Brazil

XIII International Back Pain Forum

Simplifying the complex or complicating the simple

30th September to 3rd of October 2014
Campos do Jordão – SP – Brazil

Abstract Book

BRAZIL INTERNATIONAL BACK PAIN FORUM XIII

Primary care research on back pain

Campos do Jordão, Brazil,
September 30-October 3, 2014

Forum venue:
Grande Hotel Campos do Jordão
Av. Frei Orestes Girardi, 3549,
Vila Capivari

LOW BACK PAIN FORUM HISTORY

LBP Forum I	Seattle, Washington, October 13-14, 1995
LBP Forum II	The Hague, The Netherlands, May 30-31, 1997
LBP Forum III	Manchester, United Kingdom, October 2-3, 1998
LBP Forum IV	Eilat, Israel, May 16-18, 2000
LBP Forum V	Montreal, Canada, May 10-11, 2002
LBP Forum VI	Linkoping, Sweden, May 22-24, 2003
LBP Forum VII	Edmonton, Canada, October 7-9, 2004
LBP Forum VIII	Amsterdam, The Netherlands, June 8-10, 2006
LBP Forum IX	Palma de Mallorca, Spain, October 4-6, 2007
LBP Forum X	Boston, USA, June 14-17, 2009
LBP Forum XI	Melbourne, Australia, March 15-19, 2011
LBP Forum XII	Odense, Denmark, October 17-19, 2012
LBP Forum XIII	**Campos do Jordão, Brazil, September 30-October 3, 2014**

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Welcome to the Brazil International Forum XIII

We are delighted to welcome you to Campos do Jordão, Brazil to participate in the 13th International Forum on Low Back Pain Research in Primary Care, from 30th September to 3rd October 2014. Brazil is a thriving and vibrant country. It is a land for all people where diverse cultures converge to form a unique friendly place. Brazil is naturally exuberant and is home to the world's largest tropical rain forest. While in the east we find the Atlantic Ocean and its famous beaches such as Rio de Janeiro in the west the wet season forms the famous rich natural environment of Pantanal. It is a modern, democratic and free country. With its continental dimensions, Brazil is home to over 200 million people that are proud to speak a single language – Portuguese. Brazil is a rising star in the world's economy but its biggest asset is still its people and their natural talent for hospitality. Campos do Jordão is a small touristic town, two-hour drive from the largest city in Brazil – São Paulo. Campos do Jordão is a beautiful, warm, and welcoming town, which provides a perfect setting for the many colleagues from all over the globe. From Campos do Jordão conference attendees can quickly reach São Paulo and be connected to any region in Brazil.

The first Forum in Latin America comes at a time of increasing international acceptance of the worldwide burden of back pain and widespread international interest in debate how much complex this condition is. By hosting the XIII International Forum we will offer clinicians, researchers and policy makers a perfect opportunity to explore the complexity of back pain in a global context, under the dichotomous framework of whether the field is simplying a complex condition or complicating a simple one. This is one of the main themes of the Forum. We will also revisit the issue of causation in back pain, a theme that we believe has been under appreciated. We aim to challenge the discussion of these themes, along with others such as prognosis and contemporary management in ageing population.

The Forum is an ideal place to challenge current thoughts and provide a fertile land for new ideas to emerge. We look forward to welcoming you to Campos do Jordão to participate in the Forum XIII, a place where the old meets the new and where the fine friendly spirit inspires good thoughts.

Sejam Bem Vindos!

The Local Organizing Committee

COMMITTEE MEMBERS

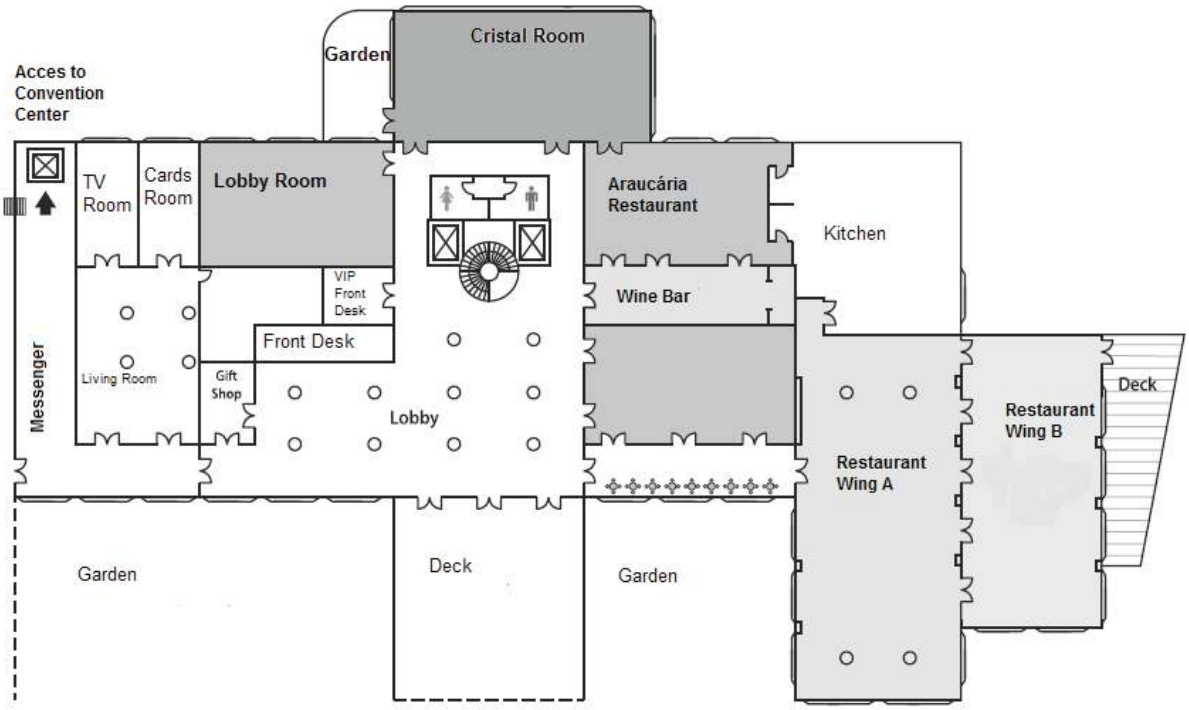
Local Organizing Committee

Leonardo OP Costa, Universidade Cidade de São Paulo
Luciola CM Costa, Universidade Cidade de São Paulo
Manuela L Ferreira, The George Institute for Global Health, University of Sydney
Paulo H Ferreira, University of Sydney
Vinicius C Oliveira, Universidade Federal de Minas Gerais
Felipe RC Fagundes, Universidade Cidade de São Paulo
Gustavo C Machado, The George Institute for Global Health, University of Sydney
Marina B Pinheiro, University of Sydney

International Organizing Committee

Dan Cherkin, USA
Michele Battié, Canada
Jeff Borkan, USA
Rachelle Buchbinder, Australia
Rick Deyo, USA
Nadine Foster, The United Kingdom
Margreth Grotle, Norway
Jan Hartvigsen, Denmark
Aage Indahl, Norway
Peter Kent, Denmark
Bart Koes, The Netherlands
Francisco Kovacs, Spain
Ammon Lahad, Israel
Chris Maher, Australia
Birgitta Öberg, Sweden
Glenn Pransky, USA
Michel Rossignol, Canada
Maurits van Tulder, The Netherlands
Martin Underwood, The United Kingdom

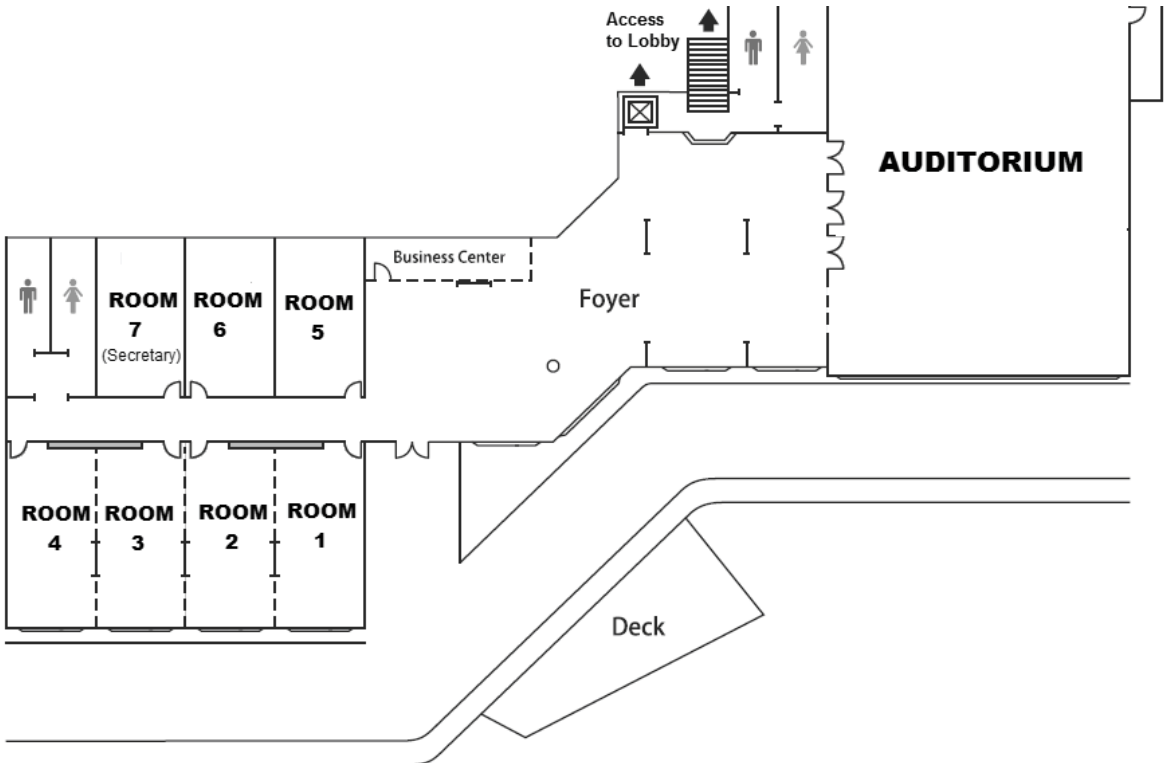
LBP FORUM XIII VENUE



HOTEL MAP

The Forum venue is at the Grande Hotel Campos do Jordão's Convention Centre, in Campos do Jordão, Brazil. The venue is close to most restaurants and malls located at the city center.

The Forum venue is located at:
Av. Frei Orestes Girardi, 3549, Vila Capivari
Tel: +55 (12) 3668-6000
site: www.grandehotelsenac.com.br/Home.aspx?HotelId=2
Google maps: https://www.google.com.br/maps/@-22.720636,-45.577023,17z?hl=pt-BR


Access
to Lobby
AUDITORIUM
Business Center
Foyer
ROOM
7
(Secretary)
ROOM
6
ROOM
5
ROOM
4
ROOM
3
ROOM
2
ROOM
1
Deck

FORUM MAP

GENERAL INFORMATION

Name Badges

A name badge and registration pack will be given to you when you register. It is required that you wear your name badge to gain entry to all sessions, to access catering, and attend social functions. Should you lose your badge, please contact Joana Estrela, Forum Manager to arrange a replacement. Only paid registrants will be able to attend the Forum.

Messages and Emergency Contact Information

If you need emergency assistance please contact Joana Estrela @ joana@impareventosbh.com.br or at on the Forum Main reception. Joana and her team will provide support during the Forum, please see Joana for any issues related to your Forum participation.

Welcome Reception

This Function is included in the cost of registration for all registered delegates. The Reception will be held at the Grande Hotel Campos do Jordão (Forum venue) on September 30th, from 6:00 to 8:00 pm. Note: You will need to bring your name badge to gain access to the Reception.

Gala Dinner

The Gala Dinner will be at the Grande Hotel Campos do Jordão (Forum venue) on October 2nd at 7:00 pm. Dress is casual. Note: You will need to bring your name badge to gain access to the dinner. Ask at the Forum Main reception for tickets to the dinner if you have not yet registered for that.

Luggage Storage

You are welcome to bring your luggage on the days of arrival and departure. You can access to the storage rooms by contacting the Forum Main Reception.

Transfer

A return airport transfer service from Guarulhos international airport to the Forum venue will be made available for all Forum attendees. We will offer this transfer service on the following days: 29th and 30th September from São Paulo (Guarulhos international airport) to Campos do Jordão (Forum venue); 3rd and 4th October from Campos do Jordão (Forum venue) to São Paulo (Guarulhos international airport). Please contact Joana Estrela and her team at the Forum Main Reception (lbpforumbrazil@gmail.com) to book your transfer in advance as it is subject to availability . It is important that all Forum attendees are aware that São Paulo has three airports (Guarulhos, Congonhas and Viracopos/Campinas). So, please be careful to book your flights to the Guarulhos airport. There are buses that connect these three airports in case you will be landing in Congonhas or Viracopos/Campinas.

Forum Main Reception

You are welcome to bring your luggage on the days of arrival and departure. You can access to the storage rooms by contacting the Forum Main Reception.

City Map

You will find a map of Campos do Jordão in your conference bag

ACKNOWLEDGEMENTS

We wish to thank the following supporters:

UNICID
Universidade
Cidade de S. Paulo

C A P E S
Coordenação de Aprefeiçoamento de Pessoal de Nível Superior

CAMPOS DO JORDÃO E REGIÃO
Convention & Visitors Bureau

Scientific Program

PRE-CONFERENCE DAY – SEPTEMBER 30th 2014

9:00 – 10:45 **Closed Meeting for CBRG Editorial Board Members – Room 6**

11:00 – 12:30 **CBRG Open Meeting – Auditorium A**

- Brief update on CBRG activities (15 min)
- Speed data-ing session (5 speakers) (30 min)
- Co-publication of DTA reviews (Aron Downie) (15 min)
- Discussion of dissemination (iBook, YouTube, Twitter, Facebook) (30 min)

12:30 – 1:30 **Lunch (lunch will be provided)**

1:30 – 2:00 **CBRG Open Meeting (continued) - Auditorium A**

- Priority setting exercise (30 min)

2:00 – 4:30 **Methods Presentations and Discussion - Auditorium A**

- Prognosis reviews
  Dr Jill Hayden (45 min)
- Coffee break (15 min)
- Harms reviews
  Dr Andrea Furlan (45 min)
- Diagnostic reviews
  Dr Arianne Verhagen (45 min)

4:30 – 5:00 **Closing session - Auditorium A**

- Your updates (an opportunity for attendees to share news with group) (15 min)
- Awards presentation (10 min)
- Closing remarks (5 min)

Registration: Please contact Allison Kelly at akelly@iwh.on.ca to indicate whether you will be attending the Open Meeting, the methods presentations, or both.

6:00 - 8:00 **Welcome reception – Grande Hotel Campos do Jordão (Forum venue)**

DAY ONE – OCTOBER 1st 2014 AM

8:30 **Forum opening and welcome**

9:00 – 10:00 **Plenary sessions - Auditorium A + B > Chair: Associate Prof Peter Kent**

- Are we over-simplifying back pain?
  Prof Paul Hodges - University of Queensland – Australia

- Are we over-complicating back pain?
  Prof Chris Maher - University of Sydney – Australia

10:00 - 11:00 **Coffee break and Poster session (n=31)**

- Identification of potential adverse events following spinal manipulation
  Daniel Rhon

- Self-perceived recovery status among Danish people with low back problems; what influences their appraisal after 12 months?
  Alice Kogsted

- Diagnostic accuracy of history taking to assess lumbosacral nerve root compression
  Annemieke Verwoerd

- Prevalence of low back and neck pain in adolescents from a Rio de Janeiro public High School
  Ney Meziat Filho

- How psychologically distressed are acute low back pain patients?
  Prof Jan Hartvigsen

- Converting between Patient-Reported Outcome Measures of Physical Disability for Chronic Low Back Pain
  Siew Wan Hee

- The effect of changing movement and posture using motion sensor biofeedback, versus usual care, on the clinical outcomes of people with sub-acute or chronic low back pain - a multicentre, cluster randomised, placebo-controlled, pilot trial
  Associate Prof Peter Kent

- How reassuring is education for patients with acute low back pain?
  Adrian C Traeger

- Sleep disorders as a prognostic factor in persons with neck and back pain following traffic collision
  Lena Holm

- Modifying the STarT Back tool for use with patients with other musculoskeletal conditions: does it work?
  Dr Jonathan C Hill

- The role of rehabilitation counselors in the return to work process of workers identified as being at-risk for long-term disability in a compensation context.
  Manon Truchon

- Therapist delivered interventions for low back pain - Results from a back pain respository
  Dr Shilpa Patel

- Effect graded activity versus supervised exercise program in patients with chronic nonspecific low back pain: a randomized controlled Study
  Amélia Pasqual Marques

- The efficacy of conservative treatment of acute vertebral compression fractures on pain relief: a systematic review
  Dr Manuela L Ferreira

- Clinicians' and Patients' Views on Triggers for Low Back Pain
  Matthew Stevens

- Prevalence of degenerative and spondyloarthritis-related MRI findings in the sacroiliac joints and spine in patients with persistent low back pain
  Bodil Arnbak

- Does pain-catastrophizing mediate the effect of tai chi on treatment outcomes for people with low back pain?
  Dr Amanda Hall

- Chronic pain: exploring the meaning and management of pain within the Bangladeshi community in east London
  Harbinder Sandhu

- Recursive partitioning based approaches for LBP subgroup analyses
  Prof Martin Underwood

- Disability and plasma cytokine levels in elderly women with low back pain (LBP)
  Leani Souza Máximo Pereira

- Massage for Low Back Pain: An updated Cochrane Systematic Review (SysRev).
  Dr Andrea Furlan

- Cost-effectiveness of implementing clinical guidelines on management of low back pain: a cluster randomised trial
  Cathrine Elgaard Jensen

- A systematic review of the relation between self-reported measures of spine function and physical measures of spine function.
  Greg Kawchuk

- Genetic and Lifestyle Factors for Low Back Pain in Brazilian Twins: Establishment of the First Brazilian Twin Registry as part of a Global Network
  Dr Vinicius Cunha Oliveira

- Depressive symptoms in Brazilian elders with low back pain: a "BACK COMPLAINTS IN THE ELDERS – BACE BRAZIL" study
  Fabianna Moraleida

- Does spinal stiffness change with low back pain intensity?
  Arnold Wong

- Is there an association between daily or leisure physical activity and low back pain? A population-based cross-sectional study of 2157 Spanish twins
  Amabile Borges Dario

- The association between symptom severity and physical activity participation in people seeking care for acute low back pain
  Juliana Leme Gomes

- Functional capacity, pain intensity and trunk mobility in elders with acute low back pain: BACE Brazil
  Fabiana Moraleida

- Do MRI findings identify patients with chronic low back pain who respond best to rest or exercise? A secondary analysis of a randomised controlled trial
  Rikke K Jensen

- Perceptual dysfunction in chronic low back pain
  Dr Tasha Stanton

11:00 – 12:00 **Oral presentations (n=3) - Auditorium A + B > Chair: Prof Raymond Ostelo**

- PACE - Efficacy of paracetamol for acute low back pain: A randomized controlled trial
  Dr Christopher M Williams

- Improving Patient Choice in Treating Low Back Pain (IMPACT-LBP) – Results from a cluster randomised trial
  Dr Shilpa Patel

- Fat in the lumbar multifidus muscles in patients with chronic low back pain and degenerative disc: predictive value and change following disc prosthesis surgery and multidisciplinary rehabilitation. 2-year follow-up of a randomised study.
- Dr Kjersti Storheim

12:00 – 1:00 **Lunch**

DAY ONE – OCTOBER 1st 2014 PM

1:00 – 2:00 **Plenary sessions - Auditorium A + B > Chair: Prof Martin Underwood**

- Back Pain – a global perspective and lessons learned from USA
  Prof Rick Deyo – Oregon Health & Science University – USA

- Back pain is apparently not really important – a population perspective
  Prof Jan Hartvigsen – University of Southern Denmark – Denmark

2:00 – 2:30 **Round table - Auditorium A + B > Chair: Associate Prof Peter Kent**

- The Real Forum: An organized research anarchy

2:30 – 3:30 **Short concurrent oral presentations (3 sessions x 6 presentations) -**
Global perspective of back pain's impact - Session 1 Auditorium A + B > Chair: Dr Per Kjaer

- Stratified Care for Patients with Sciatica and Suspected Sciatica in Primary Care: the SCOPiC trial protocol (SCOPiC - SCiatica Outcomes in Primary Care)
  Prof Nadine E Foster

- Evaluating Acupuncture and Standard carE for pregnancy-related Back pain: the EASE Back pilot randomised trial
  Prof Nadine E Foster

- Implementation of the BeST intervention: a group cognitive behavioural approach for patients with low back pain
  Dr Helen Richmond

- A Flexible Database for a Repository of Individual Participant Data from Multiple Randomized Controlled Trials of Low Back Pain for Meta-analysis
  Dr Siew Wan Hee

- Improving Patient Choice in Treating Low Back Pain (IMPACT-LBP) – Economic analysis from a cluster randomised trial
  Prof Martin Underwood

- A Randomized controlled trial on subgroup-specific pain management in chronic back pain
  Dr Bart Staal

Are we complicating simple back pain? - Session 2 - Room 1+2 > Chair: Dr Bard Natvig

- Convolutions generated by the use Kinesio Taping are not better than placebo in patients with chronic non-specific low back pain: a randomised controlled trial
  Patricia Parreira

- Rehabilitation after lumbar disc surgery
  Teddy Oosterhuis

- A novel potential mechanism of spinal manipulative therapy in treating non-specific low back pain
  Arnold Wong

- How important is physiotherapist competence in the delivery of cognitive behavioural approaches (CBA) for low back pain?
  Prof Sallie Lamb

- PREPARE a study of pre-surgery physiotherapy for patients with specific low back pain scheduled for surgery, short term results
  Yvonne Lindbäck

- Comprehensive physiotherapy exercise programme or advice for chronic whiplash (PROMISE): a pragmatic randomised controlled trial
  Prof Chris Maher

Are we over-simplifying back pain? - Session 3 - Room 3+4 > Chair: Julia Fritz

- Clinicians' responses to patients' expressions of emotional cues and concerns are associated with poorer disability outcomes in low back pain
  Dr Vinicius C Oliveira

- The effect of journal impact factor, reporting conflicts of interest, and reporting funding sources, on standardized effect size in back pain trials
  Robert Froud

- Heritability as a contributor for the prevalence of chronic low back pain: The Australian Twin low BACK pain (AUTBACK) study
  Dr Daniela RG Junqueira

- A systematic review of the measurement properties of neuropathic pain screening questionnaires for use in low back pain
  Stephanie Mathieson

- Low-back pain in children and adolescents: a systematic review and meta-analysis evaluating the effectiveness of conservative interventions
  Dr Steven Kamper

- Are obesity and body fat distribution associated with low back pain in women? A population-based study of 703 Spanish twins
  Amabile Borges Dario

- Predicting response to motor control exercises and graded activity for low back pain patients: a randomized controlled trial
  Dr Mark Hancock

3:30 – 4:00 **Coffee break**

4:00 – 5:30 **Workshops (n=4) - Auditorium A + B; Room 1+2; Room 3+4; Lobby room**

- How to write a successful grant proposal for low back pain research: tips & tricks - Room 1+2
  Prof Bart Koes
  Prof Chris Maher

- Is there method in the madness? Subgrouping and matching treatments for back pain - Auditorium A + B
  Prof Nadine E Foster
  Prof Kate Dunn
  Dr Jonathan Hill
  Prof Dan Cherkin
  Dr Karen Sherman
  Rene Hawkes

- Establishing a preliminary framework to evaluate physical measures of spine function- Lobby room
  Greg Kawchuk
  Gert Bronfort
  Prof Raymond Ostelo
  Prof Jan Hartvigsen
  Arnold Wong
  Martha Funabashi

- Is it all about a pain in the back? - Room 3+4
  Prof Jan Hartvigsen
  Dr Manuela L Ferreira
  Dr Bard Natvig

5:45 - 6:45 **Special group meeting: Delphi list research - Auditorium A + B**

5:45 - 6:15

- Standardised method for reporting exercise programs (30 min)
  Dr Susan Slade
  Prof Rachelle Buchbinder
  Prof Martin Underwood

6:15-6:45

- Proposal for Revision of the Core Outcome Set for Low Back Pain: Results from an International Delphi Study (30 min)
  Alessandro Chiarotto
  Prof Raymond Ostelo

7:00 **Indoor football finishing with social networking – Grande Hotel Campos do Jordão**

DAY TWO - OCTOBER 2nd 2014 AM

8:30 **Plenary sessions - Auditorium A + B > Chair: Prof Nadine E Foster**

- Have we forgotten about causation in LBP – lessons learned from other complex conditions
  Prof Luis Claudio – Universidade Federal da Bahia – Brazil

- Causation and Prediction
  Prof Rob Herbert – University of New South Wales – Australia

10:00 - 11:00 **Coffee break and Poster session (n=31)**

- Pilates for Low Back Pain
  Tiê Parma Yamato

- Roland Morris change scores can be independent of changes in back pain
  Robert Froud

- The impact of work related physical activity and leisure physical activity on the risk and prognosis of neck pain – A population based cohort study on workers
  Lina Palmlöf

- The Risk of Receiving a MRI, Lumbar Injection or Surgery in Patients with Lumbar Radiculopathy Stratified as High -Risk by the StarT Back Screening Tool
  John (Jake) Magel

- Self-reported musculoskeletal pain predicts long-term increase in health care use.A population-based cohort study with 20-year follow-up
  Prof Jan Hartvigsen

- Association between home postural habits and back and neck pain in High School adolescents
  Ney Meziat Filho

- Does MRI Add to the Prediction of Recovery in Low Back Pain Patients in General Practice?
  Annemieke Verwoerd-Roest

- Qualitatively and quantitatively defined courses of low back pain. A mixed-method study.
  Associate Prof Lise Hestbaek

- Multidisciplinary biopsychosocial rehabilitation for chronic low back pain: Systematic review and meta analysis
  Dr Steven Kamper

- Motor Control Exercise for Chronic and Recurrent Low Back Pain: A Systematic Review.
  Bruno Tirotti Saragiotto

- Surgery or Physical Activity in the Management of Sciatica. A Systematic Review and Meta-Analysis
  Matt Fernandez

- Using social media to investigate risk for low back pain. Lessons from a case-crossover study using twitter.
  Hopin Lee

- Study protocol "Back on Track"; Chronic low back pain rehabilitation program in Primary care
  Rob J.E.M. Smeets

- Does age matter? An explorary analysis of data from the Back Skills Training (BeST) Trial.
  Esther Williamson

- Patient expectancies in manual therapy practice; related to outcome in neck pain patients?
  Dr Arianne Verhagen

- Adherence measurement tools for non-pharmacological self-care in chronic musculoskeletal conditions: a systematic review
  Dr Amanda Hall

- Does adherence mediate the relationship between patients' outcome expectancies and recovery?
  Tsjitske M Haanstra

- Incidence of low back pain related occupational diseases in the Netherlands
  Prof Bart Koes

- COPE – A Cognitive Patient Education trial for Low Back Pain in Primary Care.
  Kjersti Storheim

- The Influence of Leg Pain on Recovery Trajectories in a Working Cohort with Incident Low Back Pain
  Anne Thackeray

- Quantitative Sensory Testing in patients with specific low back diagnosis scheduled for back surgery
  Yvonne Lindbäck

- A systematic review of long-term use of opioids for chronic back pain
  Dr Andrea Furlan

- Development and Evaluation of a Clinical Prediction Rule to Screen for Patients at Higher Risk for Developing Chronic Whiplash-related Symptoms
  Maja Stupar

- How should self-management of spinal pain be defined?
  Dr Vinicius Cunha Oliveira

- Validation and reliability of the WOMAC questionnaire for elders with acute low back pain
  Leani de Souza Máximo Pereira

- The relationship between symptoms of depression and low back pain is partially mediated by sleep quality and physical activity
  Marina Barros Pinheiro

- Fast tracking the design of theory-based KT interventions through a consensus process.
  André Bussières

- Pain and gait speed in elders with acute low back pain: BACE Brazil
  Fabianna Moraleida

- Örebro musculoskeletal pain screening questionnaire short-form versus start back screening tool: analysis of correlation and agreement
  Cristina Maria Nunes Cabral

- Protocol for pilot RCT to test the effectiveness and cost effectiveness of Facet-joint injections for selected people with persistent non-specific low back pain (FIS) – The protocol
  Mindy Cairns

11:00 – 12:00 **Oral presentations (n=3) - Auditorium A + B > Chair: Prof Rachelle Buchbinder**

- What Triggers an Episode of Low Back Pain? Results of a Case-Crossover Study
  Prof Jane Latimer

- 3-level chronic pain risk classification in patients with strictly defined acute low back pain
  Dr Wolf E Mehling

- Are symptoms of depression associated with low back pain when genetics is considered? A population-based study of Spanish twins
  Marina B Pinheiro

12:00 – 1:00 **Lunch**

DAY TWO - OCTOBER 2nd 2014 PM

1:00 – 2:00 **Network time**

2:00 – 2:30 **Round table - Auditorium A + B > Chair: Dr. Jonathan Hill**

- The Real Forum: An organized research anarchy

2:30 – 3:30 **Short concurrent oral presentations (3 sessions x 6 presentations)**
Causation and prediction of back pain - Session 1 - Auditorium A + B > Chair: Dr Bart Staal

- Could the weather trigger an episode of acute low back pain? A case cross-over study
  Daniel Steffens

- Symptoms of depression increase the risk of developing low back pain. A systematic review and meta-analysis
  Marina B Pinheiro

- How does disability develop in spinal pain? A systematic review of mediating factors
  Hopin Lee

- Red flags and other determinants for fractures as a cause of back pain in older adults
  Wendy Enthoven

- Reduced Progressive Iso-Inertial Lifting capacity is associated with and predictive of future low back pain women, but not in men. A longitudinal study of middle aged Danes from the general population
  Dr Per Kjaer

- Sleep Quality Can Influence Intensity of Low Back Pain
  Dr James Mcauley

Causation and prediction of back pain - Session 2 - Room 1+2 > Chair: Dr Arianne Verhagen

- Are Job Strain and Sleep Disturbances Prognostic Factors for Neck/Shoulder/Arm Pain? A Cohort Study of a General Population of Working Age in Sweden
  Lena Holm

- The clinical course of lumbar spinal stenosis: a systematic review
  Carolina Fritsch

- Patients with low back pain had distinct clinical course patterns which were typically neither recovered nor constant pain
  Alice Kongsted

- Trajectories of acute low back pain: latent class growth analysis
  Aron Downie

- Does low back pain or neck pain increase the risk of myocardial infarction? Insights from a prospective Longitudinal -Based Study of Danish Twins 70-102 Years of Age
  Matt Fernandez

- Predictors for success following the McKenzie method or spinal manipulation in low back pain patients presenting with centralization or peripheralization. Subgroup analysis
  Tom Petersen

Causation and prediction of back pain - Session 3 - Room 3+4

- Spinal pain – good sleep matters: a secondary analysis of a randomized controlled trial
  Dr Eva Skillgate

- Expectations of recovery – a prognostic factor in patients with neck pain undergoing manual therapy treatment
  Lina Palmlöf

- Lifestyle factors in chronic low back pain: Results from the Australian Twin low BACK pain (AUTBACK) study
  Dr Daniela RG Junqueira

- The relationship between obesity and low back pain: a systematic review with meta-analysis of twin studies
  Amabile Borges Dario

- Concordance of chronic pain and chronic back pain between family members
  Paul Campbell

- The Bidirectional Relationship Between Intensity of Low Back Pain and Sleep Quality
  Dr Saad Alsaadi

3:30 – 4:00 **Coffee break**

4:00 – 5:30 **Workshops (n=4) - Auditorium A + B; Room 1+2; Room 3+4; Lobby room**

- Validation and implementation of a resource questionnaire for use in low back-pain research - Room 1+2
  Dr Melina Dritsaki
  Prof Martin Underwood
  Dr Robert Froud
  Dr Christine Lin

- Back pain in children and adolescents: Moving forward through coordinated research - Room 3+4
  Associate Prof Lise Hestbaek
  Prof Kate Dunn
  Dr Per Kjaer

- Transforming latent low back pain trajectories into manifest variables suitable for use in future studies - Lobby room
  Alice Kongsted
  Associate Prof Peter Kent

- Developing websites for people with low back pain - Auditorium A+B
  Prof Paul Hodges
  Dr Simon French
  Prof Chris Maher
  Prof Maurits van Tulder

7:00 **Gala dinner – Grande Hotel Campos do Jordão (Forum venue)**

DAY THREE - OCTOBER 3rd 2014 AM

9:00 **Plenary sessions - Auditorium A + B > Chair: Prof Kathryn Refshauge**

- New frontiers for primary care back pain research: The Ageing Population

  Prof Sallie Lamb – University of Warwick – UK

- Physical activity as a population-based treatment

  Associate Professor Pedro Hallal – Federal University of Pelotas – Brazil

10:00 – 11:00 **Coffee break and Poster session (n=31)**

- A Comparison of Spinal Manipulation Methods and Usual Medical Care for Acute Low Back Pain: A Randomized Clinical Trial
  Michael Schneider

- Örebro musculoskeletal pain screening questionnaire short-form: translation, cross-cultural adaptation and measurement properties of the Brazilian-Portuguese version
  Felipe Ribeiro Cabral Fagundes

- Health Care Services Use After Lumbar MRI in General Practice
  Annemieke Verwoerd-Roest

- Effectiveness and cost effectiveness of a group pain self-management intervention for patients with chronic musculo-skeletal pain: a randomized controlled trial
  Prof Martin Underwood

- Extending stratified care beyond low back pain: the Keele Stratified Care for Musculoskeletal Pain Programme
  Nadine E Foster

- Short term outcomes in patients with low back pain using the treatment based classification (TBC) in a private outpatient setting in Brasil: A retrospective study
  Rodrigo Antunes de Vasconcelos

- Visual trajectories: can people tell you their back pain trajectory?
  Prof Kate Dunn

- Analgesic use in older adults with back pain: the BACE study
  Wendy Enthoven

- Recruiting medical groups for implementation research
  Allan Riis

- Cost-analysis related to dose-response for spinal manipulative therapy for chronic low back pain: outcomes from a randomized controlled trial
  Mitchell Haas

- Is the predictive ability of the STarT Back Tool affected by clinical setting, duration of episode or outcome time period?
  Alice Kongsted

- Low-back pain and physical activity in adolescents: Analyses of a population-based international survey.
  Michael Steven Swain

- Degenerative pathways of lumbar motion segments - a comparison in two samples of patients with persistent low back pain
  Rikke K Jensen

- Psychometric properties of the Brazilian Portuguese version of the Working Alliance Inventory
  Dr Rafael Zambelli de Almeida Pinto

- Association between spondyloarthritis features and MRI findings in patients with persistent low back pain
  Bodil Arnbak

- Radiofrequency therapy for chronic low back pain: a systematic review
  Esther Maas

- Delivering and Sustaining Higher-Value Low Back Pain Care Across 40 Physical Therapy Clinics
  Emily Karlen

- Clinical examination findings as prognostic factors in low back pain: a systematic review of the literature.
  Lisbeth Hartvigsen

- Patients' beliefs about LBP as reported by LBP experts.
  Meagan Blackburn

- Decompression techniques in the management of lumbar spinal stenosis: A systematic review and meta-analysis of randomised controlled trials
  Gustavo Carvalho Machado

- Preventative care strategies for common risk factors of chronic disease and back pain in patients waiting for specialist consultation
  Dr Chris Williams

- Combining data from randomised controlled trials with registry data to improve health economic evaluation of low back pain treatment in Denmark
  Cathrine Elgaard Jensen

- The relation between changes of pain-related fear and improvement of pain. Results from a 2 year observational study in patients with sciatica
  Anne Julsrud Haugen

- Prevalence of back or neck pain in patients with Irritable Bowel Syndrome in Primary care, and effect on pain, disability and health related quality of life
  Paul Enthoven

- Risk factors for low back pain: insights from a novel case-control twin study
  Dr Vinicius Cunha Oliveira

- Pain intensity, functional performance and physical capacity in elders with acute low back pain
  Leani de Souza Máximo Pereira

- Pain intensity and self-reported reason for the onset of acute low back pain in elders: BACE study data
  Leani Souza Máximo Pereira

- Effect of Minimally Invasive low-intensity laser therapy (MILLT) on the spontaneous regression (autolysis) the disc hernia structure.
  Alexander Tkachev

- Combination of different types of physical activity in chronic low back pain: The Australian Twin low BACK pain (AUTBACK) study
  Dr Daniela RG Junqueira

- Association between kinesiophobia and physical capacity measures and functional performance in elders with low back pain.
  Fabianna Moraleida

- Identifying patients with chronic back pain who respond best to McKenzie therapy: a secondary analysis of a randomised controlled trial
  Alessandra Garcia

11:00 – 12:00 **Oral presentations (n=3) - Auditorium A + B > Chair: Prof Bart Koes**

- Exercise Therapy for Chronic Low Back Pain: Cochrane Review update & Individual Participant Data-Meta-analysis (IPD-MA)
  Dr Jill Hayden

- Second opinion on spine surgeries: an option or necessity?
  Dr Mario Lenza

- Healthy lifestyle behaviour improves the prognosis of low back pain in women: A population based cohort study
  Dr Eva Skillgate

12:00 – 1:00 **Lunch**

DAY THREE - OCTOBER 3rd 2014 PM

1:00 – 2:00 **Wrap-up - Auditorium A + B > Chair: Dr Andrea Furlan**

- Emergent themes: stepping away from our Guru's umbrella
  Dr Nick Henshke - University of Heidelberg – Germany

- Forum summary
  Prof Dan Cherkin

2:00 – 3:00 **Proposals arising from the Forum**
Presentation of the next Forum host
Closing remarks

3:00 – 3:30 **Closing ceremony**

Keynotes Speakers

(Plenary Presentations)

Chris Maher

Director, Musculoskeletal Division, The George Institute for Global Health
Professor, Sydney Medical School, The University of Sydney

"Are we over-complicating back pain?"

