

Abstract

Title : Preconditions of feedback mechanism in telerehabilitation

Objectives: The aim of this master thesis was to determine whether and under what conditions it is possible to objectively assess the exercise execution, according to predefined parameters of given exercise remotely, based on vide-recording only.

Methods: 40 probands, a healthy adult population, were included in the evaluation, for which video recordings of the exercises were made. These exercises were then judged by 75 raters-more or less experienced specialists in the field-according to preset conditions. They were evaluated for their agreement with each other, their agreement with themselves when the same video was repeated, and the difference between the ratings according to their length of practice. Parameter analysis was performed according to the agreement in their ratings, or the differences between the rating parameters in terms of their specificity. The measured values were statistically and graphically processed..

Results : It has been shown that the correctness of the exercise execution can be remotely evaluated, especially if specific parameters are selected, mostly those for which it is easy to determine the truth value. A higher degree of objectivity and therefore inter-rater agreement is achieved by raters with longer experience in the field who achieve high level of agreement. For objective evaluation using a medium such as video recording, or perhaps other forms in the future, it is necessary to select exercises that are easy to perform, the evaluation should be performed by experts with as much experience as possible, and the parameters for evaluation should be chosen so that they are well defined and it is only possible to determine the evaluation in terms of whether or not the parameter is valid..

Key words: Remote evaluation, exercise, video recording, evaluation parameter. Inter rater reliability, Intra rater reliability, agreement in remote exercise evaluation, objectivity of evaluation by video.