The impact of e-Learning for the elderly on drug utilization – a randomized controlled trial

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Introduction

Prescription and use of medications by the elderly have to be improved.

The objective of this study was to investigate the effects of e-learning for the elderly on drug utilization concerning knowledge, self-confidence and beliefs about medicines.

Methods

The study was a randomized controlled trial in elderly people (aged ≥65 years). Participants (included n=248, analyzed n=194, drop-outs n=54) were recruited from patient and pensioners´ associations. Participants were randomized to either an intervention group (IG, n=95) that participated in the e-learning or to a control group (CG, n=99) that did not participate in the e-learning.

A web site including e-learning modules with informative films was used to distribute information in the field of drug utilization. The modules were adapted for the use of the elderly. Data were collected using questionnaires; the General Beliefs about Medicines Questionnaire (BMQ) were used as well as a questionnaire concerning the content in the e-learning modules (knowledge questions). The participants were asked to fill in and return the questionnaires within two weeks after agreeing to participate in the study.

The questionnaires were evaluated with quantitative analysis. A two-tailed unpaired t-test was performed to compare the scores of the knowledge questions between the groups.

Results

Results from a pilot study indicated that e-learning modules were a suitable tool for distributing information and education and that they could be managed by elderly individuals, allowing them to learn more about medication use.

The preliminary results from the present study showed that there was a statistical significant difference ($P<0.0001$) in knowledge scores (mean ± CI) between the IG (14.12 ± 0.75) and the CG (10.76 ± 0.66). The total number of knowledge questions in the questionnaire was 20.

The work is in progress and the analysis of all the results will be completed during the spring 2016.

Discussion

In the future, the proportion of elderly in the population will increase and each individual will probably take more responsibility for her own health. It is important to enhance patient participation and empowerment. Increased knowledge and self-confidence about medicines among patients might create better conditions for a good communication between the patient and health care, and enhance the participation.

The use of internet allowed flexible learning, i.e. participants were able to choose the time and place that suited them, and to repeat the lesson as required in their own pace. In general, a lack of experience with computers could prevent elderly patients from participating in e-learning.

The elderly people who agreed to participate in our study were probably those with an interest in drug and medical treatment and who wanted to learn more. This limits the generalizability of the results.

In the future, we will explore the attitudes of elderly people to e-learning in the field of drug utilization, with particular emphasis on layout, usability, relevance and level of knowledge.

Acknowledgments

The e-learning web site was developed with help from Mattias Johansson (ICT teacher). This work was supported by The Kamprad Family Foundation.

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