This presentation will focus on problems in research and practice that arise from overcomplicating back pain and what we might do to address these problems. For example some of the problems we experience with clinical management of back pain are caused by our reluctance to do the simple things well...and then stop there. There seems to be a belief that more is better and a fascination with complex treatments. There is waste in research because we often measure the same construct in different ways, we tend not to lodge our data in registries and instead of working collaboratively on a small set of important trials we typically favour anarchy. Lastly the way we conduct and report our research can complicate its transfer to policy and practice.

Jan Hartvigsen

Jan Hartvigsen is Full Professor and head of the Research Unit for Clinical Biomechanics at the Institute of Sports Science and Clinical Biomechanics at University of Southern Denmark. He is also director of the Graduate Program for Physical Activity and Musculoskeletal Health at the Faculty of Health Sciences that currently includes 64 PhD students from multiple professional backgrounds. In addition to his university appointment Jan Hartvigsen is a Senior Researcher at the Nordic Institute of Chiropractic and Clinical Biomechanics.

Back pain is apparently not really important – a population perspective

Musculoskeletal disorders are now leading causes of disability worldwide and costs and suffering associated with them are astronomical. Intuitively one would think that research into effective prevention and effective early treatment would be a top priority for governments everywhere. Well apparently not, because even though we know very little about how to prevent and best treat for instance back pain, funding for research, guideline development and implementation of guidelines is negligible in most countries. Why is that and what roles have health professionals and academics played in creating this situation?

Luís Cláudio Lemos Correia

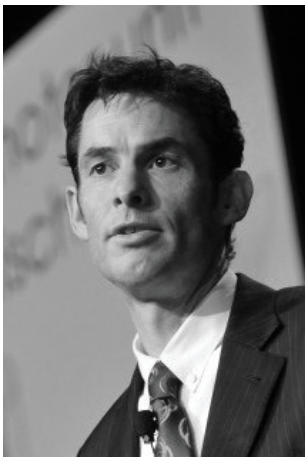
Associate Professor Luís Claudio Lemos Correia has a Medical degree from the Federal University of Bahia, did his medical residency at the University Hospital Professor Edgard Santos, followed by research fellowship in Cardiology at Johns Hopkins University and National Institute on Aging - Baltimore. Later obtained a Doctorate in Medicine and Health at the Federal University of Bahia and conducted postdoctoral studies at Bahia Foundation for Science Development Project. He coordinates the undergraduate discipline Clinical Evidence-Based Reasoning and the disciplines of postgraduate Quantitative Methods. Leader of the research group Risk Markers in Acute Coronary Syndromes, linked to graduate Bahia School of Medicine, where he leads the Prospective Registry of Acute Coronary Syndromes. He is co-director of the residency program in cardiology at Hospital São Rafael / BA, editor of the Evidence-Based Medicine Blog and current President of the Study Group on Epidemiology and Evidence-Based Cardiology of the Brazilian Society of Cardiology.

Nicholas Henschke

Nicholas Henschke is a researcher in the Institute of Public Health at the University of Heidelberg, Germany.
He holds a conjoint position at the Sydney Medical School, University of Sydney.

"Emerging themes: stepping out from under the umbrella"

In the increasingly competitive world of health research, early career scientists face multiple challenges. After the relative safety and comfort of working under the "umbrella" of experienced mentors there is often a difficult process to becoming an independent researcher. Through examples from personal experience, Nicholas will discuss the barriers faced by early career researchers and strategies to overcome them. The discussion will draw parallels to the challenges faced by primary care research in low back pain.



Paul Hodges

NHMRC Senior Principal Research Fellow, Professor and Director of the Centre of Clinical Research Excellence in Spinal Pain, Injury and Health, The University of Queensland, Brisbane, Australia.

Are we over-simplifying back pain?

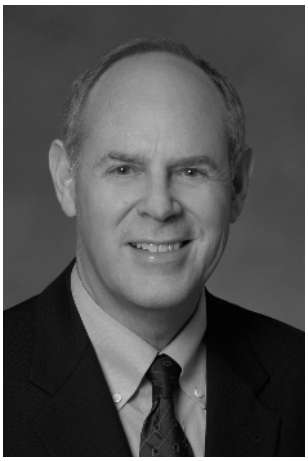
Management of back pain is often considered at two ends of a spectrum. At one end is the view that management should be targeted to the individual with detailed consideration of individual features of the presentation including the pain mechanism and physical features such as posture, movement, muscle activation that may contribute to ongoing symptoms. The alternative is a generic view where the patient is encouraged to return to function with little consideration of physical/physiological aspects of pain. The latter approach is easier to apply and current clinical trials provide no convincing evidence of lesser efficacy. Should we discard the complexity in favour of a more generic approach? Where does complexity fit in the design of intervention for back pain?

Pedro Hallal

Associate Professor, Federal University of Pelotas, Brazil

Physical activity as a population-based treatment

1/3 of the adults and 4/5 of the adolescents worldwide are inactive. More than 5 million deaths per year are attributable to physical inactivity. Data are lacking on the determinants of physical activity. Several physical activity interventions have proven to be effective, but most of them have not been extended to a national scale. Actions outside the health sector (e.g. technology, transportation) have the potential to considerably influence physical activity levels worldwide. In view of the prevalence, global reach, and health effects, physical inactivity can be appropriately described as pandemic, with far-reaching health, economic, environmental, and social consequences.



Richard A. Deyo

Professor of Evidence-Based Family Medicine, Department of Family Medicine, Dept. of Internal Medicine, Dept. of Public Health and Preventive Medicine, and Oregon Institute of Occupational Health Sciences; and Clinical Investigator, Kaiser Center for Health Research; all in Portland, Oregon.

Back Pain – a global perspective and lessons learned from the USA.

The high prevalence and impact of low back pain have spawned a rapidly expanding range of tests and treatments. Some have become widely used for indications that are not well validated, leading to uncertainty about efficacy and safety, increasing complication rates, and marketing abuses. This has been a particular challenge in the US, where spine imaging, opioid prescribing, injections, and surgery rates exceed those elsewhere and have increased rapidly. These increases have not been accompanied by population-level improvements in patient outcomes or disability rates. We need better understanding of pain mechanisms, more rigorous trials of many treatments, a stronger regulatory stance toward new drugs and devices, and a chronic disease model for managing chronic back pain.

Rob Herbert

Senior Principal Research Fellow at Neuroscience Research Australia (NeuRA).

Causation and prediction

Cohort designs are widely used in epidemiological research, including research into the epidemiology of back pain. They can be used to answer questions about aetiology (causation) or questions about prognosis (prediction). This presentation describes critical differences in the design and analysis of cohort studies of aetiology and prognosis. Specifically, it discusses how the study objective influences selection of exposure variables, the need to consider confounding, tolerance of measurement error, the need to correctly specify the statistical model, the extent to which the analysis is driven by theory or by the data, the importance of model simplicity, the statistics of interest, and the interpretation of the study's findings.

Sarah Lamb

Professor Lamb is Co-Director, Oxford Clinical Trials Research Unit (OCTRU) – University of Oxford, Kadoorie Professor of Rehabilitation, University of Oxford
Professor of Rehabilitation, Warwick Clinical Trials Unit, University of Warwick.

New frontiers for primary care back pain research: The Ageing Population.

Over 70% of people will suffer with LBP in their lifetime, and the chance of having serious LBP is greatest in later life. LBP is associated with mobility decline, disability and falls in older people, and in turn, loss of independence and frailty. Conversely, this is the time in life when GPs and patients are least likely to target LBP for treatment. The management of LBP in older people is without sufficient evidence base. This presentation will explore gerontological concepts including multi-morbidity, polypharmacy, geriatric syndromes, condition preference and treatment resilience, and the potential for improved management of LBP in older people.

Workshops

04:00 – 05:30 PM

Title

HOW TO WRITE A SUCCESSFUL GRANT PROPOSAL FOR LOW BACK PAIN RESEARCH: TIPS & TRICKS

Authors & Affiliations

Bart Koes, ErasmusMC, Rotterdam, the Netherlands
Chris Maher, George Institute, Sydney, Australia

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Background

Writing and obtaining research grants is an important activity for back pain researchers. There are many options available for submitting research proposals nationally as well as internationally. This includes government agencies, charitable foundations, (pharmaceutical) industry, health insurers, medical societies, etc. Available budgets for back pain research are limited and not all research proposals (not even seemingly great ones) are awarded. The rules of the 'game' are not always clear to researchers applying for funding. At the same time many research proposals do get funding, as illustrated by the relatively large number of articles describing original studies in the field of back pain. This situation leads to a number of questions. What can we learn from each other in our attempts for obtaining research grants? What are the most important grant agencies in the field of back pain? What are the do's and dont's? Can we influence policymakers in governments and elsewhere in order to increase the total budget for back pain research? Does collaboration lead to higher success rates in obtaining research funding?

How the workshop will be conducted?

The workshop will be interactive. Participants are invited to share their positive and negative expericiences with writing and obtaining research grants. National and international oportunities for submitting grant applications in the field of low back pain will be discussed with the workshop participants. Tips & tricks for succesful grant applications in general will be presented and discussed by the workshop leaders.

Conclusions

The workshop gives a platform for back pain researchers to share our experiences with writing research proposals and obtaining research funding. Strategies to enhance a successful grant application for back pain research will be discussed and together we will make a list of do's and dont's.

04:00 – 05:30 PM

Title

IS THERE METHOD IN THE MADNESS? SUBGROUPING AND MATCHING TREATMENTS FOR BACK PAIN

Authors & Affiliations

Nadine Foster[1], Kate Dunn[1], Jonathan Hill[1], Dan Cherkin[2], Karen Sherman[2], Rene Hawkes[2]

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2 Group Health Research Institute, Seattle, USA

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Background

Stratified care involves targeting treatment to subgroups of patients based on key characteristics such as prognostic factors, likely response to treatment or proposed mechanisms. It is thought to 'fast track' patients to appropriate treatment by supporting therapeutic decision-making in ways that maximise treatment benefit, reduce harm and increase healthcare efficiency by more consistently offering the right treatment to the right patient. A proliferation of studies has tested an array of approaches to stratifying back pain patients for treatment, each with different (sometimes overlapping) philosophies and approaches. There are now almost as many systematic reviews on this topic as original studies and collectively these highlight the limitations in the methods and quality of the evidence base to date. Reassuringly there is a methodological road map supported by published guidance about the key stages of research to improve the quality and clinical applicability of stratified care research. These include i) early stages of development or derivation of the stratification method, ii) validation, iii) definitive testing in a randomised controlled trial (RCT) sufficiently powered to detect differences at the level of the subgroups, and iv) replication in both narrow (similar clinical setting and population) and broad validation studies (broader clinical settings and populations) to fully assess impact on patient outcomes, clinical behaviour and resource use. These 'impact analyses' studies also need to consider cost-effectiveness and ease of implementation in clinical practice. As the interest in stratified care continues to grow, many other clinical research teams wish to conduct research to test new approaches. In this workshop we discuss the road map for this type of research, and share real examples.

How the workshop will be conducted?

We will introduce and appraise the key research stages that are needed to provide sufficiently robust evidence to justify implementation of stratified care in clinical practice. We will consider one key example of stratified care for back pain – the STarT Back approach based on prognosis - that has been subjected to all 4 stages of research. We aim to highlight the sequential range of studies required to incrementally build the evidence base for stratified care and to give others the chance to share and discuss their ideas.

Workshop plan (1.5 hours total):

1. Stratified care in back pain – what is it and what approaches have been tested? 5 mins
2. Key research stages needed to underpin stratified care. 10 mins
3. STarT Back example – a 10 year journey and beyond: stratification tool and matched treatment development, validation, RCT, narrow validation, broad validation. 15 mins
4. Small group discussion (each with a facilitator and rapporteur): 40 mins

   Discussion topics:

   Implications of the methodological road map for stratified care research

   Delivering all 4 stages of stratified care research

   Where next for stratified care research?

   Implications for clinical practice
5. Feedback and discussion. 20 mins

Conclusions

The workshop will conclude with identifying opportunities for improvements to existing stratified care models, highlighting remaining, key research questions about new stratified care approaches, and drawing out the implications of stratified care for clinical practice in back pain.

04:00 – 05:30 PM

Title

ESTABLISHING A PRELIMINARY FRAMEWORK TO EVALUATE PHYSICAL MEASURES OF SPINE FUNCTION.

Authors & Affiliations

Greg Kawchuk1, Gert Bronfort2, Ray Ostello3, Jan Hartvigsen4, Arnold Wong1, Martha Funabashi1.

1.University of Alberta 2. Northwestern Health Science University 3. Vrije Universiteit Amsterdam 4. University of Southern Denmark and Nordic Institute of Chiropractic and Clinical Biomechanics

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Background

Despite their frequency in the literature, objective measures of spine function are seldom used in clinical and epidemiological studies. Specifically, spine function is almost exclusively evaluated by self-reported measures despite recent evidence from other fields (e.g. osteoarthritis) that patient reported outcome measures characterize a functional domain distinct from that of physical measures.

As such, objective quantification of spine function may provide important information that is presently missing from many spine studies (provided that these measures are reliable, valid and meaningful). A growing body of evidence suggests that high-quality objective measures may reveal novel relations between subjective complaints and function as well as increase our understanding of the underlying causes of pain and mechanisms of action for various treatments.

We propose the following workshop with the goal of developing a preliminary framework to evaluate physical measures of spine function in relation to the needs of researchers so that we may better understand opportunities and barriers for characterizing spine function in research.

How the workshop will be conducted?

After introduction to the topic, participants will be divided into smaller workgroups that will use structured discussion and assigned leaders to explore three key questions.

1. Which physical properties of the spine are most relevant?
2. Is it possible to define these properties and how can they be measured?
3. What measurement parameters are important to researchers (e.g. accuracy, reliability, time, cost) and what values are acceptable?

For question 1, workgroups will be led through a brainstorming exercise to identify physical properties of the spine after which a consensus-based approach will be used to rank the list by relevance (as defined by the group). For question 2, the ranked spine properties will be defined by consensus and methods to measure these properties will be listed. To conclude the workshops, a range-finding exercise will be employed to develop a list of parameters to evaluate each measure for use in research and to provide a spectrum of acceptable values.

The groups will be reconvened and the findings discussed. Included in the discussion will be an exercise to identify potential alignments and mismatches between identified measures and acceptable parameters for use in research.

Conclusions

Similar to processes used in other musculoskeletal conditions when considering the adoption of new outcomes measures, the aim of this workshop is to create a preliminary framework to evaluate physical measures of spine function against the needs of the research community. The preliminary framework developed here will be used as a foundation for establishing formal criteria for which to adopt physical outcome measure for use in spine research.

04:00 – 05:30 PM

Title

IS IT ALL ABOUT A PAIN IN THE BACK?

Authors & Affiliations

Jan Hartvigsen, University of Southern Denmark and Nordic Institute of Chiropractic and Clinical Biomechanics, Odense, Denmark
Manuela Ferreira, George Institute for Global Health, Sydney, Australia
Bard Natvig, University of Oslo, Oslo, Norway

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Background

Multisite musculoskeletal pain is common among people suffering from low back pain. Although the mechanisms behind co-occurrence of multiple symptoms and musculoskeletal pain are still unknown, patients with co-occurring musculoskeletal symptoms tend to have worse functional status, a poorer prognosis, and they respond less favorably to treatment. Evidence also suggests that the more pain sites a patient reports, the more reduced their physical and mental function will be regardless of location of the pain.

Evidence-based strategies for diagnosis and treatment of back pain and other musculoskeletal disorders such as neck pain and lower limb osteoarthritis are very similar.

We therefore ask: Is it time to move away from site-specific research, site-specific guidelines, and site specific specialization and take a more general and comprehensive view of musculoskeletal pain disorders and develop a conceptual framework for a common stratified and/or step-wise approach to diagnosis and management of back and musculoskeletal pain?

Objectives of this workshop are
1. To provide a brief overview of the evidence on the prevalence of site-specific and multisite musculoskeletal pain and the impact of site-specific versus multisite pain on patient's prognosis.
2. To present examples of principles, strategies, and guidelines for management of musculoskeletal disorders across pain sites and introduce a common stepwise approach to care
3. To discuss pros and cons for a similar clinical approach to back pain and pain in other sites
4. To discuss pros and cons for a similar research approach in back pain and pain at other sites

Conclusions

The expected outcomes of this workshop are to increase awareness of coexistence of multisite musculoskeletal pain in patients with spinal pain. We also expect to initiate a structured discussion among opinion leaders in this field, of how coexistence multisite pain should inform future policy, practice and research agenda. Where possible, a research interest group will be established to initiate international collaboration and a position paper written of the results of these discussions.

04:00 – 05:30 PM

Title

VALIDATION AND IMPLEMENTATION OF A RESOURCE QUESTIONNAIRE FOR USE IN LOW BACK-PAIN RESEARCH

Authors & Affiliations

1. Dr Melina Dritsaki, Warwick Clinical Trials Unit, The University of Warwick, UK
2. Professor Martin Underwood, Warwick Clinical Trials Unit, The University of Warwick, UK
3. Dr Robert Froud, Warwick Clinical Trials Unit, The University of Warwick, UK
4. Dr Christine Lin, Musculoskeletal Division, The George Institute for Global Health and Sydney Medical School, The University of Sydney

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Background

Research Aims: To standardise a self-completion resource questionnaire for use in economic studies of low back pain.The aim of the workshop is to finalise the questionnaire.
Background: Low back pain (LBP) is a common and costly disorder. It affects around a third of adults. As well as estimating the clinical effectiveness of interventions to improve LBP, it is equally important to capture the cost of LBP to the individual, the national health systems, and to society overall.
We have collected 12 resource-use questionnaires from RCTS of LBP conducted in the UK. These questionnaires gather structured information on all aspects of health and social care (visits to general practitioner, visits to physiotherapist etc) as well as out-of pocket expenses by the patient and other agents (i.e. informal care). We have extracted the common domains, and question formats within these domains, from these questionnaires. This has informed the development of a prototype standard questionnaire. We have run five focus groups with trial participants to explore their perception, their interpretability, and acceptability of the questionnaire.
To our knowledge a validated LBP resource-use questionnaire has not been published before, although questionnaires for other diseases are available through the DIRUM website.
Using this questionnaire as a starting point, this workshop will aid in the creation of a standardised economic questionnaire template, which will enable researchers in LBP to capture the economic burden of the disease in a consistent manner. This will facilitate efficient economic evaluation of LBP interventions and future meta -analysis of health economic analyses. In this workshop we will present the draft template to gain input from an international pool of researchers into its final design.

How the workshop will be conducted?

Workshop components:

1. Distribution of the resource questionnaire prior to the workshop
2. Brief presentation on the methods of economic evaluation
3. Brief review of main findings that came out of the patient focus groups
4. Discussion in small groups about the interpretability, practicality, content, cross-cultural validity of the questionnaire
5. Following the workshop the final questionnaire will be distributed for feedback to ensure that it reflects decisions that were made.

Number of participants: 10-25 maximum, ideally representing a breadth of expertise, experiences and views.

Conclusions

The anticipated outcomes is a consensus towards standardising a self-completion resource and expenditure questionnaire for use in economic studies of LBP and an online inclusion to the DIRUM repository of resource-use questionnaires

04:00 – 05:30 PM

Title

BACK PAIN IN CHILDREN AND ADOLESCENTS: MOVING FORWARD THROUGH COORDINATED RESEARCH.

Authors & Affiliations

Lise Hestbaek[1,2], Kate Dunn[3], Per Kjaer[1]

1 Department of Sports Science and Clinical Biomechanics, University of Southern Denmark, Odense, Denmark.
2 Nordic Institute of Chiropractic and Clinical Biomechanics, Odense, Denmark
3 Research Institute for Primary Care & Health Sciences, Keele University, Keele, England.

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Background

The concept of back pain episodes as unique entities is severely challenged as there is a growing recognition of the need to consider back pain in a lifetime perspective. At the same time there is an increasing body of evidence suggesting that back pain originates early in life, and therefore more focus is needed on its development in childhood and adolescence. This is necessary for epidemiological studies of primary prevention as well as for clinical studies aiming for treatment and secondary prevention, but nevertheless research in pediatric back pain is still very limited and very few trials have been conducted. However, around the world several research groups have been gathering data about childhood health in population based cohorts, many of which also include data on musculoskeletal health. Therefore, through a coordinated effort, there is a possibility for the field to move efficiently forward by exploiting existing data. Furthermore, collecting new data in a homogenous way, allowing for future pooling, increases the potential for conclusive results. Therefore, the aim of this workshop is to facilitate a high level of information, exchange of data and experiences between research groups, and a common sense of direction.

How the workshop will be conducted?

Prior to the conference, information about available data (questions and collection methods) from studies of general populations or primary care patients as well as ongoing projects will be collected by the authors.
Workshop structure:
1. Context & importance of studying back pain in children / adolescents.
2. Current knowledge (published research).
3. Ongoing studies & available datasets (results of survey / review).
4. Facilitated group discussions:
- Standardized measurements and collection methods.
- Future collaborations.
5. Thoughts from the groups will be discussed in plenum.

Conclusions

The workshop will result in a status paper identifying available resources and presenting suggestions for standardized data collection in future research.

04:00 – 05:30 PM

Title

TRANSFORMING LATENT LOW BACK PAIN TRAJECTORIES INTO MANIFEST VARIABLES SUITABLE FOR USE IN FUTURE STUDIES

Authors & Affiliations

Alice Kongsted[1,2,] Peter Kent[2,3]

1 Nordic Institute of Chiropractic and Clinical Biomechanics, Odense, Denmark
2 Department of Sports Science and Clinical Biomechanics, University of Southern Denmark, Odense, Denmark
3 The Spine Centre of Southern Denmark, Institute of Regional Health Research, University of Southern Denmark

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Background

There is increasingly recognition that low back pain (LBP) is often experienced as recurrent episodes of pain or as persistent pain of varying severity. Therefore, LBP is a health condition which is poorly described using traditional descriptors, such as 'onset date' and 'recovery', or by attempting to differentiate between acute and chronic LBP based only on episode duration. A number of studies have instead described the course of LBP using trajectories identified using computerized clustering / latent class techniques.
Some characteristic trajectories of LBP have been reproduced across these studies and they may provide a more nuanced way to better describe the course of LBP in future studies.
However, trajectories described as latent variables are often not practical for use in other samples/populations and some forms of sample-specific trajectories can be difficult to compare across studies. So it is timely to seek a consensus about operational definitions of trajectories that can be incorporated into a broad range of future studies. Transformation of latent trajectories into well-defined categories would enable the testing of LBP trajectories as both a prognostic factor and an outcome measure across a range of settings and populations.
Therefore, the aims of the workshop are:
(i) To discuss how to progress from the identification of LBP trajectories to the practical application of the existing body of knowledge about trajectories, and
(ii) To move towards determining what methods and tools will facilitate the application of that knowledge to data sets and individual patients.

How the workshop will be conducted?

The workshop will have six components:
1) Pre-workshop: Some pre-reading.
2) Workshop presentation 1: Attendees will be given an overview of the existing knowledge about LBP trajectories, with a focus on comparing the trajectories identified in previous studies.
3) Workshop group work 1: The attendees will workshop which trajectories to include in a manifest trajectory variable that could be potentially useful as a prognostic factor and/or as an outcome.
4) Workshop presentation 2: Examples of possible ways to define trajectories and apply them in research and clinical settings will be presented.
5) Workshop group work 2: The attendees will discuss how to define these trajectories and the methods or tools to best apply them to groups of patients and individual patients.
6) Post-workshop: People attending the workshop will be invited to participate in an on-line group that will complete the trajectory definitions.

Conclusions

Participants will gain knowledge about LBP trajectories and potential ways to practically use them.
The ideas that emerge during the workshop will be published as a commentary paper.

04:00 – 05:30 PM

Title

DEVELOPING WEBSITES FOR PEOPLE WITH LOW BACK PAIN

Authors & Affiliations

1. Paul Hodges, University of Queensland, Brisbane Australia
2. Simon French, Queen's University, Kingston Canada
3. Chris Maher, The George Institute for Global Health and The University of Sydney, Australia
4. Maurits van Tulder, VU University, The Netherlands

Contact Email

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Background

Consumers commonly search for health information on the Internet, but available health information quality varies substantially [1]. Good quality information about pain is unlikely to be retrieved by consumers on the Internet [2]. Surveys of web-based low back pain (LBP) information have indicated that websites provide poor quality information [3,4], and consumers seeking pain-related information on the internet typically do not find useful material [5,6]. Better quality websites are needed for consumers seeking information about LBP.

References
1. Kaicker et al. BMC medicine 2010;8:59.
2. Corcoran et al. Clin J Pain 2009;25:617-623.
3. Butler et al. Spine 2003;28:395-401
4. Li et al. Spine 2001;26:545-57
5. Corcoran et al. Pain Med 2010;11:512-17
6. Nielsen et al. Disabil Rehabil 2013 Sep 3. [Epub ahead of print]

How the workshop will be conducted?

Workshop Aim
The main aim of the workshop is to develop a framework for developing LBP websites and to get consensus on the optimal content of LBP websites.

Specific workshop objectives are:
1. To provide an opportunity for workshop participants to discuss methods used to develop websites for people with LBP.
2. To share experiences in developing LBP consumer websites.
3. To make recommendations for the best practice development of future LBP websites.

Prior to the workshop, LBP Forum participants will be invited to participate in a Delphi survey to determine the key messages that should be available for consumers seeking LBP-related information on the internet. Results of this survey will be presented at the workshop.

During the workshop, the organisers will give a short presentation of the methods they have used to develop LBP websites. Workshop participants will then engage in small group work, facilitated by one of the workshop organisers, to explore the key steps in the website development process. Documents will be provided to assist the guidance for the development of LBP websites, e.g. to prompt thinking about the characteristics of the target population, the key messages that should be included on the website, etc. Each small group will then feedback their discussion to the larger group.

Desired workshop outcomes
As well as shared experiences, a paper for publication will be developed to discuss best practice methods for developing consumer websites in this area and to make recommendations for future implementation research.

Target audience

Researchers and clinicians who are interested in developing consumer websites for people with LBP.

Conclusions

There is potentially much duplication (existing and planned) with different groups developing different websites for LBP. This workshop will attempt to reduce this duplication, and also improve the quality of the content of LBP websites, by bringing developers together to share experiences and make recommendations about the optimal content of LBP websites. The main workshop output will be a framework for developing LBP websites including the “do’s”, the “don’ts” and “how to” lessons.

Oral Presentations

11:00AM – 12:00PM > Auditorium A+B

Title

PACE - EFFICACY OF PARACETAMOL FOR ACUTE LOW BACK PAIN: A RANDOMIZED CONTROLLED TRIAL

Authors & Affiliations

Christopher M Williams[1, 2]
Christopher G Maher[1]
Jane Latimer[1]
Andrew J McLachlan[3]
Mark J Hancock[4]
Richard O Day[5]
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Background

Paracetamol is recommended as the first-line analgesic for acute LBP; however, there is no high quality evidence to support this recommendation. PACE aimed to determine whether paracetamol taken regularly or as-required improved recovery time, pain, disability, function, global symptom change, sleep or quality of life in patients with acute LBP, compared to placebo.

Methods

1,643 acute LBP patients were randomly allocated to receive regular (three times per day) or as-required (taken when needed for pain relief) doses of paracetamol, or placebo. All participants received best-evidence advice and were followed for 3-months. The primary outcome 'recovery' (defined as a pain score of 0 or 1, on a 0 to 10 pain scale, sustained for seven consecutive days) was analysed using Cox regression.

Results

Outcome was determined for 97•3% of the regular group, 97•1% of the as-required group and 97•3% of the placebo group. These was no difference in recovery time between groups (global p=0•75). Median recovery time (95% CI) was 17 days (14 to 19) in the regular group, 17 days (15 to 20) in the as-required group and 16 days (14 to 20) in the placebo group. No differences between groups in other outcomes were observed.

Conclusions

When provided with guideline recommended advice and reassurance, paracetamol taken regularly or as-required does not improve recovery time from acute LBP compared to placebo. Paracetamol also appears to have no added effect on pain, disability, function, symptom change, sleep or quality of life in this patient group.

11:00AM – 12:00PM > Auditorium A+B

Title

IMPROVING PATIENT CHOICE IN TREATING LOW BACK PAIN (IMPACT-LBP) – RESULTS FROM A CLUSTER RANDOMISED TRIAL

Authors & Affiliations

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Background

Treatment options for low back pain only provide small to moderate average benefits to patients. The aim of this pilot cluster randomised trial was to test the hypothesis that using a patient decision aid within an informed shared decision making consultation with a physiotherapist would produce better outcomes in patient satisfaction with treatment at four month follow-up.

Methods

We designed and developed a Decision Support Package (DSP) then randomised physiotherapists. Those assigned to the intervention were trained in core components of informed shared decision making. Participants with low back pain were recruited from a local physiotherapy department. Those allocated to an appointment with an intervention physiotherapist were sent a copy of the DSP in the post. Participants then attended their appointment as usual.

Results

148 participants joined the trial, 85 (57%) participants were assigned to the DSP arm. There was an 80% response rate for the primary outcome, satisfaction with treatment at four months. The adjusted odds ratio of satisfaction with treatments from participants in the control arm against those in the DSP arm was 1.85 (95% CI: 0.65, 5.25). The difference between the treatment arms for the RMDQ (Roland Morris Disability Questionnaire) at four month follow-up was –2.27 (95% CI: –4.47, –0.08).

Conclusions

There was no statistically significant difference in our primary outcome measure between the groups. However, there was a statistically significant and clinically important difference in the RMDQ. These data have informed our decision about progression to a full trial application.

11:00AM – 12:00PM > Auditorium A+B

Title

FAT IN THE LUMBAR MULTIFIDUS MUSCLES IN PATIENTS WITH CHRONIC LOW BACK PAIN AND DEGENERATIVE DISC: PREDICTIVE VALUE AND CHANGE FOLLOWING DISC PROSTHESIS SURGERY AND MULTIDISCIPLINARY REHABILITATION. 2-YEAR FOLLOW-UP OF A RANDOMISED STUDY

Authors & Affiliations

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Background

Evidence is lacking on whether fat infiltration in the multifidus muscles affects outcomes after total disc replacement (TDR) surgery or may develop after surgery. The present study investigated whether pre-treatment multifidus muscle fat infiltration predicted outcome two years after treatment with TDR surgery or multidisciplinary rehabilitation, and compared changes in multifidus muscles fat infiltration from pre-treatment to 2-year follow-up between the two treatment groups.

Methods

The study is secondary analysis of data from a randomized trial with 2-year follow-up of patients with chronic LBP and degenerative disc. Patients with both pre-treatment MRI and 2-year outcome data on LBP (n=144), Oswestry Disability Index (ODI) (n=147), and/or work status (n=137) were analysed for prediction purposes. In 126 patients we also had a 2-year follow-up MRI, change in muscle fat infiltration at the follow-up was compared between the two treatment groups. Three independent radiologists visually quantified multifidus muscle fat in the three lower lumbar levels on MRI.

Results

Absence of pre-treatment multifidus muscle fat infiltration predicted better clinical results at 2-year follow-up after TDR surgery (all outcomes) but not after rehabilitation. At 2-year follow-up, increased fat infiltration was more common in the surgery group (RCT, intention-to-treat p=0.034, per protocol p=0.08) where it was related to worse pain and ODI.

Conclusions

Patients without pre-treatment multifidus muscle fat infiltration had better outcomes 2 years after TDR surgery, but findings also indicated a negative influence of TDR surgery on back muscle morphology. The rehabilitation group maintained its muscular conditions and was unaffected by pre-treatment multifidus muscle fat.

11:00AM – 12:00PM > Auditorium A+B

Title

WHAT TRIGGERS AN EPISODE OF LOW BACK PAIN? RESULTS OF A CASE-CROSSOVER STUDY

Authors & Affiliations

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Background

There has been little or no progress in identifying effective prevention strategies for back pain; one of the most burdensome health conditions across the globe. This study aimed to investigate the increase in risk of an episode of sudden onset, acute back pain associated with transient exposure to a range of physical and psychosocial factors.

Methods

A case-crossover study was conducted to quantify the risk associated with transient exposure to 12 modifiable triggers for back pain in 999 participants with a sudden, acute episode of back pain, seeking primary care in Sydney, Australia. Exposure during the two hours preceding back pain onset (case window) was compared to exposure during two 2 hour periods 24 and 48 hours before the onset (control windows). Odds ratios (OR) and 95% confidence intervals (95% CI) were derived using conditional logistic regression.

Results

Exposure to manual tasks involving awkward positioning (OR: 8.03; 95% CI: 5.46 to 11.82), objects far from the body (OR: 6.20; 95% CI: 2.41 to 15.94), handling of live people or animals (OR: 5.8; 95% CI: 2.25 to 14.98) or a load that was unstable, unbalanced or difficult to grasp or hold (OR: 5.13; 95% CI: 2.40 to 10.93); as well as being distracted during a task (OR: 25.0; 95% CI: 3.4 to 184.5), or being fatigued (OR: 3.7; 95%CI: 2.2 to 6.3) significantly increased the odds of a new episode of back pain. Exposure to alcohol consumption or sexual activity did not increase risk. These associations were not moderated by habitual participation in physical activity.

Conclusions

Brief exposure to a range of modifiable physical and psychosocial factors can substantially increase the risk of an episode of sudden onset back pain. These results can inform the development of new prevention approaches for back pain.

11:00AM – 12:00PM > Auditorium A+B

Title

3-LEVEL CHRONIC PAIN RISK CLASSIFICATION IN PATIENTS WITH STRICTLY DEFINED ACUTE LOW BACK PAIN

Authors & Affiliations

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Background

Low back pain (LBP) screening tools for risk classification have been developed to support clinical treatment decisions in patients with LBP of any duration, a majority already in pain for >3 months, when the risk for persistent pain dramatically increases. We examined risk factors for chronic pain in patients with strictly defined acute LBP.

Methods

In primary care patients with LBP of <1 month (mean 2 weeks), we queried bio-psycho-social risk factors and assessed non-recovery at 6 months and 2 years. We examined the performance of 6 items identical and 3 analogous to the STarT BACK tool. Regression models identified new predictor items of chronic pain. Using likelihood ratios (LRs) we tested their performance in classifying patients into 3 risk levels.

Results

Of 605 patients, <20% developed chronic pain. Applying the 9 known items resulted in positive and negative LRs between 0.45 and 1.59. We identified 11 new items predicting chronic pain. A 10-point increase on a 60-point decision rule was associated with an odds ratio of 11.1 ($p<0.001$) for chronic pain at 6 months. Bootstrapped area under the receiver operating characteristics curve was 0.76 (0.70-0.82). LRs were 0.26 (0.14–0.48) for low-risk and 4.4 (3.0–6.3) for high-risk classification.

Conclusions

Screening tools developed in patients with LBP of any duration are limited in classifying patients with strictly defined acute LBP into risk subgroups. A new 11-item clinical decision rule of demographic, clinical and psychological predictors showed acceptable performance when tested in the development sample. It now requires testing in a separate sample.

