

The Effect of Implementation of a Program to Promote Physical Activity in the Relationship between Functionality and Well-being in Patients with Multiple Sclerosis

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Abstract: The aim of this study is to examine the implications of the IPPA in the perception of functionality and wellbeing in Multiple Sclerosis (MS) patients. **Methods** - This is a quasi experimental study non-randomized study with 27 MS patients diagnosed at least 1 year before, and with an EDSS score of under 7. We used the IPPA in 3 groups of eight people in 3 Portuguese hospitals (Lisbon, Coimbra, and Porto). The sessions were held once a week for 90 minutes, over a period of 7 weeks. The instruments used were: We asked the subjects the question "Please classify your functionality?" and used the Personal Wellbeing Scale (PWS) at the beginning (time A) and end (time B) of the IPPA. We used the SPSS version 20. We used the spearman correlation test for the variable analysis. The intervention followed the recommendations of the Helsinki Declaration. **Results** - The Results the correlations between the functionality perception and well-being, before application of IPPA ($r=0.47$, $p<0.01$), and the end of the implementation of IPPA ($r=0.63$, $p<0.01$). The results show that the IPPA improves the correlation between functionality and well-being. **Conclusions** - The IPPA can play an important role in modifying the perception of functionality and personal wellbeing.

1 INTRODUCTION

Multiple Sclerosis (MS) is a chronic disease of the central nervous system that affects more often young adults in the prime of his career and personal development, with no cure and unknown causes. The most common signs and symptoms are fatigue, muscle weakness, changes in sensation, ataxia, changes in balance, gait difficulties, memory difficulties, cognitive impairment and difficulties in problem solving (Compston, Coles, 2008; Grima, Torrance, Francis, Rice, Rosner, Lafortune, 2006). MS is a relatively common neurological disorder in which various impairments and disabilities impact strongly on function and daily life activities.

The increasing the number of people with chronic illness to live in the community, allows the involvement of public health, management of chronic disease, promoting well-being and functionality of these people. The Promoting physical activity in people with chronic disease, such as multiple sclerosis (MS) has an important

role for public health (Asano, Dawes, Arafah, Moriello, Mayo, 2009).

The aim of this study is implementation of a program of physical activity to improve the functionality and well being with patients of Multiple Sclerosis (MS).

2 METHODS

This is a quasi experimental study, the hypothesis is: people with MS that practice physical activity have a better perception of the functionality; people with MS that practice physical activity increase the well being.

The study includes a consecutive sample of 27 MS patients, diagnosed at least one year, and with an Expanded Disability Status Scale (EDSS) (Kurtzke, 1983) score under seven. The sample was divided in three groups, each group including eight people, collected sequentially in three Portuguese hospitals (Lisbon, Coimbra, and Porto) with the collaboration

of their personal physician. The sessions were held once a week for 90 minutes, over a period of seven weeks.

The IPPA objective is to promote autonomous physical activity via a better well being. Each session aimed: to stimulate group discussion about a theme related to inability or limitation in physical activity; to discuss strategies to minimize these limitations; to define and learn appropriate physical activities to implement between sessions.

We focus a set of exercises to be used in daily life activities, according to studies developed with MS patients (Howe, Gomperts, 2006; Khan, Turner-Stokes, Kilpatrick, 2007; Rietberg, Brooks, Uitdehaag, Kwakkel, 2005; Stuifbergen, Blozis, Harrison, Becker, 2006; White, Dressendorfer, 2004).

The application of the program followed the self regulation model (Maes & Karol, 2005). This model includes three procedural phases: the first phase, the individuals identify and define personal goals they wish to achieve; the second phase they implement strategies to achieve pre-set goals; the third phase they assess if they reach the intended objectives, as well as maintenance.

The assessment of variables used one question for disease severity, "Please classify your functionality?" with an answer in numerical scale between "0" and "11" and the Personal Wellbeing Scale (PWS) (Pais Ribeiro & Cummins, 2008), a one dimensional scale including seven questions with a classification between "0" and "100", to assess well being, at the beginning (time A) and end (time B) of the IPPA.

We used the Spearman correlation between the functionality and Wellbeing scale. We used the Statistical Package for the Social Sciences (SPSS) version 20. The intervention followed the recommendations of the Helsinki Declaration.

3 RESULTS

The age range of the subjects was between 20 and 58 years with a mean age of 44 years. 58.3 % were women, 37.5 % were currently married, 67% were retired and the mean level of education was 12.5 years.

The Results the correlations between the functionality perception and well-being, before application of IPPA ($r=0.47$, $p<0.01$), and the end of the implementation of IPPA ($r=0.63$, $p<0.01$). The results show that the IPPA improves the correlation between functionality and well-being.

4 CONCLUSIONS

The IPPA can play an important role in modifying the perception of functionality and personal wellbeing. Initial hypothesis where confirmed. We think this program promotion and awareness of the importance of physical activity, using the conceptual model of self-regulation, can be very beneficial for the prevention of disabilities you stay in people with MS.

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