

Avaliação longitudinal da Escola de Postura para dor lombar crônica através da aplicação dos questionários Roland Morris e Short Form Health Survey (SF-36)

Longitudinal evaluation of Posture School for low back pain by the questionnaires Rolland Morris and Short Form Health Survey (SF-36)

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RESUMO

O objetivo desse trabalho foi analisar quantitativamente a resposta ao tratamento dos pacientes com dor lombar crônica atendidos pela “Escola de Postura” da DMR-HCFMUSP no período de outubro de 2001 a julho de 2004, usando os questionários Roland-Morris (RM) e Short Form Health Survey (SF-36). A intensidade da queixa dolorosa foi avaliada pela Escala Visual Analógica (EVA). A amostra inicial foi composta por 244 prontuários de pacientes encaminhados e avaliados para a Escola de Postura no período de outubro de 2001 a julho de 2004, tendo completado o programa 110 pacientes desse total. Alguns dados referentes a estes pacientes foram coletados, tais como: diagnósticos etiológico, tempo de evolução da doença e origem do encaminhamento; dados sócio-demográficos como sexo, idade, escolaridade, estado civil, ocupação; e, também, o comparecimento aos retornos após o primeiro mês, quarto mês, e um ano a contar da avaliação inicial. Observou-se que os indivíduos que concluíram a Escola de Postura apresentaram melhora significativa nos domínios do SF-36 para Capacidade Funcional, Aspectos Físicos, Dor, Estado Geral de Saúde, Vitalidade, bem como na avaliação pela EVA e questionário RM. Não foram observados ganhos estatisticamente significantes nos domínios Aspectos Sociais, Emocionais e Saúde Mental. Cabendo ressaltar que o período de alcance da Escola de Postura, não possibilita afirmar mudanças significativas quanto a aspectos afetivo-emocionais e novas posturas em seu relacionamento social. Novos estudos, quantitativos e qualitativos devem ser realizados de maneira a oferecer subsídios à equipe multiprofissional da Escola de Postura que permitam operar mudanças e ampliar recursos terapêuticos se necessário.

PALAVRAS-CHAVE

avaliação funcional, lombalgia, qualidade de vida, questionários, reabilitação, escola de postura.

ABSTRACT

The objective of this study was to analyze quantitatively the response of patients with chronic low back pain to treatment at the Back School in DMR-HCFMUSP between October 2001 and July 2004, using the Roland-Morris (RM) and Short Form Health Survey (SF-36) questionnaires. Pain intensity was measured by the visual analogue scale (VAS). The initial sample consisted of 244 medical charts of patients referred to the Back School program for initial evaluation between October 2001 and July 2004; of this initial sample, 110 patients completed the program. Data were collected from these patients such as: etiologic diagnosis, history of disease and referring institution; socio-demographic information such as gender, age, education level, marital status, occupation, and also attendance to clinical interviews scheduled for the first and fourth months after treatment and one year after the first evaluation. The group that completed the Back School Program showed improvement at SF-36 domains: Functional Capacity, Physical Conditions, Pain, General Health Status, Strength, as well as in VAS and RM evaluations. No statistically significant changes in Social, Emotional, and Mental domains were observed. The Back Pain School allowed fewer changes regarding affective emotional conditions and social relationships. Further qualitative and quantitative studies must be carried out in order to support the development of specialized multiprofessional teams, who will carry out alterations and add to therapeutic resources, if necessary.

KEYWORDS

functional evaluation, low back pain, quality of life, questionnaires, rehabilitation, back school.

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Introduction

Low back pain is a general denomination for all categories of pain, with or without rigidity, which is located in the lower back region between the last costal arch and the gluteal fold. Its study is of interest to different medical specialties and comes from the origins of the history of Medicine. According to Cossermelli¹, low back pain represents 30% of all rheumatic complaints and disc degeneration, especially at the level of the last two discs (L4-L5 and L5-S1), is the most frequent cause of low back pain.

