explain these results. In conclusion, both the French and German version of the SFS are valid and reliable for evaluation of perceived functional capacity for patients with back complaints.


CO34-002–EN

Validation of the French version of the Rosenberg self-esteem questionnaire in patients with chronic low-back pain

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Keywords: Self-esteem; Low-back pain; Questionnaire

Goal.– Low back pain patients’ evaluation requires analysis of different parameters (pain, functional limitations, coping strategies, fear avoidance). Self-esteem evaluation appeared to us important to analyse. The goal of the present study is to precise validation of the Rosenberg self-esteem questionnaire in chronic low back pain (LBP) patients.

Material and methods.– One hundred and fifty-two LBP patients were examined between May 2010 and February 2011 in the rehabilitation department of Cochin Hospital in Paris. After getting socio-demographic data, patients had to answer the 10-questions Rosenberg questionnaire and other questionnaire usually given to LBP patients. Test-retest reliability was determined with intraclass correlation coefficient (ICC) measure. Construct validity was calculated with Spearman rank correlation (r). A factorial analysis with Varimax rotation was done.

Results.– Test-retest reliability showed an ICC=0.95 (p<0.05), whereas catastrophizing part (r=0.491), catastrophizing part of CSQ (r=0.462), was corrected with Spearman correlation. Factorial analysis found two factors. They were not categorized.

Discussion.– Test-retest reliability of the Rosenberg self-esteem questionnaire is good. Its convergent and divergent validities were confirmed. It allows a measure of self-esteem in chronic LBP patients.

References


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CO34-003–EN

Do spine-specific functional restoration programs have an influence on coping strategies of patients with chronic low back pain? Importance of the coping strategies questionnaire (CSQ)

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Keywords: Chronic low-back pain; Coping; Spine-specific functional restoration program

Introduction.– The French version of the Coping Strategies Questionnaire (CSQ-F) is a French-validated self-assessment questionnaire [1], used to evaluate the five strategies that patients use to cope with chronic pain.

It has not previously been used in French studies to assess cognitive and behavioral strategies in chronic low back pain (CLBP).

Aims.– To determine the profile of coping strategies in a population of patients with CLBP included in a spine-specific functional restoration program (SFR) and assess the evolution of this profile at the end of the SFR program.

Methods.– A 6-month prospective, single-center study. Patients had their coping strategies evaluated using the CSQ-F at day 0 and at the end of the SFR program (day 30).

Answers were correlated with patient information (age, gender, socio-professional category) and specific scales for CLBP assessment: Saint-Antoine Questionnaire (QSA), Fear-Avoidance-Belief Questionnaire (FABQ), at day 0 and 30.

Results.– Fifty-two patients with CLBP were included in the study. At the beginning of the SFR program, the strategies used were, in decreasing order: attention diversion, catastrophizing, ignoring pain sensations, praying, reinterpreting.

Patients who were anxious or who feared professional activities mostly used dysfunctional strategies (catastrophizing, praying). At the end of the SFR program, the use of strategies such as attention diversion and ignoring pain sensations increased (P<0.05), whereas catastrophizing (P<0.01) and praying (P<0.05) decreased.

Patients who diminished their use of dysfunctional strategies (P<0.05) were the youngest, the ones with a high level of education, and those who feared professional and physical activities.

Conclusion.– SFR programs have shown their efficacy in dealing with patient fears and beliefs [2]. This study shows that these programs also have a positive influence on patients coping strategies.

References


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Isokinetic trunk strength in teenagers with and without low-back pain: A comparative study

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Keywords: Teenagers; Low-back pain isokinetic trunk strength

Objectives.– To evaluate isokinetic trunk strength in low-back pain (LBP) teenagers; its relations with the clinical measures, and comparison analysis with healthy teenagers.

Methods.– This study has included two groups of 22 LBP and 22 healthy teenagers, aged 11–13 years. We have measured the isokinetic trunk strength in each group on the Cybex trunk extension/flexion machine; additionally the LBP group was evaluated by clinical measures.

In the LBP group, association between clinical and radiological measures and strength profiles were analysed.

Results.– The two groups were homogeneous concerning gender and weight. The visual analogic scale was 58±22 for the LBP patients.

