The Efficacy of Home Rehabilitation

Introduction

The Wisdom at Senior Citizen's Home was a two-year (2014-2016) research and development project.

The aims of the project were
1) to develop a new cost-effective and versatile rehabilitation service concept for senior citizens,
2) to develop a model for rehabilitation services, which was based on the seniors' needs and
3) to pilot technology assisted rehabilitation as part of the project.

The development process was carried out in active dialogue with all stakeholders.

The research provided scientific information on the efficacy of the home rehabilitation pilot and the development process.

Methods

The research was based on practice research methodology. The target group consisted of two subgroups: home care customers (n=21) and seniors who used only home care support services (n=20).

Short Physical Performance Battery (SPPB), EuroHIS-8 and Visual Analog Scale (VAS) assessments were done at the beginning and at the end of the 12-week rehabilitation period.

The technology applied in project consisted of activity trackers and virtual group meetings. The activity trackers measured the seniors' daily activities. Five seniors participated in the virtual group meetings.

Semi-structured interviews and structured questionnaires were used to collect the research data of the user experiences. The user experience was also collected from the customer panels.

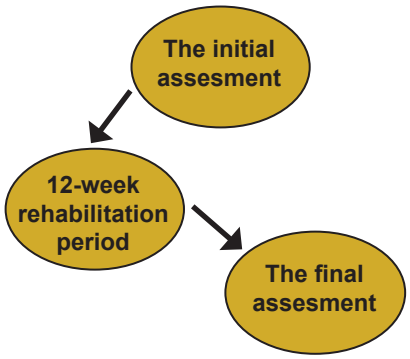

Figure 1. The 12-week rehabilitation period

SPPB	Results	
The initial assesment	Home care customers Support care customers	4,8 7,6
The final assesment	Home care customers Support care customers	5,0 8,6
The average change %	Home care customers Support care customers	9% 16%
N	Home care customers Support care customers	21 20

Table 1. The development of physical activity

EuroHIS-8	Results	
The initial assesment	Home care customers Support care customers	3,71 3,65
The final assesment	Home care customers Support care customers	3,74 3,92
The average change %	Home care customers Support care customers	2% 9%
N	Home care customers Support care customers	18 21

Table 2. The development of the quality of life

Results

The physical activity (SPPB) and quality of life (Euro-HIS8) improved during 12-week rehabilitation period in both subgroups. VAS showed no significant changes in experience of pain. The seniors who had individual rehabilitation plan and attended the subgroups showed improvement in the SPPB and EuroHIS-8 assessments comparing to those, who did only the rehabilitation at home with the help of home care personnel.

The activity trackers produced moderately well information about the development of the daily activity during the rehabilitation, excluding the seniors, who used a walker.

The research results provide useful findings for those interested in home rehabilitation and implementation of new initiatives in developing the services.

Conclusions

It is possible to improve the physical activity of the seniors with the help of individual rehabilitation plan and guidance of the professionals.

The best results are achieved by the combination of an individual rehabilitation plan and the group rehabilitation.

The technology offers new possibilities for rehabilitation, but there is still need for further development in order to meet better the needs of the elderly. The customer panels proved to be a useful method to involve customers in the development process. Additional training for the home care personnel is needed in order to get good results in home rehabilitation.

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