



Centre universitaire de recherche
sur la douleur et l'incapacité
University Centre for Research
on Pain and Disability

The Newsletter of the University Centre for Research on Pain and Disability

Message from the Scientific Director :

This has been an exciting year at our Centre. Through the dedication of our research staff, students and collaborators, we have been successful in completing a number of clinical and experimental studies. Three projects are briefly described in this Newsletter. One paper describes how spouses of pain patients can influence patients' displays of pain behaviour. Another paper describes the findings of a study showing that, once

suspicion has been aroused, pain patients exhibiting authentic displays of pain behaviour are considered to be faking by observers. The findings of the latter study caution against the practice of asking clinicians to judge the authenticity of pain patients' presenting pain and disability. Finally, another paper describes the application of the Progressive Goal Attainment Program

(PGAP) to individuals who are work-disabled due to Fibromyalgia.

Additional studies completed at our Centre over the past year are referenced in this Newsletter. A calendar of activities of our Centre is also provided at the end of this Newsletter.

MICHAEL JL SULLIVAN, PhD

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Promoting Return to Work in Individuals with Fibromyalgia

Fibromyalgia (FM) is a rheumatic condition characterised by the presence of chronic widespread pain and hypersensitivity to a variety of noxious stimuli. Individuals with FM often experience a number of symptoms other than pain, including fatigue, sleep disturbances and a variety of neuropsychiatric problems such as memory difficulties, slowed

information processing, and depressive symptoms. Levels of social and occupational disability associated with FM are alarmingly high. Recent meta-analyses of the literature have concluded that even intensive multidisciplinary rehabilitation programs have not been shown to yield meaningful long-term impact on physical or psychological disability

associated with FM.

We recently completed a study examining the effectiveness of the Progressive Goal Attainment Program (PGAP) as an intervention to promote return to work in individuals who were chronically work-disabled due to FM. While a number of different rehabilitation approaches have been used with



individuals with FM, to our knowledge, no other study ever examined the effectiveness of an intervention specifically designed to promote return-to-work on this population.

A sample of 30 individuals with FM participated in this study. We compared the outcomes of PGAP with individuals with FM to a sample of individuals who were chronically work-disabled due to low back pain (LBP). The interventionists in this study were occupational therapists who had completed the two-day PGAP skills training workshop.

Both groups (FM and LBP) were matched on age, sex, pain severity and duration of work absence (approximately 2 ½ years). Of the individuals who met inclusion criteria (e.g., risk factor scores above the 50th percentile), 83% of individuals with FM agreed to participate. All participants with FM completed 10 sessions of treatment. These results suggest that PGAP is considered an acceptable intervention for the majority of individuals with FM.

Interesting group differences emerged. Individuals with FM and LBP showed comparable reductions in pain catastrophizing, depression and fear of movement. These results suggest that individuals with FM respond (on these variables) as well to treatment as individuals with LBP. However, individuals with FM completed treatment with higher scores on catastrophizing and depression than individuals with LBP. This was due to individuals with FM having higher initial (pre-treatment) scores on these measures than individuals with LBP.

Compared to individuals with LBP, individuals with FM showed less reduction in pain severity and less change in perceived disability. Individuals with FM were also less likely to return to work (23%) than individuals with LBP (50%). The return to work rates for individuals with LBP are similar to previous studies of PGAP with individuals with long standing work disability. Although the return to work rates for individuals

with FM might appear modest, it is important to consider that these individuals were work-disabled for more than two years. Epidemiological studies suggest that following two years of work disability, the probability of return to work is less than 2%.

The results of this study are promising in that they suggest that PGAP is an intervention in which individuals with FM are willing to participate. Individuals with FM appear to benefit as much from participation in PGAP as individuals with LBP with respect to reductions in catastrophic thinking, fear of movement and depression. This study is also the first to document return-to-work outcomes in individuals with FM following a psychosocial intervention.

The results of this study will appear in an upcoming issue of the *Journal of Cognitive Psychotherapy*. (Sullivan, M.J.L., Adams, H., Ellis, T. Targeting Catastrophic Thinking to Promote Return to Work in Individuals with Fibromyalgia. in press).

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How Good are we at Detecting Faking in Pain Patients?

The findings call into question clinicians' ability to detect lack of authenticity in the pain expressions of chronic pain patients.

