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Musculoskeletal Telerehabilitation User Satisfaction - Preliminary Report

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Abstract: Patients participating musculoskeletal telerehabilitation due to their hip or knee osteoarthritis during the project „CLEAR” - Clinical Leading Environment for the Assessment and validation of Rehabilitation Protocols for home care were recruited to the user satisfaction study. After one month duration of the telerehabilitation participation at home patients were asked to assess their use of the Habilis platform. They were surveyed with use the Preference and Satisfaction Questionnaire. The assessment focused on observed advantages, satisfaction, and ease use of the telerehabilitation platform. Patients were asked additionally about their attitude towards potentially commercial participation telerehabilitation. One hundred and thirty eight patients assessed the platform. Over 80% assumed the improvement of efficacy and quality of the treatment and treatment enhancement. Approximately 95% of patients confirmed that use of the platform was good idea, and 87% of patients thought that telerehabilitation with use the platform were also advantageous for their treatment outcomes. 93% of patients would recommend this form of rehabilitation to other patients. More than 80 % would like to continue telerehabilitation. However, 70,12 % of the study participants would continue their telerehabilitation even if it would be not reimbursed. Obtained results confirm that telerehabilitation is considered effective and improving quality of service in patient’s subjective opinion. The most of the patients would continue home therapy with supervised on remote, having individually tailored schedule and clear instructions.

Introduction

The satisfaction of users became a new important, measurable value that may inform about used system acceptance. It applies not only to computer use. Inserting the computers to remotely supervised rehabilitation made user

satisfaction assessment applicable to telerehabilitation. This new form of rehabilitation becomes more popular for patients suffering chronic diseases and requiring long term treatment. Therefore user satisfaction assessment appears as an important element of the implementation. The aim of the study was to present preliminary results of the user satisfaction study.

Material and Methods

One hundred and thirty eight hip or knee osteoarthritis patients participated in the user satisfaction study. 41,3% of patients were males and 58,7% females. Their average age was 68,92 years (SD 7.94). All of those patients exercised at home for one month period utilizing telerehabilitation platform. Patients were surveyed after finishing their programs. The survey focused on the overall satisfaction including observed advantages and ease use of the telerehabilitation platform. Additionally, patients were asked about their willingness to recommend this form of rehabilitation to other patients.

Results

Over 80% assumed the improvement of efficacy and quality of the treatment and treatment enhancement. 86,95% of patients assumed that using platform was beneficial for their treatment. Approximately 95% of patients confirmed that concept of use of the platform was good (82,6%). 87% of patients thought that utilized form of telerehabilitation was advantageous for their treatment outcomes. 93% of patients would recommend this form of rehabilitation to other patients. More than 80 % would like to continue this form of rehabilitation. The most appreciated parts of the program were short instructional clips, individually tailored exercise program, exercising at home, and improved safety while exercising at home. A few patients were disappointed with mobile internet connections problems.

Discussion

There is little research published on patient satisfaction of the process of telerehabilitation. Tousignant et al. [1] assessed satisfaction in groups of patients who participated in-home telerehabilitation after knee arthroplasty surgery. They found the high level of satisfaction. Also, Eriksson et al. [2] assessed patients' experiences of telerehabilitation at home after shoulder joint replacement. Patients described that aspects which contributed to their recovery after home therapy were: safety, continuity, collaboration and home environment. Piron and al. [3] compared the degree of satisfaction among post-stroke patients with arm motor impairment who underwent a

virtual reality therapy program at home. Level of satisfaction of patients who exercised at home showed equal to or higher than the hospital treated patients. Moreover, patients who exercised at home were able to engage in therapy in home environment and the videoconferencing system ensured a good relationship between them and the physical therapists whose physical proximity was not necessary. Similarly, the research of user satisfaction of telemedicine in the hospital-assisted home for INR monitoring service for long-term warfarin using children [4] have shown high level of all aspects of the service evaluated. Similarly to our study Burdea conducted research that [5] shown remarkable advantages of telerehabilitation in domains of patient's motivation, adaptability and variability. Finally, Sugarman [6] described some benefits of a "smart" system, self-adapting to the patient's needs in real time, inexpensive and easy to use for patients, and capable for remote monitoring and control of the patient's computer and analysis of patient status by the therapist in the clinic.

Conclusions

Presented results show good level of satisfaction among patients who were received the telerehabilitation program. They were convinced that telerehabilitation contributed to the improvement of their health and treatment. Obtained results confirm that patients consider telerehabilitation as effective and improving quality of their service. The conclusion can be drawn that telerehabilitation evolves to be a promising support to traditional face to face rehabilitation treatment.

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