11:00AM – 12:00PM > Auditorium A+B

Title

ARE SYMPTOMS OF DEPRESSION ASSOCIATED WITH LOW BACK PAIN WHEN GENETICS IS CONSIDERED? A POPULATION-BASED STUDY OF SPANISH TWINS

Authors & Affiliations

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Background

Although the co-occurrence of low back pain (LBP) and depression is common, the nature of this association remains unclear. We aimed to investigate whether symptoms of depression are associated with LBP after adjusting for genetic and environmental influences.

Methods

We used cross-sectional data from 2148 twins registered in the Murcia Twin Registry, Spain. All twins answered questions about lifetime prevalence of LBP (outcome variable) and symptoms of depression, which were collected via two instruments, deriving three measures: i) self report feelings of depression and anxiety, ii) state depression, and iii) trait depression. Firstly, associations were investigated using cross-sectional logistic regression analysis of the complete sample (total sample analysis). We performed subsequent matched within pair case-control analyses with all complete twin pairs discordant for LBP regardless of zygosity, and separately for dizygotic (DZ) and monozygotic (MZ) twins. This sequence of analyses was used to examine a possible causation path as in each step the impact of early shared environment and genetics is further considered.

Results

We found a significant association between state depression and LBP in the total sample analysis (OR=2.07, 95%CI: 1.42 – 3.01) and this relationship was stronger in the subsequential case-control analysis (OR=2.30, 95%CI: 1.12-4.73) and case-control-DZ analysis (OR=3.38, 95%CI:1.10 –10.38). The association disappeared in the MZ analysis (OR=1.55, 95%CI: 0.58-4.11). A similar pattern was found for symptoms of depression and anxiety and trait depression.

Conclusions

The depression-LBP relationship disappears when high levels of control are applied and therefore it appears to be driven by genetic factors or even environment factors that influence both conditions.

11:00AM – 12:00PM > Auditorium A+B

Title

EXERCISE THERAPY FOR CHRONIC LOW BACK PAIN: COCHRANE REVIEW UPDATE & INDIVIDUAL PARTICIPANT DATA-META-ANALYSIS (IPD-MA)

Authors & Affiliations

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Background

Despite a large amount of research in the field, there remains uncertainty about the best treatment approach for chronic LBP, and identification of relevant patient subgroups is an important goal. Exercise therapy is a commonly used, moderately effective strategy. We conducted an IPD-MA, allowing us to standardize analyses across studies and directly derive results, and to examine differential treatment effects across individuals to estimate how patients' characteristics modify treatment benefit.

Methods

We identified relevant trials from a parallel Cochrane Review update. Eligible trials evaluated exercise therapy compared to any or no other interventions in adult non-specific chronic LBP, measured pain, functional status, or return-to-work/absenteeism outcomes, and were rated as having moderate to low risk of bias. We collected and tested original data and compiled a master dataset with information about each trial (including reported characteristics of the study sample, exercise therapy characteristics, individual patient characteristics at baseline and all follow-up periods, subgroup and treatment effect modifiers investigated).

Results

127 new RCTs were identified for the Cochrane Review update. IPD was requested from 60 trials; original IPD was received for 27. A master dataset with information about each trial was mapped on a pre-specified framework of prognostic factors. Analyses will be completed before the LBP Forum, including descriptive, study-level meta-analysis, meta-regression analyses of the overall treatment effect, and individual-level IPD-MA of treatment effect modification.

Conclusions

Analyzing IPD across a large number of LBP trials will allow sufficient sample size to explore patient-level heterogeneity in exercise-based treatment outcomes and prognosis of chronic LBP.

11:00AM – 12:00PM > Auditorium A+B

Title

SECOND OPINION ON SPINE SURGERIES: AN OPTION OR NECESSITY?

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Background

Second opinions may improve quality of patient care. We compared diagnoses and management plans of all patients recommended for spinal (cervical or lumbar) surgery who received a second opinion at the Hospital Israelita Albert Einstein, São Paulo, Brazil on the advice of their health insurance company.

Methods

A physiatrist and orthopaedic surgeon assessed consenting adults ≥18 years between May 2011 and May 2012. If both agreed surgery was indicated, or consensus could not be reached, participants attended a spine review panel for a final recommendation. Descriptive analyses compared diagnoses and management plans of the first and second opinions.

Results

Of 544 referred patients, 16 (2.9%) did not meet inclusion criteria, 43 (7.9%) refused participation and 485 were included. Diagnoses differed from the first opinion for 290 (59.8%); cervical and lumbar disc herniation was confirmed in 36/99 (36.4%) and 116/234 (49.6%) respectively. Conservative treatment was recommended for 168 (34.6%), 27 (5.6%) were not considered to have a spine condition and 290 (59.8%) were referred to the review board. Sixty participants did not attend so no final recommendation was made. Following board review, an additional 67 participants were recommended conservative treatment (final: 235/425, 55.3%), 20 were not considered to have a spine condition (final: 47/425, 11.1%) and surgery was finally recommended in 143 (33.6%). Only 66/425 (15.5%) participants received the same surgical recommendation.

Conclusions

Large variation between first and second opinions regarding diagnosis and management among a cohort of patients initially recommended spinal surgery suggests that obtaining a second opinion could reduce unnecessary spinal surgery.

11:00AM – 12:00PM > Auditorium A+B

Title

HEALTHY LIFESTYLE BEHAVIOUR IMPROVES THE PROGNOSIS OF LOW BACK PAIN IN WOMEN: A POPULATION BASED COHORT STUDY

Authors & Affiliations

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Background

Healthy lifestyle behaviour (HLB) has been suggested to improve the prognosis of several diseases but the association with low back pain is not known. Therefore we aimed to explore the influence of HLB on a poor prognosis of occasional low back pain (OLBP) in a general population.

Methods

The study sample comprised adults (3938 men, 5056 women), from the Swedish Stockholm Public Health cohort reporting OLBP in the baseline questionnaire 2006. Lifestyle factors and potential confounders were assessed at baseline. The lifestyle factors smoking habits, alcohol consumption, leisure physical activity and consumption of fruit and vegetables, were dichotomized using recommendations for a health-enhancing lifestyle and combined to form the exposure variable HLB. HLB was categorised into five levels according to the number of healthy lifestyle factors met. The follow-up questionnaire in 2010 gave information about the outcome, long duration troublesome low back pain (LTLBP). Crude and adjusted log-binomial regression models were applied to estimate the association between HLB and LTLBP analysing men and women separately.

Results

The risk of developing LTLBP among women with OLBP decreased with increasing HLB. Compared to women with no healthy lifestyle factor, the risk was reduced by 35% (RR: 0.65, 95% CI: 0.44, 0.96) for women with one healthy lifestyle factor and 52% (RR: 0.48, 95% CI: 0.31, 0.77) for women with all four healthy lifestyle factors. There were no clear associations found among men.

Conclusions

Healthy lifestyle behaviour decreases the risk of developing LTLBP among women with OLBP and may be recommended to improve the prognosis.

Concurrent Orals

session **01** / 01

2:30 – 3:30PM > Auditorium A+B

Title

STRATIFIED CARE FOR PATIENTS WITH SCIATICA AND SUSPECTED SCIATICA IN PRIMARY CARE: THE SCOPIC TRIAL PROTOCOL (SCOPIC - SCIATICA OUTCOMES IN PRIMARY CARE)

Authors & Affiliations

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Background

Usual care for sciatica is 'stepped' and starts with advice, analgesia and 'wait and see', where patients are only referred to other services if symptoms fail to improve. We have shown the superiority of stratified care (sub-grouping for targeted treatment) over usual care for non-specific back pain. We now aim to test a new model of stratified care for patients with sciatica.

Methods

In a pragmatic RCT with 470 primary care sciatica patients, participants will be randomised to stratified care or usual care. Stratification will be based on a combination of 4 clinical indicators (interference with work-ability, pain below the knee, intense leg pain and sensory deficits) that predict referral to spinal specialists and 8 prognostic indicators of persistent disability (STarT Back tool). Patients will be allocated to 1 of 3 subgroups: those at low risk will receive advice and support to self-manage; those at medium risk will receive a course of physiotherapist-led treatment, and those at high risk will be 'fast-tracked' to spinal specialists. Primary outcome is time to symptom resolution collected using regular SMS text messages. Linked qualitative interviews will be conducted with patients (and clinicians) in the 'fast-track' pathway to explore it's acceptability.

Results

Primary analysis will compare time to resolution between stratified care and usual, non-stratified care, on an intention-to-treat basis, and cost-effectiveness will also be investigated. Kaplan-Meier survival analysis and Cox regression analysis will be used. Qualitative interviews will be analysed thematically.

Conclusions

This is the first RCT to test a model of stratified primary care for patients with sciatica and suspected sciatica.

session **01** / 02

2:30 – 3:30PM > Auditorium A+B

Title

EVALUATING ACUPUNCTURE AND STANDARD CARE FOR PREGNANCY-RELATED BACK PAIN: THE EASE BACK PILOT RANDOMISED TRIAL

Authors & Affiliations

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Background

Acupuncture is a promising intervention for pregnancy-related back pain but there is a limited evidence base. To inform a multicentre randomised controlled trial (RCT) we conducted a pilot trial to test recruitment and retention, explore intervention acceptability and safety, test outcome measures and explore observed changes in outcomes.

Methods

Pregnant women with back pain (+/- pelvic girdle pain) at 12 to 31 weeks gestation were recruited using 6 methods and randomised to standard care (SC), SC plus true acupuncture or SC plus non-penetrating acupuncture delivered through a semi-flexible protocol in 6-8 sessions over 6 weeks. We audio-recorded the consent process of 30 women. Follow-up at 8 weeks included pain and function (Oswestry Disability Index, Pelvic Girdle Questionnaire).

Results

Of 388 women assessed in 6 months, 280 were potentially eligible and 125 women were randomised. Women had few concerns other than needing reassurance about physical positioning for treatment and needle location. The most successful recruitment methods were a brief screen for back pain at routine 20 week ultrasound scan visits, community midwives providing women with an EASE Back study card and self-referral following a local media campaign. Treatments were delivered per protocol. Follow-up was 74% with low levels of missing data. There were no serious adverse events attributable to the trial or interventions. Function and pain outcome data have informed the sample size for a future main RCT.

Conclusions

With minor amendments to recruitment and retention methods, a multi-centre RCT is warranted and feasible to provide robust evidence to inform clinical practice.

session **01** / 03

2:30 – 3:30PM > Auditorium A+B

Title

IMPLEMENTATION OF THE BEST INTERVENTION: A GROUP COGNITIVE BEHAVIOURAL APPROACH FOR PATIENTS WITH LOW BACK PAIN.

Authors & Affiliations

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Background

The Back Skills Training Trial (BeST) showed the clinical and cost-effectiveness of a cognitive behavioural approach (CBA) for non-specific sub-acute and chronic LBP. There is sparse research concerning the implementation of a CBA into physiotherapy practice. Provision of training presents a challenge for dissemination and is a key part of the implementation process. Online training has the potential to enable greater access at reduced costs.

Methods

Mixed methods research consisting of a randomised controlled trial and a qualitative study. Physiotherapists from eight NHS Trusts were randomised to online training or a 2-day face-to-face workshop (n=35). Outcomes included the number of therapists delivering BeST and their competency; changes in attitudes and beliefs to the management of chronic LBP; knowledge; self-efficacy; and training satisfaction. A subsample of participants (n=13) were interviewed.

Results

Implementation was low, with seven participants from the face-to-face and five from the online group delivering the manualised intervention. Both groups demonstrated comparable clinical competency. Face-to-face participants significantly reduced their biomedical attitudes and beliefs. Online participants were sceptical about the plausibility of learning through online methods and were not as satisfied with their training. All participants reported a positive impact of the training on their clinical practice; however both groups showed anxiety around adopting a CB approach. Physiotherapists identified several barriers to implementation including organisational factors.

Conclusions

Despite reservations from online participants, both training methods resulted in comparable clinical competency. The content of both training methods was insufficient to achieve wider implementation. Physiotherapists face challenges in the adoption of a CB approach.

session **01** / 04

2:30 – 3:30PM > Auditorium A+B

Title

A FLEXIBLE DATABASE FOR A REPOSITORY OF INDIVIDUAL PARTICIPANT DATA FROM MULTIPLE RANDOMIZED CONTROLLED TRIALS OF LOW BACK PAIN FOR META-ANALYSIS

Authors & Affiliations

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Background

The use of large pooled datasets has potential to generate new insights into the management of low back pain. For a National Institute for Health Research funded programme grant we needed to develop software for collating data from multiple trials of therapist delivered interventions for low back pain. Due to data heterogeneity a database that is flexible and robust to accommodate millions of data points was necessary to integrate data from various trials and harmonize them to a uniform standard before any analysis can be undertaken.

Methods

We collected individual participant data from 19 RCTs (n=9328). Each trial was unique with a variety of established patient reported outcomes on pain, non-utility quality of life and cost-effectiveness outcomes. We created a flexible open schema database based on the entity-attribute-value (EAV) with classes and relationships model. This solution has the flexibility to accommodate frequent changes to the database schema without compromising data integrity or performance. A bespoke software program was developed to extract, transform and load the original data into the standardized repository.

Results

Data integrity is kept. Retrieving data for analysis is achieved by employing an optimized transformation solution that pivots the repository data into a tabular format that can then be imported into a statistical software package.

Conclusions

Although the EAV-modelled database has added more complexity to the system when compared with a relational model, its flexibility in managing sparse data is a worthy trade off. This is an innovative software solution to the management of complex pooled datasets and this large pooled dataset of back pain trials is useable by other researchers in the field.

session **01** / 05

2:30 – 3:30PM > Auditorium A+B

Title

IMPROVING PATIENT CHOICE IN TREATING LOW BACK PAIN (IMPACT-LBP) – ECONOMIC ANALYSIS FROM A CLUSTER RANDOMISED TRIAL

Authors & Affiliations

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Background

Many decision-support tools have been developed and used in healthcare. There are few, if any, robust economic analyses of such interventions in the literature. We carried out a cost effectiveness analysis alongside a pilot cluster RCT of informed shared decision making.

Methods

he total cost of back pain related health care over four months was estimated, using data from a follow-up questionnaire and physiotherapy records. Unit costs for health services were identified from standard national sources. The effectiveness of the decision support package (DSP) and usual care were measured using QALYs, estimated from EQ-5D data using the 'area under the curve' approach.

Between-group differences in mean costs and QALYs were estimated using multiple imputation and bootstrap regression. The seemingly unrelated regression method was used to simultaneously estimate differences of costs and QALYs between treatment arms, adjusting for patient age, sex, Roland Morris Disability Questionnaire and EQ-5D scores at baseline, and physiotherapist experience. A simple model was used to extrapolate between-group differences in QALYs and costs (excluding the cost of the DSP) at the end of the trial to a maximum of one year from baseline.

Results

Mean healthcare costs were slightly lower (£38 saving per patient; CI: -£80 to £156) within the intervention arm but health outcomes were also less favourable (0.02 fewer QALYs, CI: -0.02 to 0.06); the estimated probability that the intervention would be cost-effective at an incremental threshold of £20,000 per QALY was 16%.

Conclusions

This DSP is unlikely to prove cost-effective. Decision support packages should be formally tested for cost-effectiveness as well as effectiveness before implementation.

session **01** / 06

2:30 – 3:30PM > Auditorium A+B

Title

A RANDOMIZED CONTROLLED TRIAL ON SUBGROUP-SPECIFIC PAIN MANAGEMENT IN CHRONIC BACK PAIN

Authors & Affiliations

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Background

Classification of patients into homogeneous subgroups might be an important objective in order to improve treatment outcomes. This study aimed to investigate the effects in improving pain and disability of a subgroup-specific, 4-week, inpatient interdisciplinary pain management program, compared to a standard pain management program in patients with chronic back pain in a rehabilitation setting.

Methods

A tailored pain management program based on the Multidimensional Pain Inventory (MPI) Classification System was compared to standard pain management. The primary outcomes were self-reported pain and disability, measured at 4 and 12 weeks after randomization. Secondary outcomes were observed functional disability, anxiety and depression, catastrophizing, self-efficacy and psychosocial aspects of pain. The primary comparison was made between the intervention group as a whole (i.e. the overall effect of all three MPI subgroups) and the control group. Standardized Mean Difference for independent groups with 95% confidence intervals was calculated.

Results

A total of 146 patients were included in this study. With the exception of reduction of minimum pain intensity after 4 weeks with a standard mean difference (SMD) = 0.43, 95% confidence interval (CI), 0.02 to 0.84; p = 0.034, no significant differences between intervention and control group were found. None of the other comparisons for any of the outcomes and follow-up times was statistically significant.

Conclusions

The subgroup-specific pain management program based on the MPI Classification System for patients with chronic back pain was not more effective in improving pain and disability than a standard pain management program.

session **02** / 01

2:30 – 3:30PM > Room 1+2

Title

CONVOLUTIONS GENERATED BY THE USE KINESIO TAPING ARE NOT BETTER THAN PLACEBO IN PATIENTS WITH CHRONIC NON-SPECIFIC LOW BACK PAIN: A RANDOMISED CONTROLLED TRIAL

Authors & Affiliations

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Background

Kinesio Taping Method is a new intervention based on the use of elastic tapes that are fixed on the skin. The combination of the stretching capacity of the Kinesio Tape with the muscle in a stretched position creates convolutions that would potentially reduce pain in patients with musculoskeletal conditions.

Methods

The trial was conducted in two outpatient physiotherapy clinics in Brazil. One hundred and forty-eight patients were randomly allocated to a four-week treatment program upon 8 sessions of Kinesio Taping (i.e. 10-15% tension with the treated muscles in stretching position and with convolutions in neutral) or 8 sessions of Kinesio Taping having no convolutions in neutral (0% tension) with the treated muscles in resting position. Clinical outcomes (pain intensity, disability and global perceived effect) were obtained by a blinded assessor in assessments that were performed at 4 weeks and 3 months after randomization. The effects of the intervention were calculated through linear mixed models following intention-to-treat principles.

Results

No between-group differences were observed for the primary outcomes of pain intensity (mean difference= 0.44 points, 95% CI -1.34 to 0.45) and disability (mean difference= 0.27 points, 95% IC -1.85 to 1.30). We observed a small difference in favor of control group for global perceived effect (i.e. secondary outcome) (mean difference= 1.41 points, 95% CI 0.31 to 2.52). No between-group differences were observed at three months.

Conclusions

Using the Kinesio Taping with convolutions was not better than using the Kinesio Taping without convolutions for pain intensity and disability in short term in patients with chronic low back pain.

session **02**/02

2:30 – 3:30PM > Room 1+2

Title

REHABILITATION AFTER LUMBAR DISC SURGERY

Authors & Affiliations

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Background

Several rehabilitation programs are available for individuals after lumbar disc surgery.

Methods

Relevant databases were searched to May 2013. Only randomised controlled trials (RCTs) were included. Pairs of review authors independently assessed studies for eligibility and risk of bias. Meta-analyses were performed. GRADE was used to determine the quality of evidence.

Results

wenty-two studies were included, 10 low risk of bias. There is very low quality evidence (five RCTs, N = 272) that exercises are more effective than no treatment for pain at short-term follow-up (SMD -0.90; 95% CI -1.55 to -0.24), low quality evidence (four RCTs, N = 252) that they are more effective for functional status on short-term follow-up (SMD -0.67; 95% CI-1.22 to -0.04) and that there is no difference in functional status on long-term follow-up (three RCTs, N=226). There is very low quality evidence (two RCTs, N =103) that high intensity exercises are more effective than low intensity exercises for pain in the short term (WMD -10.67; 95% CI -17.04 to -4.30) and low quality evidence (two RCTs, N = 103) that they are more effective for functional status in the short term (SMD -0.77; 95% CI -1.17 to -0.36). There is very low quality evidence (four RCTs, N = 154) that there were no significant differences between supervised and home exercises for short-term pain relief or functional status.

Conclusions

Because of lack of high- or moderate-quality evidence, no strong recommendations can be made for clinical practice. Taking this into account, exercise programs starting 4-6 weeks post surgery seem to lead to a faster decrease in pain and disability than no treatment, high- intensity exercise programs seem to lead to a slightly faster decrease in pain and disability than low-intensity programs.

session **02** / 03

2:30 – 3:30PM > Room 1+2

Title

A NOVEL POTENTIAL MECHANISM OF SPINAL MANIPULATIVE THERAPY IN TREATING NON-SPECIFIC LOW BACK PAIN

Authors & Affiliations

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Background

Prior research showed that a single session of spinal mobilization and back exercises enhanced the water diffusion in the L5-S1 discs of some low back pain (LBP) patients, who experienced immediate pain relief. To date, it is unclear if spinal manipulative therapy (SMT) alone can improve disc diffusion and respective clinical outcomes. As such, this study aimed to examine the relation between the post-SMT change in disc diffusion and reported LBP-related disability.

Methods

Thirty-two people with nonspecific LBP received SMT on Day 1 and Day 4. All of them underwent diffusion-weighted lumbar magnetic resonance imaging scans before and after SMT on Day 1. An Oswestry Disability Index was collected on Day 1 and Day 7. A 30% decrease of the index was used as a cutoff to classify responders and non-responders to SMT. The mean apparent diffusion coefficient, a proxy for the water diffusion in the lumbar discs, was measured from the midsagittal diffusion-weighted images. A generalized estimating equation was used to examine the relations among the pre- and post-SMT mean apparent diffusion coefficients of all lumbar discs, age, and the treatment responses at 1-week follow-up.

Results

The responders showed significant post-SMT increase in the mean apparent diffusion coefficients of all lumbar discs ($P < 0.01$), while no such change was observed in the non-responders. Compared to the non-responders, the responders demonstrated higher water diffusion in their L4-5 and L5-S1 discs ($p < 0.05$). Age had a significant negative impact on diffusion in the lumbar discs of all participants ($p < 0.01$).

Conclusions

These findings suggested that improved clinical outcome of SMT responders was associated with improved post-SMT water diffusion within their lumbar discs.

session **02**/04

2:30 – 3:30PM > Room 1+2

Title

HOW IMPORTANT IS PHYSIOTHERAPIST COMPETENCE IN THE DELIVERY OF COGNITIVE BEHAVIOURAL APPROACHES (CBA) FOR LOW BACK PAIN?

Authors & Affiliations

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Background

The Back Skills Training trial (BeST) was a large RCT testing a group based CBA for moderate to severely troublesome LBP > 6 weeks. The intervention was found to be clinically and cost-effective. Health professionals were trained over 2 days on the delivery of the structured, manualised intervention. This study explored the relative importance of physiotherapist competence in patient clinical outcome.

Methods

Audio recordings were made of 17 group sessions relating to 11 physiotherapists and 136 participants. Each recording underwent assessment of competency level using the Cognitive Therapy Scale-Revised-Pain, a validated tool. Competency scores were then used in a series of analyses using data collected as part of the BeST trial.

Results

Specific previous experience was positively associated with competence (p=<0.001). Years of qualification correlated negatively to participant 12 month change score in disability (r=-.259 p=0.007). Physiotherapists demonstrated greater competence in community settings versus healthcare settings (p=0.053). Competence was observed to increase with experience.

In a linear regression model, 33% of the variance in patient outcome, using the 12 month change score of the Roland Morris Questionnaire (RMQ), could be attributed to the covariates with significant predictors of positive outcome being: higher baseline disability (RMQ), higher baseline fear avoidance beliefs, being in work, and less therapist years since qualification. Only 1% of the variance in patient outcome score could be attributed to therapist competence.

Conclusions

This research could help inform training requirements. Where competence is adequate or better, it does not appear to substantially impact on the effects of the BeST intervention.

session **02** / 05

2:30 – 3:30PM > Room 1+2

Title

PREPARE A STUDY OF PRE-SURGERY PHYSIOTHERAPY FOR PATIENTS WITH SPECIFIC LOW BACK PAIN SCHEDULED FOR SURGERY, SHORT TERM RESULTS

Authors & Affiliations

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Background

Non-surgical intervention is first line intervention for disc-herniation, spinal stenosis, spondylolisthesis and degenerative disc disease. However, there is a lack of guidelines for non-surgical intervention for specific low back pain. The aim is to study if pre-surgery physiotherapy changes the need of surgery and improves the post-surgery results on function, pain and health in patients with specific low back pain scheduled for surgery.

Methods

An ongoing randomized controlled trial in a spine clinic. The participants were scheduled for surgery due to specific low back pain diagnosis and randomized to either physiotherapy or waiting-list group. Clinical measurement and treatment-classification was done before and after intervention. A follow-up was performed after three months, one and two years with self-reported measures for function (ODI) (primary outcome), pain (VAS) and health (SF-36, EQ-5D). Broad assessment of known predictive factors is included.

Results

162 participants were included. The mean(SD) age was 58,2(13,7) and 52,4 % were female. Mean(SD) at baseline for ODI/pain VAS back/pain VAS leg was 36,7(13,1)/52,5(28,5)/65,7(25,7) in physiotherapy group and 38(12,2)/59,1(24)/62,5(23,6) in waiting-list group. Pain VAS back was significantly lower in the physiotherapy group compared to the waiting-list group after the intervention and ODI and pain VAS leg were significantly lower in the physiotherapy group three months after surgery. Further analysis on secondary outcomes will be presented at the conference.

Conclusions

Preliminary analysis indicates that pre-surgery physiotherapy seems to have a beneficial effect regarding function and pain in patients scheduled for surgery, both after the physiotherapy intervention and at short-term follow-up post-surgery.

session **02**/06

2:30 – 3:30PM > Room 1+2

Title

COMPREHENSIVE PHYSIOTHERAPY EXERCISE PROGRAMME OR ADVICE FOR CHRONIC WHIPLASH (PROMISE): A PRAGMATIC RANDOMISED CONTROLLED TRIAL. TRIAL REGISTRATION NUMBER: ACTRN12609000825257

Authors & Affiliations

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Background

There is evidence that brief physiotherapy programs are as effective for acute whiplash associated disorders (WAD) as more comprehensive programs; however it is not clear if this is also the case for chronic WAD. We aimed to estimate the effectiveness of a physiotherapist-delivered comprehensive exercise program compared to advice for people with chronic WAD.

Methods

172 participants with a chronic (> 3months and <5 years) Grade I or II WAD were randomised to receive either the comprehensive exercise program (20 sessions) or advice (1 session and telephone support). The primary outcome was pain intensity (0-10 scale). Secondary outcomes were self-rated recovery, disability, health-related quality of life and neck range of motion. Outcomes were measured by a blinded assessor at baseline, 14 weeks, 6 months and 12 months. Analysis was by intention-to-treat and treatment effects were calculated using linear mixed models.

Results

The two groups were similar at baseline for all outcomes. Follow up rates were 157 (91%) at 14 weeks, 145 (84%) at 6 months and 150 (87%) at 12 months.The addition of a comprehensive exercise program was not more effective than advice alone in reducing pain: at 14 weeks the treatment effect was 0.0 (95%CI -0.7 to 0.7), 6 months 0.2 (-0.5 to 1.0) and at 12 months -0.1 (-0.8 to 0.6). Some of the effects on secondary outcomes were statistically significant but none were sufficiently large to be considered clinically worthwhile.

Conclusions

The comprehensive exercise program provided no additional benefit to a single physiotherapy advice session supplemented with telephone support.

session **03**/01

2:30 – 3:30PM > Room 3+4

Title

CLINICIANS' RESPONSES TO PATIENTS' EXPRESSIONS OF EMOTIONAL CUES AND CONCERNS ARE ASSOCIATED WITH POORER DISABILITY OUTCOMES IN LOW BACK PAIN

Authors & Affiliations

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Background

The impact of clinicians' responses to patients' expressions of negative emotions on clinical outcomes remains unknown in low back pain (LBP). We aimed to describe the interaction between clinicians and patients with LBP and investigate the relationship between specific communication factors and clinical outcomes.

Methods

Patients with non-specific LBP (N=49) referred for physiotherapy treatment were recruited. The patient-clinician interaction was assessed at the first consultation and outcomes of pain, disability, and patients'satisfaction with care were assessed at baseline and at 2-month and 6-month follow-ups. Interaction was coded using Verona coding definitions of emotional sequences (VR-CODES). Spearman's ρ and linear regression models were used to investigate whether frequency of patients' expressions of emotional cues and concerns and type of clinicians' response were associated with outcomes at any time-point. The type of clinicians' response assessed was whether clinicians mainly facilitated or impeded further clarification of expressed emotions.

Results

Participants expressed a median of 6.0 (IQR 3-10) emotional cues and concerns per consultation. Clinicians responded most frequently by facilitating further clarification of the expressed emotions (3.0, IQR 1-6). Frequency of participants' expressed emotions and the type of clinicians' responses were associated with disability at baseline (Spearman's ρ=0.47 and 0.34, respectively), and also at 2-month follow-up ($p<0.05$). No statistical association was found for the other outcomes, or for disability at 6-month follow-up ($p>0.05$).

Conclusions

A greater number of patients' expressions of negative emotions, and facilitating further clarification responses by clinicians appear to be associated with poor disability in LBP.

session **03**/02

2:30 – 3:30PM > Room 3+4

Title

THE EFFECT OF JOURNAL IMPACT FACTOR, REPORTING CONFLICTS OF INTEREST, AND REPORTING FUNDING SOURCES, ON STANDARDIZED EFFECT SIZE IN BACK PAIN TRIALS

Authors & Affiliations

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Background

The funnel-shaped relationship between effect size (ES) and sample size is well-known, but it is not clear how ES relates to journal impact factor or to the reporting conflicts of interest (COIs) and funding sources. We aimed to explore this empirically.

Methods

We performed a systematic review of English-language papers reporting RCTs of treatments for non-specific LBP trials published between 2006-2011 inclusive, and conducted a meta-regression of ES on 5-year impact factor (IF), reporting category of COIs (not reported, none reported, some reported), and funding (not reported, none reported, funder reported). The relationship between sample size and IF was explored using correlation and regression analysis.

Results

We could abstract requisite data in 100 of 147 trials that met our inclusion criteria. The relationship between ES and IF followed a typical funnel plot formation (meta-regression not appropriate due to heteroschedasticity). IF had a medium correlation with sample size ($r=0.39, p=0.001$); on average IF increases by 0.8 for every 100-person increase in sample size ($p<0.0004$). Neither crude nor adjusted models demonstrated any effect of reporting 'no COIs' ($p=0.71$), or some COIs ($p=0.95$); neither did reporting 'no funding' ($p=0.58$), nor detailing sources of funding ($p=0.21$).

Conclusions

Reporting sources of funding or COIs do not appear to have any association with ES. This reflects positively on research conduct. The variance of treatment effects of back pain trial interventions is larger In lower impact journals and absolute magnitude decreases with increasing impact factor. Journal impact factor is a valid means of judging quality of back pain trials.

session **03** / 03

2:30 – 3:30PM > Room 3+4

Title

HERITABILITY AS A CONTRIBUTOR FOR THE PREVALENCE OF CHRONIC LOW BACK PAIN: THE AUSTRALIAN TWIN LOW BACK PAIN (AUTBACK) STUDY

Authors & Affiliations

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Background

It is still not known how much genetics affect chronic low back pain (LBP), particularly in the general population.

Methods

We explored the contribution of genetics on the prevalence of chronic LBP in a sample of adult Australian twins using a classical twin study design and validated definitions for chronic LBP. Chronic LBP was investigated with a recall period of three months and assessed using an e-survey.

Results

Data from 105 complete twin pairs showed that the prevalence of chronic LBP is significantly determined by genetic factors (heritability=32%). Monozygotic twins were five times more likely to have chronic LBP than dizygotic twins when one of the siblings of the pair was affected.

Conclusions

The estimated contribution of genetics to chronic LBP is similar to other high genetic influenced conditions such as autism, drug dependence and depression. The increased chance of chronic LBP related to genetic similarity (monozygotic twins) shows that inheritance plays a significant role in the development of chronic LBP.

session **03**/04

2:30 – 3:30PM > Room 3+4

Title

A SYSTEMATIC REVIEW OF THE MEASUREMENT PROPERTIES OF NEUROPATHIC PAIN SCREENING QUESTIONNAIRES FOR USE IN LOW BACK PAIN

Authors & Affiliations

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Background

Neuropathic pain can be a component of back pain. The PainDETECT, Douleur Neuropathique (DN4), ID Pain, Leeds Assessment of Neuropathic Symptoms and Signs (LANSS) and the Neuropathic Pain Questionnaire (NPQ) have been recommended as suitable screening tools to identify neuropathic pain, including in patients with low back pain. The aim of this systematic review is to determine the measurement properties of these questionnaires.

Methods

Online search of electronic databases was conducted, combining the search terms of individual measurement properties and questionnaires. Two independent reviewers screened studies and extracted data. Measurement properties and the methodological quality of included studies were assessed against established criteria. A modified GRADE approach summarised the level of evidence.

Results

Search results identified 35 eligible studies, 2 studies specifically in low back pain. Most participants had mixed chronic pain conditions. Measurement properties reported include validity (content, criterion and construct) and reliability (internal consistency and test-retest reliability). Many measurement properties were satisfactory but had varying levels of supporting evidence. Of the five questionnaires, the NPQ, DN4, PainDETECT and Portuguese DN4 version had the most convincing evidence of acceptable measurement properties. The evidence for the PainDETECT questionnaire, specifically validated in back pain participants, was satisfactory for most properties but with less evidence and fewer measurement properties assessed compared to the DN4 and NPQ.

Conclusions

DN4 and NPQ are best suited to identify neuropathic pain.

session **03** / 05

2:30 – 3:30PM > Room 3+4

Title

LOW-BACK PAIN IN CHILDREN AND ADOLESCENTS: A SYSTEMATIC REVIEW AND META-ANALYSIS EVALUATING THE EFFECTIVENESS OF CONSERVATIVE INTERVENTIONS

Authors & Affiliations

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Background

Low back pain (LBP) prevalence is low in children (1-6%) but rises sharply in adolescents (18-51%) to approach that of adults. However, clinical guidelines for the management of LBP are restricted to evidence from studies performed on adult populations. This systematic review aimed to evaluate the effectiveness of conservative treatment approaches used to manage and prevent LBP in children and adolescents.

Methods

Five electronic databases and the reference lists of systematic reviews were searched for relevant studies. Randomised controlled trials (RCTs) were considered eligible for inclusion if they enrolled children or adolescents (<18 years old) and evaluated any conservative intervention to treat or prevent LBP. Two authors independently screened search results, extracted data, assessed risk of bias, and rated the quality of evidence using the GRADE criteria.

Results

Four RCTs on intervention and eleven RCTs on prevention of LBP were included. All included studies had a high risk of bias scoring ≥7 on the PEDro scale. For the treatment of LBP, a supervised exercise program compared to no treatment improved average pain intensity by 2.9 points (95%CI 1.6 to 4.1) on a 0-10 scale (2 studies; n=125). For the prevention of LBP, there was moderate quality evidence to suggest back education and promotion programs are not effective in reducing LBP prevalence.

Conclusions

While exercise interventions appear to be promising to treat LBP in children and adolescents, there is a dearth of relevant research data. Future studies should incorporate what has been learnt from adult LBP research and be of rigorous methodological quality.

session **03**/06

2:30 – 3:30PM > Room 3+4

Title

ARE OBESITY AND BODY FAT DISTRIBUTION ASSOCIATED WITH LOW BACK PAIN IN WOMEN? A POPULATION-BASED STUDY OF 703 SPANISH TWINS

Authors & Affiliations

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Background

It has been suggested that obesity and low back pain (LBP) are associated and that genetics can influence this relationship. However, some measures of obesity such as waist-hip ratio that account for body fat distribution have not been investigated in LBP when the genetic factor is controlled. This study aims to investigate the relationship between obesity related measures and LBP using a twin design that adjust for genetics and early shared environment.

Methods

Associations between different measures of obesity (body mass index; fat mass; waist circumference; waist-hip ratio) and lifetime prevalence of LBP were investigated using a cross-sectional analysis. A sample of 703 female twins, aged 43 to 70, from the Murcia Twin Registry-Spain was used. Data analysis was conducted in three stages: (i) total sample analysis; (ii) within-pair case-control analysis for monozygotic (MZ) and dizygotic (DZ) twins together; (iii) within-pair case-control analysis separated for MZ and DZ.

Results

Lifetime prevalence of LBP was not associated with any measures of obesity in the total sample analyses. However, when shared environment and genetic factors were adjusted using the case-control analysis, greater waist-hip ratios were significantly associated with smaller prevalence of LBP (OR=0.7; 95% CI: 0.5 to 0.9). The association remained significant for DZ (OR=0.6; 95% CI: 0.3 to 0.9) but not for MZ twins (OR=0.8; 95% CI: 0.5 to 1.2).