Low back pain is generally caused by a number of factors, which involve sociodemographic (age, gender, marital status, educational level, income) and behavioral (sedentary life, smoking) factors, occupational activities including those that involve exposition to prolonged vibratory stimuli, heavy work, absence of adequate ergonomic conditions, vicious postural pattern, repetitive movements and even dissatisfaction at work².

Chronic low back pain (CLP) is recognized as an incapacitating syndrome and is characterized by pain that persists into the third month after the first episode of acute pain and by the progressive onset of impairment. Many times it has an indefinite start, with periods of improvement alternating with periods of worsening³.

Due to the relevance of the matter, either because of the large number of individuals affected by the disease or due to the social, economical and familial consequences derived from it, treatment strategies have been developed in search of higher efficiency in the prevention or cure of low back pain.

Hence, in 1969, Zachrisson-Forsell created in Sweden a training program focused on the prevention and educational aspects called "Back School". It is an intervention model for unspecific low back pain that offered an intensive educational program aiming at reducing pain and preventing its recurrence. It consisted on information about the spinal column mechanics, posture, ergonomics and a set of exercises supervised by physicians or physical therapists. It consisted of groups with 6 to 8 patients each and a 4-class program twice a week for 45 minutes⁴.

The premise of the Back School of the Division of Rehabilitation Medicine (DRM) of Hospital das Clinicas of the University of Sao Paulo School of Medicine (HC-FMUSP) is to provide education for basic prevention and reduction of low back pain episodes, encouraging patients to bear the responsibility regarding their treatment and recovery.

As the Back School of the DRM-HCFMUSP is dedicated to the multiple aspects of the daily life of an individual with low back pain and to teaching patients methods to overcome these factors in order to better control their symptoms, the choice of an evaluation tool should contemplate this variety of outcomes directed at the treatment, and not be solely restricted to the pain complaint.

Objective

The specific objective of the present study were: to evaluate the interference of pain on the functional performance of patients who completed the Back School program from October 2001 to July 2004 at the DRM of HC-FMUSP and study the association

of pain in relation to gender, educational level and age. We also aimed at analyzing quantitatively patients' response to treatment through the assessment of the "Roland-Morris" (RM) and "Short Form Health Survey" (SF-36) questionnaires and the visual analogue scale (VAS).

Methods

Two hundred and forty-four patients' files were referred to and analyzed by the program of the Back School (BS) from October 2001 to July 2004, and data regarding sociodemographic information, gender, age, educational level, marital status and occupation were collected.

The attendance to reassessments was also verified after 1, 4 and 12 months after the initial assessment, with a total of 110 patients who finished the proposed program entirely, and were selected for this study.

Regarding the marital status, the patients were classified as married, single, divorced and widowed. As for the educational level, they were divided as having Grade School, High School and College education. The patients' occupational situations were assessed, and women who had housework as their sole occupation were classified as housewives. The patients had their results at the SF-36 and RM questionnaires analyzed, applied during the BS at the four moments of the study.

The patient's inclusion at the Back School program of the DRM of HCFMUSP started with a triage carried out by the physician, psychologist and social worker, having as inclusion criteria individuals with the following characteristics:

- Individuals of both sexes;
- Older than 16 yrs of age;
- Literate individuals;
- Presenting a stable clinical picture;
- No cognitive alterations;
- Psychological conditions that allowed their interaction with a group;
- Time availability to attend treatment full-time daily, during four days a week.

The exclusion criteria included pictures suggestive of radicular compression, acute-phase disease, pain intensity that prevented the patient from participating in the program and associated impairing diseases.

The Back School consists of a group of professionals including physicians, social workers, psychologists, physical therapists, occupational therapists, nurses, nutritionists and physical education teachers. It is developed through protocols of evaluation, treatment and follow-up, with a 32-hr duration divided in 4 consecutive days.

The program consists of theoretical and practical activities, with classes on the anatomy of the vertebral column and physiological aspects of low back pain, information about dietary re-education, stretching, exercises and body care, information on aerobic and anaerobic activities, use of gym apparatus (benefits and restrictions), ergonomic aspects related to daily life, work and leisure

activities and sensibilization regarding the possibilities of social participation.