There is some degree of consensus that some individuals presenting as pain patients might be intentionally simulating their pain, distress and disability. Since pain is essentially an invisible symptom, individuals must rely on their words and behaviour to communicate their pain to others. As clinicians, we attend to our patients' words and behaviour in order to arrive at a clinical impression or diagnosis of their presenting condition.

At times, clinicians will be asked to make judgments about the 'authenticity' of a patient's presenting symptoms of pain and disability. When asked to perform this task, it is assumed that clinicians indeed possess the ability to discern lack of authenticity in the words or behaviours used by a client to communicate his or her pain and disability. But what is the evidence that clinicians actually possess this skill?

Marc-Olivier Martel is a doctoral student at our Centre who was interested in finding the answer to this question. He asked pain-free participants to view video sequences on chronic pain patients performing a physically demanding task.

Participants were asked to estimate the intensity of pain that the patients experienced while performing the physically demanding task. After having completed the pain estimation trial, participants were then informed that a certain number of the patients in the video sequences were actually faking their pain expressions. Participants were then shown the video sequences a second time and asked to rate the likelihood that each patient was faking his or her pain expression.

In the pain estimation trial, Mr. Martel's findings replicated what had previously been demonstrated; namely, that participants relied heavily on patients' pain behaviour to estimate patients' pain.

Of interest was that the same was found for the faking judgments. In other words, the same pain behaviours that were previously used as indicators of patients' pain experience were later considered indicators of faking. The findings suggest that simply raising suspicion of faking was

sufficient for participants to consider expressions of pain as indicators of faking.

In reality, all video sequences depicted authentic pain expressions of chronic pain patients; there were no fakers in the sample. Still, once suspicion was aroused, participants saw evidence of faking everywhere.

The findings call into question clinicians' ability to detect lack of authenticity in the pain expressions of chronic pain patients. More alarming still is that clinicians are willing to consider authentic displays of pain as examples of faking. Findings worthy of reflection.

The findings of this study are reported in a recent publication in the *Journal of Pain* (Martel, M-O., Thibault, P., Sullivan, M.J.L. (2011). Judgments about pain intensity and pain genuineness: The role of pain behaviour and judgmental heuristics. *Journal of Pain*, 12: 468 – 475.)

Couples in Pain: How the Level of Catastrophizing of the Spouse Influences a Patient's Pain Behaviour.

Even though we often think of pain as something that exists within an individual, pain is also a social experience. Our pain experience often takes the form of language or behavior that communicates to others around us something about our experience. In turn, people in our social environment react to our pain communication, and these reactions can influence our future pain communication, either by increasing it or decreasing it.

Dr. Nathalie Gauthier was a doctoral student at our Centre who was interested in examining how spouses influenced patients' pain communication, specifically, their expressions of pain behavior. The research question could be summarized as follows: If you are a pain patient and you are a high catastrophizer, is it better for you to be married to another high catastrophizer, or is it better for you to be married to a low catastrophizer. Intuitively, one might predict that the worst scenario would be one where both the pain patient and the spouse were high catastrophizers. Since catastrophizing is associated with 'alarmist' reactions to pain, if both partners in the relationship are being overly alarmist, the ensuing distress might be more

intense than if only one partner was catastrophizing.

To address this question, Dr. Gauthier sought the participation of couples where one partner suffered from a persistent pain condition. Couples were invited to the laboratory and the pain patient was asked to lift a series of weighted canisters. The pain patient was filmed during the canister lifting task, and the video records were later coded for the presence of pain behavior (e.g., grunts, moans, rubbing the shoulder, holding the area in pain). While the pain patient was completing the canister lifting task, the spouse was in another room completing questionnaires.

Both the pain patient and the spouse completed the Pain Catastrophizing Scale. Based on the responses, four different categories of couples were generated: pain patient high catastrophizers with a high or low catastrophizing spouse, and pain patient low catastrophizers with a high or low catastrophizing spouse.

The main finding of interest was that the greatest amount of pain behavior was exhibited by high catastrophizing pain patients who were married to a low catastrophizing

spouse. Dr. Gauthier suggested that low catastrophizing spouses are not only less attentive to their own pain, but they are also less attentive to others' pain, including their spouses' pain. As such, the high catastrophizing pain patient must 'increase the volume' of his or her pain behavior in order to effectively communicate pain to his or her spouse. When married to a high catastrophizing spouse, the pain patient does not need to increase the volume of pain communication because high catastrophizers are more attentive to others' pain communication.

