

the maximum inspiratory effort and the MEP from the maximum expiratory effort. Thoracic expansibility was measured at the axillary, xiphoid and abdominal levels with an inelastic metric tape. Expansibility was established by the difference between the thoracoabdominal diameter at rest and at the end of maximum inspiration and expiration.

Analysis: The Student's independent *t*-test was used in order to compare the means of the measures between the groups.

Results: The MIP was significantly affected by FS with the TG obtaining a mean of 63.9 ± 4 cm H₂O and the CG a mean of 83.9 ± 6 cm H₂O ($p < 0.05$). The expansibility at the xiphoid level was significantly lower in the TG: 4.38 ± 0.48 cm than in the CG: 6.38 ± 0.6 cm ($p < 0.05$). No other differences were found between the groups.

Conclusions: The MIP and expansibility at the xiphoid level were negatively affected in TG.

Implications: The "muscular pain" felt as trigger points in the condrocostal junction and mid portion of the trapezius muscle, associated to other symptoms as anxiety, depression and others, may interfere with the respiratory mechanics and control causing disuse. The results of this study may justify respiratory evaluation and physical therapy intervention in preventing pulmonary muscle disuse and chest dysfunctions in people with FS.

Keywords: Fibromyalgia; Respiratory pressure; Thoracic expansibility

Funding acknowledgements: This study did not receive financial support.

Ethics approval: This work was approved by the Ethic Committee of the University of Paraná – UNIPAR.

Research Report Poster Display

Number: RR-PO-312-15-Wed Wednesday 22 June 13:00

RAI: Exhibit Halls 2 & 3

URINARY INCONTINENCE IN PREGNANCY AND POSTPARTUM

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Purpose: The aim of this study was to determine the prevalence of Stress Urinary Incontinence (SUI) before pregnancy, during pregnancy and following childbirth, and also to ana-

lyze the impact of a health education campaign about SUI prevention following childbirth.

Relevance: It is important for physiotherapists to know the extent of the problem of SUI and establish evidence on forms of intervention.

Participants: A representative sample of the District, which included the total number of women (336) who gave birth in the Santa Luzia Hospital. The mean age was 28.1 ± 5.3 . The participants were divided into two groups—a first group of non-exposed women who gave birth between 15th January and 15th February and a second group of women who were exposed to a health education campaign and gave birth between 15th February and 29th March. The groups are homogeneous for the variables age, educational level and parity

Methods: A quasi-experimental study was carried out. The education campaign consisted of an individual approach by talking about SUI, prevention means, pelvic floor muscles re-education and the teaching of perineal muscles contractions. Women were encouraged to perform a programme of exercises at home during eight weeks following childbirth. They were also offered a brochure about SUI – Prevention and treatment that was approved by the Health Education Board. Two questionnaires were used—one was used at hospital following childbirth in order to assess the prevalence and impact of SUI before and during pregnancy and to evaluate knowledge about SUI and pelvic floor muscles re-education. The other questionnaire was filled-in between the second and the fourth month following childbirth in the Health Care Centre of the place of residence with the aim of assessing SUI prevalence and the outcomes of the health education campaign.

Analysis: In analyzing the data we used measures of central tendency and dispersion. The inferential statistics was used *t*-student test and chi-square test. In the analysis of dichotomous variables was considered the correction for continuity. Statistical tests relating to inferential analysis, was considered a significance level of 5%. For statistical analysis we used Statistical Package for Social Sciences, SPSS® version 17.0 for Windows.

Results: The SUI prevalence defined as: "Have you ever experienced a urinary loss episode while making an effort?" was of 5.4% (2.94–7.78) before pregnancy, 51.5% (46.10–56.91) during pregnancy and 10.2% (8.50–15.92) four weeks after giving birth. As regards the health education campaign, significant statistical differences were found between the exposed group and the non-exposed group. The level of knowledge about SUI was 2.6 times higher in the exposed group and practise of pelvic floor muscles re-education exercises was also 5.1 times higher in this group.

Conclusions: The IUS affects a large number of women during pregnancy and postpartum. The action of health education on SUI induced gains in health knowledge changed and modified behaviors in women.

