

malities in the area of surgery. $N = 12,984$. Age 30–87 years, median 59. 53.4% women.

Pain intensity was reported using a 0–10 Numeric Rating Scale (0–10 NRS). Logistic regression was used to reveal any associations between pain and self-reported hyposensitivity, hypersensitivity and allodynia.

Results: 2316 individuals (17.8%) had surgery between 3 months and 3 years prior to the survey.

826 (40.4%) of the 2044 who answered a questionnaire on post-surgical pain, reported having some degree of pain in the area of surgery. Of these 826 individuals, 45.2% had pain, when at worst, of moderate or severe intensity, i.e. 0–10 NRS of 4 or higher.

The areas of surgery carrying the strongest association with persistent pain were (in descending order of frequency): (1) Shoulder/upper arm [74.5% (108/145)], (2) back [73.9% (65/88)], (3) lungs [66.7% (8/12)], (4) knee/lower leg [63.7% (179/281)], (5) hand [58.8% (90/153)], (6) hip/thigh [58.3% (74/127)] and (7) ankle/foot [58.7% (84/143)].

18.3% (413) had reduced sensitivity in the area near the surgical scar, while 10.6% (240) reported hypersensitivity and 5.6% (127) allodynia.

For those reporting hypoesthesia, the odds ratio (OR) for having pain was 2.71 (95% confidence interval 2.08–3.53), for those reporting hyperesthesia, OR was 4.82 (3.24–7.18) and for those with allodynia 5.83 (3.12–10.90).

Conclusions: 3 months or more after surgery, nearly half of the respondents report having pain in the area of surgery. In this survey, there is a strong association between persistent pain and the presence of both hyposensitivity, hypersensitivity and allodynia.

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Cost-benefit of a 13-week multidisciplinary rehabilitation course for chronic non-malignant pain patients

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Background: Economy is an important part of chronic pain.

Aim: To describe the economy in chronic non-malignant pain patients attending a 13-week Rehabilitation Program (RP).

Methods: All patients participating in the RP 2006–2008 were evaluated at baseline (BL) and at follow-up (FU) after an observation period of mean . . . month in relation to: (1) work-income (WI) or (2) transfer income (TI), comprised by: (a) sick-leave (SL), (b) sick pension (SP), (c) social benefit (SB) and (d) rehabilitation benefit (RB). The economic impact on state and county and the time to age pension was calculated.

Results: 117 patients attended the RP. At BL 23 patients had WI and 19 maintained this at FU (3 were on SP and 1 on RB). 90 patients were on TI at BL: 58 on SL at BL changed to 20 on SP+23 on WI+6 on SB+1 on RB+6 maintained SL, 12 on SB at BL changed to 6 on WI+1 on SP+5 still on SB, 7 on RB at BL changed to 6 on WI+1 on RB. The economic situation was concluded for 97 patients (83%). State expenses were increased by 540,000 Euro and county savings was 698,000 Euro. The societal savings were 158,000 Euro. The total costs for the RP was 421,000 Euro. Costs balanced savings after 2.7 years. The average time to age pension for the participating patients was 25 years. The potential accumulated savings thus amounted to 3.5 million Euros.

Conclusions: The 13-week Rehabilitation Program was highly cost effective: expenses for the program balanced savings after 3 years and the time to age pension for the participating patients was 25 years. The potential accumulated saving per patient was 30,000 Euro.

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A novel and effective treatment modality for medically unexplained pain

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Medically unexplained pain (MUP) confounds physicians, and the incidence and prevalence of these conditions is poorly documented. This is not least due to the complex nature of MUP and mimicry of morbidity with conditions that have common clinical assessment and treatment modalities, e.g. migraine headaches which stress headaches commonly are misdiagnosed as. Effective treatment modalities for MUP have been more or less non-existent. In the following we present a modality for the assessment, diagnosis and treatment of MUP that in our experience leads to cure, at least in better than half of these cases measured in terms of allowing the individual back to work. These results are at least twice as high as those described hitherto (see below), and yet, our treatment modality is beset with many obstacles, not the least of which is the intransigence of a system that will not and/or can not understand why this modality is so much better than what they are able to offer. The most important obstacle is financing, as this modality requires long term and committed financing to work. The economic implications of not dealing with these issues are described.

Keywords: Medically unexplained symptoms; Back to work

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Somatocognitive therapy in the management of chronic gynaecological pain. A review of current approach and historical background

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Introduction: We have developed somatocognitive therapy as a hybrid of Mensendieck physiotherapy and cognitive psychotherapy. Women with chronic pelvic pain (CPP) and vulvodynia (chronic pain of the vulvae and vestibulum, VD) were recruited into two separate treatment protocols as described.

Methods: 60 patients with CPP were recruited from the Department of Gynaecology at the Oslo University Hospital into a randomized, controlled intervention study. The patients were randomized into three treatment groups, receiving (1) treatment as usual, (2) somatocognitive therapy, and (3) in addition receiving cognitive therapy. The patients were assessed by means of SMT, Visual Analogue Score of Pain (VAS), and General Health Questionnaire (GHQ-30) at baseline, after three months of out-patient therapy and at 1 year follow-up. 9 women with VD were treated in an outpatient setting by physiotherapy students under senior supervision, each receiving in all 16 therapy sessions over 8 weeks, and scored for motor patterns (SMT) and pain (VAS) before and after therapy.