Conclusions

Genetics and early shared environment should be considered in the body fat distribution and LBP relationship. Future research is needed to determine if the waist-hip ratio and LBP relationship observed in this study remains in a longitudinal study.

session **03** / 07

2:30 – 3:30PM > Room 3+4

Title

PREDICTING RESPONSE TO MOTOR CONTROL EXERCISES AND GRADED ACTIVITY FOR LOW BACK PAIN PATIENTS: A RANDOMIZED CONTROLLED TRIAL

Authors & Affiliations

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Background

Current treatments for low back pain have small effects. A research priority is to identify patient characteristics associated with larger effects for specific interventions.

Methods

This study involved the secondary analysis of a randomised controlled trial investigating motor control exercises or graded activity in 172 people with chronic low back pain. Treatment consisted of 12 initial exercise sessions over an 8-week period and booster sessions at 4 and 10 months following randomisation. The outcome was pain and function measured at 2 and 12 months. Seven pre-specified baseline features (including psychosocial features, physical activity level, walking tolerance and a questionnaire measure of clinical instability) were investigated as effect modifiers using linear mixed models.

Results

We found self-reported clinical instability was a statistically significant and clinically important modifier of treatment response for 12 month function (interaction: 2.72; 95% CI 1.39 to 4.06). People with high scores on the clinical instability questionnaire (>9) did 0.85 points better with motor control whereas people who had low scores (<9) did 1.97 points better with graded activity. Most other effect modifiers investigated did not appear to be useful in identifying preferential response to exercise type.

Conclusions

A simple 15-item questionnaire of features considered indicative of clinical instability appears to identify patients who respond best to either motor control exercise or graded activity. Future validation is required for this promising finding.

session **01** / 01

2:30 – 3:30PM > Auditorium A+B

Title

COULD THE WEATHER TRIGGER AN EPISODE OF ACUTE LOW BACK PAIN? A CASE CROSS-OVER STUDY

Authors & Affiliations

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Background

Patients with musculoskeletal pain commonly report that their symptoms are influenced by the weather, but this issue has not been evaluated for the most common musculoskeletal condition, back pain. This study aimed to investigate the influence of various weather conditions on risk of acute low back pain.

Methods

A case-crossover study was performed with 993 patients presenting to primary care in Sydney Australia. Demographic and clinical data about the back pain episode were obtained for each participant during an interview. Weather parameters (temperature, relative humidity, air pressure, wind speed, wind gust, wind direction and precipitation) were obtained from Sydney weather stations for the entire study period. Weather exposures in the case window (time when participants first noticed their back pain) were compared to exposures in two control time-windows (same time duration, one week and one month before the case window).

Results

Temperature, relative humidity, air pressure, wind direction and precipitation showed no association with onset of a new episode of back pain. Higher wind speed (odds ratio 1.17, 95% CI 1.04 to 1.32; p=0.01; for an increase of 11 km/h) and wind gust (odds ratio 1.14, 95% CI 1.02 to 1.28; p=0.02; for an increase of 14 km/h) increased the odds of pain onset.

Conclusions

Weather parameters that have been linked to arthritic pain such as temperature, relative humidity, air pressure, and precipitation do not increase the risk of a low back pain episode. Higher wind speed and wind gust speed provided a very small increase in risk of back pain onset that does not seem clinically important.

session **01** / 02

2:30 – 3:30PM > Auditorium A+B

Title

SYMPTOMS OF DEPRESSION INCREASE THE RISK OF DEVELOPING LOW BACK PAIN. A SYSTEMATIC REVIEW AND META-ANALYSIS

Authors & Affiliations

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Background

Depression and low back pain are associated, but what remains in dispute is whether depression is a cause or consequence of low back pain. The aim of this review was to determine the role of depression as a risk factor for low back pain.

Methods

We only included cohort studies that enrolled participants who were free of low back pain at baseline. Meta-analyses were used to pool the study risk estimates; stratified by depression assessment method. When possible, we also investigated the relationship between depression severity and risk of back pain.

Results

19 studies were included in this study, but only 11 in the meta-analyses. Overall pooled results showed that symptoms of depression increased the risk of developing a new episode of low back pain (OR=1.59; 95%CI: 1.26-2.01). The risk was similar in studies that used the diagnostic interview method (OR=1.66; 95%CI: 1.14-2.42) and in studies using self-report screening questionnaires (OR=1.68; 95%CI: 1.05-2.70). No statistically significant relationship was observed when we pooled studies that employed non-specific screening questionnaires (OR=1.17; 95%CI: 0.48-2.87). Three studies provided results in incremental categories of symptoms of depression and the pooled odds ratio for the most severe level of depression (OR=2.51; 95%CI: 1.58-3.99) was higher than for the lowest level (OR=1.51; 95%CI: 0.89-2.56).

Conclusions

Individuals with symptoms of depression have an increased risk of developing low back pain with the risk being higher in patients with more severe levels of depression. These findings are consistent with depression being a possible cause for low back pain.

session **01** / 03

2:30 – 3:30PM > Auditorium A+B

Title

HOW DOES DISABILITY DEVELOP IN SPINAL PAIN? A SYSTEMATIC REVIEW OF MEDIATING FACTORS

Authors & Affiliations

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Background

For many people, back or neck pain can lead to disability. Research has identified predictors of disability, and the processes by which these predictors lead to disability have been explored by mediation analysis. The primary aim of this systematic review was to summarize the evidence for mediating factors that explain the development of disability in spinal pain.

Methods

Five electronic databases were searched to locate studies that included patients with acute and/or chronic low back and/or neck pain and formally tested a mediating effect. Titles, abstracts and full-texts were screened for inclusion by two independent reviewers. The primary analysis involved the subgroup of observational studies that reported disability as an outcome measure.

Results

A total of 10582 titles were identified, from which 48 studies were finally included. The two most commonly tested predictors were pain (4 studies; 10 models) and fear (6 studies; 13 models), the three most commonly tested mediators were fear (7 studies; 9 models), self-efficacy (4 studies; 6 models), and catastrophizing (4 studies; 5 models). For the relationship between pain and disability, fear was a mediator in 4 out of 6 models, self-efficacy was a mediator in 3 of 3 models and catastrophizing was shown not to be a mediator in 1 model.

Conclusions

For the relationship between pain and disability, there is consistent evidence for a significant mediating effect of self-efficacy, conflicting evidence for fear, and limited evidence that catastrophizing does not mediate pain and disability.

session **01** / 04

2:30 – 3:30PM > Auditorium A+B

Title

RED FLAGS AND OTHER DETERMINANTS FOR FRACTURES AS A CAUSE OF BACK PAIN IN OLDER ADULTS

Authors & Affiliations

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Background

Most back pain patients experience non-specific back pain, but in a minority of the cases there is a specific underlying pathology. Specific causes include fractures, malignancies, infection, cauda equina syndrome and ankylosing spondylitis. The aim of the study was to identify the prevalence of specific causes of back pain and their determinants. We were especially interested in the association between red flags and fracture as a cause of back pain.

Methods

The BACE study is a prospective cohort study. Patients (aged >55 years) with back complaints were included when consulting their GP. Baseline measurement included a questionnaire, physical examination, X-ray and heel bone densitometry. Questionnaires asked about patient characteristics and features of the back complaint including known red flags. X-ray reports were send to the patients GP. Final diagnosis established at 1 year and additional red flags were collected from the GPs medical system.

Results

Of the 669 patients 6% were diagnosed with a specific cause of back pain. Most patients (n=33, 5%) were diagnosed with a vertebral fracture. In a multivariate regression model age≥75, trauma, osteoporosis and pain score>7 were associated with the diagnosis vertebral fractures. When the red flags were used alone, the highest positive predictive value for vertebral fracture was 0.25 for trauma. A diagnostic prediction rule with four determinants combined could not raise this positive predictive value.

Conclusions

In our population of older adults with back pain in general practice 6% were diagnosed with a specific cause of back pain. Most patients were diagnosed with a vertebral fracture (namely 5%), red flags associated with vertebral fractures were age≥75, trauma, osteoporosis and pain score>7.

session **01** / 05

2:30 – 3:30PM > Auditorium A+B

Title

REDUCED PROGRESSIVE ISO-INERTIAL LIFTING CAPACITY IS ASSOCIATED WITH AND PREDICTIVE OF FUTURE LOW BACK PAIN WOMEN, BUT NOT IN MEN. A LONGITUDINAL STUDY OF MIDDLE AGED DANES FROM THE GENERAL POPULATION

Authors & Affiliations

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Background

Low back pain (LBP) is a common, costly and disabling condition. The strength of back muscle has been found to be associated with LBP. A functional measure, Progressive Iso-Inertial Lifting Evaluation (PILE), was used to explore the relationship between muscle strength and current/future LBP.

Methods

People aged 41 years old were recruited from the general population (n=403). At baseline, they completed the PILE test (i.e., a repetitive lifting task where the load is gradually increased) and a LBP questionnaire. LBP was assessed at four and eight years later. LBP was defined as current if any within the past 14 days, and non-trivial if >30 days during the past year with consequences. Associations between low lifting capacity (PILE results in the lowest quintile) and LBP were analysed using logistic regression stratified by sex and presented as odds ratios (OR) with 95% confidence intervals [CI].

Results

Women lifted on average 16.9kg [16.2;17.6], and men 31.9kg [30.7;33.0]. People with LBP lifted less than people without LBP; however, it was not statistically significant. Current LBP was reported by 109 (28%) and non-trivial LBP by 69 (18%). Low lifting capacity was associated with current LBP 4.38(1.7;11.5) and non-trivial LBP 6.5 [2.4;17.3], but only in women. Four years later, the OR of non-trivial LBP was 3.9[1.3;11.4] in women. Eight years later, all results were non-significant.

Conclusions

In women, reduced lifting capacity is associated with both current and non-trival LBP as well as predictive of LBP four years later. Future research should focus on optimizing the PILE test for men.

session **01** / 06

2:30 – 3:30PM > Auditorium A+B

Title

SLEEP QUALITY CAN INFLUENCE INTENSITY OF LOW BACK PAIN

Authors & Affiliations

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Background

Recent evidence suggests that patient's quality of sleep might modulate the intensity of pain. Although sleep disturbance is common in the low back pain (LBP) population, the effect of sleep disturbance on pain intensity is unknown. The current study therefore aimed to investigate the effect of sleep quality on subsequent pain intensity in patients with recent onset of low back pain.

Methods

Data from 1246 patients with acute low back pain were included in the analysis. Sleep quality was assessed using the sleep quality item of the Pittsburgh Sleep Quality Index (PSQI), scored on 0-3 scale, where 0= very good sleep quality and 3= very bad sleep quality. Pain intensity was assessed on (0-10) numerical rating scale (NRS). Generalised estimating equations (GEE) modelled with an exchangeable correlation structure were used to examine the relationship between sleep quality and pain intensity. The model further controlled for symptoms of depression and recognised low back pain prognostic factors.

Results

The GEE analysis demonstrated a large effect of poor sleep on subsequent pain intensity, where for every 1-point (0-3) decrease in sleep quality, pain intensity increases by 2.08 units (95% CI: 1.9 to 2.1) on a 0-10 scale. This effect was independent of depression and common low back pain prognostic factors.

Conclusions

Sleep quality is strongly related to subsequent pain intensity in patients with acute low back pain. Research needs to determine whether targeting sleep improvement contributes to pain reduction.

The study is accepted for publication by the Arthritis and Rheumatology, but not yet published.

session **02** / 01

2:30 – 3:30PM > Room 1+2

Title

ARE JOB STRAIN AND SLEEP DISTURBANCES PROGNOSTIC FACTORS FOR NECK/SHOULDER/ARM PAIN? A COHORT STUDY OF A GENERAL POPULATION OF WORKING AGE IN SWEDEN

Authors & Affiliations

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Background

It is proposed that workers exposed to job strain are at risk of stress-related diseases such as neck/shoulder/arm (NSAP) pain. One factor that may influence the impact of job strain on the prognosis of NSAP is sleep disturbances. The aim was to study if job strain and sleep disturbances are prognostic factors for the development of troublesome NSAP, and to determine whether sleep disturbances is an effect measure modifier in the association between job strain and troublesome NSAP

Methods

A population-based cohort of individuals with occasional NSAP (n = 6,979) answered surveys in 2006 and 2010. Logistic regressions were used to assess the associations between the exposures; job strain, active and passive job and sleep disturbances, and the development of troublesome NSAP. Stratified analysis was used to assess potential effect measure modification.

Results

The odds ratios for developing troublesome NSAP were in individuals exposed to active job 1.3 (95% CI 1.1–1.5); passive job 1.2 (95% CI 0.9–1.4); job strain 1.5 (95% CI 1.0–2.4); mild sleep disturbances 1.4 (95% CI 1.3–1.6); and severe sleep disturbances 2.2 (95% CI 1.6–3.0). Job strain and an active job situation were associated with persistent or troublesome NSAP in individuals with sleep disturbances, but not in individuals with no sleep disturbances.

Conclusions

Job strain and an active job situation as well as sleep disturbances are all independent prognostic factors that should be taken into account when implementing preventive measures meant to minimize the risk of troublesome neck/shoulder/arm pain among individuals of the general working-age population.

session **02**/02

2:30 – 3:30PM > Room 1+2

Title

THE CLINICAL COURSE OF LUMBAR SPINAL STENOSIS: A SYSTEMATIC REVIEW

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Background

Although spinal stenosis is the most common condition leading to spinal surgery in the elderly population, its clinical course is still not known. Our main objective was to assess the clinical course of pain associated with surgery among patients with lumbar spinal stenosis.

Methods

We searched MEDLINE, EMBASE and Cinahl databases up to the 10th of May 2013 to identify eligible studies. We included prospective cohorts with a follow-up period of at least 3 months which assessed pain. Two independent reviewers performed the data extraction and the quality assessment. We determined pooled estimates of pain and disability over time using mixed models.

Results

10527 titles and abstracts were screened and 69 published cohorts on the prognosis of surgery for people with LSS published from 1993 to 2013 were included. Mined linear model analyses reveal that although patients improve an average of 30 points (0-100 pain scale) from pre-operative pain status, they are far from being recovered, majority of patients having long-term residual chronic pain following surgery.

Conclusions

Surgery for spinal stenosis is the fastest growing surgical procedure worldwide, however, we provide evidence that patients still experience significant pain 60 months post-surgery.

session **02** / 03

2:30 – 3:30PM > Room 1+2

Title

PATIENTS WITH LOW BACK PAIN HAD DISTINCT CLINICAL COURSE PATTERNS WHICH WERE TYPICALLY NEITHER RECOVERED NOR CONSTANT PAIN.

Authors & Affiliations

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Background

It can be argued that the prognosis of low back pain (LBP) is better described using trajectories instead of a single outcome time point. However, the extent to which identifying LBP trajectories is dependent on the analytical model used and pain characteristics included has been unclear. This study (i) identified LBP trajectories using LBP intensity and LBP frequency measured once a week over one year, and (ii) compared results obtained using different analytical approaches.

Methods

Patients were recruited from primary care when consulting because of LBP and were followed with weekly SMS-questions. Latent Class Analysis was used to identify trajectories of LBP and 12 different analytic models were compared.

Results

The study included 1,082 patients. The 12 models resulted in five to 12 subgroups, with a number of trajectories stable across models that differed not only on pain severity but also on their pattern of improvement/relapse.

Conclusions

Most patients do not become pain free within a year but only a small proportion report continual severe pain. Some distinct clinical course patterns existed that were identified independently of the way the outcome was modelled. These patterns would have stayed unrecognised using simple summary measures as traditionally performed in LBP research or when describing a patient's pain history only in terms of duration.
Whether dividing the course of LBP into five identified subgroups is simplifying the complex, or using 12 subgroups is complicating the simple, depends on the intended purpose of subgrouping. The clinical management implications of these trajectories remain to be investigated.

session **02**/04

2:30 – 3:30PM > Room 1+2

Title

TRAJECTORIES OF ACUTE LOW BACK PAIN: LATENT CLASS GROWTH ANALYSIS

Authors & Affiliations

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Background

Most people will recover from acute non-specific low back pain, but some do not. There is a paucity of longitudinal evidence describing how many individuals do not recover from acute low back pain. Understanding the course of acute low back pain is important to establish how many patients may need early intervention. This part of our study aimed to identify pain trajectories in patients presenting to primary care for acute low back pain.

Methods

Participants were adults consulting general practice with acute low back pain, recruited for a placebo controlled trial of paracetamol. Pain numerical rating scale data (score range 0-10) was collected at baseline, weeks 1, 2, 4 and 12. Latent Class Growth Analysis (LCGA) was used to identify pain trajectories, based on trichotomised pain scores (0 = no pain, 1 – 4 = moderate pain, ≥ 5 = high pain).

Results

In total, 1,505 participants who provided at least four pain scores (i.e. at four out of the five collection points) were analyzed. Six distinct clusters were identified including : 'delayed pain recovery'(n = 529), 'incomplete pain recovery' (n = 378), 'early pain recovery' (n = 371), 'fluctuating recurrent pain' (n = 115), 'persistent high pain'(n = 83) and 'fluctuating pain with recovery' (n = 29).

Conclusions

Overall, 38% of primary care attendees with acute low back pain show early tendency for pain persistence, recurrence or partial recovery. Describing baseline characteristics associated with the trajectories and conducting a long-term follow-up will help to identify patients in need of early intervention.

session **02** / 05

2:30 – 3:30PM > Room 1+2

Title

DOES LOW BACK PAIN OR NECK PAIN INCREASE THE RISK OF MYOCARDIAL INFARCTION? INSIGHTS FROM A PROSPECTIVE LONGITUDINAL-BASED STUDY OF DANISH TWINS 70-102 YEARS OF AGE

Authors & Affiliations

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Background

Spinal pain, specifically low back (LBP) and neck pain (NP) while rarely life threatening, is costly with associated disability and production losses. Cardiovascular disease is also costly, taking more lives than any other illness. The most common form of cardiovascular disease is coronary heart disease in the form of myocardial infarction (MI). LBP and to a lesser degree NP, is associated with cardiovascular disease, though no study has investigated widespread spinal pain and the risk of MI.

Methods

his study accessed a large population-based prospective cohort of Danish twins aged 70-102 years, via the Longitudinal Study of Ageing Danish Twins. LBP, NP and spinal pain (LBP and NP) data from twins with no reports of MI at study entry were used as predictors and a history of MI at 2, 4, 6, 8, and 10 year follow ups used as outcomes. Multivariate analysis models were adjusted for age, gender, smoking history and physical activity.

Results

A total of 4379 individuals (mean age of 77.8 years) completed the interview. Over a 10 year observational period, multivariate analysis found spinal pain associated with MI at the 6 year follow-up (OR 2.68, 95%CI 1.04-6.92; p=0.04) and 10 year follow-up (OR 6.51, 95%CI 1.58-26.81; P=0.01) and NP at 8 year follow-up (OR 2.71, 95%CI 1.10-6.66; p=0.03) and 10 year follow-up (OR 4.08, 95%CI 1.16-14.3; p=0.03). No significant association was found for LBP and MI.

Conclusions

Widespread spinal pain and to a lesser degree NP may increase the risk of developing late MI in older people.

session **02**/06

2:30 – 3:30PM > Room 1+2

Title

PREDICTORS FOR SUCCESS FOLLOWING THE MCKENZIE METHOD OR SPINAL MANIPULATION IN LOW BACK PAIN PATIENTS PRESENTING WITH CENTRALIZATION OR PERIPHERALIZATION. SUBGROUP ANALYSIS IN A RANDOMIZED CONTROLLED TRIAL.

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Background

Reports vary considerably concerning characteristics of patients with chronic LBP who will respond to mobilizing exercises or manipulation. The objective of this study was to identify patients with a changeable lumbar condition, i.e. centralization or peripheralization, who are more likely to benefit from the McKenzie method or spinal manipulation two months after completion of treatment.

Methods

Included in the study were 350 patients with chronic LBP. The possible predictor variables measured were age, gender, levels of pain and disability, duration of symptoms, centralization of symptoms, days on sick leave, nerve root involvement, pain below the knee, expectations for outcome, and improvement at fourth visit. The outcome variable was number of patients reporting success on reduction of disability, defined as a difference of more than 5 points on Roland Morris at two months follow-up. The predictors were dichotomized and the effect of predictor and type of treatment was analyzed. Secondly, the interaction between the dichotomized predictors and treatment was analyzed.

Results

The McKenzie method was superior to manipulation across all predictor subgroups. When the two strongest predictors, nerve root involvement and peripheralization of symptoms, were combined, the chance of success was relative risk 10.5 (95% CI 0.71-155.43) for the McKenzie method and 1.23 (95% CI 1.03-1.46) for manipulation (P=0.11 for interaction effect).

Conclusions

This study was unable to find any predictive factors in patients with chronic low back pain, presenting with centralization or peripheralization, that support the use of spinal manipulation; the McKenzie method was consistently superior.

session **03**/01

2:30 – 3:30PM > Room 3+4

Title

SPINAL PAIN – GOOD SLEEP MATTERS:
A SECONDARY ANALYSIS OF A RANDOMIZED CONTROLLED TRIAL

Authors & Affiliations

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Background

The estimated prevalence of poor sleep in patients with non-specific chronic low back pain is up to 64% in the adult population. The annual cost for musculoskeletal pain and poor sleep is estimated to be billions annually in the US. The aim of this cohort study with one-year follow-up was to explore the role of impaired sleep with daytime consequence on the prognosis of non-specific neck and/or back pain.

Methods

Secondary analysis of a randomized controlled trial, including 409 patients. Impaired sleep (reference group) was defined as having difficulties to fall asleep (“Do you have trouble falling asleep?”) or to maintain sleep (”Do you wake up several times at night and sometimes have difficulty going back to sleep?”), and reporting daytime consequence (“Do you feel very tired during your work day (shift)?”) several times per week or every day.

Results

At baseline 105 patients reported impaired sleep. Patients with good sleep at baseline were more likely to experience a clinically important difference in pain (OR 2.03 (95% CI 1.22-3.38)) and disability (OR 1.85 (95% CI 1.04-3.30)) compared to patients with impaired sleep at one-year follow-up.

Conclusions

Patients with non-specific neck and/or back pain and self-reported good sleep are more likely to experience a clinically important difference in pain and disability compared to patients with impaired sleep with daytime consequence.

session **03** / 02

2:30 – 3:30PM > Room 3+4

Title

EXPECTATIONS OF RECOVERY – A PROGNOSTIC FACTOR IN PATIENTS WITH NECK PAIN UNDERGOING MANUAL THERAPY TREATMENT

Authors & Affiliations

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Background

Expectations have been investigated in populations seeking care for neck pain, however not considering potential confounding factors. We aimed to investigate if pre-treatment expectations of recovery are a prognostic factor for recovery from neck pain at seven weeks follow-up in patients seeking manual therapy treatment.

Methods

The study was based on the Stockholm Manual Intervention Trial, a randomized controlled trial investigating efficiency of three combinations of manual therapy. We selected patients with neck pain and formed a cohort (n=716).
Expectations of recovery was measured at baseline; “How likely is it, according to your judgment, that you are completely recovered from your neck/back problems in seven weeks”. Patients answered on an 11 point scale, further categorized into low, moderate and high expectations. The outcome was measured at seven weeks follow-up by a modified version of the Global Perceived Recovery Question. Potential effect-measure modifiers and confounders were measured at baseline. Multivariable log-binomial regression models were used to analyze the association between expectations and recovery, presented as relative risks and 95% confidence intervals.

Results

Sex was an effect-measure modifier. Considering study power, analyses were also performed with the sexes combined. High expectations of recovery yielded an almost 50% increased chance of being recovered at seven weeks follow-up. High expectations of recovery yielded improved recovery in both sexes, but moderate expectations yielded improved recovery only among men.

Conclusions

Our results suggest that expectations of recovery are a prognostic factor for recovery in patients with neck pain seeking manual therapy treatment.

session **03** / 03

2:30 – 3:30PM > Room 3+4

Title

LIFESTYLE FACTORS IN CHRONIC LOW BACK PAIN: RESULTS FROM THE AUSTRALIAN TWIN LOW BACK PAIN (AUTBACK) STUDY

Authors & Affiliations

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Background

Although population-specific lifestyle factors such as physical activity and smoking are considered to significantly contribute to chronic low back pain (LBP) the effects of these factors have not been extensively investigated when genetics and early shared environment factors are controlled.

Methods

Using a within pair co-twin control study design, where the effects of genetics and early shared environment are considered, we investigated in a cross sectional study the association between chronic LBP and the lifestyle factors of alcohol consumption, smoking, and engagement in recreational and domestic-related physical activity. Data were collected via a web design survey. The sample consisted of 38 twin pairs from the Australian Twin Registry discordant for chronic LBP (i.e., one twin reporting chronic LBP and the co-twin reporting no LBP in the previous month). Analysis was carried with conditional stepwise logistic regression models.

Results

Considering a significance level of 0.05, time spent in vigorous gardening or heavy work around the house was the only variable that remained associated with chronic LBP in the final multivariate model adjusting for genetics and early shared environment (OR 6.5; 95%CI 1.47-28.8).

Conclusions

The type, frequency, and duration of physical activity may be important to understand risk factors for chronic LBP with more vigorous and housework related physical activity being associated with higher prevalence of chronic LBP after genetics and early shared environment are considered.

session **03**/04

2:30 – 3:30PM > Room 3+4

Title

THE RELATIONSHIP BETWEEN OBESITY AND LOW BACK PAIN: A SYSTEMATIC REVIEW WITH META-ANALYSIS OF TWIN STUDIES.

Authors & Affiliations

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Background

The relationship between obesity and low back pain (LBP) is still unclear and we know genetics could potentially confound this relationship. The aim of this systematic review is to investigate the relationship between obesity related measures (e.g BMI) and LBP in twin studies, where the effect of genetics and early shared environment can be controlled.

Methods

We conducted a systematic review of cross-sectional and longitudinal observational studies investigating the association between obesity and LBP in twins. Meta-analyses were performed to pool studies' estimates of association (OR) for total sample and within-pair case-control analyses.

Results

5 twin studies were included in the meta-analyses.
Pooled results for total sample analysis (5 cross sectional studies) showed that obese/heavier twins had higher prevalence rates of LBP (OR=1.73, 95%CI 1.53 – 1.93; p<0.001) compared to normal weight/lighter twins. After the adjustment for early shared environment and genetic components by using a monozygotic (MZ) and dizygotic (DZ) within-pair case-control analyses(3 cross sectional studies), pooled results showed that the obesity-LBP association was reduced but remained statistically significant associated with the increased prevalence of LBP (OR=1.48; 95%CI1.05 – 2.09; p=0.02). Lastly, the pooled results for MZ only within-pair case-control analyses (2 cross sectional studies) showed a further reduction in the association found (OR=1.35; 95%CI 0.81 – 2.25; p=0.26).
Obesity increases the prevalence of LBP. However, when genetics and early shared environment are accounted for this relationship appears to reduce. The lack of longitudinal studies in the field preclude a precise causal relationship and should be addressed in future research.

Conclusions

Obesity increases the prevalence of LBP. However, when genetics and early shared environment are accounted for this relationship appears to reduce. The lack of longitudinal studies in the field preclude a precise causal relationship and should be addressed in future research.

session **03** / 05

2:30 – 3:30PM > Room 3+4

Title

CONCORDANCE OF CHRONIC PAIN AND CHRONIC BACK PAIN BETWEEN FAMILY MEMBERS.

Authors & Affiliations

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Background

Substantial research describes the impact of chronic pain conditions on families. However much less is known about concordance (i.e. shared risk) of chronic pain between family members. The aim of this study is to determine whether the presence of chronic pain in one family member is associated with chronic pain in another family member.

Methods

Analysis focused on a subsample (n=2714) of the Generation Scotland dataset. Individuals were included if they had a first degree relative (parent, sibling) also in the dataset. This equated to a total of 1357 dyads (e.g. paired family members). One family member was randomly assigned as the "exposure" with the other assigned as the "outcome". Analysis used logistic regression to estimate odds ratios (OR) with 95% confidence intervals (95%CI).

Results

Prevalence of chronic pain was 36.1% and prevalence of chronic back pain was 19.8%. After adjustment for both family members' age and gender, persons whose family member indicated the presence of chronic pain were more likely to report chronic pain (OR 1.29, 95%CI 1.02, 1.64); this effect was stronger for chronic pain if the "exposure" family member had back pain (OR 1.38, 95%CI 1.05, 1.83) .

Conclusions

Concordance exists between family members for chronic pain conditions. Aside from genetic influence, these findings raise implications for the consideration of social factors on the experience of pain. Further planned analysis will consider the non-genetic reasons for concordance by examining shared risk factors (psychological, environment, health behavior, physical) using multi-level modeling.

session **03**/06

2:30 – 3:30PM > Room 3+4

Title

THE BIDIRECTIONAL RELATIONSHIP BETWEEN INTENSITY OF LOW BACK PAIN AND SLEEP QUALITY

Authors & Affiliations

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Background

Low back pain (LBP) has an adverse effect on patient's quality of sleep. On the other hand, sleep can modulate the intensity of pain. Despite this, the relationship between sleep quality and intensity of LBP is currently unknown. This study investigated the bidirectional relationship between intensity of LBP and sleep disturbance. Moreover, The study aimed to identify whether the relationship is dependent on pain duration, symptoms of depression and anxiety and the method of sleep assessment (subjective vs. objective).

Methods

Eighty patients with LBP completed a sleep diary and a sub-group of 50 patients additionally wore an electronic device (Armband) to measure sleep for 7 consecutive days. Pain intensity was assessed twice daily using a sleep diary. Depression and anxiety symptoms were assessed at baseline using the Depression Anxiety Stress Scale (DASS-21). Generalised estimating equations (GEE) were used to examine the relationship between day-time pain intensity and sleep.

Results

The analysis showed that a night of poor sleep quality, difficulty falling sleep, waking after sleep onset and low sleep efficiency were followed by a day with higher pain intensity. A day with higher pain intensity was also associated with a decrease in the subsequent night's sleep quality, an increase in sleep latency and waking after sleep onset and low sleep efficiency.

Conclusions

The study results imply that intensity of LBP and sleep quality have a bidirectional relationship. The relationship is independent of pain duration and baseline symptoms of depression, anxiety and somewhat dependent on the method of sleep measurement (sleep diary or Armband).

The study is accepted for publication by the Clinical Journal of Pain, but not yet published.

Posters

10:00 – 11:00AM > Lobby area

Title

IDENTIFICATION OF POTENTIAL ADVERSE EVENTS FOLLOWING SPINAL MANIPULATION

Authors & Affiliations

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Background

The safety of spinal manipulation is often debated despite reports that adverse events occur infrequently (less than 1 in 3 million). While they can be challenging to identify, those serious enough to require medical attention may be easier. The purpose was to identify potential serious adverse events following the use of spinal manipulation.

Methods

Patients at Madigan Army Medical Center with an initial spine or shoulder condition from 1 January to 31 December 2009 were followed for a 12-month period. Encounters that included spinal manipulation current procedural codes (CPT) performed by physiotherapists (PT), chiropractors (DC), or osteopathic physicians (DO) were captured using the MHS Management Analysis and Reporting Tool. Potential adverse events from an apriori established list of ICD9 codes were identified. Any visits including these codes occurring within 7 days of a spinal manipulation event, were further abstracted.

Results

From 6706 initial encounters with potential manipulation procedure codes, 1084 encounter were identified as a potentially adverse event within 45 days, representing 337 unique subjects. There were 133 potential adverse events within 30 days, 43 within 7 days, and only 9 occurring within 24 hours. Qualitative analysis of cases within 7 days found no potential adverse events that could be attributed to spinal manipulation.

Conclusions

There was no evidence of serious harm found after the use of spinal manipulation. However, the number of spinal manipulation encounters were low to expect an adverse events consistent with published reports. This study presents a standardized manner with which to identify serious adverse events in retrospective epidemiological studies.

10:00 – 11:00AM > Lobby area

Title

SELF-PERCEIVED RECOVERY STATUS AMONG DANISH PEOPLE WITH LOW BACK PROBLEMS; WHAT INFLUENCES THEIR APPRAISAL AFTER 12 MONTHS?

Authors & Affiliations

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Background

Important questions regarding how patients understand their own 'recovery' and how recovery progresses over time remain unanswered. The aim of this study was to retrospectively explore issues and experiences impacting self-perceived recovery among low back pain sufferers.

Methods

We conducted a qualitative case study among patients in the Danish primary care setting. Semi-structured, telephonic interviews were scheduled with individuals sampled consecutively and according to number of weekly pain days. A blend of thematic and content analysis was performed.

Results

Thirty-two interviews were conducted with 'symptoms', 'daily life' and 'recovery' emerging as the three main themes. Seventeen respondents considered themselves recovered, 6 were undecided and 9 were not recovered. Self-perceived recovery hinged on the dynamic interaction between pain-related symptom attenuation, evidence of tissue injury/trauma and positive coping experiences. Those unsure of their status, tended to do so on the basis of cognitive dissonance regarding the meaning of recovery and paradoxical scepticism of pain-free periods.

Conclusions

Retrospective self-appraisal appears to be filtered through the individual's understanding of the nature of their problem, their perceived level of control over their life and whether they trust the character of their illness.

10:00 – 11:00AM > Lobby area

Title

DIAGNOSTIC ACCURACY OF HISTORY TAKING TO ASSESS LUMBOSACRAL NERVE ROOT COMPRESSION

Authors & Affiliations

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Background

The diagnosis of sciatica is primarily based on history and physical examination. Little is known about the diagnostic accuracy of history items. Therefore, the aim of our study was to assess the diagnostic accuracy of history taking for the presence of lumbosacral nerve root compression or disc herniation on MRI in patients with sciatica.

Methods

A total of 395 adult patients with severe disabling radicular leg pain of 6-12 weeks duration were included in this cross-sectional diagnostic study. History was taken according to a standardized protocol. Three spine experts blinded to any clinical information independently assessed Lumbosacral nerve root compression and disc herniation on MRI.

Results

Exploring the diagnostic odds ratio of 20 history items revealed a significant contribution in diagnosing nerve root compression for "male sex," "pain worse in leg than in back," and "a non-sudden onset." A significant contribution to the diagnosis of a herniated disc was found for "body mass index <30," "a non-sudden onset," and "sensory loss."
Multivariate logistic regression analysis of 6 history items pre-selected from the literature (age, gender, pain worse in leg than in back, sensory loss, muscle weakness, and more pain on coughing/sneezing/straining) revealed an AUC of 0.65 (95%CI 0.58–0.71) for the model diagnosing nerve root compression and an AUC of 0.66 (95%CI 0.58–0.74) for the model diagnosing disc herniation.

Conclusions

A few history items used in isolation had significant diagnostic value and the diagnostic accuracy of a model with six pre-selected items was poor.

10:00 – 11:00AM > Lobby area

Title

PREVALENCE OF LOW BACK AND NECK PAIN IN ADOLESCENTS FROM A RIO DE JANEIRO PUBLIC HIGH SCHOOL

Authors & Affiliations

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Background

Both low back and neck pain are common in adolescence. Some studies reported a prevalence as higher as in adulthood. Our aim was to investigate the prevalence of low back pain (LBP), and neck pain (NP) by subgroups in adolescents.

Methods

A cross-sectional study was conducted with 1102 High School adolescents in Rio de Janeiro, Brazil. Students answered questions regarding sociodemographic variables, lifestyle, time watching TV, time using a computer and the presence of LBP, NP and mid back pain (MBP). Current pain with a duration higher than three months was classified as chronic and current pain only in the last month was classified as acute. The point prevalence of LBP and NP was calculated by subgroups.

Results

The prevalence of LBP was 46,8%, including 18,2% (95% CI 15,9 - 20,5) of chronic low back pain (CLBP) and 28,6% (95% CI 25,9 - 31,2) of acute low back pain (ALBP). The prevalence of NP was 48,9%, including 16% (95% CI 13,8 - 18,2) of chronic neck pain (CNP) and 32,9% (95% CI 30,1 - 35,7) of acute neck pain (ANP). Prevalence of LBP and NP was increased in female sex and smokers (except for ALBP). The subgroups of participants who had combined chronic pain in the other regions of the spine had a higher prevalence of CLBP and CNP. The same occurred for acute pain in the other regions of spine and ALBP and ANP prevalences.

Conclusions

Our findings support the high prevalence of low back and neck pain in adolescence.

10:00 – 11:00AM > Lobby area

Title

HOW PSYCHOLOGICALLY DISTRESSED ARE ACUTE LOW BACK PAIN PATIENTS?

Authors & Affiliations

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Background

Psychological distress is a well-established risk factor for chronicity in low back pain (LBP). Levels of psychological distress in persons experiencing an acute episode of LBP have however received relatively little attention in research and guidelines.