The patients' evaluation is carried out by protocols filled out by all the multidisciplinary team professionals at the moment of admission, and re-evaluated after 1 month, 4 months and 1 year after the initial evaluation.

The instruments used for such evaluations include the questionnaire on the aforementioned biodemographic and clinical data, added to the systematic pain evaluation through the visual analogue scale (VAS), functional evaluation through the Roland-Morris (RM) questionnaire and quality of life through the Short Form Health Survey tool (SF-36).

The evaluation tool for impairment that is specific for low back pain, the Roland-Morris questionnaire, is recommended for a general population within a low-impairment spectrum⁵. Considering this information, this questionnaire was chosen for the study, as the sample is within a spectrum of low impairment. This questionnaire was created based on the observations of Roland and Morris of the absence of a reliable parameter to evaluate the different methods of low back pain treatment. These authors used the Sickness Impact Profile (SIP), a questionnaire consisting of 136 items, from which the most relevant 24 were chosen to describe the functionality of patients with low back pain. The expression "because of my back" was added and the period to which the questionnaire refers to is the current day. Its application normally lasts 5 minutes.

A score of one (1) point is attributed to each phrase, and the result is the sum of these points. The higher the score is, the higher the individual's impairment will be.

The minimum score is zero, and it represents no impact of the pain on the individual; the maximum score is 24, and it indicates total functional impairment. There is no focus on the psychosocial aspects encompassed by low back pain.

The questionnaire was tested and validated by Deyo², in 1986, from the comparison with the complete version of the SIP and correlated with the visual scale of pain, column flexion and Laségue's sign, being considered sensitive and valid for the aspects of function and physical capacity, which determine functional capacity, but is not indicated for psychosocial evaluation⁶. Its validation for the Portuguese language was carried out in 2000 by Nusbaum.

Another assessment tool is called "Short Form Health Survey" (SF-36), which is a multidimensional general quality of life questionnaire, consisting of 36 items divided in 8 scales or domains: functional capacity (10 items), physical aspects (4 items), pain (2 items), general health status (5 items), vitality (4 items), social aspects (2 items), emotional aspects (3 items), mental health (5 items) and a comparative question between the current health status and those of one year before. It evaluates the negative health aspects (disease or infirmity) as well as the positive ones (well-being)¹⁸. It was translated and validated for the Portuguese language by Cicconelli in 1997. It is easily reproducible and applicable, allowing comparisons between different pathologies or treatments.

The application of this questionnaire is made by attributing a score for each question, later transformed into a scale that goes from 0 to 100 per domain, where 0 corresponds to the worst health

status and 100 to the best. Each dimension of the questionnaire is evaluated separately. There is no single value that synthesizes the whole evaluation.

The evaluation of pain by the SF-36 is carried out by two questions that measure the pain intensity at 6 levels with the objective of assessing its impact on daily life activities. It does not reflect the work limitations, although it contains questions that include this aspect.

As for the questions regarding the physical and emotional aspects, the SF-36 also assesses how much these limitations make working and performing daily life activities difficult.

The questions that evaluate the overall health status were reproduced from the General Health Rating Index (GHRI) and vitality scale was derived from the Mental Health Inventory (MHI) questionnaire⁷. The scale that refers to the social aspects analyzes whether the individual's integration into social activities was affected by health problems. The evaluation of the mental health component includes questions related to anxiety, depression, behavior alterations and psychological well-being.

Descriptive analyses of all study variables were carried out. To compare the four moments of evaluation, the non-parametric Friedman's test was used. To compare two moments, the non-parametric Wilcoxon's test was used. For the hypothesis of equality between two groups, the non-parametric Mann-Whitney's test was used. Pearson's coefficient was used to verify the correlation between the quantitative variables per group. Significance level was set at 5%.

Results

In the period between October 2001 and July 2004, 244 patients with chronic low back pain of mechanical-degenerative origin participated in the Back School. These patients had been previously submitted to treatments that included: kinesiotherapy, physical means, relaxation techniques, massage and acupuncture. Of these, 156 were referred by physicians of the DRM and the remaining were referred by other Outpatient Clinics of Hospital das Clinicas, external services and private practices.