Dr. Gauthier's findings have several clinical implications. First, the findings highlight the importance of being receptive to clients' pain communications. In the past, behavioural models of pain behaviour advocated ignoring patients' displays of pain. These recommendations were based on the opinion that pain behaviours were reinforced by attention, and could be extinguished through systematic non-reinforcement.

However, it appears that, at least for high

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catastrophizers, ignoring pain behaviours might lead to an increase in pain behaviour. To the extent that pain behaviour contributes to disability, ignoring patients' pain behaviour might inadvertently increase disability as well. Active listening leads to mutual understanding, which in turn, reduces the patient's need to express verbal or nonverbal messages of distress such as pain behaviours. The findings of this study will appear in an upcoming issue of Pain Research and Management.

Gauthier, N., Thibault, P., Sullivan, M.J.L. Catastrophizers with chronic pain display more pain behaviour when in a relationship with a low catastrophizing spouse. Pain Research and Management, in press.

Selected activities and publications since our last Newsletter

Published Refereed Papers

- Martel, M-O., Thibault, P., Sullivan, M.J.L. (2011). Judgments about pain intensity and pain genuineness: The role of pain behaviour and judgmental heuristics. *Journal of Pain*, 12: 468 – 475.
- Wideman, T.H., Sullivan, M.J.L. (2011). Differential predictors of the long-term levels of pain intensity, work disability, healthcare use, and medication use in a sample of workers' compensation claimants. *Pain*, 152 : 376 – 383.
- Wideman, T.H., Sullivan, M.J.L. (2011). Reducing catastrophic thinking associated with pain. *Pain Management*, 1: 249 – 256.
- Ialongo-Lambin, D., Thibault, P., Simmonds, M., Lariviere, C., Sullivan, M.J.L. (2011). Repetition-induced activity-related summation of pain in patients with fibromyalgia. *Pain*, 152: 1424 – 1430.
- Sullivan, M.J.L., Lariviere, C., Simmonds, M. (2010). Activity-related summation of pain and functional disability in patients with whiplash injuries. *Pain*, 151: 440 - 446.
- Scott, W., Sullivan, M.J.L. (2010). Validity and determinants of clinicians' return to work judgments for individuals following whiplash injury. *Psychological Injury and Law*, 3, 220 - 229.
- Martel, M-O, Thibault, P., Sullivan, M.J.L. (2010). The persistence of pain behaviors in patients with chronic back pain is independent of pain and psychological factors. *Pain*, 151: 300 - 336.
- Pincus, T., Smeets, R.J., Simmonds, M.J., Sullivan, M.J.L. (2010). The fear avoidance model disentangled: Improving the clinical utility of the fear avoidance model. *Clinical Journal of Pain*, 9: 739 – 746.

Accepted/ In Press Refereed Papers

- Sullivan, M.J.L., Adams, H., Ellis, T. Targeting Catastrophic Thinking to Promote Return to Work in Individuals with Fibromyalgia. *Journal of Cognitive Psychotherapy*, in press.
- Sullivan, M.J.L., Scott, W., Trost, Z. Perceived injustice: A risk factor for problematic pain outcomes. *Clinical Journal of Pain*, in press.
- Sullivan, M.J.L., Tanzer, M., Reardon, G., Amirault, D., Dunbar, M., Stanish, W.D. The role of pre-surgical expectancies in predicting pain and function one year following total knee arthroplasty. *Pain*, in press.
- Mankovsky, T., Lynch, M.E., Clark, A.J., Sawynok, J., Sullivan, M.J.L. Pain catastrophizing predicts poor response to topical analgesics in patients with neuropathic pain. *Pain Research and Management*, in press.
- Hadjistavropoulos, T., Craig, K., Duck, S., Cano, A., Goubert, L., Jackson, P.L., Mogil, J.S., Rainville, P., Sullivan, M.J.L., Williams, A.C., Vervoort, T., Fitzgerald, T.D. A biopsychosocial formulation of pain communication. *Psychological Bulletin*, in press.
- Sullivan, M.J.L., Adams, H., Martel, M.O., Scott, W., Wideman, T.W. Catastrophizing and perceived injustice: Risk factors for the transition to chronicity following whiplash injury. *Spine*, in press.
- Gauthier, N., Thibault, P., Sullivan, M.J.L. Catastrophizers with chronic pain display more pain behaviour when in a relationship with a low catastrophizing spouse. *Pain Research and Management*, in press.
- Vervoort, T., Caes, L., Trost, Z., Sullivan, M.J.L., Vangronsveld, K., Goubert, L. Social modulation of facial pain display in high catastrophizing children: an observational study in schoolchildren and their parents. *Pain*, in press.