Methods

MedLine, Embase, PsychInfo, Cinahl, EDAM, and Mantis were searched for literature published 1966 to September 2013. Inclusion criteria included original, peer-reviewed research reports in English, Danish, Norwegian, and Swedish dealing with humans of all ages experiencing an episode of low back pain of less than eight weeks duration and where any measure of psychological distress, i.e. a state of emotional suffering characterized by symptoms of depression and anxiety, were included in the report. Two reviewers independently performed in-depth reviews of eligible studies using the STROBE checklist as guide. Levels of psychological distress were extracted, distributions for each measure and study were calculated based on reported means and standard deviations and compared to reference general population values or known values for other conditions.

Results

9090 individual reports were identified and 17 papers from nine different countries fulfilled the inclusion criteria. Psychological distress was assessed using 15 different instruments. In spite of heterogeneity in setting and measures, psychological distress scores were consistently and significantly worse than scores for the general population, and at least the same or worse when compared with chronic LBP patients.

Conclusions

Acute LBP patients report levels of psychological distress comparable to chronic LBP patients. In addition to being an important prognostic indicator, psychological distress represents a significant symptom that might be addressed in early clinical management.

10:00 – 11:00AM > Lobby area

Title

CONVERTING BETWEEN PATIENT-REPORTED OUTCOME MEASURES OF PHYSICAL DISABILITY FOR CHRONIC LOW BACK PAIN

Authors & Affiliations

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Background

We established a repository of individual patient data (IPD) from RCTs of therapist-delivered interventions for low back pain. The aim is to identify subgroups of patients who will benefit most from a particular treatment through IPD meta-analysis. There was no standard set of outcome measures used in all RCTs. Prior to pooling outcomes from various instruments for analysis we assess the feasibility of standardizing these measurements. We report here the conversion and standardization of measurements for the physical disability endpoint.

Methods

We used data from 11 trials (n=6089 patients) with at least two of the following instruments: chronic pain grade (Von Korff) disability score, Hannover functional ability questionnaire, Oswestry disability index, physical component summary of SF-12/36, patient specific functional scale and Roland Morris disability questionnaire. We used linear regression models to attempt to transform from one measurement to another. Correlation and responsiveness (the ability to detect change in condition) were tested to infer the compatibility, comparability and meaningfulness of the transformed measurements.

Results

We did 21 pairwise comparisons and of these 16 of them had correlation between 0.4 and 0.6. Nine had statistically significant different responsiveness ($p < 0.0024$ correction for multiplicity).

Conclusions

There was a lack of correlation and responsiveness between different instruments. The transformations between outcome measures were not very accurate. It is not recommended to convert between, or pool data from, different measures.

10:00 – 11:00AM > Lobby area

Title

THE EFFECT OF CHANGING MOVEMENT AND POSTURE USING MOTION SENSOR BIOFEEDBACK, VERSUS USUAL CARE, ON THE CLINICAL OUTCOMES OF PEOPLE WITH SUB-ACUTE OR CHRONIC LOW BACK PAIN - A MULTICENTRE, CLUSTER RANDOMISED, PLACEBO-CONTROLLED, PILOT TRIAL

Authors & Affiliations

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Background

The aims of this pilot trial were to (i) test the hypothesis that modifying patterns of painful lumbo-pelvic movement in people with back pain would lead to reduced pain and activity limitation when compared to standard care and placebo, and (ii) facilitate sample size calculations for a fully powered trial.

Methods

A multicentre, cluster randomized, placebo-controlled pilot trial compared two groups of people with sub-acute and chronic back pain (n=112). It was powered for longitudinal analysis but not for single-time point comparisons. The intervention group received modification of movement patterns augmented by motion-sensor movement biofeedback (ViMove, dorsaVi.com). The control group received standard medical or physiotherapy care and a placebo (wearing the motion-sensor device without biofeedback). Primary outcomes were pain intensity (VAS) and activity limitation (Roland Morris (RMDQ) and Patient Specific Function (PSFS), all on 0-100 scales. Both groups received 6-8 treatment sessions. Outcomes were measured seven times during the treatment period and at 12, 26 and 52 weeks follow-up, with 10% dropout.

Results

Across 1 year, there were significant between-group differences favoring the intervention group for pain [linear mixed model coefficient (95% CI): 15.7 (11.4 to 19.9)] and activity limitation [RMDQ 15.3 (9.4 to 21.3), PSFS 21.0 (12.0 to 29.0)], all $p<0.001$.

Conclusions

Individualised movement retraining using motion-sensor biofeedback resulted in sustained improvements in pain and activity limitation, even after treatment finished. This pilot trial also refined the procedures and sample size requirements for a fully powered RCT.

It was equally funded by DorsaVi P/L and the Victorian State government.

10:00 – 11:00AM > Lobby area

Title

HOW REASSURING IS EDUCATION FOR PATIENTS WITH ACUTE LOW BACK PAIN?

Authors & Affiliations

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Background

Systematic reviews on low back pain (LBP) have found that reassurance delivered in the form of written or oral education has little effect on pain and/or disability outcomes, however, their effect on fear and worry is unknown. The aim of this systematic review was to determine the reassuring effect of education for acute LBP in primary care.

Methods

Databases were searched to identify controlled studies on education, advice and information for acute LBP. To be eligible, studies had to measure outcomes that reflect the definition of reassurance: fear, worry or health-care utilisation. Two independent reviewers screened studies for eligibility, extracted data, and assessed the quality of included studies.

Results

The search identified 6422 articles of which 12 randomised controlled trials were included. The mean quality of included studies was 6 (range 3 to 9) out of 10 on the PEDro scale. Oral education sessions ranged from 5 minutes to 3 hours in duration. Reassuring effects were reported in 2 of 6 studies measuring fear, in 1 of 6 studies measuring worry, and in 2 of 7 studies measuring healthcare utilisation.

Conclusions

There is moderate evidence to suggest that education alone, as delivered in published RCTs in primary care, is not sufficient to reassure patients with acute LBP.

10:00 – 11:00AM > Lobby area

Title

SLEEP DISORDERS AS A PROGNOSTIC FACTOR IN PERSONS WITH NECK AND BACK PAIN FOLLOWING TRAFFIC COLLIISION

Authors & Affiliations

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Background

Sleep disturbances are known to be associated with chronic pain conditions. Sleep is of possible importance for recovery from traumatic neck/back pain. Aim was to assess the prognostic value of sleep disturbances in persons with neck/back pain following a car collision

Methods

Persons 18-74 yrs, who claimed an injury to private insurers in Sweden between Jan 2004 and Jan 2005, were eligible. We included persons who reported an injury to the neck and/or back. Soon after the collision, they responded to a questionnaire including questions about symptoms and sleep disturbances as result of the collision; Do you have difficulties falling asleep due to the injury?; and Do you have problems with waking up during nights due to the injury? Six months later responders received a follow-up questionnaire, including the Pain Disability Index (PDI) questionnaire. We constructed four categories of sleep pattern based on the the two sleep questions. PDI was dichotomized at the 75th percentile (PDI 20/21). Cox regression was used to assess the association between sleep and pain-related disability and to test for confounders.

Results

1,373 persons were included; 82% responded to the follow up. Compared to the reference group, persons with sleep disturbances were at higher risk of reporting high disability; the more severe the sleep disturbances, the higher the risk. The results remained also after adjusting for confounders, but were attenuated and the dose-response relation was less pronounced. Detailed results will be presented.

Conclusions

It is important to take sleep disturbances into consideration when persons do not recover fully from neck/back pain shortly after the collision.

10:00 – 11:00AM > Lobby area

Title

MODIFYING THE START BACK TOOL FOR USE WITH PATIENTS WITH OTHER MUSCULOSKELETAL CONDITIONS: DOES IT WORK?

Authors & Affiliations

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Background

The Keele STarT Back Screening Tool (SBST) has predictive validity for stratifying primary care patients with non-specific low back pain (Hill et al, 2008). We tested whether a modified SBST could be used with a broader group of musculoskeletal pain patients.

Methods

A generic, modified SBST was embedded within prospective data collection of patients in 1) physiotherapy services (PhysioDirect trial n=2247) and 2) musculoskeletal primary/secondary care interface services, (SAMBA n=1039). The tool's ability to predict 6-month physical function (SF-36 upper tertile Physical-Component-Score) for patients with back, neck, upper limb, lower limb, or widespread pain was examined using Area-Under-the-Curve (AUCs) and sensitivity/specificity.

Results

In PhysioDirect, AUCs for back, neck, upper limb, lower limb and multi-site pain were 0.72, 0.82, 0.79, 0.77 and 0.81 respectively. However, different subgroup cut-offs were required depending on site of pain to optimize sensitivity and specificity sufficiently. These findings were replicated in the SAMBA dataset.

Conclusions

A modified SBST moderately predicts outcome in other musculoskeletal sites within physiotherapy and interface service settings. However, the use of consistent subgroup cut-offs was not possible and resulted in poor sensitivity (too few patients 'at risk' were identified) or specificity (too many were inaccurately classified 'at risk') for some pain sites. The draft tool is now being amended and validated within a new programme of research for this broader patient population in a primary care general practice sample.

10:00 – 11:00AM > Lobby area

Title

THE ROLE OF REHABILITATION COUNSELORS IN THE RETURN TO WORK PROCESS OF WORKERS IDENTIFIED AS BEING AT-RISK FOR LONG-TERM DISABILITY IN A COMPENSATION CONTEXT

Authors & Affiliations

Manon Truchon M1, 2, Schmouth, ME2, Robichaud MM3, Fillion L4, Moffet H5, Nastasia I6, Bültmann U7.

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Background

The high cost of long-term disability related to back disorders led a Quebec public workers insurance company to implement an early identification and reference approach to prevent long-term disability in all compensated workers. Workers at-risk for long-term disability are referred to specialized teams, comprised of a rehabilitation counselor in charge of assisting during the return to work process. The presentation highlights the importance of these counselors in the process, a rarely discussed subject.

Methods

Twenty interviews were conducted between November 2013 and January 2014 with caseworkers involved in the files of workers at-risk for long-term disability. They were questioned on the tasks they performed and the actors involved in the process. A content analysis was carried out by author #2 and validated by author #1 (n=19). Interviews were part of a larger study.

Results

Counselors intervened when functional limitations to perform pre-injury work were anticipated or confirmed. Their role mainly consisted in assisting workers and employers in realizing a sustainable return to pre-injury work over a 1 or 2-year period. This required making contact and meeting different actors to perform multiple tasks, namely transmitting information (e.g. compensation system) and giving support (e.g. determination of light duties). Before taking any action, counselors had to reflect and use their imagination to decide which actions need to be achieved, when, and who should be mobilized. In making decisions and performing tasks involving others, counselors are process generators and coordinators.

Conclusions

Based on results, rehabilitation counselors play a crucial role in the return to work process of compensated at-risk workers.

10:00 – 11:00AM > Lobby area

Title

THERAPIST DELIVERED INTERVENTIONS FOR LOW BACK PAIN - RESULTS FROM A BACK PAIN RESPOSITORY

Authors & Affiliations

Shilpa Patel, Warwick Medical School, Siew Wan Hee, Warwick Medical School, Sally Brown, Warwick University, Melina Dritsaki, Warwick Medical School, Tim Friede, University Medical Center Göttingen, Jake Jordan, Brunel University, Sallie Lamb, Oxford University, Joanne Lord, Brunel University, Dipesh Mistry, Warwick Medical School, Nigel Stallard, Warwick Medical School, Colin Tysall, Warwick University, Martin Underwood, Warwick Medical School.

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Background

Identification of sub-groups of people with low back pain (LBP) who may benefit from different treatment approaches is an important research priority. Few individual trials are large enough to identify subgroups.

Methods

We developed a repository of individual patient data (IPD) of therapist delivered interventions (TDIs) for LBP. We initially invited investigators of RCTs (n>179) to share their trial data with us, other trials were obtained through snowballing. The analysis is a three-stage process; a one-step IPD meta-analysis to explore efficacy between TDI against control, to identify potential moderators and to construct clinical and health economic prediction rules to identify sub-populations that may benefit from different treatment modalities.

Results

We collected IPD from 19 RCTs (n=9328, mean age 49 years, 57% females). In 'proof of concept' analysis using data from 6 trials (n=5208) of different TDIs we found that the SF36/12 Mental Component Score (MCS) moderates response to treatment measured using the SF36/12 Physical Component Score (PCS) (P=0.0413) in an analysis of covariance adjusting for treatments and trials as random effects. The additional standardise effect size on PCS between being below and above the population norm of MCS was 0.15 (95% CI, 0.04 to 0.26).

Conclusions

We have, for the first time, shown that psychological distress predicts response to treatment for back pain. In on-going work we are seeking to identify sub-populations defined by multiple parameters for different TDIs with both clinical and cost-effectivness outcomes. This work offers the potential to improve rational targeting of treatment.

10:00 – 11:00AM > Lobby area

Title

EFFECT GRADED ACTIVITY VERSUS SUPERVISED EXERCISE PROGRAM IN PATIENTS WITH CHRONIC NONSPECIFIC LOW BACK PAIN: A RANDOMIZED CONTROLLED STUDY

Authors & Affiliations

Mauricio O. Magalhaes[1], Josieli Comachio[1], Luzilaure H.A. Muto[1], Ana P.M.C. Carvalho e Silva[1], Gabriel, A. Leao[2], Fabio J.R. Franca[1], Luiz A.V. Ramos[1], Thomaz N.Burke[1], Amelia P. Marques[1]

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Background

Low back pain (LBP) is a major health problem associated with reduced functional performance and bio psychosocial factors. The practice of supervised exercise has shown positive results in reducing pain and disability, but currently there is no or insufficient evidence that Graded Activity results in better outcomes of patients with LBP. The aim of this study was to compare the effectiveness of supervised exercises and graded activity in patients with LBP.

Methods

Sixty-six patients were randomly assigned in two groups: Supervised exercises (strengthening, stretching, and motor control) or Graded Activity (moderate intensity treadmill walking, education and strength exercises). The intervention were individualize, twice a week for six weeks.

Results

Results show both treatments have benefits for patients with LBP, but no significant difference between treatment groups. For pain intensity (mean difference 0.2 (95% IC -1.09 a 1.49) and disability (mean difference 0.8 (95% IC-2.63 a 1.32).

Conclusions

Both treatments have benefits for patients with LBP

10:00 – 11:00AM > Lobby area

Title

THE EFFICACY OF CONSERVATIVE TREATMENT OF ACUTE VERTEBRAL COMPRESSION FRACTURES ON PAIN RELIEF: A SYSTEMATIC REVIEW

Authors & Affiliations

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Background

Vertebral compression fractures (VCFs) can cause severe pain and disability, and usually require intervention in the acute phase. The efficacy of surgical interventions is debatable. An overview of the efficacy of non-surgical treatments in acute VCFs is lacking. We therefore aimed to assess the efficacy of first-line conservative pain relief interventions in acute VCFs.

Methods

Eight electronic bibliographic databases were searched up to January 2014. Randomized controled trials were selected which included adults with recent VCFs receiving conservative treatment with first-line pain control medications, passive physical therapies, bed-rest or bracing and that reported pain outcomes. Trials that included surgery as a comparison group or VCFs originating from malignancy or severe trauma were excluded. Standardized mean differences (SMDs) and 95% CIs were estimated. Physiotherapy Evidence Database (PEDro) scale (score range 0-10) was used to assess trial methodological quality.

Results

5878 titles were identified, 316 abstracts and 54 articles were screened. 5 RCTs (total n=377) were included with PEDro scores ranging from 5 to 7. Identified were trials into pain control medications (2 studies), bracing (2) and electrical stimulation (1). Statistical power for comparative efficacy analyses was limited, unclear or insufficient. Numerically, at around 2-week follow-ups treatment groups had pain intensity similar to placebo/sham (SMD range: 0.0 [95% CI -0.47, 0.47] to -0.48 [-0.95, 0.00]) and lower than control groups (SMD range: -0.49 [95% CI -0.90,-0.07] to -1.30 [-2.47,-0.14]).

Conclusions

A multicenter RCT is needed to examine the efficacy of first-line pharmacological and non-pharmacological treatments to relieve pain in acute VCFs.

10:00 – 11:00AM > Lobby area

Title

CLINICIANS' AND PATIENTS' VIEWS ON TRIGGERS FOR LOW BACK PAIN

Authors & Affiliations

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Background

Most research on risk factors for low back pain (LBP) is guided by the views of clinicians and researchers, not patients. This study aimed to compare patients' and clinicians' views on triggers for an episode of LBP.

Methods

Data were collected as part of a case-crossover study conducted in primary care clinics in Sydney, Australia. 103 clinicians recruited 999 patients with a sudden, acute episode of LBP. Participating clinicians were asked, based on their experience, to nominate the most likely short and long-term risk factors to trigger a LBP episode. Similarly, patients were asked what they thought had triggered their onset of LBP. Responses were coded into risk factor categories by two independent researchers (κ=0.73) and compared using Pearson's chi-squared statistics.

Results

ithin long-term risk factors, patients were more likely than clinicians to endorse biomechanical factors (71.9%; 54.2%; x2=26.0) as opposed to individual risk factors (6.9%; 39.0%; X2=104.2). There was also a significant difference between their endorsement of sports injuries (11.3%; 1.7%; x2=35.0), awkward postures (4.1%; 0.2%; x2=17.9), gardening (5.3%; 0.4%; x2=21.5) and other individual risk factors (0.3%; 5.8%; x2=16.8). When comparing the endorsement of short-term risk factors there was a significant difference in sports injuries (16.5%; 4.7%; x2=40.6), awkward postures (6.2%; 0.8%; x2=23.1), physical trauma (3.7%; 8.9%; x2=14.4), unaccustomed activity (1.0%; 7.4%; x2=32.5) and lifting and bending (0.3%; 2.3%; x2=10.5).

Conclusions

This study shows a significant difference in patient and clinician beliefs on triggers for LBP. The views of patients may be a useful source of potential risk factors to be evaluated in future research studies.

10:00 – 11:00AM > Lobby area

Title

PREVALENCE OF DEGENERATIVE AND SPONDYLOARTHRITIS-RELATED MRI FINDINGS IN THE SACROILIAC JOINTS AND SPINE IN PATIENTS WITH PERSISTENT LOW BACK PAIN

Authors & Affiliations

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Background

Knowledge of the pathoanatomical changes visualized by MRI, such as spondyloarthritis (SpA)-related and degenerative findings, is essential to improve the use of MRI in low back pain (LBP). Therefore the objective of the current study was to estimate the prevalence of degenerative and SpA-related MRI findings in the sacroiliac joints (SIJ) and spine and analyse its association with gender and age.

Methods

Patients aged 18-40 years with persistent LBP with or without sciatica referred to a regional Spine Centre were included in the study. All patients received a SIJ and whole spine MRI, which was evaluated using a standardised protocol.

Results

037 patients were included (median age 33 years, 54% women). In the SIJ, 28% (±SEM 1.4) had at least one MRI finding, of which bone marrow oedema (BMO) was the most common (21% (±1.3)). SIJ sclerosis, fatty marrow deposition, and BMO were associated with female gender. SIJ erosions were more prevalent in patients aged 18-29 years and BMO more prevalent in patients aged 30-40. In the spine, disc degeneration and disc contour changes were the most common findings, present in 87% (±1.1) and 82% (±1.2) of the patients, respectively. All degenerative spinal findings were more frequent in men and in patients aged 30-40 years.

Conclusions

The high prevalence of SIJ findings in this patient group combined with the association between SIJ findings and female gender reveals a need for further investigation of the clinical importance of MRI findings in the SIJ in patients with persistent LBP.

10:00 – 11:00AM > Lobby area

Title

OES PAIN-CATASTROPHIZING MEDIATE THE EFFECT OF TAI CHI ON TREATMENT OUTCOMES FOR PEOPLE WITH LOW BACK PAIN?

Authors & Affiliations

Amanda Hall1, Steve Kamper2, Richard Emsley3, Chris Maher2

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Background

There is some evidence to support the effectiveness of tai chi for reducing pain-related symptoms, however, the mechanism(s) are unclear. This study explores the role of pain-catastrophization as a possible mediator in the relationship between practising tai chi and back pain symptoms.

Methods

The study used a sub-sample of patients (n=102) from a larger RCT that studied the effect of a 10-week tai chi intervention on pain symptoms in patients with persistent low back pain. The sub-sample of patients completed self-assessments of pain intensity, pain bothersomeness, disability and pain catastrophization at baseline and at follow-up after the intervention. Mediation analysis was used to look at the role of pain catastrophization (potential mediating variable) in the relationship between allocation to tai chi (independent variable) and treatment outcome (dependent variable).

Results

The results indicated that a reduction in catastrophization explained approximately 1/3 of the effect on pain intensity and pain bothersomeness and 2/3 of the effect on pain-related disability.

Conclusions

The link between catstrophizing and treatment outcome has been previously demonstrated in chronic low back pain populations with both cognitive behavioural interventions and physical therapy interventions. Catastrophization was only a partial mediator - other mechanisms should be explored in future research. Thus, for clinicians treating patients with persistent low back pain, tai chi may be a viable option for their patients who present with a catastrophization thinking style.

10:00 – 11:00AM > Lobby area

Title

CHRONIC PAIN: EXPLORING THE MEANING AND MANAGEMENT OF PAIN WITHIN THE BANGLADESHI COMMUNITY IN EAST LONDON

Authors & Affiliations

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Background

Compared to the White British the prevalence of chronic pain amongst South Asians living in the UK is higher. In particular our previous research has shown the prevalence of chronic widespread pain to be higher in the Bangladeshi group compared to white British/Irish residents in the east Borough of Tower Hamlets, London, however very few studies have explored the experiences of pain and its management amongst this group.

Methods

Face to face interviews were carried out in Sylheti by a bilingual researcher, interviews were audio-recorded and transcribed in English for analysis. Data were analyzed using a thematic framework.

Results

We included 13 participants (8 female and 5 male participants who moved to UK aged 14 or over). The key themes that emerged from the data were mapped onto micro contextual factors; pain triggers and the impact of pain on daily activities, family and pain management and macro contextual factors; health beliefs (related to the external health locus of control), thoughts and feelings related to pain and overall coping and management strategies including traditional and alternative remedies to pain management.

Conclusions

The themes we identified highlight more similarities between our sample and the White population than was expected. The day to day management and impact of living with pain could therefore require similar levels of intervention and information in both population groups. The main differences were in the wider cultural factors related to health beliefs and challenges related to prayer posture and limitations to this due to pain.

10:00 – 11:00AM > Lobby area

Title

RECURSIVE PARTITIONING BASED APPROACHES FOR LBP SUBGROUP ANALYSES

Authors & Affiliations

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Background

Identifying subgroups that most benefit from treatment is an important research priority internationally in the area of LBP. Individual patient data (IPD) meta-analyses provide an ideal framework with improved statistical power to identify subgroups. Conventional approaches to subgroup analyses applied in both a single trial setting and an IPD setting have a number of issues, one of them being that subgroups are typically investigated one at a time. As individuals have multiple characteristics that may be related to response to treatment, alternative statistical methods are required to overcome the associated issues.

Methods

Tree based methods that use recursive partitioning techniques are a promising alternative that systematically search the entire covariate space to identify subgroups defined by multiple parameters. We propose two new IPD recursive partitioning methods to subgroup analyses in an IPD meta-analyses framework. We demonstrated their application to real LBP data from four acupuncture trials (N=4,540) using short-term outcome on the physical component score (PCS) from the SF-36 questionnaire where the main treatment effect was 3.75 (95% CI: 3.20 – 4.31).

Results

For the short-term PCS outcome, those with baseline SF-36 Mental Component Score >51.4 AND a baseline PCS≤35.9 (n=919) had an enhanced treatment benefit of 5.44 (95% CI: 4.24 – 6.64). Also those aged≤43 (n=1,170) at baseline had an enhanced treatment benefit of 4.93 (95% CI: 3.29 – 5.97).

Conclusions

The proposed approaches are promising alternatives that should be considered for identifying LBP subgroups.

10:00 – 11:00AM > Lobby area

Title

DISABILITY AND PLASMA CYTOKINE LEVELS IN ELDERLY WOMEN WITH LOW BACK PAIN (LBP).

Authors & Affiliations

Bárbara Zille de Queiroz, UFMG; Daniele Sirineu Pereira, UFMG; Renata Antunes Lopes, UFMG; Nayza Maciel de Britto Rosa, UFMG; Diogo Carvalho Felício, UFMG; Juscélio Pereira da Silva, UFMG; Rosangêla Correa Dias, UFMG; João Marcos Domingues Dias, UFMG; Leani Souza Máximo Pereira,UFMG.

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Background

Higher levels of the proinflammatory cytokines contributes to sarcopenia and impairment on the functionality. An association was verified between high levels of systemic inflammatory mediators and the disability in adults with LBP.
The aim of this study was to compare the plasma levels of (IL-6) and (sTNF-R1) among 2 groups of elderly women with LBP: with and without disability.

Methods

IL-6 and sTNF-R1 were measured in plasma by using an enzyme-linked immunosorbent assay. Disability was assessed using Roland Morris Disability Questionnaire (score 0-24). The groups was GI, with disability (score>14) and GII, without disability (score <14). Descriptive statistics and Mann-Whitney U test was used to verify the differences between groups, (SPSS 15.0, α = 5%)

Results

155 elderly women were included, (70.62 ± 5.50year), LBP intensity of 5.58±3.36 (VAS 0-10). GI (n=84) presented higher IL-6 levels (p=0.021) compared to GII (n=70). No difference was found between the sTNF-R1 plasma levels (p=0,405).

Conclusions

Elderly women with LBP and significant disability had the higher IL-6 plasma levels, compared to elderly women with no significant disability.

10:00 – 11:00AM > Lobby area

Title

MASSAGE FOR LOW BACK PAIN: AN UPDATED COCHRANE SYSTEMATIC REVIEW (SYSREV).

Authors & Affiliations

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Background

The growing use of alternative therapies for pain (1-3) with conflicting results (4), requires better evidence to prescribe them safely (1) under rational health expenditure (5). Massage might be beneficial for patients with nonspecific low back pain (LBP) (6) but heterogeneity of published studies impede consistent results. We assessed the effectiveness of massage in idiopathic LBP by regrouping massage versus other interventions.

Methods

Databases Search:
Cochrane Central Register of Controlled Trials (CENTRAL), MEDLINE, HealthSTAR, CINAHL, EMBASE, Dissertation abstracts/Silver Platter, LILACs, ICL (7). Without language restrictions for Randomized controlled trials (RCTs), quasi-randomized, controlled clinical trials.

- Patients: Adults (> 18 years) with idiopathic LBP(8).
- Interventions: Massage (9)
- Co-interventions: Passive Therapies (usual treatment, sham or no therapies). Active Therapies (direct intervention on patients)
- Outcomes: Pain, back-specific functional status and quality of life.
- Exclusion:

o Infection, neoplasm, metastasis, osteoporosis, rheumatoid arthritis, fracture, inflammatory process, radicular syndrome.
o Duplicates, protocols or studies form previous SysRevs.

Blinded to each other, two reviewers analyzed preselected articles. When consensus was not reached, a third reviewer decided the inclusion of the studies.

Results

Retrieved articles: 534 (47 preselected).
Included: current update (5) + previous SysRev (13)= total (18 RCTs).
Massage: Thai, Sweedish, Relaxation massage, Superficial, Deep, Acupressure, Electromassage, Foot Reflexology, Comprehensive or combined techniques, roptrotherapy, muscle energy technique
Passive Therapies: conventional treatment, Sham massage
Active Therapies: manipulation/mobilization, Relaxation, self-care education, Alexander technique, Traction, endermology, exercise modalities, posture, interferential current

Conclusions

Results of Metaanalysis and Risk of Bias will be presented at the conference

10:00 – 11:00AM > Lobby area

Title

COST-EFFECTIVENESS OF IMPLEMENTING CLINICAL GUIDELINES ON MANAGEMENT OF LOW BACK PAIN: A CLUSTER RANDOMISED TRIAL

Authors & Affiliations

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Background

New guidelines on management of LBP in general practice have been introduced in Denmark. These guidelines have the potential to improve quality of care and be cost saving by reducing the number of patients referred to hospital. In Denmark, 78 % of the annual treatment cost of LBP is associated with hospital care. Introduction of the guidelines are evaluated in a RCT, which compares usual dissemination with an extended implementation strategy. The extended implementation strategy consists of usual dissemination, two electronic decision tools, facilitator visits, and feedback on guideline adherence. The aim is to assess the cost-effectiveness of the extended implementation strategy compared to usual dissemination.

Methods

This is an ongoing cluster RCT with nested health economic analyses. Outcome measures include health-related quality of life, Roland Morris disability, and pain. In the cost-effectiveness and cost-utility analyses the additional costs and effects of the extended implementation strategy compared to usual dissemination will be quantified in order to calculate an incremental cost-effectiveness ratio. A societal perspective with a 12-month time horizon equal to the follow-up period of the RCT will be applied. Assessment of outcomes will be blinded and follow the intention-to-treat principle.

Results

Sixty-one general practices are participating and are expected to enrol 1,400 patients between the age of 18 and 65 years with a LBP diagnosis. Data collection will be completed by July 2015.

Conclusions

It is expected that the additional upfront cost of the extended implementation strategy is cost-effective through improvements in clinical practice and patients' quality of life, disability, and pain.

10:00 – 11:00AM > Lobby area

Title

A SYSTEMATIC REVIEW OF THE RELATION BETWEEN SELF-REPORTED MEASURES OF SPINE FUNCTION AND PHYSICAL MEASURES OF SPINE FUNCTION.

Authors & Affiliations

Greg Kawchuk1, Arnold Wong1, Colleen Sharp2, Eric Parent1, Liz Dennett1, Alan Richter1, Kara Laing1, Martha Funabashi1, Narasimha Prasad1

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Background

Evidence from individual studies that describe correlations of spine function between self-reported outcome measures (SRM) and physical outcome measures (PM) demonstrate mixed results. This study is the first to systematically review this specific literature.

Methods

From 7 databases, 399 articles were identified that described correlations between either the Oswestry Disability Index (ODI) or the Roland Morris Disability Questionnaire (RMDQ) and a physical measure of spine function. From these, 56 papers met the inclusion criteria. The reported correlation coefficients were further analyzed by giving those with larger sample sizes higher weights to provide more reliable estimates based on all studies.

Results

Twenty-two unique PM categories were correlated to either the ODI or RMDQ. Sample sizes varied from 10-192 with 25% being < 33. Assigning sample size weighting, the mean correlation between ODI/PMs and RMDQ/PMs was 0.15±0.26 and -0.05±0.27 respectively. An association coefficient computed on the absolute correlations considering sample size (-0.167, p=0.022) suggests that large correlation coefficient values were associated with small sample sizes and vice versa.

Conclusions

For spine function overall, these data suggest that SRMs are not proxies for PMs. This finding, consistent with observations from other musculoskeletal disciplines, suggests SRMs and PMs measure unique functional domains.

10:00 – 11:00AM > Lobby area

Title

GENETIC AND LIFESTYLE FACTORS FOR LOW BACK PAIN IN BRAZILIAN TWINS: ESTABLISHMENT OF THE FIRST BRAZILIAN TWIN REGISTRY AS PART OF A GLOBAL NETWORK

Authors & Affiliations

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Background

The establishment of a Twin Registry in Brazil as part of a Global Network of Twin Registries has the potential to become a rich research resource for a variety of health fields.

Methods

We are setting the first Brazilian twin study investigating genetic and lifestyle factors of low back pain (LBP). Applying the methodology of the AUstralian Twin low BACK Pain study (AUTBACK), we are initially recruiting 300 twin pairs from Belo Horizonte. Twins participating in the LBP study will form the platform for the Brazilian Twin Registry.

Results

The project has recently been granted funding and ethics. A pilot trial has been finalized which showed study feasibility. Data collection started in March 2014.

Conclusions

This is the first twin study in the field of LBP which will lead the implementation of the first Twin Registry in Brazil. The Brazilian Twin Registry will be an innovative resource and the opportunities for collaboration and data linkage are significant.

10:00 – 11:00AM > Lobby area

Title

DEPRESSIVE SYMPTOMS IN BRAZILIAN ELDERS WITH LOW BACK PAIN: A "BACK COMPLAINTS IN THE ELDERS – BACE BRAZIL" STUDY

Authors & Affiliations

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Background

Depressive symptoms are prevalent among elders, but little is known about these symptoms in those with low back pain (LBP). The objective of this study was to evaluate depressive symptoms in elders with LBP.

Methods

Subsample of the Back Complaints in the Elders – BACE study with 472 participants, mean age of 67.14 (7.04) years. Patients completed the Numeric Rating Scale (NRS) for pain intensity and the CES-D questionnaire for depressive symptoms, considering a score above 11 points as a cut-point for depressive state. The Spearman Correlation Test was used to investigate the association between tests, $\alpha = 0.05$.

Results

NRS and CES-D mean scores were 7.12 (2.06) and 19.25 (12.11) respectively. 67.8% of the sample presented a depressive state. Tests results were positively and significantly correlated ($p < 0.01$).

Conclusions

Results suggest that LBP is linked with mood disorders in elders evidencing the need to elucidate the burden of depression in LBP.

10:00 – 11:00AM > Lobby area

Title

DOES SPINAL STIFFNESS CHANGE WITH LOW BACK PAIN INTENSITY?

Authors & Affiliations

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Background

A subset of people with low back pain (LBP) have increased spinal stiffness, which decreases as LBP subsides. To date, the relation between LBP intensity and spinal stiffness remains unclear. As such, this study aimed to examine the effect of pain on temporal changes of spinal stiffness.

Methods

In separate sessions, ten healthy participants received injections of hypertonic (0.3ml, 5% NaCl) or isotonic saline (0.3ml, 0.9% NaCl) in random order. On both occasions, saline was injected into the L3/4 and L4/5 interspinous ligaments. Participants were blinded to saline concentration. Spinal stiffness at L3 spinous process was measured by a mechanical indentation device before, immediately after, and 25-minute after injection. Pain intensity at the three time points was recorded. Pain intensity and spinal stiffness were compared between each saline condition using repeated measures analysis of variance adjusted for Fear of Pain Questionnaire-III scores. Tetrad difference calculation was used as the post-hoc test. The alpha level was set at 0.05.

Results

Although hypertonic and isotonic saline injections significantly increased LBP temporarily, hypertonic saline induced significantly higher LBP intensity than isotonic saline ($p < 0.05$). Similarly, both saline injections temporarily increased spinal stiffness but hypertonic saline increased spinal stiffness significantly more than isotonic saline alone ($p < 0.05$).

Conclusions

Experimental LBP caused a transient increase in spinal stiffness beyond pain caused by an inert injection volume. This finding may explain the spinal stiffness reduction in some patients with LBP as their pain subsides. It also justifies the monitoring of spinal stiffness in these patients.

10:00 – 11:00AM > Lobby area

Title

IS THERE AN ASSOCIATION BETWEEN DAILY OR LEISURE PHYSICAL ACTIVITY AND LOW BACK PAIN? A POPULATION-BASED CROSS-SECTIONAL STUDY OF 2157 SPANISH TWINS

Authors & Affiliations

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Background

Whereas physical activity is recommended for the management of chronic low back pain (LBP), there is conflicting evidence as to what types of physical activity may cause or prevent chronic LBP. We conducted a cross-sectional observational twin study with data from the Murcia twin registry (MTR) in Spain to determine if daily (work related) or leisure (recreational) physical activity or a combination of both types of physical activity is associated with lifetime prevalence of chronic LBP.

Methods

A total of 2157 monozygotic (MZ) and dizygotic (DZ) twins were included in the general cohort analyses, with 361 complete and discordant twin pairs for chronic LBP incorporated in the case-control analyses.

Results

In the general cohort analyses, leisure physical activity was associated with a lower lifetime prevalence of chronic LBP (OR: 0.8, 95% CI: 0.6 to 0.9, p=0.02), with significant associations found for women (OR: 0.6, 95% CI: 0.5 to 0.8, p=0.001) but not for men. There was no association between daily physical activity and lifetime prevalence of chronic LBP. The same trend was observed in the case-control analyses although no statistically significant associations were identified. Engagement in both types of physical activity was not associated with lifetime prevalence of chronic LBP, although a non-statistical increase in lifetime prevalence of chronic LBP was found in MZ twins (OR: 3.8, 95% CI: 0.8 to 17.5, p=0.08).

Conclusions

Various types of physical activity may have different effects on LBP, particularly in women, and genetics should be considered in the relationship between physical activity and LBP.

10:00 – 11:00AM > Lobby area

Title

THE ASSOCIATION BETWEEN SYMPTOM SEVERITY AND PHYSICAL ACTIVITY PARTICIPATION IN PEOPLE SEEKING CARE FOR ACUTE LOW BACK PAIN

Authors & Affiliations

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Background

Physical activity is widely recognized to provide important mental, social and functional health benefits in general and LBP population. Current research exploring the association between physical activity participation and clinical outcomes in people with LBP lacks information on acute symptoms and pre-episode levels of physical activity participation, the focus being on activity levels after the onset of pain. The aim of the study was to investigate the association between symptom severity and physical activity participation in people with acute non-specific LBP.