The mean age of the sample was 46.8 ± 11.9 yrs, ranging from 18 to 73 yrs. The great majority (72.1%) was female and most of them were married (66%), followed by single (26.6%), divorced (4.1%) and widowed women (3.3%). Patients whose educational background reached High School or College represented 38.1% and 36.5% respectively (Table 1).

There was a 54.9% loss of follow-up of these patients after the conclusion of the Back School, with 110 patients being present at all reassessments. When compared to the total sample participating in the therapeutic program, these patients who underwent all reassessments until the end of the Back School were very similar in terms of distribution along the age ranges, educational level and civil status; however, there was trend towards a higher participation of male individuals in the subgroup that was present at all reassessments (31.8% vs. 27.9% in the total sample). The comparison of the biodemographic variables is shown in Table 1.

Table 1

Biodemographic variables of all participants in the Back School of DMR in the period of October 2001 to July 2004 and those who attended all reassessments.

Variable		Initial Total (%) n=244	Final Total (%) n=110
Civil status	Married	161 (66,0)	73 (66,3)
	Single	65 (26,6)	26 (23,6)
	Divorced	10 (4,1)	8 (7,2)
	Widowed	8 (3,3)	3 (2,7)
Educational level	Grade school	62 (25,4)	26 (23,6)
	High school	93 (38,1)	37 (33,6)
	College	89 (36,5)	47 (42,7)
Age	<30 yrs	10,66%	11,82%
	30 a 39 yrs	17,62%	16,36%
	40 a 49 yrs	29,92%	27,27%
	50 a 59 yrs	29,92%	36,37%
	>= 60 yrs	11,88%	8,18%
	Mean	46,8 ± 11,9	45,61 ± 12,26
Gender	Male	68 (27,9)	35 (31,8)

Regarding the occupational status, the category with the highest percentage of participation was that of women who were housewives (17.6%), followed by retired individuals (8.6%) and teachers (5.6%). The remaining 167 patients were distributed throughout 87 occupations with varied physical and intellectual activity loads. Only one patient (0.4%) was unemployed.

At the analysis of the “Short Form Health Survey” (SF-36) questionnaire we observed that, for the Functional Capacity, Physical Aspects, Overall Health Status and Emotional Aspects domains, 108 questionnaires were evaluated, whereas 109 were evaluated for Vitality and 107 for Mental Health. These differences reflect the difficulties that some patients presented when filling out the evaluation tools by themselves.

Table 2 presents the evolution of the mean values of the SF-36, RM and VAS domains throughout the evaluations related to the Back School. The Functional Capacity, Physical Aspects, Pain, Overall Health Status and Vitality domains showed a statistically significant improvement of all reassessments in comparison to the initial evaluation, but not between the reassessments. On the other hand, the Social Aspects domain only presented statistically significant improvement at the second reassessment, whereas the Emotional Aspects domain only presented statistically significant improvement at the 1-year reassessment.

It is noteworthy the observation that the Mental Health domain did not present a statistically significant difference between the assessments.

Additionally, Table 2 demonstrates the progressive improvement of pain perception according to the VAS until the second reassessment, but not from the latter to the 1-year follow-up. However, according to the RM questionnaire, the improvements were sequential and statistically significant until the last reassessment.

Table 2

Range of the mean values of domains of the SF-36, Rolland-Morris and EVA questionnaires during the follow-up period, expressed as means ± SD and range.

