.

Conclusion: Our system can provide better information easily that could show the attributes of residents with chronic disease. Further, it would help to describe the daily community health activities, which were not described before this system was used. We also expect this system to help CHNs' decision making to improve quality of community health.

Biography

Naoko Arakawa is a Registered Nurse and a Public Health Nurse who currently works as an Assistant Professor at the College of Life and Health Sciences at Chubu University. She is also pursuing her PhD on Fundamentals and Clinical Nursing at the Nagoya University Graduate School of Medicine. The research theme of her Doctoral thesis is to promote work efficiency and effective use of data by developing a database system for community health nurses in developing countries. She has acquired a Grant-in-Aid for Young Scientists from the Japanese government for her work on the research theme. She is interested in Nursing Informatics, particularly practical work using the Nursing minimum data set and the development of database systems.

maruyama@isc.chubu.ac.jp

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