Implications of the Intervention Program for Physical Activity (IPPA) in the perception of illness and wellbeing in people with Multiple Sclerosis (MS)

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Abstract:

The aim of this study is to examine the implications of the IPPA in the perception of illness and wellbeing in MS patients. Methods - This is a quasi experimental study non-randomized study with 24 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 the severity of your disease?" 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. A non-parametric statistical hypothesis test (Wilcoxon test) was used for the variable analysis.
The intervention followed the recommendations of the Helsinki Declaration. Results – The results suggest that there are differences between time A and B, the perception of illness decreased ($p<0.08$), while wellbeing increased ($p<0.01$). Conclusions: The IPPA can play an important role in modifying the perception of disease severity and personal wellbeing.

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 aim of this study is to examine the implications of an Intervention Program of Physical Activity (IPPA) the perception of illness and wellbeing in MS patients.

Methods - This is a quasi experimental study, the hypothesis is: people with MS that practice physical activity have a better perception of the severity of disease; 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 visa 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.

Table 1 is sketched the intervention program as follows: the Therapist Objectives, the Activities to Develop and Physical Activity.

Table 1 - Intervention Program IPPA in MS

Objectives Therapist	**Activities to Develop**	**Physical Activity**
-to stimulate the group towards collaborative interaction of all participants. - to Inform about the objectives of the work that will be developed over the next eight weeks, once a week for (90 min.) -to explain the international recommendations. -to plane the activities for between sessions	- Each session begins with a discussion between the group members about a topic related to physical functional limitations (40min.). -Approach the strategies used to cope with the limitations using the self-regulatory model. - Promotion of AR, a biopsychosocial perspective -Strategies that can be implemented to promote AR, taking into account the personal goals of each patient. - Setting goals to be met until the next session	- Exercise session (30min) using the particulars of scientific evidence. -Moderate-intensity aerobic 1.exercicios 2.treino resistance with low or moderate intensity, first the large muscle groups after the small groups. 3.exercicios flexibility moderate - Program consists of 4-8 different types of exercises, 1-3 sets, increasing gradually, with rest periods. - At the end short relaxation session (10min.)

The assessment of variables used one question for disease severity, “Please classify the severity of your disease?” 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", (internal consistency of ???) to assess well being, at the beginning (time A) and end (time B) of the IPPA.
Because we are using ordinal variables and the sample is small, we used non parametric statistic to compare initial and final results, named the Wilcoxon test for paired samples. We used the Statistical Package for the Social Sciences (SPSS) version 20. The intervention followed the recommendations of the Helsinki Declaration.

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.
Between time A and B, the perception of illness decreased ($p<0.08$), while wellbeing increased ($p<0.01$), confirming the hypothesis of the study.
Results suggests that an intervention program that helps people to discuss their limitations, that identify ways to surpass tem, and teach the way to implement personal defined physical activities, can be useful in the way they deal with everyday life, and to feel improve perception of well being.

Conclusions: The IPPA can play an important role in modifying the perception of disease severity 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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