Dimension	Reassessments			
	Start	1 ST	2 ND	3 RD
Functional capacity	63,8 ± 20,0 (15,0 – 95,0)	68,7 ± 18,5* (5,0 – 100,0)	72,7 ± 18,1* (20,0 – 100,0)	71,6 ± 16,7* (25,0 - 100)
Physical aspects	49,3 ± 40,5 (0,0 – 100,0)	62,0 ± 35,6* (0,0 – 100,0)	63,2 ± 37,2* (0,0 – 100,0)	65,7 ± 37,8* (0,0 – 100,0)
Pain	49,7 ± 19,9 (0,0 – 100,0)	59,4 ± 19,4* (22,0 – 100,0)	62,7 ± 21,0* (0,0 – 100,0)	60,7 ± 17,8* (22,0 – 100,0)
Overall health status	71,1 ± 16,9 (22,0 – 97,0)	73,9 ± 14,2* (32,0 – 100,0)	76,5 ± 14,6* (30,0 – 100,0)	75,4 ± 13,5* (32,0 – 100,0)
Vitality	56,7 ± 19,3 (10,0 – 90,0)	61,9 ± 17,3* (20,0 – 95,0)	64,6 ± 17,4* (20,0 – 100,0)	65,1 ± 16,8* (20,0 – 100,0)
Social aspects	69,4 ± 24,1 (12,5 – 100,0)	75,0 ± 21,6 (12,5 – 100,0)	79,9 ± 18,8* (25,0 – 100,0)	76,7 ± 20,1 (12,5 – 100,0)
Emotional aspects	63,3 ± 39,3 (0,0 – 100,0)	68,8 ± 35,7 (0,0 – 100,0)	74,5 ± 32,7 (0,0 – 100,0)	76,3 ± 30,2* (0,0 – 100,0)
Mental health	68,9 ± 19,3 (12,0 – 100,0)	71,7 ± 16,1 (28,0 – 100,0)	74,1 ± 15,5 (28,0 – 100,0)	72,9 ± 13,8 (28,0 – 100,0)
Visual analoguescale	5,2 ± 2,1 (1,5 – 10,0)	3,8 ± 2,2* (0,0 – 8,6)	2,7 ± 2,1* § (0,0 - 9,6)	2,6 ± 2,2* § (0,0 – 8,2)
Rolland-Morris	6,9 ± 3,9 (0,0 – 18,0)	5,3 ± 3,4* (1,0 – 15,0)	4,1 ± 3,3* § (0,0 – 15,0)	3,3 ± 3,2* § ¥ (0,0 – 13,0)

* statistically significant difference in relation to the initial assessment; § * statistically significant difference in relation to the first reassessment; ¥ * statistically significant difference in relation to the second reassessment.

Based on the arbitrarily chosen value of 5 as the cutoff for the results at the RM questionnaire, it was possible to carry out the stratification of the patients according to their impairment degree (worse when the score was > 5), forming a group with 47 individuals, whereas another group, with a lower functionality decrease (score ≤ 5) consisted of 63 individuals. Figure 1 shows that in both groups there was an improvement comparing the beginning to the end of the treatment, and the differences between the groups remained on statistically significant levels until the end of the study. In the most severely compromised group, all reassessments presented significantly lower values in comparison to the initial assessment, but there was also a significant decrease between the first and the third reassessments, although this did not happen with the remaining ones. The group that was least affected by pain, on the other hand, presented a decrease of the values in these questionnaires between the first reassessment and the remaining ones, but no other statistically significant difference.

The patients presented similar degrees of functional impairment, regardless of the gender (Figure 2). The progression of values at the RM questionnaire showed improvement at all reassessments in comparison to the initial evaluation in both genders.

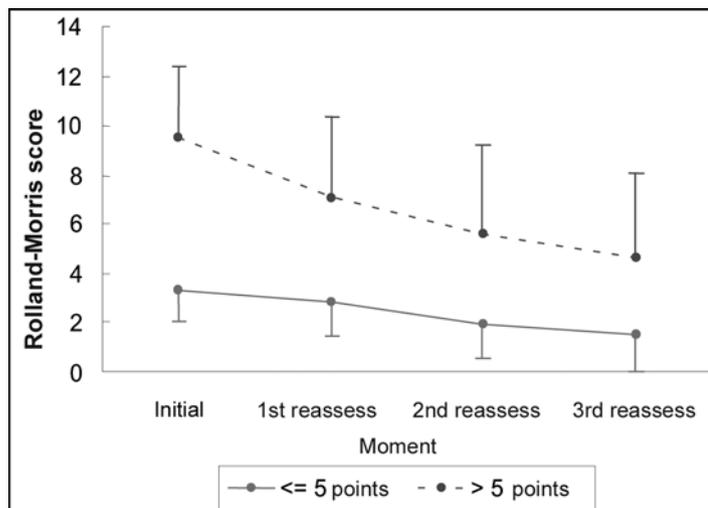


Figure 1

Variation of the mean values of the Roland-Morris questionnaire at each evaluation moment according to the initial severity of the case.