Methods

The sample included a total of 999 patients who presented to primary care with an acute episode of low back pain. Symptom severity, in terms of activity limitation and severity of pain were assessed using self-report questionnaires. Physical activity participation before (habitual) and after pain onset was assessed using the Active Australia questionnaire which provides information on weekly participation in light, moderate and vigorous physical activity. All participants were interviewed within 14 days of pain onset.

Results

At interview most of the participants (87.5%) reported having moderate to extreme activity limitation due to back pain. There was a significant decrease in physical activity participation after pain onset (mean difference: -176 min, 95% CI: 327 to 400; $p<0.0001$) but no association between habitual or change in physical activity participation and symptom severity was observed ($p>0.21$).

Conclusions

Pain onset causes a significant and immediate decrease in physical activity participation, but this change does not seem to be associated with symptom severity.

10:00 – 11:00AM > Lobby area

Title

FUNCTIONAL CAPACITY, PAIN INTENSITY AND TRUNK MOBILITY IN ELDERS WITH ACUTE LOW BACK PAIN: BACE BRAZIL

Authors & Affiliations

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Background

The maintenance of functional capacity is key to independence and autonomy of the elderly, which can be influenced by changes in muscle function, trunk mobility and pain. The literature indicates association of low back pain (LBP) with functional deficits, though findings for the elderly population are limited. The aim of this study was to evaluate differences in functional capacity and intensity of pain in elders with acute LBP with and without movement restriction of the trunk.

Methods

Subsample of the Back Complaints in the Elders – BACE study with participants aged 60 or more, with complaints of acute LBP in the past six weeks. Those with cognitive and visual, auditory and severe motor disabilities were excluded. Movement restriction of the trunk was assessed by side flexion of the trunk and the finger-tip-to-floor test; functional capacity by the Timed-up and go (TUG) and gait speed (GS) tests; pain intensity by the numerical rating scale (NRS). The Mann-Whitney U test was used with significance level of 5%.

Results

The sample consisted of 291 Brazilian elders with a mean age of 68.4 (± 5.8) years. Differences between groups were observed ($p \leq 0.01$), with elders with restricted mobility of the trunk (n=156) having lower functional capacity (TUG=12.9±4.6 s and GS=1.05±0.2 m/s) and higher pain intensity (NRS=5.5±2.9) in comparison those without restriction (n=135, TUG=10.8±3.5 s; GS=0.95±0.2 m/s NRS=4.4±3.1).

Conclusions

Elders with acute LBP and with restricted mobility of the trunk have less functional capacity and higher pain intensity levels than those without restriction.

10:00 – 11:00AM > Lobby area

Title

DO MRI FINDINGS IDENTIFY PATIENTS WITH CHRONIC LOW BACK PAIN WHO RESPOND BEST TO REST OR EXERCISE? A SECONDARY ANALYSIS OF A RANDOMISED CONTROLLED TRIAL

Authors & Affiliations

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Background

No previous RCTs have investigated MRI findings as effect modifiers for response to conservative interventions. The purpose of this hypothesis-setting study was to investigate if MRI findings modified the treatment response to exercise or rest in patients with chronic LBP.

Methods

Five baseline MRI findings were investigated: (i) Modic changes Type 1 (any size), (ii) large Modic changes (any type), (iii) large Modic changes Type 1, (iv) severe disc degeneration and (v) large disc herniation. The outcome measure was change in LBP intensity at 14-month follow-up (n=96). Interaction terms between treatment group and MRI findings in linear regression quantified any effect modification. An interaction ≥ 1 point (0-10 LBP intensity scale) was considered clinically important.

Results

As expected, no interaction term for any of the MRI findings was statistically significant, probably due to the small sample size.

We had hypothesized that patients with Modic Type 1, with large Modic changes or with large Modic changes Type 1 would benefit more from rest than from exercise, but the direction of the effect was the opposite for all three predictors and potentially important in size (-0.99 (95%CI -3.28; 1.29), -1.49 (-3.73; 0.75), -1.49 (-3.57; 0.58) respectively).

The interactions for severe disc degeneration (0.74 (-1.40; 2.88)) and large disc herniation (-0.92 (3.15; 1.31)) were less than the 1 point threshold for importance.

Conclusions

Three of the five MRI predictors showed potentially important effect modification, although the direction of the effect was surprising. Further studies with adequate power are warranted to study these and additional MRI findings as potential effect modifiers.

10:00 – 11:00AM > Lobby area

Title

PERCEPTUAL DYSFUNCTION IN CHRONIC LOW BACK PAIN

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Background

People with low back pain (LBP) often report feeling stiff. That subjective stiffness does not relate to objective measures suggests that stiffness may be a perceptual construct. We aimed to evaluate this relationship in people with LBP and also to determine if objective stiffness differs between LBP patients and healthy controls. Further, evidence suggests that perceptual dysfunction occurs in chronic LBP. Whether this extends to force perception, a surrogate of subjective stiffness, is unknown. Thus we compared perception of force between those with chronic LBP/stiffness and those without.

Methods

Force (50N-70N) was provided in a standardised manner to the spine (n=15 LBP, 15 controls); objective spinal stiffness (N/mm) was measured and participants estimated force magnitude. Independent t-tests compared objective stiffness and force estimation error between groups. Spearman's rho related subjective stiffness (0-100 NRS) and objective stiffness measures in LBP participants.

Results

Significant differences were found between groups for force estimation error (t2,27=-2.60,p=0.017). LBP participants overestimated forces (0.38N ±3.3N) while healthy controls underestimated them (-2.4N ±2.4N). No group differences in objective spinal stiffness were found (p=0.11-0.94). In LBP participants, subjective stiffness was unrelated to objective measures (p>0.05).

Conclusions

The lack of relationship between subjective stiffness reports and objective spinal stiffness measures supports the idea that subjective stiffness in LBP is a perceptual construct. Further, that we found alterations in force perception, in the absence of spinal biomechanical differences between people with/without pain, raises the possibility that these alterations represent changes to the cortical representation of force in people with LBP.

10:00 – 11:00AM > Lobby area

Title

PILATES FOR LOW BACK PAIN

Authors & Affiliations

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Background

The Pilates method has become a popular form of exercise to manage back pain however effectiveness is unclear. The aim of this Cochrane review was to determine the effects of Pilates method for patients with low back pain (LBP).

Methods

We searched MEDLINE, EMBASE, CINAHL, CENTRAL, PEDro and SPORTDiscus from inception to March 2013 for randomised controlled trials evaluating the effectiveness of Pilates in adults with acute, sub-acute or chronic non-specific LBP. Two reviewers independently extracted pain, disability, recovery and quality of life and assessed risk of bias and quality of evidence.

Results

The search retrieved 123 trials, of which 9 were included in the review and 8 in the meta-analysis (pooled = 386 participants). There was low quality evidence that Pilates reduces pain in the short term (SMD= –0.69; 95% CI, –1.08 to –0.31; p<0.01), but not disability (SMD: –0.48, 95% CI, –0.96 to 0.01; p=0.06) compared with controls. There was low quality evidence for a short-term effect on disability (SMD= –0.45; 95% CI, –0.80 to –0.10; p=0.01) and very low for a short-term effect on pain (MD= –1.22; 95% CI, –2.02 to –0.41; p<0.01) compared with other treatment. Due to heterogeneity, some treatment contrasts were not pooled. Three studies found significant improvement for pain at short-term compared with other treatment.

Conclusions

Pilates seems to be more effective than no treatment or other treatments for pain and better than other treatments for disability, at short-term. However these conclusions are based on low or very low quality of evidence.

10:00 – 11:00AM > Lobby area

Title

ROLAND MORRIS CHANGE SCORES CAN BE INDEPENDENT OF CHANGES IN BACK PAIN

Authors & Affiliations

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Background

Roland Morris Disability Questionnaire (RMDQ) change and global transition question (TQ) reponses can be discordant; e.g. participants can show improving RMDQ scores even though they say their back pain is generally worse. This is concerning as TQs are used as anchors to estimate Minimally Important Change on the RMDQ. We wanted to explore what people with back pain think when they respond to a TQ, and what they think when they complete the RMDQ.

Methods

We purposively sampled 35 people enrolled on a back pain RCT who completed the RMDQ and two TQs. One TQ enquired about ability to perform tasks, the other about back pain. We sampled participants with discordance (in both directions), and participants with concordant scores. We explored participants' rationale using in-depth interviews.

Results

People with discordant RMDQ change and TQ responses attend to different factors when responding to TQs. In particular those for whom the RMDQ change indicated greater improvement than the TQs, prioritized their pain and physical symptoms. For the RMDQ, thought processes were more objective relative to each statement.

Conclusions

The RMDQ may be wholly unsuitable for use as a primary outcome measure in back pain trials. It may measure a change in ability to cope with tasks that is independent of change in back pain. Some participants who improve on the RMDQ consider themselves globally worse; TQs are driven by pain and other physical factors. TQs should not be used to anchor RMDQ change, and approaches to primary outcome assessment in back pain needs radical re-assessment.

10:00 – 11:00AM > Lobby area

Title

THE IMPACT OF WORK RELATED PHYSICAL ACTIVITY AND LEISURE PHYSICAL ACTIVITY ON THE RISK AND PROGNOSIS OF NECK PAIN – A POPULATION BASED COHORT STUDY ON WORKERS

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Background

Previous studies on association between physical activity and neck pain show inconsistent results. The objective of this study was to investigate if leisure physical activity and work-related physical activity are of importance for risk and prognosis of neck pain.

Methods

We used Stockholm Public Health Cohort and formed two sub-cohorts of the working population based on data from 2002. Cohort I (risk cohort) included persons without neck pain (n=4681), and cohort II (prognostic cohort) included persons with occasional neck pain during the previous six months (n=6820). Both cohorts were assessed for long duration troublesome neck pain (LDNP) in 2007.
The exposures were assessed through questionnaire in 2002. The question regarding work-related physical activity had five answering categories ranging from “sedentary” to ”heavy”. The question regarding leisure physical activity had five answering categories ranging from “sedentary” to “regular physical activity”.
LDNP in 2007 was defined as having had troublesome neck pain lasting ≥3 consecutive months the previous five years. Associations between work-related physical activity and LDNP, as well as leisure physical activity and LDNP, were investigated by multivariable logistic regression, considering potential confounding.

Results

In cohort I we found an association between leisure physical activity and LDNP. In cohort II we found no association between exposures and outcome.

Conclusions

The results suggest that leisure physical activity has a protective effect on the risk of developing neck pain, but did not affect prognosis. Neither risk nor prognosis of neck pain was affected by work-related physical activity.

10:00 – 11:00AM > Lobby area

Title

THE RISK OF RECEIVING A MRI, LUMBAR INJECTION OR SURGERY IN PATIENTS WITH LUMBAR RADICULOPATHY STRATIFIED AS HIGH-RISK BY THE START BACK SCREENING TOOL

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Background

Patients with lumbar radiculopathy (LR) are likely to receive costly LBP-related procedures. Unknown is whether patients with LR stratified as high-risk by Start Back Screening Tool (SBST) are more likely to receive these procedures. The purpose of this study was to examine the risk of receiving a MRI, lumbar injection (LI) or surgery in patients with LR stratified as high-risk by the SBST in the year following the start of physical therapy

Methods

We performed a secondary analysis from clinical trial comparing interventions for 120 patients with LR. Patients completed the SBST at baseline. After 6-weeks of intervention and at 6 and 12 month follow-up, patients reported whether they received the health outcomes of a MRI, LI or lumbar surgery. Poisson regression models were used to examine the risk (Incident Rate Ratio (IRR)) of receiving each of the health outcome at any time during the 1-year period following the start of treatment in patients stratified as high-risk compared to patients stratified as medium/low-risk. Covariates were included in the models if their univariate association with any of the health outcomes resulted in a significance level of $p<0.25$. Final models controlled for age, and baseline average LBP and leg pain.

Results

Mean age was 41.1 years (11.3) with 51 females. At baseline, 29 participants were stratified as high-risk and 90 as medium/low-risk. Compared to participants stratified as medium/low risk, high-risk participants demonstrated significant risk of receiving a MRI (IRR=2.33, 95%CI=1.36-3.99), a lumbar injection (IRR 2.1, 95%CI=1.14-3.90), and lumbar surgery (IRR=2.41, 95%CI=1.10-5.27) after initiating physical therapy.

Conclusions

In patients with LR, the SBST may help predict who will receive costly procedures.

10:00 – 11:00AM > Lobby area

Title

SELF-REPORTED MUSCULOSKELETAL PAIN PREDICTS LONG-TERM INCREASE IN HEALTH CARE USE. A POPULATION-BASED COHORT STUDY WITH 20-YEAR FOLLOW-UP

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Background

Musculoskeletal pain and disability is a modern epidemic and is a major reason for seeking health care. It is not known to what extent self-reported musculoskeletal pain in the population affects future seeking of care. We aimed determine absolute and relative rates of care seeking over 20 years for adults reporting musculoskeletal complaints.

Methods

Interview data on musculoskeletal pain during the past two weeks from the Danish National Cohort Study were merged with data from the Danish National Health Insurance Registry and the National Patient Registry containing. Absolute and relative rates for seeking of care with general practitioners, physiotherapists, chiropractors, outpatient hospital contacts and hospital admissions are reported for persons reporting no musculoskeletal pain and for persons reporting pain in the neck, shoulder, wrist/hands, mid back, low back, hips, knees and ankles/feet.

Results

Regardless of site, persons experiencing a musculoskeletal complaint had a statistically increased risk of consulting a general practitioner when compared to persons reporting no musculoskeletal complaint. For physiotherapists and chiropractors, only persons complaining of neck pain and back pain had an increased risk of seeking care. Regardless of pain site except for shoulder pain, persons reporting musculoskeletal pain had a statistically increased risk of outpatient hospital consultations and hospital admissions. Few differences were found between pain sites in relation to any of the outcomes.

Conclusions

Self-report of musculoskeletal pain within the past two weeks predicts a statistically significant long-term increase in use of health care services in both primary and secondary health care.

10:00 – 11:00AM > Lobby area

Title

ASSOCIATION BETWEEN HOME POSTURAL HABITS AND BACK AND NECK PAIN IN HIGH SCHOOL ADOLESCENTS

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Background

When back pain starts in adolescence, there is an increased risk of developing chronic pain in adulthood. Our aim was to investigate the associations between home posture habits while watching TV and using the computer (by illustrations) and low back pain (LBP), thoracic pain (TP) and neck pain (NP) in high school adolescents.

Methods

A cross-sectional study was conducted with 1102 High School adolescents in Rio de Janeiro, Brazil. Students answered questions regarding sociodemographic variables, lifestyle, posture (illustration in the questionnaire), time watching TV, time using a computer and the presence of LBP, TP and NP. Multivariate logistic regression was used to investigate the association between home postural habits and low back, neck and thoracic pain. Effect modification was assessed by including interaction terms between home posture habits variables and time.

Results

When compared to the participants who had neutral posture habits, the ones who watched TV lying supine in bed for 2 hours or more yielded an OR of 6.21 (1.45 – 26.52) for neck pain and 5.1 (1.26 - 12) for thoracic pain. Participants who watched TV seated in bed yielded an OR of 2.14 (1.06 - 4.32) for LBP and who used the notebook lying belly down in bed yielded an OR of 2.26 (1.02 - 5.01) for LBP.

Conclusions

Our findings showed the associations between bad home posture habits and back and neck pain. Longitudinal studies are necessary to confirm home posture habits as a risk factor for back and neck pain.

10:00 – 11:00AM > Lobby area

Title

DOES MRI ADD TO THE PREDICTION OF RECOVERY IN LOW BACK PAIN PATIENTS IN GENERAL PRACTICE?

Authors & Affiliations

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Background

Information on the prognostic value of MRI findings could be useful to better inform patients with LBP about their prognosis. However, the prognostic value of MRI findings has mainly been studied in patients with sciatica. The objective of this study is to investigate the added prognostic value of baseline MRI findings over known prognostic factors for recovery at 12-month follow-up in patients with LBP referred to MRI by their general practitioner.

Methods

Patients referred by their general practitioner for MRI of the lumbar spine were recruited. The questionnaires included potential clinical predictors from history taking and the outcome. The MRI radiology reports were scored for the presence of several MRI findings. Multivariate logistic regression analysis was performed in 3 steps: derivation of a predictive model including characteristics of the patients and back pain only (history taking), including reported MRI findings only, and the addition of reported MRI findings to the characteristics of the patients and back pain.

Results

Pain severity of the patients (n=683) decreased from a mean of 6.6 (SD 2.0) at baseline to 3.8 (SD 2.6) at 3-months follow-up and to 3.8 (SD 2.8) at 12-months follow-up. At 12-months follow-up 53% of the patients reported recovery. Lower age, better attitude/beliefs regarding back pain, acute back pain, presence of neurological symptoms of the leg(s), and presence of non-continuous back pain were significantly associated with recovery at 12-months follow-up: area under the curve (AUC) 0.77. Addition of the MRI findings resulted in an AUC of 0.78.

Conclusions

Five clinic baseline characteristics were associated with recovery at 12-months follow-up; adding the MRI findings did not result in a stronger prediction of recovery.

10:00 – 11:00AM > Lobby area

Title

QUALITATIVELY AND QUANTITATIVELY DEFINED COURSES OF LOW BACK PAIN. A MIXED-METHOD STUDY.

Authors & Affiliations

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Background

Due to the recurrent nature of low back pain (LBP), the traditional concept of recovery is challenged and investigating the course as well as observing fixed time points may help us understand patient recovery. Therefore, this study aims to evaluate the relationship between retrospective self-appraised recovery and quantitatively measured trajectories of pain and disability.

Methods

Participants: 27 subjects with low back pain (LBP) from primary care.
Qualitative measures: Based on semi-structured telephone interviews one-year after a consultation for LBP, two independent coders categorized the self-appraisal of LBP course into four predefined categories: better, fluctuating, constant and worse. Furthermore, subjects were asked to classify themselves as recovered or not.
Quantitative measures: Subjects completed weekly SMS questions for one-year about pain intensity, days with LBP, and activity limitations. The authors categorized the weekly responses using the predefined categories.

Results

The trajectories of the three SMS-questions were very similar.
The agreement between interview-based and SMS-based categorization was 61-67% with Kappa values from 0.41 to 0.49. All disagreements were related to the fluctuating category. No participants were categorized as "better" on SMS and "constant" based on interviews or vice versa.
All subjects who answered not recovered were either "constant" or had a mixture of SMS-based categorizations. Conversely, recovered subjects were categorized as either "better" or "fluctuating" on SMS trajectories.

Conclusions

Retrospective self-appraisal correlated well with quantitative measures for individuals experiencing definite improvement or stable (constant) LBP. However, when the SMS-trajectories showed a fluctuating pattern, the correlation was less consistent. This zone of uncertainty requires further investigation.

10:00 – 11:00AM > Lobby area

Title

MULTIDISCIPLINARY BIOPSYCHOSOCIAL REHABILITATION FOR CHRONIC LOW BACK PAIN: SYSTEMATIC REVIEW AND META ANALYSIS

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Background

The idea that LBP is a condition best understood as a biopsychosocial condition has led to the development of multidisciplinary rehabilitation programs that address factors from the different domains. The aim of this Cochrane Review was to review the effectiveness of multidisciplinary biopsychosocial rehabilitation (MBR) for patients with chronic LBP.

Methods

Methods according to The Cochrane Collaboration. Inclusion criteria: published randomised controlled trial; adults with non-specific LBP >12 weeks duration; intervention targeted at least two of; physical, psychological and social/work-related factors; intervention was delivered by clinicians from at least two different professional backgrounds.

Results

41 RCTs were included. There was mod. to low quality evidence from 16 RCTs that MBR is more effective than usual care for pain (0.5-1.4 points; NRS) and disability (1.4-2.5 points; RMDQ). There was mod. to low quality evidence of no difference on work outcomes. There was mod. to low quality evidence from 19 RCTs that MBR is more effective than physical treatment for pain (0.6-1.2 points) and disability (1.2-4.0 points). There was mod. to low quality evidence that MBR doubles the odds of being at work after 6-12 months compared to physical treatment.

Conclusions

Chronic LBP patients receiving MBR are likely to experience less pain and disability than those receiving usual care or physical treatment. MBR also increases the odds of being at work when compared to physical treatment. The effects should be balanced against the time and resource requirements of MBR programs. Conducting further RCTs is unlikely to substantially change this estimate of the effectiveness of MBR.

10:00 – 11:00AM > Lobby area

Title

MOTOR CONTROL EXERCISE FOR CHRONIC AND RECURRENT LOW BACK PAIN: A SYSTEMATIC REVIEW.

Authors & Affiliations

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Background

Motor control exercise (MCE) has been widely used to manage low back pain (LBP). However, no updated review has shown its efficacy. This Cochrane review aims to evaluate the effectiveness of MCE in patients with LBP.

Methods

We searched on MEDLINE, CINAHL, AMED, PEDro, EMBASE and LILACS up to November 2012 for RCTs investigating adults with chronic or recurrent non-specific LBP. Two reviewers independently extracted pain, disability, function and quality of life, and assessed risk of bias and quality of evidence.

Results

The searches yielded 1350 trials, of which 20 were included in the meta-analysis (pooled = 1857 participants). We found moderate quality evidence that MCE reduces pain at short-term (MD= –7.84; 95% CI, –11.09 to –4.59; p<0.01) and intermediate (MD= –4.05; 95% CI, –7.66 to –0.44; p=0.03), and low quality for short-term effect on disability (SMD= –0.30; 95% CI, –0.54 to –0.05; p=0.02) compared with other exercises. There was low quality evidence that MCE reduce pain at long-term (MD= –12.97; 95% CI, –18.51 to –7.42; p<0.01), and there was very low quality evidence for pain at short (MD= –8.7; 95% CI, –16.26 to –1.14; p=0.02), intermediate term (MD= –12.61; 95% CI, –20.53 to –4.67; p<0.01), and also disability in the short-term (SMD= –0.53; 95% CI, –1.03 to –0.04; p=0.03) compared with minimal intervention. There is no significant difference between MCE and manual therapy for all outcomes.

Conclusions

Motor control exercise seems to be more effective than other exercises and minimal intervention for pain and disability with most of effect sizes small or medium.

10:00 – 11:00AM > Lobby area

Title

SURGERY OR PHYSICAL ACTIVITY IN THE MANAGEMENT OF SCIATICA A SYSTEMATIC REVIEW AND META-ANALYSIS

Authors & Affiliations

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Background

The objective was to compare surgery to physical activity (structured exercise/advice to stay active) in the management of sciatica through a systematic review and meta-analysis.

Methods

Using key words for sciatica, MEDLINE, CINAHL, Embase and PEDro databases were searched to May 2013, identifying randomized controlled trials comparing surgery to physical activity. Two independednt reviewers used PEDro (methodological quality) and GRADE (quality of evidence and the strength of the recommendation) and extracted relvant outcome data for short and long term follow up. For primary analysis, trials including disc herniation, spondylolithesis and stenosis were grouped together and in diagnostic subgroups (secondary analysis). Meta-analyses were used to pool relevant outcomes using a random effects model.

Results

Thirteen published papers were included in this review. Meta-analysis of all studies at short term follow up revealed 'low quality evidence' that surgery is superior to physical activity in reducing leg pain intensity (MWD -19.45 [95%CI, -27.48, -11.41]), back pain intensity (MWD -17.55 [95%CI, -21.92, -13.17]) and disability (MWD -10.93 [95%CI, -14.05, -7.81]). At long term follow up there is 'low quality evidence' that surgery is superior to physical activity in reducing leg pain intensity (MWD -12.59 [95%CI, -20.16, -5.02]), back pain intensity (MWD -13.82 [95%CI, -21.45, -6.18]) and disability (MWD -9.38 [95%CI, -14.09, -4.68]).

Conclusions

Low-quality evidence suggests that surgery is superior to physical activity in both short and long term for patient relevant outcomes for sciatica symptoms although the effects appear to be small. Findings should assist health care providers and patients regarding treatment outcomes and management choices.

10:00 – 11:00AM > Lobby area

Title

USING SOCIAL MEDIA TO INVESTIGATE RISK FOR LOW BACK PAIN. LESSONS FROM A CASE-CROSSOVER STUDY USING TWITTER

Authors & Affiliations

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Background

We aimed to investigate transient risk factors of a new episode of back pain using the social media platform Twitter.

Methods

A case-crossover design was employed. Case tweets were identified using a predefined list of phrases that described an episode of back pain. Risk tweets were searched by using a predefined list of physical, psychological or general health phrases. The hazard interval was the 48 hour period prior to the case tweet. The control intervals were the 48 hour periods 2 weeks and 2 months prior to the case tweet. We measured the frequency of risk tweets during the hazard and control periods, and a matched-pair interval analysis was used to compare the risk during the hazard and control intervals contributed by the same case.

Results

A total of 780,398 back pain cases were identified over a 2 year period. During the hazard interval, risk tweets were identified in 25% of the sample. During the 2 week and 2 month control periods, risk tweets were identified in 20% and 15% of the sample, respectively.

Conclusions

This is the first study to investigate transient risk factors for back pain using a social media platform. Although using a large database of twitter streams serves as an efficient method to investigate risk factors for back pain, there are major limitations that preclude definitive conclusions. Such strengths and limitations will be discussed.

10:00 – 11:00AM > Lobby area

Title

STUDY PROTOCOL "BACK ON TRACK"; CHRONIC LOW BACK PAIN REHABILITATION PROGRAM IN PRIMARY CARE

Authors & Affiliations

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Background

Multidisciplinary biopsychosocial interventions have proven to be effective in patients experiencing CLBP. These interventions however, are expensive and waiting times are mostly long. Hence it is important to investigate the feasibility and effectiveness of a biopsychosocial intervention in primary care - when provided by specifically trained physiotherapists - in specific CLBP subgroups.

Objectives:

1. To assess differences in (cost-) effectiveness between the new primary care intervention "Back on Track" and usual primary care in patients with CLBP experiencing moderate levels of functional disability (WPN2).
2. To assess whether the primary care intervention "Back on Track" improves functional disability in patients with CLBP experiencing moderate to high levels of functional disability (WPN3-).

Methods

An RCT (objective 1; n=82) and a pre-post test design (objective 2; n=30) will be performed. The "Back on Track" intervention, provided by trained physiotherapists, is based on a biopsychosocial approach used in multidisciplinary pain rehabilitation settings. Usual primary care comprises regular physiotherapy consultations. Primary outcome is functional disability at post- treatment, 3 and 12 months of follow-up. Secondary outcomes are costs and quality-adjusted life-years.

Results

Ethical approval is in progress and patient recruitment is planned to start in May. Preliminary results will be available at the LBP forum.

Conclusions

This study will provide useful information about primary care physiotherapy interventions for specific subgroups of patients with CLBP. Results might improve the management of CLBP-patients resulting in reduction of costs and waiting times.

10:00 – 11:00AM > Lobby area

Title

DOES AGE MATTER? AN EXPLORARY ANALYSIS OF DATA FROM THE BACK SKILLS TRAINING (BEST) TRIAL.

Authors & Affiliations

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Background

The BeST Trial demonstrated that a cognitive behavioural intervention reduced disability in people with subacute/chronic low back pain (LBP). Unlike many other clinical trials of LBP, BEST had no upper age limit and included people aged over 65 years.

Methods

Secondary analysis of the BeST Trial data, including a pre-specified sub-group analysis on age. We compared baseline pain intensity, fear avoidance, self-efficacy, disability, anxiety and depression of older participants (≥65 years old) with younger participants. We examined change in disability (Roland Morris Questionnaire) at 12 months.

Results

185 (26%) of the 701 participants were ≥ 65 years old. At baseline, pain intensity, fear avoidance beliefs and self-efficacy scores were similar. Older participants had higher baseline disability (RMQ 9.4 SD5.1 versus 8.4 SD4.8) and reported different types of disability than their younger counterparts. Pain impacted mobility (standing, walking and stair climbing) to a much greater extent than younger participants, and impacts of sleep quality and mood were less. A greater proportion of younger participants had elevated Hospital Anxiety and Depressions Scores compared to older participants (80% versus 68%; p=0.012). The mean change (95%CI) in disability from baseline in those receiving the BeST intervention was 3.04 (2.53-3.54) in younger participants (18-64 years) but only 1.31 (0.51-2.11) in older participants.

Conclusions

Older patients with LBP present with different patterns of disability compared to younger patients and appear not to respond to cognitive behavioural intervention as well as younger people. We need to improve our understanding of the clinical presentation of older patients and design interventions accordingly.

10:00 – 11:00AM > Lobby area

Title

PATIENT EXPECTANCIES IN MANUAL THERAPY PRACTICE; RELATED TO OUTCOME IN NECK PAIN PATIENTS?

Authors & Affiliations

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Background

The Patient Expectancies List (PEL) is a Dutch instrument of 4 questions on treatment expectations of patients. There is some evidence that expectancies may predict outcome, but little is known in neck pain patients in manual therapy practice. This study aims to examine the internal validity of the PEL and to evaluate the association between expectancy and outcome.

Methods

In a prospective cohort 287 Dutch manual therapists included consecutive patients of 18 years and over with non-specific neck pain. All patients completed the baseline questionnaire including the PEL. After treatment and at 12 months follow-up outcome (recovery and pain) was assessed.
To examine the internal validity of the PEL we used Rasch analysis, and regression analysis for the association of the PEL with recovery and pain (post treatment).

Results

Of 663 patients baseline and post treatment data were available of which 78.9% (n=523) rated themselves as recovered and 85.7% (n=568) reported high expectations on all PEL-items.
Three out of four PEL-items displayed moderate to low discrimination on the lower side of expectation. One item (“to what extent do you expect your neck pain to change as a result of exercise?”) had the highest probability to discriminate between respondents with low or high expectation.
None of the items were related to outcome post treatment (correlation coefficients varied between 0.002 and 0.26).

Conclusions

We found an overall high recovery rate and most patients had high expectations. The PEL-items mainly provide information for respondents with low expectation, but we found no relation with outcome.

10:00 – 11:00AM > Lobby area

Title

ADHERENCEMEASUREMENTTOOLS FOR NON-PHARMACOLOGICALSELF-CARE IN CHRONIC-MUSCULOSKELETALCONDITIONS: A SYSTEMATICREVIEW

Authors & Affiliations

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Background

Patient adherence to self-management advice for chronicmusculoskeletal (MSK) conditions has beenidentified as a research priority, however, little is knownabouthowadherence to this type of advice is assessed. This reviewaimed to identify all measures of adherenceto non-pharmacologicalself-management adviceusedin this population.

Methods

Five databases weresearched for all study types thatincluded a chronic MSK population, an unsupervisedtreatment component and a measure of adherence. Two independent researchers reviewed all titles for inclusionbased on the followingcriteria: adult (>18yrs) participants with a chronic MSK condition; the intervention included an unsupervised non-phamacological component; and it contained a measure of adherence to the unsupervised component. Descriptive data regarding the measures of unsupervisedadherence in terms of item information, response options and clinimetricinfomrationwerecollected from eachstudy by two independent researchers.

Results

Forty-seven studies wereselected for inclusion in which 47 'unique and self-invented instruments' wereidentified and no 'instrument' wasused in more than a single study. In terms of methodstheycouldbegroupedinto: home diaries (n=31); multi items questionnaires (n=11) and single item questionnaires (n=1). Therewerenonamed or referencedadherence measures foundprecluding the ability to assessmeasurementpropertyquality with the COSMIN checklist.

Conclusions

Despite the importance of adherence to self-management interventions, measurementappears to beconducted on an ad hoc basis. Thisstudyalerts the research community to the gap in measuringadherence to self-care in a rigorous and reproduciblemanner.

10:00 – 11:00AM > Lobby area

Title

DOES ADHERENCE MEDIATE THE RELATIONSHIP BETWEEN PATIENTS' OUTCOME EXPECTANCIES AND RECOVERY?

Authors & Affiliations

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Background

The association between outcome expectancies and outcomes after treatment is well established for low back pain (LBP). The pathways through which this association is established are however largely unknown. It has been hypothesized that adherence to treatment may play a mediating role in this relationship, i.e. if a patient has high expectations of improvement from the treatment the patient will better adhere to the treatment regimen, which will subsequently influence the patient's outcome. However, this hypothesized pathway has never been tested in LBP patients. The aim of this study is to explore whether adherence is a mediator in the relationship between outcome expectancies and recovery in LBP patients treated with paracetamol or placebo paracetamol.

Methods

Data will be used from the PACE trial; a randomized placebo controlled trial which investigated the effect of paracetamol for the treatment of acute LBP. Treatment expectancy was measured at baseline with the Credibility Expectancy Questionnaire. Self-reported treatment adherence and pain (0-10 scale) were recorded daily in a diary during the 4 week study period. Structural Equation Modeling in Mplus 6.12 will be used to investigate the relationship between outcome expectancies and recovery, including the possible mediating role of adherence.

Results

1650 patients seeking care for acute low back pain were enrolled in the study. No between group differences for the three treatment modalities were seen at baseline and therefore we will use all available data for analyses. Data analyses are underway and results will be ready to present at the low back pain forum in October 2014.

Conclusions

10:00 – 11:00AM > Lobby area

Title

INCIDENCE OF LOW BACK PAIN RELATED OCCUPATIONAL DISEASES IN THE NETHERLANDS

Authors & Affiliations

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Background

Until recently no evidence based criteria were available to determine the work-relatedness of low back pain (LBP) in an individual worker. Incidence figures for LBP that can be qualified as occupational disease (OD) are scarce. We studied the trend in the number of OD-notifications due to LBP in the Netherlands and estimated incidence rates of LBP- related OD-notifications.

Methods

We developed an instrument for the assessment of work-relatedness of non-specific LBP (NLBP) in 2004 (Kuiper, et al. Criteria for Determining the Work-Relatedness of Nonspecific Low-back Pain: http://www.occupationaldiseases.nl/content/criteria-nonspecific-low-back-pain-published), accompanied by an OD-registration-guideline. We analyzed the trend in LBP-related OD-notifications in the Netherlands from 2004-2011 and estimated incidence rates for LBP-related OD-notifications in the period 2009-2011.

Results

After implementation of the instrument and guideline, we noticed a huge increase in numbers of OD-LBP-related notifications, from 0.7% of all notified ODs in 2004, via 8.6% in 2005 and 13.6% in 2008, to 9.1% in 2011. We estimated the incidence rate of ODs due to NLBP at 24.1 per 100,000 worker years (19.2 for NLBP), with a large difference between men and women (31.3 and 3.2 respectively).

Conclusions

The instrument for the assessment of work-relatedness of NLBP played an important role in the recognition of LBP-related ODs. It provides a basis for a uniform and objective evaluation of the role of work-related risk factors in the occurrence of NLBP. This knowledge can be used to initiate or direct preventive actions towards subgroups with higher incidence rates.

10:00 – 11:00AM > Lobby area

Title

COPE – A COGNITIVE PATIENT EDUCATION TRIAL FOR LOW BACK PAIN IN PRIMARY CARE.

Authors & Affiliations

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Background

Cognitive treatment is endorsed by guidelines for the treatment of longstanding LBP. In this study we explored the effectiveness of a modified "Explain Pain" model provided by GPs and PTs in primary care on function (disability) and sick leave. paracetamol.

Methods

The protocol and design have been presented previously (Werner et al, BMC Musculoskeletal Disorders 2010). 20 GPs and 20 PTs were cluster randomized to intervention or control group. All patients received four sessions of 30 minutes individually with their health care provider. In the intervention groups these sessions followed a detailed manual.

Results

Of 220 recruited patients, 148 completed 12 months follow-up. There were no statistical differences between the groups in baseline characteristics. During the 12 months follow-up the Roland Morris Disability Quesitionnaire scores in the intervention group dropped from mean 9.0 (SD 4.0) to 3.7 (4.2) compared to mean 9.8 (4.0) to 3.0 (3.4) in the control group. The proportion of patients on sick leave dropped 66% in the intervention group compared to 73% in the control group.

Conclusions

This study did not find any statistical differences in any of the outcomes between a cognitive "Explain Pain" model and usual care provided by GPs and PTs in primary care in Norway. All groups had a substantial reduction in disability and sick leave.

10:00 – 11:00AM > Lobby area

Title

THE INFLUENCE OF LEG PAIN ON RECOVERY TRAJECTORIES IN A WORKING COHORT WITH INCIDENT LOW BACK PAIN

Authors & Affiliations

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Background

Research suggests individuals with low back pain (LBP) have varied yet distinct recovery patterns. LBP, when presenting with associated leg pain, has been indicated as a poor prognostic variable but its impact on recovery trajectory is unclear. The primary purpose of this research was to identify the latent classes of recovery in workers with incident LBP and the influence of leg pain on recovery trajectory.