No significant difference was found between isokinetic peak torque, total work and mean power in extension and flexion in the two groups. Other than, the control group had a higher mean power extension in 120° than the LBP group with a nearly significant P.
Significant correlations between isokinetics total work at 120°/s in flexion (r=0.461) and in extension (r=0.475) were observed with the body mass index. A high correlation was also found between the total work at 120°/s and the number of hours per week of sport activities. The mean power in extension at 120°/s was correlated positively (r = 0.453) to the lumbar radiological lordosis.

The endurance of agonist (flexors) and antagonist (extensors) ratio were high in both populations compared to expected values in general population (0.91 vs 0.89).

**Conclusion.**—This study reveals no significant difference in the isokinetic trunk strength of both flexors and extensors in the two groups. Based on the results, the usefulness of studying the effect of isokinetic rehabilitation is to remove the inhibition at high speed.

So, isokinetic strength parameters, as measured in this study, do not seem to explain the occurrence of low back pain among children.

**References**


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**CO34-005-EN**

**Neuromuscular adaptations induced by a short rehabilitation program in chronic low back pain**

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**Keywords:** Low-back pain; Neuromuscular adaptation; Rehabilitation program

**Purpose.**—It is not known whether abdominal or back neuromuscular changes induced by chronic low back pain are reversible or not [1]. To investigate the effect of a short rehabilitation program on the trunk reflex gain and feed-forward activation induced by a postural perturbation.

**Patient sample.**—Thirty chronic low back patients were included in an observational study.

**Methods.**—Abdominal and spinal force and endurance, feed forward activation and responses to postural perturbation with superficial EMG were recorded in non-expected and expected conditions. Subjects were analysed before, just after and one month after a 1-week non-specific training and educational rehabilitation program for low back pain.

**Results.**—Force and endurance parameters were significantly improved after intervention. No main intervention effect was found for EMG recordings. However, we observed a shift in the motor control between conditions with, in non-expected condition, a muscular response aggregation after perturbation while feedforward activation was dissociated before perturbation. It is proposed that unspecified movement-based exercises probably lead to (i): a better recruitment of trunk muscles related to a better control as demonstrated yet by transcortical stimulation [2]; (ii): a reduction of fear of movement as trunk movements never led to increased pain during the rehabilitation program.

**Conclusions.**—It is suggested that a short-term rehabilitation can modify paraspinal functional patterns with more adapted muscular responses to sudden load.

**References**


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**CO34-006-EN**

**Chronic low back pain patient, a candidate for cardiac rehabilitation?**


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**Keywords:** Low-back pain; Cardiovascular risk; Rehabilitation

**Objective.**—Chronic back pain is linked to deconditioning with reduced aerobic capacity [1]. It shares some of its risk factors (CVRF) with cardiovascular diseases: smoking, hypertension, dyslipidemia, overweight, sedentary lifestyle [2]. The distribution of cardiovascular risk factors was studied in a population of patients referred for an intensive reconditioning program of 4 weeks.

**Patients and methods.**—One hundred and eighty-five patients from 205 (55.98% men, mean age 49.9 ± 11.32 years) divided into three groups (non-smokers, smokers and weaned) were reviewed at 5 months. The evaluation criteria were: scores of Quebec, CVRF control, physical performance, experienced changes of habit, analgesic consumption, and overall feel. Analysis of the results was performed with the Kruskal-Wallis univariate (α = 0.05).

**Results.**—CVRF distribution was similar to that found in the general population in France: 31.58% dyslipidemia (35.7%), 4.78% diabetics (5.5%), 39% tobacco (22.1%), hypertension 14.35% (27%) [3]. Quebec score’s decreases of 11, eight and six points respectively for non-smokers, smokers and weaned (NS). But more CVRF were controlled the better the benefit over time.

**Discussion.**—The assessment of chronic low-back pain should include a screening for CVRF and implementation of recommendations in lifestyle management and medication, particularly for smoking cessation. The similarities with cardiac rehabilitation in terms of effort rehabilitation, therapeutic education, technical requirement (assessment of exercise ability) and human needs (multidisciplinarity), must consider reconciliation between these two activities. The long-term impact (insertion, pain control) of this new approach must be evaluated in large cohorts of patients.

**References**


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**Limiting the educational failures of chronic low-back pain patients**

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**Keywords:** Education; Chronic low-back pain

Fear, avoidance and believes are major cognitive factors in the development of chronic disability in low-back pain (LBP) patients. The pain intensity account