In Press Book Chapters

- Sullivan, M.J.L. and Martel, M.O. Processes Underlying the Relation between Catastrophizing and Chronic Pain: Implications for Intervention. In Hasenbring, M., Rusu, A. and Turk, D. (Eds.) *From Acute to Chronic Back Pain: Risk factors, Mechanisms and Clinical Implications*. Oxford: Oxford University Press, in press.
- Sullivan, M.J.L. and Mankovsky, T. Psychological Interventions for Chronic Pain. In J. Strong, A.M. Unruh, A. Wright, and G.D. Baxter (Eds) *Pain: A Textbook for Therapists*. Elsevier.

Published Book Chapters

Sullivan, M.J.L. and Wideman, T. Pain Catastrophizing and Fear of Movement: Detection and Intervention. In M.E. Lynch, K.D. Craig, and P.W.H. Peng (Eds), *Clinical Pain Management: A Practical Guide*. New York: Wiley, 2010.

Scientific and Invited Plenary Presentations:

- Sullivan, M.J.L. Managing Persistent Pain and Disability: Best Practices. 31st Annual National Workers' Compensation and Occupational Medicine Conference. SEAK Inc. Hyannis, Cape Cod, Massachusetts. July 2011
- Sullivan, M.J.L. How psychosocial intervention techniques might be incorporated into physical therapy practice. Canadian Physiotherapy Association. Whistler, BC. July 2011.
- Sullivan, M.J.L. The conceptual and empirical evolution of pain catastrophizing. CPA Distinguished contributions to psychology as a profession award address. Annual Meeting of the Canadian Psychological Association, Toronto, ON. June 2011.
- Sullivan, M.J.L. and Scott, W. The adverse impact of perceived injustice on pain outcomes: mechanisms of action. Joint Annual Scientific Meeting of the British Pain Society and the Canadian Pain Society. Edinburg, Scotland. June 2011.
- Wideman T.H. and Sullivan M. Predicting response to physical therapy for individuals with work-related injuries and symptoms of depression. Annual Meeting of the American Pain Society. Austin, TX. May 2011.
- Scott, W. and Sullivan, M.J.L. Perceived injustice moderates the relationship between pain and depression among individuals with persistent musculoskeletal pain. Annual Meeting of the American Pain Society. Austin, TX. May 2011.
- Sullivan, M.J.L. Targeting psychosocial risk factors for spinal pain. Annual Meeting of the Canadian Pain Society. Niagara Falls, ON. April 2011.
- Sullivan, M.J.L. Psychosocial Risk Factors for Pain-Related Disability: Detection and Intervention. 4th WCOMTG Current Concepts Symposium. Orthopaedic Manipulative Physiotherapy Group, a Special Interest Group of the South African Society of Physiotherapy. Stellenbosch, South Africa. April 2011.
- Scott, W., and Sullivan, M.J.L. Determining factors in the experience of perceived injustice following whiplash injury. Annual Meeting of the Canadian Pain Society. Niagara Falls, ON. April 2011.
- Sullivan, M.J.L. Targeting Psychosocial Risk Factors to Promote Return to Work Following Musculoskeletal Injury. Musculoskeletal Disorders & Chronic Pain Conference. American College of Occupational and Environmental Medicine and Canadian Institute for the Relief of Pain and Disability. Los Angeles, CA. February 2011
- Sullivan, M.J.L. Catastrophizing and Perceived Injustice as Risk Factors for Chronicity Following Whiplash Injury. 2011 Whiplash Symposium. Presented by The Centre of Clinical Research Excellence in Spinal Pain, Injury and Health in conjunction with The Centre of National Research on Disability and Rehabilitation Medicine. Brisbane, Australia. February 2011.
- Sullivan, M.J.L. Les facteurs psychosociaux et les trajectoires de récupération suite à des blessures musculo-squelettiques. Bureau des Evaluations Medicales du Quebec Montreal, QC. December 2010.
- Sullivan, M.J.L. Psychological Risk Factors in Return to Work – Strategies for Successful Outcomes. Ministry of Labour, Workers' Advisers Office (Interorganizational Training Committee) Return to Work - Return to Life Conference. Richmond, BC. December 2010.
- Sullivan, M.J.L. Risk Factors for problematic recovery; techniques for screening for risk factors. Case Manager Professional Development Conference, WorkSafeBC, Nanaimo, BC. October 2010.
- Sullivan, M.J.L. Engaging Rehabilitation Professionals in Changing their Clinical Practice Patterns The American Congress of Rehabilitation Medicine. ACRM-ASNR Joint Educational Conference, 87th annual meeting. Montreal, QC. October 2010.

