



Service Priorities and Programmes Electronic Presentations

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Advanced Technology for Home Based Cognitive Training: A Cost-effective Approach

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Enhance Cognitive Function

Introduction

A major concern with the rise in life expectancy is the increased prevalence of cognitive decline. In occupational therapy department, referrals for cognitive rehabilitation have increased from 365 in 2009 to around 1000 last year. It indicated the need to develop a cost-effective intervention. Currently, computerized cognitive training is available in occupational therapy department; however due to limited resources, patients can only attend one session a week on an 8-10 sessions basis. It is indispensable to extend department-based training to home-based in order to sustain treatment effect; hence home-based computerized cognitive training program was developed.

Objectives

1. To provide a cost-effective cognitive training alternative for patients to train at home anytime
2. To provide training for patients who cannot attend department-based cognitive training

Methodology

The program was implemented in occupational therapy out-patient department in Prince of Wales Hospital. Patients who cannot attend the department training or require further training after completion of department training were recruited. A personalized treatment plan was offered by occupational therapists. List of computerized cognitive training games that are available on tablet, smartphone and computer were provided and encouraged to install on their own digital devices. After 1-2 weeks, evaluation of the treatment was done in form of survey, collecting feedbacks from patients or their caregivers and occupational therapists.

Result

From December 2016 to February 2017, 32 patients were recruited to the program; 22 surveys were collected via phone calls, feedbacks from the involved occupational therapists were also assembled.

Treatment Compliance: Over 75% of patients had successfully installed cognitive games on their digital devices, the average hours for their training attendance was 3.5 times per week and the mean duration of each training was 29 minutes. Over 95% of patients were willing to have regular training. Around 25% of patients failed to install the cognitive games as their caregivers were not available to assist the set-up procedure.

Patient's feedback: All patients agreed the variety of the prescribed cognitive games is enough; they were willing to receive updated information for the cognitive games. Over 95% of patients agreed the prescribed cognitive games are of suitable level. Over 91% of patients enjoyed the training and agreed the games are easily accessible. Over 83% of patients expressed the program has increased patient's motivation in improving own cognitive function.

Occupational Therapist's feedback: Therapists championed the feasibility and cost-effectiveness of the program as it can be easily implemented and helps to reduce the long waiting list for cognitive training.

In conclusion, with good compliance and high satisfaction from patients, caregivers and occupational therapists, the program successfully provided a new cognitive training platform to future target patients.