To have finished College did not interfere with the functionality of patients with back pain, as well as with the gains after the end of the Back School, as can be observed in Figure 3, in which both groups show practically identical evolutions.

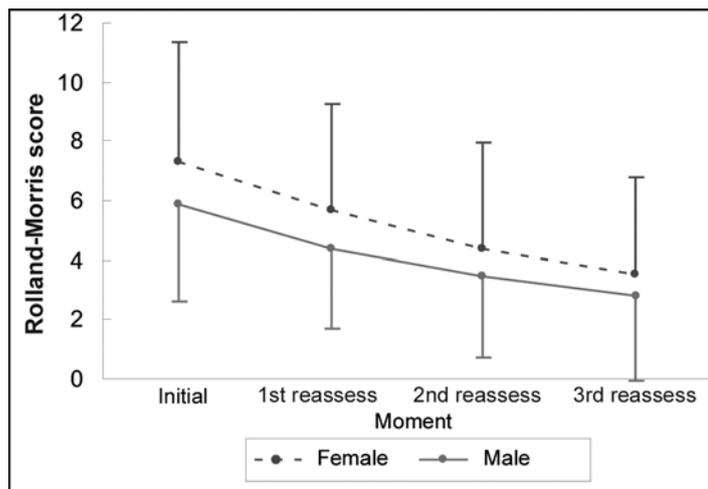


Figure 2

Variation of the mean values of the Roland-Morris questionnaire at each evaluation moment according to gender.

Age was another biodemographic factor that did not have an effect on the impact of back pain on functionality. Figure 4 shows that the age ranges did not have statistically significant different mean values at the RM questionnaire at any evaluation period. All age ranges improved throughout the follow-up period, except for the range ≥ 60 years (Fig. 4).

Discussão

O objetivo do estudo foi avaliar, através dos questionários RM e SF-36 e da EVA, a resposta dos pacientes com dor lombar crônica que frequentaram a Escola de Postura da DMR. Os instrumentos de avaliação utilizados neste estudo são complementares e importantes para verificar a eficácia do tratamento e a resposta ao mesmo, além de permitir um melhor direcionamento para os aspectos que podem ser trabalhados de forma mais específica para aquisição de maiores ganhos.

Estudos sobre dor lombar crônica avaliam principalmente as modalidades de tratamento. A elaboração de programas terapêuticos, educativos, de prevenção deve ser direcionada no sentido de promover mudanças de comportamentos compatíveis com a proposta a que se destinam.

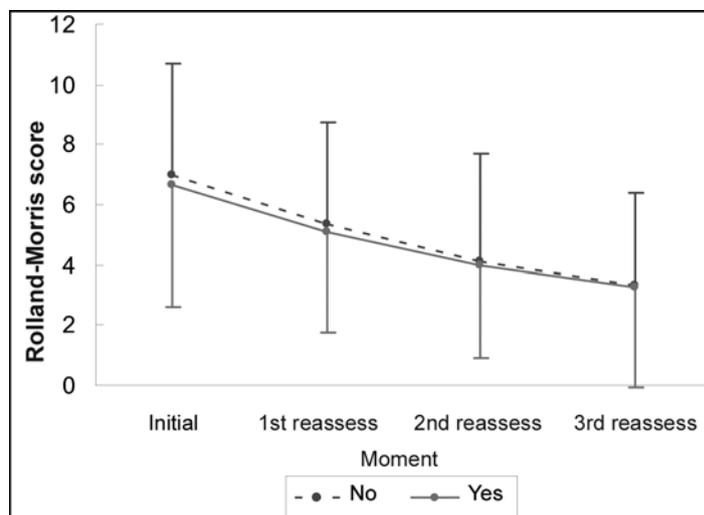


Figure 3

Variation of the mean values of the Roland-Morris questionnaire at each evaluation moment according to the formal educational level.