Implications: In the face of such evidence, it turns out very important for physiotherapists to be aware of this reality and concerned to give response to this healthcare problem.

Keywords: Stress Urinary Incontinence; Pregnancy; Health education

Funding acknowledgements: Health Regional Authority of Viana do Castelo.

Ethics approval: This study was approved by the Regional Health Administration of the Port.

Research Report Poster Display

Number: RR-PO-305-23-Tue **Tuesday 21 June 13:00**
RAI: Exhibit Halls 2 & 3

SELF-REPORT AND PERFORMANCE BASED OF FUNCTION IN PATIENTS WITH TKR

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Purpose: The purposes of this study were (1) to compare self report (SR) and performance-based (PB) measures of function in patients with total knee replacement (TKR) and (2) to determine the ability of selected physical impairments and demographic data (age, gender, and post surgery time) to explain SR and PB measures of function.

Relevance: Although the interest in PB measures of activities of daily living (ADLs) has increased during the last decade, relatively little is known about the relationship between SR and PB measures. Moreover, it is unclear whether SR and PB measures can be used interchangeably.

Participants: A sample of sixty subjects post unilateral or bilateral total knee replacement (TKR) were recruited for the study.

Methods: Functional status was assessed by Functional Status Questionnaire (a SR measure) and four PB tests including the 6 minute walk test, a modified version of the timed "Up & Go", the timed sit to stand to sit test, and timed stair up and down. The physical impairment measures included: muscle performance, passive range of motion; and knee proprioception.

Analysis: Descriptive statistics were calculated for all variables. Frequency distributions were calculated for gender and side of involvement. The mean, standard deviation, and range were calculated for all PB functional tests and total scores of the FSQ (pain, difficulty and dependency). One-way ANOVA tests were performed for PB measures to determine if differences existed between time since surgery groups (groups I–IV), age groups (less than 60 years, between 61 and 70 years and more than 71 years), and gender. Non parametric Kruskal–Wallis tests were performed to determine if differences existed between groups I–IV, age groups, and gender groups for SR items. Spearman's correlations were performed on PB tests and the FSQ items to determine the relationship between PB tests and SR of function. Step-wise multiple regression analysis was performed to determine

which of physical impairments best explained each of the PB and SR measures of function. The stepping method criteria for the regression equation were .1 for entry and .15 for removal. For all other statistics tests, significance was accepted at the .05 level.

Results: The correlation between the SR items and PB tests ranges from $r = .28$ to $.46$. Selected clusters of physical impairments and demographic data (mainly weight) explained 22–64% of PB tests; and 15–26% of the SR measure.

Conclusions: SR and PB measures of function can not be used interchangeably. Discrepancies between these two measures may be explained by several possible factors including the different tasks included in the different measures, and the effects of gender on the PB measures, the influence of age on the SR, the effect of post surgical time on PB measures; and environmental differences. Functional improvement may be reflected more in a PB measure than in a SR measure of function in patients following TKR.

Implications: Both self report and performance based tests should be used in elderly patients.

Keywords: Function; Self report; Performance based tests

Funding acknowledgements: None.

Ethics approval: Massachusetts General Hospital Research Committee.

Research Report Platform Presentation

Number: RR-PL-1037 **Tuesday 21 June 14:30**
RAI: Auditorium

CHARACTERISTICS OF CERVICAL MOTION AFFECTED BY NECK PAIN, AS ASSESSED IN A VIRTUAL ENVIRONMENT

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Purpose: To investigate how neck pain affects cervical motion characteristics using a custom-made virtual reality (VR) system.

Relevance: Neck pain is a common and growing health problem with a reported annual prevalence of 30–50%. In spite of its high prevalence, there is no single gold standard for objective cervical assessment. Most existing assessment methodologies rely on voluntary motion elicited by oral instruction. However, functional neck movements occur spontaneously in response to multiple stimuli, such as surrounding images and sounds. Furthermore, the most commonly studied objective outcome measures such as range of motion (ROM) and isometric strength are static, whereas neck function includes both static and dynamic motion. To achieve a more functional and dynamic approach to cervical motion assessment, we developed a VR system in which