Methods

Participants were 18 years, working, and reporting incident LBP. Incident LBP was defined as pain for a 24-hour period after at least one month without LBP. Cases were separated into LBP, pain between the 12th rib and gluteal fold, and lumbo-radicular syndrome (LRS), lumbar related leg pain distal to the buttock. Participants were interviewed monthly for 1 year to determine LBP or LRS status and pain level. Growth mixture modeling was used to determine recovery trajectories and the simultaneous influence of LRS.

Results

There were 370 incident cases of LBP and 181 cases of LRS. Four classes of trajectories were identified with the majority of participants reporting significant recovery (60%). Additional classes represented moderate recovery (28%), high persisting pain (8%) and recurrent pain (4%). LRS had a significant impact on growth factors and class membership differentiating the high pain class in particular.

Conclusions

The majority of workers presenting with acute low back pain are likely to experience resolution or near resolution of pain over the course of 3-5 months. The presence of leg pain increases the likelihood of experiencing high levels of persisting pain.

10:00 – 11:00AM > Lobby area

Title

QUANTITATIVE SENSORY TESTING IN PATIENTS WITH SPECIFIC LOW BACK DIAGNOSIS SCHEDULED FOR BACK SURGERY

Authors & Affiliations

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Background

An altered pain response may be significant for both outcome and decision-making about treatment of patients with chronic back pain and disc-herniation. Understanding how altered pain response patterns affect outcomes in specific back diagnoses is unclear. The aim is to describe the results for quantitative sensory testing (QST) in patients with specific low back pain scheduled for surgery, and investigate if there were differences with regard to age and sex.

Methods

The participants were scheduled for surgery due to specific low back pain diagnosis. Cold perception (CP), warmth perception (WP), cold and heat pain threshold (CPT and HPT) were measured with QST, and pressure pain threshold (PPT) with an algometer. This is an ongoing study at a spine clinic, and the testing was done pre-surgery and three months post-surgery.

Results

49 participants were included. The mean (SD) age was 63,2 (10,8) and 51% were female. On group level there were no findings of central sensitization. About 10% showed a different somatosensory pattern with altered pattern in more than two locations in both affected and non-affected locations. CP and WP had altered pattern compared to reference material. There was significant difference in CP and WP between younger and older participants. There were no significant gender differences in CP and WP, while women had lower values than men in PPT and CPT.

Conclusions

A pattern for central sensitization was not found on group level, but a small proportion of patients with specific low back scheduled for surgery seemed to have a different somatosensory pattern.

10:00 – 11:00AM > Lobby area

Title

A SYSTEMATIC REVIEW OF LONG-TERM USE OF OPIOIDS FOR CHRONIC BACK PAIN

Authors & Affiliations

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Background

Chronic non-cancer pain (CNCP) is a significant public health problem, and opioids are some of the most potent analgesics for the short-term treatment of CNCP such as low back pain. While there is evidence of the short-term effectiveness of opioids for treating CNCP, little is known about the long-term effects of this treatment. This study was to conduct a systematic review of the scientific literature on the impact of long-term opioid therapy for CNCP, with a focus on the outcomes of (1) misuse, abuse or addiction, (2) overdose, and (3) falls and fractures.

Methods

A systematic search was conducted in Medline, EMBASE, CINAHL, PsycINFO, Central and Business Source Premier. References were screened for relevance by the review team to identify studies with the population of interest (non-cancer pain greater than three months), relevant intervention (opioid use longer than three months), and the outcomes of interest. The quality of included studies was assessed and their findings extracted using standardized quality appraisal and data extraction forms. Relevancy screening, quality appraisal and data extraction were conducted independently by two reviewers and conflicting responses were resolved.

Results

The initial search retrieved 16,288 references. We identified 18 studies with misuse, abuse, or addiction, 2 studies with overdose, and 3 studies with falls and fractures. Among these, 13 studies were identified as a population with chronic back pain.

Conclusions

By the time of the presentation we will have the analyses/meta analyses of the effects of long term opioids on back pain.

10:00 – 11:00AM > Lobby area

Title

DEVELOPMENT AND EVALUATION OF A CLINICAL PREDICTION RULE TO SCREEN FOR PATIENTS AT HIGHER RISK FOR DEVELOPING CHRONIC WHIPLASH-RELATED SYMPTOMS

Authors & Affiliations

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Background

The Bone and Joint Decade 2000-2010 Task Force on Neck Pain and its Associated Disorders determined that very little is known about the prognosis of patients with Whiplash-associated Disorders. Our objective is to develop a clinical prediction rule to identify patients who may be at risk of developing chronic pain and disability following a traffic collision.

Methods

We will use Cox regression to derive the prediction rule using a population-based whiplash cohort from Saskatchewan, Canada (n=4923). The rule will be internally validated using bootstrapped samples. We will derive multivariable models using predictors that maximize the probability of predicting less self-reported recovery and delayed claim closure. We will validate the Saskatchewan-derived rule in the Ontario data (n=340) by determining the distribution of participants who fall within each of the risk groups. Model reliability and accuracy will be reported based on plots of observed outcome frequency against model predicted probabilities and using receiver-operator curves.

Results

Participants in both cohorts had similar baseline characteristics (Saskatchewan; Ontario): two thirds were female (66. 3%; 66.7%), half were married (53.6%; 54.0%), most were employed (84.1% for both) and most presented shortly post-collision (9 days [range 0-21]; 6 days [range 0-25]). Mean age (38.3 [std 15.1]; 40.5 [std 13.2]), baseline neck pain (6.5 [std 2.1]; 5.7 [std 13.2]) and the 12-month follow-up rate (71.4%; 78.8%) were also similar. Finally, median time-to-recovery based on the global recovery question was similar (95 days; 98 days).

Conclusions

We will present our conclusions on the relevant risk group probabilities based on the final prediction rule.

10:00 – 11:00AM > Lobby area

Title

HOW SHOULD SELF-MANAGEMENT OF SPINAL PAIN BE DEFINED?

Authors & Affiliations

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Background

Spinal pain is a long term condition and self-management could potentially decrease its burden. However, a substantial problem is the inconsistency in the definition of self-management among studies of spinal pain. We aimed to reach consensus on definition of self-management of spinal pain using a modified-Delphi survey.

Methods

International experts in the area of spinal pain were invited to participate. To be included, experts had to be active researchers in publishing spinal pain research or experienced clinicians in spinal pain management. Two rounds were planned to this survey. Components (e.g. exercises), formats (e.g. method of delivery) and the definition criteria of self-management identified in the literature were compiled into a broad list. The definition criteria were related to the core treatment goals of self-management approaches of spinal pain (e.g. developing patients' shared responsibility). The participants were asked if they consider each item in the list to potentially be part of a self-management approach for spinal pain. The survey consisted of a 5-point likert scale for each definition criterion, component and format (from 1-strongly disagree to 5-strongly agree), and comments were encouraged. Items with an a priori consensus median of at least 3 out of 5 in the two rounds form the final list of recommendations.

Results

54 experts participated in the first round of this survey. The second round will be finalized at the Brazilian Low Back Pain Forum and the final list of recommendations will be presented for experts.

Conclusions

Results of this study will inform experts and establish consensus on how self-management of spinal pain should be defined.

10:00 – 11:00AM > Lobby area

Title

VALIDATION AND RELIABILITY OF THE WOMAC QUESTIONNAIRE FOR ELDERS WITH ACUTE LOW BACK PAIN

Authors & Affiliations

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Background

Many are the instruments that were adapted and validated for the use in Brazil, however, in the literature there are no instruments specific for the Brazilian population destined to assess pain, stiffness and physical function associated with low back pain (LBP). Our goals were to validate, with the Delphi technique, the questionnaire WOMAC for elders with acute LBP and determine the reliability of the adapted instrument.

Methods

For the WOMAC validation, it was requested via email the opinion of 28 physiotherapists. The original WOMAC version was sent to the experts for judgment about the relevance or not of the items for individuals with LBP. The items that presented agreement lower than 70% amongst the experts were adapted or discarded. For the reliability evaluation, the questionnaire was applied to 11 elders, in telephone calls performed by two researchers. All the calls were done in a 24hs interval, respecting the peculiarity of the instrument that assesses the items proposed referring to the last 3 days. The intraclass correlation coefficient was used to determine the reliability.

Results

Three out of 27 items presented agreement below 70%; thus two items about stiffness were discarded and the item 13 about physical function was adapted to “leaning the body forward to wash lower body parts”. Eleven elders (72.5±5.3 yrs) with average pain 7(±4.1) in the numeric pain scale participated of the reliability analysis. The reliability inter and intra rater was respectively 0.94 and 0.87 for the pain domain and 0.90 and 0.81 for the physical function domain.

Conclusions

The adapted WOMAC proved itself adequate and reliable to assess the level of pain and physical function in Brazilian elders with acute LBP.

10:00 – 11:00AM > Lobby area

Title

THE RELATIONSHIP BETWEEN SYMPTOMS OF DEPRESSION AND LOW BACK PAIN IS PARTIALLY MEDIATED BY SLEEP QUALITY AND PHYSICAL ACTIVITY

Authors & Affiliations

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Background

The literature points to a consistent relationship between symptoms of depression and low back pain (LBP). However, the factors that could mediate this relationship are poorly understood. We aimed to investigate the relationship between symptoms of depression and LBP via physical activity and sleep quality, by using mediation path analysis.

Methods

We used cross-sectional data from 2148 twins registered in the Murcia Twin Registry, Spain. All twins answered questions about lifetime prevalence of LBP (outcome variable), symptoms of depression and anxiety (independent variable), sleep quality (Pittsburgh Sleep Quality Index - PSQI) and physical activity engagement (potential mediating variables). Analyses were conducted by structured equation modeling. Indirect effect (relationship between depression and LBP via mediating variables), direct effects (the direct relationship between depression and LBP not via mediating variables) and the total effect (the sum of direct and indirect effects) were calculated.

Results

The total effect weigh coefficient for the relationship between symptoms of depression and LBP was 0.83 (95%CI: 0.61 to 1.04). Both sleep quality and engagement in physical activity significantly mediated the relationship. Sleep quality was a stronger mediator than physical activity engagement (indirect effects weigh coefficient: 0.17, 95%CI: 0.11 to 0.23 and 0.03, 95%CI: 0.01 to 0.05, respectively).

Conclusions

Physical activity and sleep quality partially mediate the relationship between symptoms of depression and LBP, indicating that these factors could be further explored in management strategies of LBP. These findings should be confirmed in future longitudinal studies.

10:00 – 11:00AM > Lobby area

Title

FAST TRACKING THE DESIGN OF THEORY-BASED KT INTERVENTIONS THROUGH A CONSENSUS PROCESS.

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Background

This study aimed to evaluate chiropractors' beliefs about managing non-specific neck pain using multimodal care, to explore barriers and facilitators to implementing evidence-based management recommendations, and to map behaviour change techniques to key theoretical domains while identifying relevant knowledge translation (KT) strategies for chiropractors.

Methods

Individual interviews were conducted with a purposive sample. The interview guide was based upon the theoretical domains framework (TDF). Interviews were digitally recorded, transcribed verbatim, and analyzed by two independent assessors using thematic content analysis. An 18-member committee composed of researchers and KT experts, clinicians and leaders formally met to design a KT intervention.

Results

Key beliefs (and relevant Theoretical Domains) included: clinicians are influenced by formal training, colleagues, and patients (Social Influences); availability of educational material may help deliver multimodal treatments (Environmental Context and Resources); and better clinical outcomes would reinforce the use of multimodal treatments for neck pain patients (Reinforcement). Facilitating factors deemed important included: better communication skills (Skills); audits of patients' treatment related outcomes (Behavioural Regulation); awareness and agreement with guidelines (Knowledge); and tailoring of multimodal care to individual cases (Memory, Attention, Decision). Clinicians conveyed conflicting beliefs about perceived threats to professional autonomy (Social/professional role & identity), and speed of recovery from either applying or ignoring the practice recommendations (Beliefs about consequence).

Conclusions

The proposed multifaceted KT educational intervention, consisting of an online education webinar, a video demonstrating the target behaviour, and clinical vignettes illustrating how multimodal care can be applied in practice is designed to reflect key theoretical domains, behaviour change techniques, and intervention components.

10:00 – 11:00AM > Lobby area

Title

PAIN AND GAIT SPEED IN ELDERS WITH ACUTE LOW BACK PAIN: BACE BRAZIL

Authors & Affiliations

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Background

Several instruments are proposed in literature to evaluate the physical ability of elders patients with low back pain among them stands the gait speed (GS). GS is a predictor of many adverse outcomes and has been widely used in scientific research and clinical practice, however, few studies have evaluated which factors can influence test performance.

Methods

This was a cross-sectional study, subproject of the epidemiological, multicenter international study called Back Complaints in the Elders. Sample selection for the study was made by convenience. We included elders aged 55 or older with acute low back pain. Exclusion criteria were cognitive dysfunction detectable by the Mini-Mental StateExamination score, presence of neurological deficits, severe visual or hearing losses The intensity of the low back pain was measured by Visual Analogue Scale (VAS) consisting of a scale of 0 to 10 where 0 means no pain and 10 representing severe pain. To evaluate walking speed, participants were instructed to walk a 8,6-m path at their usual walking speed. Spearman's correlation coefficient was calculated (α=0,05).

Results

The sample consisted of 308 elders Brazilians, with a mean age of 66.2 ± 0.3 years, mean body mass index of 32.01 ± 0.8 kg/m2. VAS and GS correlated significantly ($p < 0.01$) and weak ($r = 0.20$).

Conclusions

Intensity of low back pain predicts the decrease of mobility in the elders. Individuals with low back pain tend to walk more slowly as a strategy to try to reduce the magnitude of exerted on the body internal and external forces.

10:00 – 11:00AM > Lobby area

Title

ÖREBRO MUSCULOSKELETAL PAIN SCREENING QUESTIONAIRE SHORT-FORM VERSUS START BACK SCREENING TOOL: ANALISYS OF CORRELATION AND AGREEMENT

Authors & Affiliations

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Background

The Örebro Musculoskeletal Pain Screening Questionnaire - Short Form (ÖMPSQ-short) and Start Back Screening Tool (SBT) are indicated to identify patients with low back pain at risk of developing chronic pain and disability. The aim of this study was to assess the correlation and agreement between the Brazilian-Portuguese versions of the ÖMPSQ-short and SBT in patients with acute and subacute nonspecific low back pain.

Methods

This study included 130 patients who completed a questionnaire containing the ÖMPSQ-short, SBT, Roland-Morris Disability Questionnaire, Tampa Scale for Kinesiophobia and the Pain Numerical Rating Scale. For data analysis, the total scores of the questionnaires were correlated using Pearson's correlation test. Cross-tabulation and Cohen's Kappa coefficient were performed to investigate the agreement between the classification "low risk" or "high risk" of chronicity related to psychosocial factors of the two questionnaires.

Results

The ÖMPSQ-short and SBT showed good correlation between their total scores ($r = 0.73$) and moderate correlation with disability, pain and kinesiophobia ($r \geq 0.30$ and < 0.60). The classification of patients into "high" or "low risk" showed moderate agreement ($k = 0.49$). The analysis of cross-tabulation showed that 83% of patients were correctly classified by the two instruments while 17% were classified in disagreement.

Conclusions

The ÖMPSQ-short and SBT had good correlation between their total scores and moderate correlation with disability, pain and kinesiophobia. The classification demonstrated moderate agreement in the classification of patients into "low" or "high risk" of chronicity. Our results suggest that clinicians and researchers can choose the questionnaire according to their preference.

10:00 – 11:00AM > Lobby area

Title

PROTOCOL FOR PILOT RCT TO TEST THE EFFECTIVENESS AND COST EFFECTIVENESS OF FACET-JOINT INJECTIONS FOR SELECTED PEOPLE WITH PERSISTENT NON-SPECIFIC LOW BACK PAIN (FIS) – THE PROTOCOL

Authors & Affiliations

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Background

Between 5-15% of people with chronic LBP are believed to have disease of one or more facet joints contributing to their pain yet there is considerable uncertainty on how to identify and treat such people.

This pilot RCT will test the hypothesis that, for people with suspected facet joint pain contributing to persistent LBP, adding facet joint injections, with local anaesthetic and corticosteroids, to best usual non-invasive care available from the NHS is both clinically and cost effective.

Methods

Patients referred to secondary care with persistent non-specific LBP will be screened. Those meeting the eligibility criteria will receive a 1 hour assessment with a physiotherapist to confirm diagnosis and collect baseline data. All participants (n=150) will be offered a bespoke package of physical and behavioral rehabilitation. Those randomized into the intervention arm (n=75) will, in addition, receive facet joint injections. Primary outcome data will be collected using daily and then weekly text messaging service for a pain score on a 0-10 scale. Questionnaire follow up will be at 3, 6, and 12 months.

Results

To inform the 'diagnosis' and 'best usual care' package two systematic reviews have been undertaken
1. non-invasive 'diagnosis' of suspected facet joint pain
2. the physical therapy management of patients with 'facet joint pain' including psychological or cognitive behavioral approaches delivered by non-psychologists. MEDLINE, EMBASE, CINAHL, AMED and BIOSIS have been searched alongside the grey literature, hand searching and narrative evidence synthesis from seminal texts of physical therapy.

Conclusions

Recruitment will start in four sites in November 2014.

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Title

A COMPARISON OF SPINAL MANIPULATION METHODS AND USUAL MEDICAL CARE FOR ACUTE LOW BACK PAIN: A RANDOMIZED CLINICAL TRIAL

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Background

Mechanical-assisted manipulation devices are promoted as safe and effective alternatives to manual manipulation, but these claims have yet to be substantiated. There is still question about the use of spinal manipulation in acute episodes of LBP. This study was designed to explore two key issues: 1) the comparative effectiveness of manual versus mechanical types of spinal manipulation; and 2) the comparative effectiveness of spinal manipulation versus usual medical care.

Methods

This study was a randomized, controlled clinical trial conducted at a University-affiliated Center for Integrative Medicine. The patient sample consisted of 107 adults with a new onset of LBP within the past 12 weeks. Primary and secondary outcome measures were the Oswestry low back pain disability index and numeric pain rating scale. Subjects were randomized to one of three treatment groups: 1) Manual-Thrust Manipulation (MTM); 2) Mechanical-Assisted Manipulation (MAM); and 3) Usual Medical Care (UMC). Outcome measures were captured at baseline, four weeks, three months and six months.

Results

Subjects in the MTM group achieved significantly greater reductions in Oswestry scores at four weeks compared with MAM (-8.1, p=0.009) and UMC (-6.5, p=0.032). The MTM subjects also had greater reductions in Numeric Pain Ratings scores at four weeks compared with MAM (-1.4, p=0.002) and UMC (-1.7, p<0.001). Significant differences in pain scores, in MTM versus MAM and UMC, were also found in the repeated measures model. No adverse events were reported in any group.

Conclusions

MTM provides greater immediate reductions in self-reported disability and pain scores as compared to UMC or MAM.

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Title

ÖREBRO MUSCULOSKELETAL PAIN SCREENING QUESTIONNAIRE SHORT-FORM: TRANSLATION, CROSS-CULTURAL ADAPTATION AND MEASUREMENT PROPERTIES OF THE BRAZILIAN-PORTUGUESE VERSION

Authors & Affiliations

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Background

The Örebro Musculoskeletal Pain Screening Questionnaire short-form (ÖMPSQ-short) aims to identify psychosocial factors in patients with acute or subacute low back pain (LBP). This study aims to to translate and cross-culturally adapt the ÖMPSQ-short and to test the measurement properties of the Brazilian-Portuguese version.

Methods

The ÖMPSQ-short was translated and cross-culturally adapted in 30 patients with acute or subacute LBP. The following measurement properties were tested in 100 patients: internal consistency, reproducibility, construct validity, and ceiling and floor effects. Construct validity was assessed using the Roland-Morris Disability Questionnaire, the Tampa Scale for Kinesiophobia, and the Numeric Pain Rating Scale.

Results

The internal consistency was adequate with a Cronbach's alpha of 0.72 (Cronbach alpha if item deleted ranged from 0.66 to 0.77). Reliability was substantial (ICC = 0.76; 95% CI = 0.61 to 0.84) and agreement was of 6.67 points. The construct validity showed moderate correlation with pain (r = 0.34 to 0.54) and with the Tampa Scale for Kinesiophobia (r = 0.57) and good correlations with the Roland-Morris Disability Questionnaire (r = 0.69) and the original ÖMPSQ (r = 0.85). No ceiling or floor effects were detected.

Conclusions

This study showed acceptable values for the measurement properties of the

10:00 – 11:00AM > Lobby area

Title

HEALTH CARE SERVICES USE AFTER LUMBAR MRI IN GENERAL PRACTICE

Authors & Affiliations

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Background

An understanding of the patterns of health care services used after MRI of the spine in general practice would give information about how MRI scans are being used. Identification of possible prognostic factors predicting health care use can be important to inform patient and physician. The objective of this study is to investigate the association between specific patient characteristics, back pain characteristics and MRI abnormalities with subsequent specialist consultation and surgery in low back pain patients referred to MRI by their general practitioner.

Methods

Patients referred by their general practitioner for MRI of the lumbar spine were recruited. The MRI radiology reports were scored regarding the presence of several MRI findings. The questionnaires at baseline and at 3, 12 months follow-up included potential clinical predictors from history taking and use of health care services.

Results

Of the 683 included patients who were referred for MRI of the spine by their general practitioner, 301 (55%) reported consultation with a specialist during the first 3 months, and 124 (18%) underwent spine surgery during 12 months of follow-up. Five clinical baseline characteristics were associated with consultation, including four characteristics from history taking. Younger patients, with pain radiating in the leg below the knee, severe disability, a history of back surgery, presence of nerve root compression or spinal stenosis on MRI were more likely to undergo subsequent spine surgery (AUC 0.75).

Conclusions

At 12 months follow-up, 18% of patients with low back pain referred for MRI in general practice underwent surgery. Six baseline characteristics were associated with surgery during 12 months follow-up; including nerve root compression and spinal stenosis on MRI.

10:00 – 11:00AM > Lobby area

Title

EFFECTIVENESS AND COST EFFECTIVENESS OF A GROUP PAIN SELF-MANAGEMENT INTERVENTION FOR PATIENTS WITH CHRONIC MUSCULO-SKELETAL PAIN: A RANDOMIZED CONTROLLED TRIAL

Authors & Affiliations

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And on behalf of all the COPERS investigators.

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Background

Psychological interventions for chronic back pain may have clinical and economic advantages compared to drug treatments. We aimed to test the effectiveness and cost-effectiveness of a group, pain self-management intervention (called COPERS) for patients with chronic musculoskeletal pain.

Methods

OPERS was delivered over three days with a top-up after two weeks it was based on cognitive behaviour principles and delivered by a healthcare professional and a lay-person. We conducted a pragmatic randomised controlled trial. Control participants received usual care, an education booklet and relaxation CD. We collected follow-up data at six and 12 months. Our primary outcome was pain-related disability (Chronic Pain Grade, CPG, subscale) at 12 months, we measured: costs, health utility (EQ-5D), anxiety, depression (Hospital Anxiety and Depression Scale, HADS), coping, pain acceptance and social integration.

Results

We recruited 703 participants, mean age 60 years, 81% white, 67% female. At 12 months there was no significant difference between groups in CPG disability (difference -1.0, intervention vs. control, 95% CI -4.9 to 3.0). However self-efficacy, anxiety, depression, pain acceptance and social integration were significantly better in the intervention group at six months and these differences remained significant at 12 months for depression and social integration. COPERS has a high probability (>79%) of being cost-effective.

Conclusions

COPERS improved psychological well being and is likely to be cost effective but failed to influence our primary outcome. In the absence of more effective group self-management interventions, COPERS could be used as a substitute for less well evidenced (and more expensive) pain management programmes.

10:00 – 11:00AM > Lobby area

Title

EXTENDING STRATIFIED CARE BEYOND LOW BACK PAIN: THE KEELE STRATIFIED CARE FOR MUSCULOSKELETAL PAIN PROGRAMME

Authors & Affiliations

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Background

We have shown that stratified care for non-specific low back pain, in which patients are grouped based on their prognostic risk (to low, medium and high risk groups) and matched to treatments, is superior to usual primary care. Yet low back pain accounts for only about 14-18% of all musculoskeletal consultations in primary care. We now plan to test if we can extend stratified care to a much larger group of primary care patients with the five most common musculoskeletal pain presentations (low back pain, neck pain, shoulder pain, knee pain and multi-site pain).

Methods

Our five year programme of research (2014-2019) includes four linked work packages, to i) refine and validate a new screening tool (the STarT Musc tool) to subgroup patients with the five most common musculoskeletal problems, in a prospective cohort study, ii) identify the treatment options which can be matched to each risk and pain site group, using reviews of available best evidence, focus groups with patients and clinicians, and consensus workshops; iii) investigate the feasibility of this new approach and acceptability to clinicians in a pilot trial, iv) test whether it is clinically effective and cost effective in a large cluster randomised trial.

Results

No results yet

Conclusions

Extending stratified care from non-specific low back pain to a larger group of musculoskeletal pain patients in primary care is a logical next step given similarity in prognostic factors across musculoskeletal pain problems, and has the potential to provide benefits for patients and health services.

10:00 – 11:00AM > Lobby area

Title

SHORT TERM OUTCOMES IN PATIENTS WITH LOW BACK PAIN USING THE TREATMENT BASED CLASSIFICATION (TBC) IN A PRIVATE OUTPATIENT SETTING IN BRASIL: A RETROSPECTIVE STUDY

Authors & Affiliations

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Background

Despite the increasing interest in the community research in USA and Australia and Holland about the TBC system, no study were made in Brazil in private outpatient clinics.

Methods

Data from sixty-five patients (39 female and 26 male), age 45,1 ± 14,7, BMI 25,6 ± 4,4) presenting chronic (N=45) and acute (N=20) low back pain with or without radiculopathy with average symptoms duration of 4,5 ± 7,5 years were collected retrospectively between 2012 and 2013. The primary outcome was pain intensity and disability using Numeric Pain Rating Scale (NPRS), Oswestry Disability Index (ODI), Roland Morris Disability Questionnaire (RMDQ) and secondary outcome was kinesiofobia using Fear Avoidance Believe Questionnaire (FABQ). The data were collected at baseline, 4 weeks and 12 weeks in patients that received exclusively treatment based on the TBC system.

Results

Patients were classified in one group (N=38), combined (N=14) and no classification (N=13). Patients classified in one group and combined group demonstrated less pain at 4 weeks compared with no classification group (p=0,037) and (p=0,032) respectively (Mann-Whitney test). Also, patients in the combined group had greater improvement in ODI at 4 weeks(p=0,01) and 12 weeks (p=0,04), RMDQ at 12 weeks (p=0,04) and FABQ PA at 12 weeks (p=0,04) compared with no classification group. There were no differences between groups in the remaining outcomes and timelines.

Conclusions

Although any conclusion about clinical effectiveness of TBC system cannot be made, the short-term clinical outcomes observed demonstrated the need to design a large RCT study in the Brazilian population.

10:00 – 11:00AM > Lobby area

Title

VISUAL TRAJECTORIES: CAN PEOPLE TELL YOU THEIR BACK PAIN TRAJECTORY?

Authors & Affiliations

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Background

Prospective studies have identified different back pain trajectories, providing new insights into the course of pain. However, such data collection is time-consuming, and not always feasible. A question was developed using diagrams of back pain trajectories (visual trajectories) to enable people to categorize themselves. We aimed to investigate the validity of this self-report question.

Methods

The question was included in long-term follow-up of a primary care back pain cohort. Criterion validity was explored by comparing self-report responses with published trajectories (derived using latent class analysis (LCA)). Construct validity was tested against (1) established theories indicating that increasing trajectory severity would be associated with increases in other factors, and (2) Chronic Pain Grade (CPG).

Results

97% (n=202) answered the question. Among people reporting being mostly pain-free, 58% were classified by LCA as no/occasional mild pain; everyone who reported constant severe pain was classified with persistent severe pain by LCA. When self-report trajectories were compared with other characteristics, a clear gradient was seen. E.g. mean Roland-Morris Disability and HADS Depression scores were 0.29 and 2.36 respectively for those reporting being mostly pain-free, but 14.6 and 7.7 among those reporting constant severe pain. Of the mostly pain-free group, 83% were CPG 0-1, whereas 86% of those reporting constant severe pain were CPG 3-4.

Conclusions

There is good evidence for the validity of a single question enabling people to self-report their own perceived pain trajectory. This question is now being used with other samples, and may be of clinical use to determine the trajectory or course of back pain.

10:00 – 11:00AM > Lobby area

Title

ANALGESIC USE IN OLDER ADULTS WITH BACK PAIN: THE BACE STUDY

Authors & Affiliations

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Background

Older patients with back pain are more likely to visit their general practitioner (GP) and are more likely to be prescribed analgesics. The aim of this study was to assess analgesic use in older adults with back pain in general practice.

Methods

The BACE study in the Netherlands is a prospective cohort study. Patients (aged >55 years) with back complaints were included when consulting their GP or shortly thereafter. Measurements took place at baseline, and at 3 and 6-months follow-up. For medication use, patients were asked if they had used any medication for their back pain in the previous 3 months and, if so, to specify the medication name, used dosage, frequency of usage, and whether the medication was prescribed or purchased as 'over the counter' medication.

Results

Of the 675 patients included, 484 (72%) reported medication use at baseline. Non-steroidal anti-inflammatory drugs (NSAIDs) (57%) were more often used than paracetamol (49%). Paracetamol was mostly obtained over the counter (69%) and NSAIDs were mostly obtained by prescription (85%). At baseline, patients with severe pain (NRS >7) used more paracetamol, opioids and muscle relaxants. Patients with chronic pain (back pain >3 months) used more paracetamol, while patients with a shorter duration of pain used more NSAIDs. During follow-up there was an overall decline in medication use; however, at 3 and 6-months follow-up 36% and 30% of the patients, respectively, still used analgesics.

Conclusions

In these elderly patients consulting their GP with back pain, 72% used analgesics at baseline. Despite a decrease in medication use during follow-up, at 3 and 6 months a considerable proportion still used analgesics.

It was equally funded by DorsaVi P/L and the Victorian State government.

10:00 – 11:00AM > Lobby area

Title

RECRUITING MEDICAL GROUPS FOR IMPLEMENTATION RESEARCH

Authors & Affiliations

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Background

Recruiting medical groups for implementation research can be a challenging task. Recruitment problems may change the originally proposed time schedules and budgets resulting in unfinished studies and wasted funding. Solberg et al. investigated a successful recruitment procedure in different medical groups and found seven R- factors explaining their success; relationships, reputation, requirements, rewards, reciprocity, resolution, and respect. In a cluster randomised controlled trial, we planned to recruit 100 general practices. The aim of this evaluation was to describe how well we succeeded in meeting the seven R-factors and to discuss the usefulness of these factors.

Methods

Recruitment procedures included personal contacts, mail correspondence, and phone calls with representatives from the eligible general practices. Feedback on barriers to participate were registered and grouped according to the seven R-factors, using an explorative approach.

Results

In our recruitment procedures we succeeded in achieving a constructive relationship and a fair reputation to reward the participants, to keep up persistence and resolution, and to retain respectful co-operation with the general practices. However, we had underestimated technical requirements for a net-based enrolment procedure and the time requirements for recruitment, while some general practices had problems with the installation of the necessary technical software and were surprised by the workload involved in using this software. 61 out of 189 eligible general practices were included.

Conclusions

We received positive feedback regarding the five R-factors, but experienced problems in meeting the requirements and the reciprocity factors. The framework of the seven R-factors was useful in the evaluation of our recruitment procedures.

10:00 – 11:00AM > Lobby area

Title

COST-ANALYSIS RELATED TO DOSE-RESPONSE FOR SPINAL MANIPULATIVE THERAPY FOR CHRONIC LOW BACK PAIN: OUTCOMES FROM A RANDOMIZED CONTROLLED TRIAL

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Background

This is the first full-scale trial to evaluate both dose-response and treatment plus lost productivity costs of spinal manipulative therapy (SMT) for any condition.

Methods

We randomized 400 patients with chronic low back pain to receive a dose of 0, 6, 12, or 18 sessions of SMT. All participants were scheduled for 18 visits over six weeks and received SMT or light massage control at any one visit. Societal costs in the year following enrollment were estimated using patient reports of healthcare utilization and the number of days that patients were kept from usual activities including employment. The main health outcomes were the number of pain-free and disability-free days. Multiple regression analysis was performed to adjust for baseline covariates. Log-transformed cost data were used.

Results

Lost productivity accounted for the majority of societal costs of chronic LBP which ranged from $3398 for 12 SMT visits to $3815 for 0 SMT visits. Differences between groups were not statistically significant. Baseline patient characteristics related to increase in costs were greater age (P = .03), greater disability (P = 01), lower QALY scores (P = .01), and higher costs in the period preceding enrollment (P < .01). Compared to control, participants had 16.8 to 22.9 pain-free days and 12.3 to 19.4 disability-free days. Maximum benefits were achieved for 12 SMT visits in both outcomes (P < .05). No statistically significant changes in QALY were noted.

Conclusions

SMT showed a modicum of benefit for low back pain and disability without increasing costs of treatment and lost productivity.

10:00 – 11:00AM > Lobby area

Title

IS THE PREDICTIVE ABILITY OF THE START BACK TOOL AFFECTED BY CLINICAL SETTING, DURATION OF EPISODE OR OUTCOME TIME PERIOD?

Authors & Affiliations

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Background

The prognostic ability of the STarT Back Tool (SBT) has been reported to vary but which factors affect this was unclear. This study investigated the influences of care setting (chiropractic, GP, physiotherapy, hospital), episode duration (0-2, 3-4, 4-12, >12 weeks), and outcome time period (3, 6, 12 months) on SBT prognostic ability.

Methods

A secondary analysis of data from four cohorts investigated the effect of interactions between SBT risk subgroups and potential influential factors on the predictive ability of SBT using Generalised Estimating Equations. Roland Morris Disability Questionnaire scores were the predicted outcome.

Results

This study included 1,854 patients, in settings where care pathways were not systematically affected by SBT risk subgroup (non-stratified care). SBT risk subgroup, sex, age, care-setting, and episode duration were all prognostic factors.
However, only very short episode duration (0-2 weeks) directly affected SBT prognostic ability and only for the high-risk subgroup ($p<0.002$).

Conclusions

Prognosis, in non-stratified care settings, is affected by diverse factors that reflect differences in the clinical characteristics of their patient populations, many of which are not assessed by the SBT. When controlling for some of those factors, interaction testing between SBT prognostic ability and care setting, episode duration or outcome time period showed only very short episode duration to affect the predictive ability and only for the high-risk subgroup.
These results question whether the variability in SBT prognostic ability, previously attributed to psychological characteristics in the high-risk subgroup having different implications across care settings, may actually be a function of episode duration.

10:00 – 11:00AM > Lobby area

Title

LOW-BACK PAIN AND PHYSICAL ACTIVITY IN ADOLESCENTS: ANALYSES OF A POPULATION-BASED INTERNATIONAL SURVEY.

Authors & Affiliations

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Background

Somatic pain and physical inactivity in adolescents are major public health problems. We analysed three waves of the Health Behaviour in School-aged Children study (HBSC) to determine the prevalence of low-back pain in adolescents and its association with physical activity.

Methods

Pooled analyses of HBSC datasets (1997/98, 2001/01, 2005/06) from 28 coutries were performed. The survey assessed the monthly prevalence of self-reported LBP and current physical activity levels. Physical activity levels were dichotomised according to the thresholds recommended in the WHO guidelines. Prevalence rates of low-back pain individually and in combination with other pains (stomach ache and headache) were calculated. Multivariate logistic regression models were constructed to investigate the relationship between pain and physical activity, adjusted for regional variation and HBSC wave of data collection. Analyses were straified by gender and by age group (11yr, 13 yr, 15yr).

Results

The monthly prevalence of backache was 37%, headache 54.1%, stomach-ache 49.8%, and at least one of the three pains 74.4%. Pain was more prevalent in girls and more prevalent in the older age groups. In general the presence of pain was associated with reduced physical activity. While the association of back pain on its own with physical activity was inconsistent across the strata, adolescents that reported back pain with stomach and/or headache had lower odds of meeting physical activity guidelines.

Conclusions

Pain is very common in adolescents and associated with reduced physical activity. But this association varies according to the age, gender and the type of pain reported.