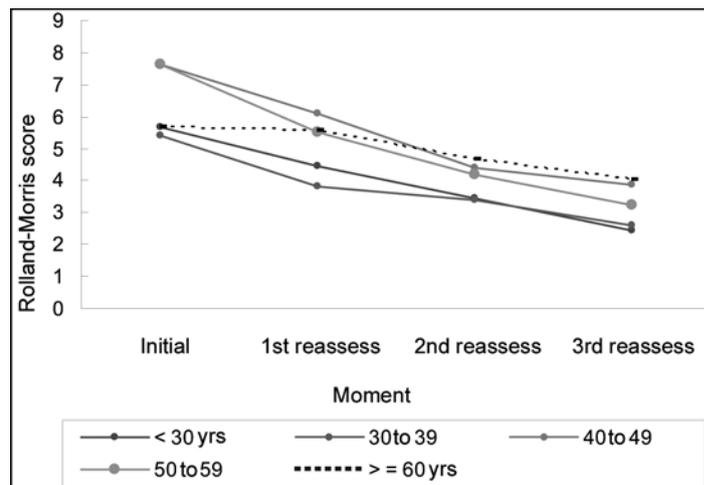


Figure 4

Roland-Morris mean values at each moment evaluated, according to age range.

The individuals who attended the reassessments presented improvement in Functional Capacity, Physical Aspects, General Health Status, Pain and Vitality. These patients also improved their functional capacity according to the RM questionnaire and showed progressive lower levels of pain assessed by the VAS (Table 2).

The SF-36 domains that presented the best results were those that evaluate the difficulties people can present in performing their routine activities, including work. After the Back School intervention, the patients started to better understand the importance of the harmony of movement and the coordination between breathing, movement performance, body awareness, paying attention to what one is doing, and the posture adopted. This is attained through exercises and activity simulations, and it is noteworthy that, despite the School activities were carried out in groups, individual needs were dealt with when necessary.

These classes, together with the theoretical information, lead to the individual's awareness of his own limits and capacities. The fact that patients can clarify their doubts at the reassessments reinforces that acquired behavior.

However, the Social Aspects and Emotional Aspects domains showed statistically significant changes in only one moment of the reassessments, whereas the aforementioned domains showed improvement in all reassessments. The Mental Health domain did not show statistical significance during the follow-up.

Considering the information in the two previous paragraphs, it is possible to deduce that the effect of the Back School was higher on the concrete aspects of patients' daily lives, implicating in a higher capacity of performing tasks, lower muscular and load demand. This result can be due to the information on adaptations, activity replanning or due to the physical training carried out during the four days of the Back School duration.

Lower gains in the domains related to emotional and social living factors might be due to a still deficient approach of these factors by the therapeutic program studied here. Thus, the reprogramming of the currently performed activities must be carried out, in order to make them more adequate for the observed needs.

It is worth mentioning that the attainment period of the Back School does not allow establishing significant changes regarding the affective-emotional aspects, promoting new attitudes regarding the social relationships. The objective is to perceive the body in order to develop and maintain the changes in posture that will propitiate pain improvement.

The influence of pain on the social aspects interferes in the relationship with the family, coworkers, and social activities, as it shows that the individuals were not able to perform them due to the pain. In this sense, some aspects must be mentioned, such as depression, the avoidance of social relations by the patient and by others, decreased self-esteem and the resistance to incorporate new habits.

Studies show that individuals with lower educational backgrounds present a higher incidence of low back pain^{8,9}. One could suppose that the longer duration of formal education would be associated to a higher assimilation of the information offered by the Back School, and consequently, higher gains in the follow-up;

however, this was not observed.

This series had a larger number of individuals with higher educational level considering the country's average (High School, 33.6%, and College 42.7%), but there was no impact of the educational level on the studied patients' evolution (Figure 3).