Colloquia and Invited Clinical Presentations

- Targeting Psychosocial Factors to Reduce Occupational Disability. LifeTEAM Inc. Walnut Creek, California. June 2011.
- Perceived injustice as a risk factor for problematic recovery. Saskatchewan Workers' Compensation Board. Regina, SK, May 2011.

Psychosocial interventions for the prevention of pain-related disability.

Department of Health and Rehabilitation Sciences, University of Cape Town University.
Cape Town, South Africa, April 2011

PGAP : An evidence-based treatment program for reducing disability associated with

pain, depression, cancer and other chronic health conditions. VA Connecticut's Errera Community Care Center (ECCC). West Haven, Connecticut, USA, April 2011.

Les facteurs de risque psychosociaux pour la douleur et l'incapacité.

CSST. St. Jerome, QC, January 2011.

Psychosocial interventions for the prevention of pain-related disability.

Department of Physical Therapy. McGill University. Montreal, QC, November 2010.

Psychosocial interventions for the prevention of pain-related disability.

Department of Occupational Therapy. McGill University. Montreal, QC, November 2010.

Sullivan, M.J.L. Le rôle de la perception d'injustice dans la réadaptation des personnes ayant des

lésions musculo-squelettiques. Centre de Evaluation et Readaptation. Montreal, QC, November 2010.

TRAINING WORKSHOPS (Knowledge Exchange)

Formation: Détection et intervention auprès des facteurs de risques psychosociaux.

Commission de la santé et de la sécurité du travail (CSST).

- Gatineau, Quebec, April, 2011
- Montreal, Quebec, February, 2011
- Montreal, Quebec, February, 2011
- Montreal, Quebec, November 24, 2010
- Montreal, Quebec, November 23, 2010
- Quebec City, Quebec, November 9, 2010
- Quebec City, Quebec, November 8, 2010
- Quebec City, Quebec, November 5, 2010
- Quebec City, Quebec, November 4, 2010

The Progressive Goal Attainment Program (PGAP): Training Workshop

- Santa Clara, California, June 17-18, 2011
- Johannesburg, South Africa, May 07-08, 2011
- Cape Town, South Africa, May 01-02, 2011
- Toronto, Ontario, April 01-02, 2011
- Galway, Ireland, November, 2010
- Montreal, Quebec, October, 2010

The Provision of PGAP™

We would like to draw attention to the Treatment Costs Tab of the www.pdp-pgap.com website. As the number of PGAP providers increases, we are being asked by Case Managers and other Stakeholders for estimates on the time required to provide PGAP. We have developed a section on the website that should address questions in relation to the provision of PGAP. We encourage insurers and others who are funding PGAP to contact our Centre for further information and to continue to voice their concerns about PGAP treatment plans that do not follow our standardized protocol. Protecting the integrity of PGAP is of utmost importance to our Centre and we appreciate the assistance of individuals who are also concerned.

Information Updates

PGAP™ Workshops Scheduled for 2011-12

The only PGAP™ Workshop remaining for 2011 is in Winnipeg, Manitoba on November 4 & 5. The language of instruction for this workshop is English. Unfortunately, simultaneous translation is not available. Please note Dr. Sullivan will be on sabbatical in 2012. At this time, it is uncertain whether a workshop will be provided in 2012. In January 2012, once Dr. Sullivan's sabbatical plans have been finalized, we will post any workshop that may get scheduled. Until that time, we can assume this is the only workshop for the next year.

The information and registration forms are available to download from our website: www.pdp-pgap.com. At the time of publication of this Newsletter there were a few spaces remaining. If you would like to be notified about upcoming workshops, please send an email to info@pdp-pgap.com and request to be placed on the distribution list.



OFFICE VACATION DATES

The University Centre for Research on Pain and Disability will be closed from September 5 – September 19 inclusive. Telephone calls, faxed messages, emails and orders for materials will not be monitored during this time. Please feel free to leave messages which will be responded to after September 19.