10:00 – 11:00AM > Lobby area

Title

DEGENERATIVE PATHWAYS OF LUMBAR MOTION SEGMENTS - A COMPARISON IN TWO SAMPLES OF PATIENTS WITH PERSISTENT LOW BACK PAIN

Authors & Affiliations

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Background

The clinical relevance of spinal degenerative MRI findings remains uncertain. Although multiple MRI findings almost always co-exist, research into their association with clinical outcomes has predominantly focused on individual MRI findings.
This study aimed to: (i) investigate how multiple MRI lumbar spine findings clustered together within two different samples of patients with LBP, (ii) classify these clusters into hypothetical pathways of degeneration based on scientific knowledge of disco-vertebral degeneration, and (iii) compare the reproducibility of these clusters and degenerative pathways across samples.

Methods

We performed a secondary cross-sectional analysis on two dissimilar MRI samples collected in a hospital department: (1) data from the spinal MRI reports of 4,162 LBP patients and (2) data from an MRI research protocol of 631 LBP patients. Latent Class Analysis was used in both samples to cluster MRI findings from lumbar motion segments. Using content analysis, each cluster was then categorised into hypothetical pathways of degeneration.

Results

Six clusters of MRI findings were identified in both samples and, although there were some differences in the content of their clusters, they had the same overall pattern of pathoanatomical findings. So, although the hypothetical pathways identified in the two samples were not identical, the overall pattern of increasing disco-vertebral degeneration within the pathways was the same and biologically plausible.

Conclusions

If relatively stable pathoanatomical pathways can be replicated in additional samples, this new multivariate approach may provide a platform to investigate the relationship between disco-vertebral degenerative pathways and patient centered outcomes, such as pain and activity limitation.

10:00 – 11:00AM > Lobby area

Title

PSYCHOMETRIC PROPERTIES OF THE BRAZILIAN PORTUGUESE VERSION OF THE WORKING ALLIANCE INVENTORY

Authors & Affiliations

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Background

The concept of therapeutic Alliance defined as the collaborative nature, the affective bond, and the goal and task agreement between patients and clinicians. The Working Alliance Inventory (WAI) is a tool developed in the psychotherapy field which has been used to measure the alliance between clinicians and patients. The aim of this study was to translate and perform the cultural adaptation of the shortened version WAI Therapist and determine the psychometric properties of the WAI Patient and WAI Therapist.

Methods

A total of 100 patients with non-specific low back seeking physical therapy treatment were recruited. Data were collected at three times: after the first session, before the second session and after 2 months of treatment. The following psychometric properties were investigated: Internal consistency, testretest reliability, ceiling-and-floor effects and concurrent validity. The Session Rating Scale(SRS), another tool to measure, was used in the concurrent validity analysis.

Results

For the internal consistency analysis of the WAI Patient, Cronbach Alpha coefficients obtained were:0.52(subscale Tasks),0.58(subscale Goals) and 0.62(subscale Bonds). The coefficients for internal consistency analysis of the WAI therapist were:0.81(subscale Tasks),0.79(subscale Goals),0.58(subscale Bonds). In the Ceiling effect analysis the questionnaire WAI Patient and SRS obtained 26% and 58% respectively. For analysis of concurrent validity, the Spearman's correlation coefficients found were:r=0.39, p≤0.001 (WAIPatient/SRS), r=-0.14(p=0.17) (WAI therapist/SRS),and r=0.09, p=0,37(WAI Patient/Therapist WAI).

Conclusions

Thus the WAI Patient despite having shown good reliability presented problems regarding internal consistency and concurrent validity, unlike the WAI Therapist obtained good psychometric properties. Further research is warranted before clinicians can use this version in clinical practice.

10:00 – 11:00AM > Lobby area

Title

ASSOCIATION BETWEEN SPONDYLOARTHRITIS FEATURES AND MRI FINDINGS IN PATIENTS WITH PERSISTENT LOW BACK PAIN

Authors & Affiliations

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Background

Based on the assumption that MRI findings and clinical spondyloarthritis (SpA) features are both strongly associated with the SpA disease entity and also with each other, the objectives of this study were to explore the prevalence of clinical SpA features and MRI findings and the association between these two domains.

Methods

In patients aged 18-40 years with persistent low back pain, referred to a regional Spine Centre, prevalence and associations of clinical SpA features, HLA-B27, CRP, and MRI of entire spine and sacroiliac joints (SIJ) were analysed.

Results

1020 patients were included in the study (median age 33; 54% women). The three most common SpA features were; inflammatory back pain, good response to NSAID and family disposition (15-17% each). Bone marrow oedema (BMO) occurred in 21% of the patients. Several SpA features including HLA-B27 were positively associated with MRI findings in the SIJ. SIJ BMO sum-scores of 3+, SIJ erosions, SIJ sclerosis, and SIJ fatty marrow deposition sum-score of 3+, spinal corner lesions and BMO at the apophyseal joints were all associated with positive HLA-B27. The three most common SpA features were in general not associated with SIJ MRI findings and SIJ BMO sum-score of 1 was not associated with any SpA features.

Conclusions

The high prevalence of both clinical SpA features and MRI findings and the lack of consistent associations between the two domains, indicate that there is a need for further investigation of the diagnostic utility of SpA features and the minimum requirements of MRI findings for defining sacroiliitis.

10:00 – 11:00AM > Lobby area

Title

RADIOFREQUENCY THERAPY FOR CHRONIC LOW BACK PAIN: A SYSTEMATIC REVIEW

Authors & Affiliations

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Background

Radiofrequency (RF) denervation is an invasive treatment for chronic low-back pain (CLBP), mostly used for pain arising from the facet joints, sacro-iliac (SI) joints or discs. Many (uncontrolled) trials have shown uncertainty regarding the effectiveness. The objective of this review is to assess the effectiveness of RF denervation procedures for the treatment of CLBP. The current review is an update of the review in 2003.

Methods

The CENTRAL, MEDLINE, EMBASE, CINAHL, PsycINFO databases and references of included studies were searched (untill 2013) for RCTs of RF denervation for patients with CLBP and a positive response to a diagnostic block or discography. Teams of two from the seven review authors independently selected the trials, extracted the data, assessed the Risk of Bias (RoB) and clinical relevance. Meta-analyses were performed with clinically homogeneous studies, and the quality of evidence for each outcome was assessed using the GRADE approach.

Results

The review is in progress; therefore preliminary results are presented. In total, 15 studies (N=772) were included of which 8 studies (53%) had a low RoB. Only three comparisons were sufficiently homogeneous to perform statistical pooling. Overall, there is moderate evidence that facet joint RF denervation has a small effect over placebo on pain on the short- and intermediate term. No effect was shown on the long term. In RF denervation used for SI-joint pain only one study (N=28) showed an effect on function on the short term. RF denervation used for disc pain or radioating CLBP did not show significant results.

Conclusions

There is a need for further high-quality RCTs with larger patient samples and data on long-term effects, for which the current evidence is inconclusive.

10:00 – 11:00AM > Lobby area

Title

DELIVERING AND SUSTAINING HIGHER-VALUE LOW BACK PAIN CARE ACROSS 40 PHYSICAL THERAPY CLINICS

Authors & Affiliations

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Background

Only 12% of physical therapists were able to identify clinical practice guidelines for LBP (low back pain) in a 2012 study. A healthcare system, having over 40 clinics and 160 physical therapists, committed to integrate evidence-based, best practice into their care for low back pain patients.

Methods

performance improvement team, committed to delivering higher-value care for the LBP population:

- Identified current LBP population needs and the system's ability to meet these needs
- Socialized best-practice care in face-to-face clinic meetings and through the development of a peer network
- Initiated peer-led teams focused on creating tools and identifying the culture changes needed to apply best-practice
- Created infrastructure to collect and report patient-reported outcomes and efficiency data at both a clinician and clinical level

Results

Sustained improvements in functional outcomes, patient experience and cost of care:

- Three years of year-over-year improvement in functional outcomes, as measured by the Oswestry Disability Index
- 57% improvement in functional outcomes in 3 years
- Reduced average number of physical therapy visits from 6 to 4 in 2 years
- 9% improvement in patient experience in last year
- Cost of LBP care grew less in 2013 (3.2%) than overall predicted healthcare costs (3.9%)

Conclusions

Delivering higher-value LBP care can be achieved across multiple physical therapy clinics through intentionally integrating evidence-based best practice.

10:00 – 11:00AM > Lobby area

Title

CLINICAL EXAMINATION FINDINGS AS PROGNOSTIC FACTORS IN LOW BACK PAIN: A SYSTEMATIC REVIEW OF THE LITERATURE.

Authors & Affiliations

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Background

The aim of this review of the literature was to systematically assess the prognostic value of clinical tests commonly used in low back pain patients.

Methods

Medline, Embase, and Mantis were searched from inception to June 2012. Prospective clinical studies of adult patients with LBP with or without leg pain and/or signs of nerve root involvement receiving no or non-surgical treatment which investigated the prognostic value of low-tech clinical tests were included. Study selection, data extraction and appraisal of study quality were performed independently by two reviewers.

Results

A total of 5,332 citations were retrieved and 49 met the inclusion criteria. Due to clinical and statistical heterogeneity a qualitative synthesis rather than a meta-analysis was performed. Associations between clinical tests and outcomes were often inconsistent between studies. For more than one third of the tests, there was consistent or limited evidence for no prognostic value. Only two clinical tests demonstrated a consistent association with one of the outcomes: Centralization and non-organic signs.

Conclusions

Clinical tests appear to have very limited or no prognostic value. However due to large heterogeneity of methods no firm conclusions can be made. To make progress in the area studies need to be designed specifically to investigate the prognostic value of the clinical tests and execution and interpretation of the tests have to be standardized.

10:00 – 11:00AM > Lobby area

Title

PATIENTS' BELIEFS ABOUT LBP AS REPORTED BY LBP EXPERTS.

Authors & Affiliations

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Background

LBP beliefs strongly influence outcomes, therefore it is important to develop measurement tools that evaluate the breadth and complexity these beliefs. This study aimed to identify and classify beliefs about LBP held by patients, as reported by LBP experts. The results will contribute to the development of a new LBP beliefs measurement tool.

Methods

LBP experts (n=140) participated in an international, web-based survey asking them to describe beliefs held by LBP patients. A follow-up survey then asked LBP experts (n=142) classify these beliefs according to the nature and strength of their influence (helpful, unhelpful, neither) on the trajectory of LBP.

Results

127 beliefs were generated relating to: LBP management (32%), cause /aggravating factors (30%), short-term consequences (16%), long-term outcomes (9%), diagnosis (6%), assessment (4%) and risk factors (3%). Overall, 63% of beliefs were unhelpful, 29% were helpful. More than 60% of beliefs relating to cause, assessment, diagnosis and consequences were classified 'unhelpful'. Over 50% of beliefs related to risk factors and outcome were classified helpful. There was poor consensus concerning the 'helpfulness' or 'unhelpfulness' of 11% of beliefs. There was strongest consensus amongst experts regarding the 'helpfulness' or 'unhelpfulness' of beliefs relating to activity, rest, surgery, returning to work and self-management. Very weak consensus was reported for some beliefs related to risk factors, cause, management, consequences and outcomes.

Conclusions

This global study has mapped LBP beliefs and categorised them into 7 main groups to reveal potential intervention points. Further work will explore the prevalence of these beliefs in communities and their relationship with LBP outcomes.

10:00 – 11:00AM > Lobby area

Title

DECOMPRESSION TECHNIQUES IN THE MANAGEMENT OF LUMBAR SPINAL STENOSIS: A SYSTEMATIC REVIEW AND META-ANALYSIS OF RANDOMISED CONTROLLED TRIALS

Authors & Affiliations

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Background

The effectiveness of surgical management for lumbar spinal stenosis is still unclear. Our objective was to assess the effectiveness of surgery compared to no treatment or placebo/sham, as well as the comparative effectiveness of the most commonly recommended surgical approaches.

Methods

We have conducted a systematic review with meta-analysis. Electronic searches were performed on 7 databases up to March, 2014. Methodological quality and quality of evidence were assessed using the PEDro scale and the GRADE criteria, respectively. We extracted data on pain, disability, post-surgical complications and reoperation rates.

Results

No trials were identified comparing surgery to no treatment or placebo/sham. We included 17 randomised trials comparing different types of surgery. Very low to low quality evidence showed that decompression plus fusion is not superior to decompression alone on pain reduction (weighted mean difference: -3.73; 95% CI: -15.55 to 8.10), disability (weighted mean difference: 9.75; 95% CI: -9.44 to 28.94) or walking ability (risk ratio: 0.86; 95% CI: 0.39 to 1.93). There is low quality evidence that interspinous spacers are better than decompression plus fusion in reducing disability (weighted mean difference: 5.66; 95% CI: 1.35 to 9.97). We found very low to moderate quality evidence for no difference between other surgical techniques. Decompression plus fusion and interspinous spacers revealed high rates of post-surgical complications (44.5%) and reoperations (11% and 28%, respectively).

Conclusions

Our results revealed that there are no published trials comparing surgery to no treatment or placebo/sham. Moreover, there is limited evidence to judge the superiority of one surgical approach over another. We argue that more evidence is needed to guide surgical recommendations for lumbar spinal stenosis.

10:00 – 11:00AM > Lobby area

Title

PREVENTATIVE CARE STRATEGIES FOR COMMON RISK FACTORS OF CHRONIC DISEASE AND BACK PAIN IN PATIENTS WAITING FOR SPECIALIST CONSULTATION

Authors & Affiliations

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Background

Four health risk behaviours, overweight and obesity, physical inactivity, poor diet and smoking are primary risks of chronic disease. These behaviours have also been associated with increased risk of musculoskeletal conditions, specifically persistent LBP. However, the provision of care to improve health risks in patient with musculoskeletal pain has not been studied.

Methods

A cross-sectional survey is being conducted of 1,500 patients referred for specialist consultation for back, knee, hip, shoulder or neck pain to determine the prevalence of health risk behaviours and associated care. Pain, disability, self-efficacy, health literacy and quality of life are assessed. Patients are also asked about the willingness and preference for participation in risk modification interventions to improve their condition and health risks.

Results

The survey is scheduled for completion in June 2014. Preliminary results reveal: 85% of patients referred are overweight or obese (mean BMI 33.9, SD7.3), none participate in recommended levels of activity (mean leisure time activity; 65 minutes per week) or consume adequate serves or fruits and vegetables, and 26% are smokers. While 93% of patients report interest in improving these health risks, only 30% received advice about how to address them; none believed they could action the advice. Only 20% of patients were referred to a service to facilitate health risk modification. Most patients (55%) prefer telephone interventions as a mode of support.

Conclusions

Results of the 1,500 patient survey will be ready for presentation at the low back pain forum in October 2014.

10:00 – 11:00AM > Lobby area

Title

COMBINING DATA FROM RANDOMISED CONTROLLED TRIALS WITH REGISTRY DATA TO IMPROVE HEALTH ECONOMIC EVALUATION OF LOW BACK PAIN TREATMENT IN DENMARK

Authors & Affiliations

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Background

Low back pain is one of the most common musculoskeletal disorders worldwide and constitutes a great human and socioeconomic burden. Health care systems worldwide face budgetary restrictions. For this reason, it is of highest priority to evaluate clinical effectiveness as well as cost-effectiveness of new health interventions to allow for the most cost-effective care of all patients.
The objective of this study is to use data from an ongoing randomised controlled trial and combine these with data from multiple Danish registries.

Methods

The use of the Danish registry system offers a unique opportunity to link patient specific data from various data registries.
The registries especially enable the collection of data on health care utilisation, which may not be collected during trials. For instance, data collected in primary care regarding diagnosis and medications can be obtained through the Danish General Practice Database.

Results

Randomised controlled trials are pertinent vehicles of evidence to evaluate clinical effectiveness and resource use of new interventions. As low back pain patients are managed by multiple players within the health care system register data may greatly contribute to the reflection of a more comprehensive resource use. Comparing estimated costs against effectiveness of an intervention aids the evaluation of its applicability within a given health care budget.

Conclusions

Combining multiple data sources offer an extensive information platform and may increase the validity of health economic evaluations to best inform decision making, relevant to treatment of low back pain.

10:00 – 11:00AM > Lobby area

Title

THE RELATION BETWEEN CHANGES OF PAIN-RELATED FEAR AND IMPROVEMENT OF PAIN. RESULTS FROM A 2 YEAR OBSERVATIONAL STUDY IN PATIENTS WITH SCIATICA

Authors & Affiliations

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Background

There is some evidence for pain-related fear to predict the development of chronic back pain and disability, but there is little knowledge about the association of pain with pain-related fear over time. The aim of this study was to investigate the strength of association between change of pain and change of pain-related fear during 2 years observation in patients with disc-related sciatica.

Methods

In this prospective observational sciatica study patients were told to stay active, but no specific intervention regarding pain-related fear was performed. Pain-related fear was assessed by the Tampa Scale for Kinesiophobia (TSK) (13-52) and the Fear Avoidance Beliefs Questionnaire-Physical Activity (FABQ-PA) (0-24). Worst pain (lower back or leg) was measured by a 0-100 VAS. Statistics used were Pearson's r and multivariate linear regression models.

Results

Of 466 included patients 372 (80%) responded at 2 years. Changes between baseline and 2 years were analysed, mean values of both pain and pain-related fear diminished. The correlation coefficients of change in worst pain with change in TSK was 0.28, and of change in worst pain with change in FABQ-PA 0.33. Using change in pain-related fear as dependent variable, the addition of change of worst pain to a regression model including age, gender, smoking, education, duration of sciatica, and baseline pain-related fear resulted in an increase of the explained variance (R2) from 14% to 21% for TSK and from 24% to 32% for FABQ-PA.

Conclusions

Our findings do not support any strong longitudinal relationship between pain and pain-related fear.

10:00 – 11:00AM > Lobby area

Title

PREVALENCE OF BACK OR NECK PAIN IN PATIENTS WITH IRRITABLE BOWEL SYNDROME IN PRIMARY CARE, AND EFFECT ON PAIN, DISABILITY AND HEALTH RELATED QUALITY OF LIFE

Authors & Affiliations

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Background

Both irritable bowel syndrome (IBS) and back and neck pain are common and may affect everyday life. However, little is known about co-morbidity between these disorders. The aim was to investigate if individuals with Irritable Bowel Syndrome (IBS) more often have back or neck pain compared to individuals without IBS, and if participants with IBS reported more pain or disability, and worse health. Furthermore to investigate whether IBS, among other symptoms/diagnoses, was a predictor for disability.

Methods

The design was a retrospective randomized case-control study. Participants were recruited from ten primary care centers in Southeastern Sweden. Participants reported on pain (VAS), disability (FRI) and health (EQ-5D). Comparison between groups was done with chi2-test or Mann-Whitney U-test. Spearman correlation was used to analyze associations. Multivariate linear regression was used to investigate if IBS diagnosis predicted level of disability.

Results

Included were 266 participants with IBS and 299 controls. Mean (SD) age was 50 (13) years and 450 (79.6%) were women. Back- and/or neck pain was reported by 174 (65.4%) of the participants with IBS and by 131 (43.8%) of the controls ($p<0.001$), and participants with IBS reported more pain, higher ODI and lower EQ-5D ($p<0.001$). Higher pain VAS, lower EQ-5D, higher age, having difficulties in sleeping, fibromyalgia or rheumatic disease predicted higher level of FRI.

Conclusions

Participants with IBS more often also have back or neck pain and have higher levels of disability and pain compared to controls. However, having IBS or not does not seem to predict level of disability.

10:00 – 11:00AM > Lobby area

Title

RISK FACTORS FOR LOW BACK PAIN: INSIGHTS FROM A NOVEL CASE-CONTROL TWIN STUDY

Authors & Affiliations

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Background

Previous research has failed to identify strong consistent risk factors for low back pain (LBP). A plausible solution is to conduct hypothesis-generating studies such as twin case-control surveys. We aimed to investigate twins' perceptions of the factors responsible for within-pair differences in LBP.

Methods

Twenty four twin pairs that were discordant for LBP history were included. Participants' perceptions of factors that could explain within-pair differences in LBP history were collected. Twins were asked to identify factors responsible for within-pair differences in LBP. Closed-questioning collected information on known risk factors and open-ended questioning was used to reveal novel factors. Frequency of risk factors was presented to investigate the individual's perception of the contribution of factors in the development of their own and/or their twin's experience of LBP.

Results

The most frequent factors reported in the closed questioning related to physical workload, specifically, twins' engagement in different types of work (n = 23/24 pairs, 96%). Types of work included those involving heavy loads, lifting, manual tasks, awkward postures and gardening. Single trauma or injury and vigorous physical activity participation were perceived as contributors by 79% (n=19/24 pairs) and 88% (n=21/24 pairs) of the pairs, respectively. Open-ended questioning did not reveal new risk factors for LBP.

Conclusions

Twins attributed differences in LBP history to risk factors related to physical workload. Future studies investigating risk factors for LBP should include valid and comprehensive assessments of these factors.

10:00 – 11:00AM > Lobby area

Title

PAIN INTENSITY, FUNCTIONAL PERFORMANCE AND PHYSICAL CAPACITY IN ELDERS WITH ACUTE LOW BACK PAIN

Authors & Affiliations

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Luiza Faria Teixeira – Universidade Federal de Minas Gerais
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Background

The prevalence of pain amongst elders is high, changing the functional performance and causing a negative impact on the quality of life. The objective of this study was to verify if there is a correlation between the pain intensity measured by the numeric pain scale (NPS) and the pain related to the functional performance by the pain domain from WOMAC, between the pain measured by the NPS and the physical capacity measured by Timed Up and Go (TUG) and gait speed (GS) and between those two tests and the physical function domain from WOMAC in elders with acute low back pain (LBP).

Methods

This is a cross-sectional study derived from Back Complaints in the Elderly (BACE) Study. Elders aged ≥60 that reported a new episode of LBP in the last 6 weeks were included. Spearman correlation was used in the analysis.

Results

The sample was of 225 elders (68.1±5.8 years) and consisted mostly of women (86.7%). The correlations between the NPS in the moment and in the last 7 days and the pain domain from WOMAC were 0.53 and 0.45 respectively. The correlations between the NPS in the moment and in the last 7 days and the TUG and GS were 0.10; 0.23; -0.19 e -0.23 respectively. The correlations between the TUG and GS and the physical function domain from WOMAC were 0.33 e -0.31 respectively.

Conclusions

The correlations found make it possible to identify relevant clinical findings about the pain in functional performance and physical capacity level of elders with acute LBP, in a way that healthcare professionals and physiotherapists can comprehend more clearly these outcomes and, thus, develop assertive intervention strategies for elders with LBP.

10:00 – 11:00AM > Lobby area

Title

PAIN INTENSITY AND SELF-REPORTED REASON FOR THE ONSET OF ACUTE LOW BACK PAIN IN ELDERS: BACE STUDY DATA

Authors & Affiliations

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Background

The objective of the study was to investigate the intensity of acute low back pain and self-reported reasons for the pain onset.

Methods

Transversal observational study as a sub-project of the Back Complaints in the Elders – BACE study. The sample consisted of elders aged 60 and over, presenting acute low back pain for 6 weeks or less and not attending health services in the last 6 months. Elders with cognitive, visual or hearing impairments or severe motor pathologies were excluded. Sample characterization: age, gender and priority use of health services. A categorical evaluation of the usage of medication for low back pain in the last 3 months and treatment was performed. The perception of the global effect in relation to the improvement of pain was assessed. The pain intensity was determined by the Numeric Pain Scale in the last week. A semi-structured questionnaire for the self-reported reasons of pain onset was used.

Results

The sample consisted of 300 elders with average age 68,64 (6,11 SD) and 83,3% were female. The average number of years in school was 7,76 (4,9 SD). The majority used the public health care services (22,3%), uses medication (71%) and does not receive other types of treatment (84,3%), reports improvement of the pain since the beginning of symptoms, despite the acute episode (44,3%). The average pain intensity was 7 (2,63 SD). The majority reported weight carrying as the main reason for the onset of the low back pain (37,7%), followed by wrong movement (26,6%), accident or trauma (7,6%), very cold days (2,7%), other reasons (18,7%) and 20 (6,7%) did not know.

Conclusions

There was high low back pain intensity and the main reason for the pain onset was weight carrying.

10:00 – 11:00AM > Lobby area

Title

EFFECT OF MINIMALLY INVASIVE LOW-INTENSITY LASER THERAPY (MILLT) ON THE SPONTANEOUS REGRESSION (AUTOLYSIS) THE DISC HERNIA STRUCTURE.

Authors & Affiliations

Authors and Affiliations: Alexander Tkachev MD, Michael Tkachev MD, Alina Smirnova DTC IIBS, Nina Anigbogu B.Pharm

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Background

Use the MILLT to accelerate spontaneous regression (autolysis) of disk hernias, in patients with intervertebral disc lesions present as confirmed by MRI

Methods

Two hundred patients volunteered to participate in this study. They were split into 2 groups – A and B, with 100 patients per group. Group A was treated using MILLT, while group B were given conservative treatment. MILLT: The method of treatment uses the impact of low-intensity laser light through the LED. This is introduced through the needle at a wavelength of 630 nm, an angle of 45-90° and at a depth of 20 – 25 mm to points located on the spinous processes of vertebrae, on which MRI studies revealed intervertebral disc lesions (protrusions or disc hernias). Treatment duration is 15 minutes, everyday, for 10 days. Conservative treatment: This includes the use of Non Steroidal Anti Inflammatory Drugs (NSAIDs) and recommendations in lifestyle changes. Patients were also treated for the same number of days – 10 days. In both groups, MTI scans were taken of patients before treatment and immediately after treatment. Subsequently, MRI scans were taken 1, 3, 6 and 12 months after treatment completion.

Results

MRI scans showed that there was a greater reduction in the size of the disc hernias in patients in Group A, as compared to those in Group B. In quantitative terms; this reduction was calculated to be approximately 55% greater in patients who opted for the MILLT treatment.

Conclusions

Conclusions: This study shows that the use of MILLT results in an increase in the rate of spontaneous regression of disc hernias. The result is attributed to the effect of the laser itself. Treatment with MILLT leads to an increase in the blood supply to the injured area. This temporarily potentiates the inflammation reaction, including the 1)stimulation of phagocytosis, which leads to faster resorbtion of the intervertebral disc hernia 2) stimulation of angiogenesis which intensifies the blood circulation in the avascular area

10:00 – 11:00AM > Lobby area

Title

COMBINATION OF DIFFERENT TYPES OF PHYSICAL ACTIVITY IN CHRONIC LOW BACK PAIN: THE AUSTRALIAN TWIN LOW BACK PAIN (AUTBACK) STUDY

Authors & Affiliations

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Background

Little is known about the potential effect of the combination of different types of physical activity in chronic low back pain (LBP).

Methods

The combination of different types of physical activities (light walking, recreational and domestic workload physical activities) was investigated using a multivariate conditional logistic regression model and applying the Lincom post-estimation technique. This method allows the investigation of combined effects of two types of activities (light + recreational physical activity; domestic workload + recreational physical activity) compared with the effect of the engagement in only one activity in the outcome of chronic LBP. We considered the influence of genetics on chronic LBP by the use of a twin sample of 38 complete Australian twin pairs from the AUTBACK study and discordant for chronic LPB (within-pair co-twin sample).

Results

While light, recreational, and domestic physical activities in isolation tended to be associated with increased prevalence of chronic LBP (e.g. domestic: OR 8.73, 95% CI 0.82 – 93.12; light: OR 8.36, 95% CI 1.34 – 51.99), when recreational physical activity was combined with either light or domestic physical activities the effects tended to be attenuated (e.g. light + recreational: OR 0.37, 95% CI 0.09 – 1.46; domestic + recreational: OR 5.58, 95% CI 0.96 – 32.19).

Conclusions

Our results shows that people's engagement in light or high load physical activities appear to be associated with a higher prevalence of chronic LBP and this effect appears to be reduced with the practice of recreational activities.

10:00 – 11:00AM > Lobby area

Title

ASSOCIATION BETWEEN KINESIOPHOBIA AND PHYSICAL CAPACITY MEASURES AND FUNCTIONAL PERFORMANCE IN ELDERS WITH LOW BACK PAIN.

Authors & Affiliations

Renata Antunes Lopes, Bárbara Zille de Queiroz, Nayza Maciel de Britto Rosa, Amanda Oliveira, LuizaTeixeira, Fabiana Moraleida, Leani Pereira de Souza Máximo, João Marcos Domingues Dias, Rosângela Corrêa Dias
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Background

The association between low back pain and psychosocial factors is recognized, especially kinesiophobia. The association between kinesiophobia, physical capacity and functional performance is not clear in the ageing context. The objective was to investigate if there is and what is the relation between kinesiophobia, physical capacity and functional performance in elders with acute low back pain.

Methods

This is a cross-sectional study derived from Back Complaints in the Elderly (BACE) Study. Took part in this study 150 elders with acute low back pain in the IPSEMG Medical Specialties Center. Were included elders that presented a complaint of pain for a maximum of 6 weeks, not having been to health services due to low back pain in the last 6 months. Were excluded elders who did not obtain minimum score in the Mini-Mental State Exam or did not present physical conditions to perform the functional assessment. The instruments used were: Tampa Scale for Kinesiophobia to measure the kinesiophobia level, Short Performance Physical Battery for physical capacity and the Roland Morris disability questionnaire. Descriptive statistics was performed to characterize the sample and the correlation was analyzed with the Spearman Correlation Coefficient.

Results

The sample was composed of elders with average age 66,8 ± 6,9 years old, 92,5% of them being female. It was found a significant statistic correlation between kinesiophobia and physical capacity ($r=0,23$; $p=0.005$), and kinesiophobia and functional performance ($r=0,38$; $p<0,01$).

Conclusions

The data found confirms the importance of a psychosocial approach in low back pain, since this condition cannot be explained only by objective clinical findings.

10:00 – 11:00AM > Lobby area

Title

IDENTIFYING PATIENTS WITH CHRONIC BACK PAIN WHO RESPOND BEST TO MCKENZIE THERAPY: A SECONDARY ANALYSIS OF A RANDOMISED CONTROLLED TRIAL

Authors & Affiliations

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Background

McKenzie therapy (MDT) like other interventions for low back pain (LBP) has been found to have small effects for people with LBP. It is possible that a group of patients respond best to MDT and have larger effects. Identification of patients who respond best to MDT compared to other interventions would be an important finding.

Methods

Secondary analysis from a previous trial comparing MDT to back school in 148 patients with chronic LBP. Only patients classified at baseline assessment as being in the derangement group were included. To reduce the chance of spurious findings we limited the number of predictors and hypothesised the direction of effect for each potential effect modifier. The predictors tested were: 1. Clear centralisation vs directional preference only; 2. Baseline pain location; 3. Baseline pain intensity; and 4. Age. The primary outcomes for this study were pain intensity (NPRS) and disability (RMDQ) at the end of treatment (4 weeks).
Treatment effect modification was evaluated by assessing the group versus predictor interaction terms from linear regression models.

Results

The presence of clear centralization, pain located below the knee and older age did not predict a more favourable response to MDT. High pain intensity at baseline seems to be a clinically useful effect modifier for disability, but not for pain improvement.

Conclusions

Our hypothesis setting study suggests high pain intensity may be an important treatment effect modifier for patients with chronic LBP receiving MDT. The results of this secondary analysis have to be interpreted cautiously and replication is required.

Special Group Meetings

Title

STANDARDISED METHOD FOR REPORTING EXERCISE PROGRAMS

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Background

Research Aims: To develop a standardised, explicit method for reporting exercise programs using a modified Delphi technique to reach international consensus.The aim of the workshop is to finalise the template.
Background: The global burden of low back pain is the highest ranked condition contributing to years lived with disability. Exercise is a moderately effective recommended treatment, includes activities that vary in type and is an umbrella term for quite different interventions.
A review of systematic reviews (N=73) of exercise for chronic conditions, including low back pain, found that reviews were unable to adequately describe the content of included exercise programs. The required information was either not reported or reported in a variable and non-explicit way. These incomplete descriptions hamper the ability of clinicians and researchers to draw firm conclusions about the true effects of exercise and their ability to accurately replicate and/or build upon effective interventions. While systematic reviews frequently recommend exercise, they do not reliably assist clinicians in designing exercise programs. This is a substantial barrier to implementing exercise programs of proven effectiveness.
Evaluation and implementation of physical activity and exercise research would be greatly facilitated if exercise programs, and their components, were comprehensively described in a standardised way. Based upon key exercise descriptors identified in their review, Slade & Keating (2
012) have designed an exercise reporting grid.
Using this grid as a starting point, this study will use an international expert consensus approach, to develop and evaluate a standardised method for reporting exercise interventions. This workshop will form part of the final consensus round after which the template will be distributed for final approval.

How the workshop will be conducted?

Workshop components:

1.Distribution of a summary workbook prior to the workshop
2.Brief review of intervention reporting and background, followed by a summary of the completed Delphi process, the final draft checklist and rankings or comments about additional or questionable items
3.Discussion about each of the items, and wording, to reach consensus for inclusion in the final template.
4.Following the workshop the final checklist will be distributed for feedback to ensure that it reflects decisions that were made

Number of participants: 10-15 maximum Min of 8 and max of 15 participants, ideally representing a breadth of expertise, experiences and views.

Conclusions

The anticipated outcomes are implementation of this exercise grid as a template for research protocols, research reports and systematic reviews of exercise; manuscript submission; an online appendix in peer-reviewed publications; a checklist for peer reviewers and addition to Item 5 of the CONSORT Statement.

Title

PROPOSAL FOR REVISION OF THE CORE OUTCOME SET FOR LOW BACK PAIN: RESULTS FROM AN INTERNATIONAL DELPHI STUDY

Authors & Affiliations

Alessandro Chiarotto1
Richard A. Deyo2
Christine Lin3
Raymond W. Ostelo1,4
on behalf of the International Steering Committee for the Core Outcome Set on Low Back Pain*

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*Raymond Ostelo, Richard Deyo, Christine Lin, Maarten Boers, Rachelle Buchbinder, Terry Corbin, Leonardo Costa, Nadine Foster, Margreth Grotle, Bart Koes, Francisco Kovacs, Chris Maher, Adam Pearson, Wilco Peul, Mark Schoene, Caroline Terwee, Dennis Turk, Maurits van Tulder

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Background

At the 1997 LBP Forum, a consensus-based proposal for standardized use of domains and measurement instruments for clinical research on LBP was formulated. This proposal1 has been largely cited and adopted in LBP clinical research throughout all these years.
A workshop was organized at the 2012 LBP Forum to establish whether an update of the proposed set was necessary and, for compelling reasons, its participants acknowledged the importance of updating the existing proposal. In order to develop an updated version of the core outcome set (COS), an international steering committee (ICS) was formed. This ICS includes LBP researchers, methodologists and patients representatives from 4 different continents.
The guidance of notable initiatives (i.e. OMERACT, COMET, IMMPACT) recommend to develop a COS by focusing on two dinstinct linchpins: 'what' and 'how' to measure.2-4 The focus on 'what' constitutes the first logical step and it should be represented by reaching consensus on a core domain set (CDS). A CDS includes those concepts of health (i.e. domains) that are core for a specific health condition and that should be measured and reported as outcomes in all clinical trials for the condition.
The ICS designed a Delphi study to reach consensus on a CDS for all clinical trials on health interventions for non-specific LBP (NSLBP). This study is actually undergoing and a broad number of expert researchers, clinicians and patients from 5 continents were invited to participate. The results will be available by the end of the summer 2014.
The aim of this workshop is to present the CDS for which consensus was reached during the Delphi study and to seek further approval on the core domains for clinical trials on NSLBP.

References:
1.Deyo RA, et al. Outcome measures for low back pain research. A proposal for standardized use. Spine 1998
2.Tugwell P, et al. OMERACT: an international initiative to improve outcome measurement in rheumatology. Trials 2007
3.Williamson PR, et al. Developing core outcome sets for clinical trials: issues to consider. Trials 2012
4.Turk DC, et al. Core outcome domains for chronic pain clinical trials: IMMPACT recommendations. Pain 2003

How the workshop will be conducted?

Raymond Ostelo will chair this 2-hour workshop.
Three presentations (45') will be followed by discussion (15') with the audience:

•A core outcome set for LBP – R. Deyo (7-8 min)
•Why updating the existing core outcome set? – C. Lin (7-8 min)
•A core domain set for NSLBP: results of an international Delphi study – A. Chiarotto (25 min)

Subsequently, the audience will be separated in 4 groups (facilitated by the workshop organizers) for discussion on the following points:

•Are all domains in the CDS relevant for all clinical trials on NSLBP?
•Are there any excluded domains that should be included in the CDS?
•Is the number of domains in the CDS adequate?
•Are there any suggestions for terms and definitons of the included domains?

Conclusions

Approval of an international consensus-based CDS for NSLBP will be sought among workshop participants. Consistent suggestions will be fed back to the ICS to evaluate if further investigation on the CDS is necessary.

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