The same occurred when the patients were stratified according to gender and age, which indicates that these factors do not interfere with the gains obtained by patients at a program such as that of the Back School.

All of the patients presented chronic disease, with degenerative mechanical low back pain, whose evolution varied from 13 years to 8 months and had been previously treated without improvement. The change observed in the health status of these individuals, according to the patients' reports at the reassessments, are due to the motivational focus of the Back School, its educational features and the commitment of the team with this program.

There is no support in Literature to prove the efficacy of the Back School. In 1994, Cohen et al¹⁰ carried out a meta-analysis with 19 studies, with the objective of evaluate the efficacy of Back Schools, respecting the following methodological variables: time of duration, number of professionals involved, program content with educational and preventive characteristics directed to the concepts of body biomechanics, kinesiology, ergonomics, approach of the psychosocial aspects, improvement of the cardiorespiratory capacity. The analysis allowed the authors to conclude that the results are better when the School is associated with an adjoining rehabilitation program, albeit more comprehensive, which would include visits to the workplace, physical conditioning program, therapeutic exercises, behavioral therapy and adaptation of activities to promote pain and functional capacity improvement. These aspects are not normally contemplated when the School is the primary or basic action of the treatment.

In 2001, a systematic review was carried out in order to study the efficacy of the Back School in patients with unspecific low back pain¹¹. In 2004 this review was updated¹² with the objective of determining whether the schools were more effective than other types of treatment or non-treatment (placebo). Nineteen studies included individuals who presented chronic low back pain, 6 studies compared the School with other types of traditional treatments such as exercises, handling, myofascial therapy and instructions. There was moderate evidence that the School is more effective than other short- and mid-term treatments for individuals with chronic low back pain. Eight studies were identified for the Back School and non-treatment, two of them with high quality with no evidence for its effectiveness.

For the "School at the Workplace" program and other treatments for chronic low back pain, there was moderate evidence that the School is more effective as short and mid-term treatment. There is moderate evidence that the School at the workplace is more effective when compared to the placebo, however, only when it is considered as mid-term or short-term treatment. Nonetheless, the results of the present study showed gains that persisted for up to one year in all outcomes studied in patients that came to all reassessments. One way to study the mechanism through which the Back School

worked, would be to verify how much the patients learned during the period of therapeutic intervention and repeat this verification at the reassessments. This evaluation mechanism would show how much of the given information was kept after one year.

It is important to mention, however, that the patients might have adhered to the program especially because they realized the gains obtained and nothing can be said about those who did not attend the reassessments.

The absence of a control group in the present study is one of its main limitations. It is difficult to contest that the clinical evolution of these patients would be somewhat different without the treatment. On the one hand, it is necessary to remember that all cases are chronic cases and had previously undergone several therapeutic procedures, thus it is unlikely that their evolution would show spontaneous improvement. The effect of the School on the range of pain control strategies allowed the patients to prevent suffering and sensation of submission to the somatic symptom, especially regarding functional capacity and other motor aspects.

The patients who sought the Back School declared, at the initial evaluation, that they were seeking a solution, which for them meant absence of pain. Nevertheless, the rehabilitational focus of the program aims, more than abolishing pain, at the functional improvement, expressed by the performance of all daily living activities, whether they are leisure, work, self-care activities or even social and emotional aspects.

Conclusion

The efficiency of the treatment provided by the Back School can be measured by applying the two proposed questionnaires. Therefore, the present study showed that the individuals who participated in the process showed progress in several aspects, especially those directed at the functional capacity, perception of pain and physical aspects. The gains in the emotional and social aspects were less evident.

The focus given by the School shows to be broader than the criteria analyzed by the aforementioned questionnaires; an example is the educational character of the School, which is not the object of its analysis.

Thus, one can conclude that further studies to complete the approach of the several aspects of the Back School are necessary, in order to verify its real effectiveness in the treatment of chronic back pain at the functional, laborative and psychosocial levels.

These further qualitative and quantitative studies must be carried out in order to offer subsidies to the multidisciplinary team of the Back School, who will carry out alterations and add to therapeutic resources, if necessary.

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