Results: In the control group, no significant change was found. In the group receiving somatocognitive therapy, significant reduction in pain score and improvement in motor function were found the end of therapy, and the significant improvement continued through the follow-up period. GHQ scores were significantly improved for the scores representing level of anxiety and coping, and improved for depression. In the group receiving cognitive therapy in addition, the VAS scores were reduced to the same level as the group receiving only somatocognitive therapy, whereas the motor patterns showed slightly less improvement than for those women that did not receive cognitive intervention. In the women with

VD somatocognitive therapy resulted in significantly reduction in pain scores (by an average of 66%), and significant improvement of motor patterns, especially for the scores for gait (56%) and respiration (88%).

Conclusions: Somatocognitive therapy is a new approach that appears to be very promising in the management of chronic gynaecological pain.

Short-term out-patient treatment significantly reduces pain scores and improves motor function, especially with respect to respiration, gait and movement (ability to relax).

The approach is now being used in a randomized, controlled intervention study including patient with chronic low back, neck and shoulder, and widespread pain.

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The Manual Intervention Trial (MINT)—The effect of various combinations of naprapathic manual therapy. The study protocol of a randomized controlled trial

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Objective: Naprapathy is defined as a specific system for examining, diagnostics, manual treatment and rehabilitation of pain/dysfunction in the neuromusculoskeletal system. The therapy aims to reduce pain and dysfunction through treatment of the connective tissue, muscle- and neural tissue in/around the spine and other joints, by a combination of manual techniques. Earlier trials show that Naprapathy is effective for patients with unspecific back/neck pain. The current trial aims to compare the effect of three combinations of Naprapathic manual therapy (NMT) on such pain, to examine prevalence, severity and duration of adverse reactions after NMT, and to identify subgroups of patients who have greater benefit from the treatments.

Methods: A randomized controlled trial with three arms (target number: 1050 patients). *Inclusion criteria:* Patients 18–65 years at the student clinic at The Scandinavian College of Naprapathic Manual Medicine with a new episode of non-specific neck and/or back pain (duration \leq one week). *Exclusion criteria:* Pain < 2 on a 10 point NRS, pregnancy, contraindication for spinal manipulation, recent trauma, specific diagnosis, red flags, recent treatment.

Treatment arms (all given by students in year 4): NMT (a combination of soft tissue techniques, stretching, and spinal manipulation/mobilization), NMT but not spinal manipulation and NMT but not stretching (treatment or advice).

Patients will get up to 6 treatments within 6 weeks. They will get questionnaires about adverse reactions at new appointments and web based or postal questionnaires regarding the outcomes four times within a year.

Primary outcomes: Pain/disability and prevalence; duration and intensity of possible adverse reactions. *Secondary outcomes:* Quality of life and perceived recovery.

Results: A pilot trial of 75 patients is finished. The main trial will take place in March 2010 to December 2012. We will report on the process and on the characteristics of the 75 included patients in the pilot trial.

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The experience of chronic pain, loss and grief

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Introduction: Based on a theoretical framework which integrates grief theory, cognitive behavioural therapy (CBT) and writing theory, 1–2 an intervention for persons experiencing loss and grief caused by chronic pain or death of someone close is planned. There seems to be lack of understanding of the connections between pain, loss and grief and how these life phenomena can be met in patient care. Understanding the process involved in one sort of grief following loss may help us understand the processes involved in another. Increased understanding of this complexity may contribute to suitable approaches in practice.

Methods: This is a mixed method design 3:

1. Qualitative theoretical study (literature review) 1–2
2. Intervention study (questionnaires and interviews):
 - a. A CBT approach and writing as tools for managing grief and loss related to chronic pain
 - b. A CBT approach and writing as tools for managing grief and pain related to loss by death

A structured group approach following a fixed plan. Participants: 100 with chronic pain and 40 bereaved adults are included.

Results: (1) A comparison between two previous interventions dealing with chronic pain and grief caused by death, indicate common main themes like “relearning the world” and “adaptation”. Between these themes a continuous movement emerges involving several typical experiences. (1) Life phenomena grief, loss and chronic pain seem to have many qualities in common, they may overlap, and a “common core” is identified. (2) Based on this core, a group programme, which integrates CBT and writing theory is suggested.

2. The intervention study based on these findings will be initiated April 2010.

Conclusion: This theoretical framework might offer an integrated fundament for health care workers. There is a value in future research to consider together as well as separately different kinds of losses. The results from our theoretical study will form a new platform for intervention programmes.

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Effect of buprenorphine and fentanyl in experimental induced superficial, deep and hyperalgesic pain

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Chronic pain and hyperalgesia can be difficult to treat with classical opioids acting predominately at the μ -receptor. Some opioids have different receptor binding profiles and different analgesic and anti-hyperalgesic effects. Buprenorphine and its metabolites are believed to exert the analgesic action through μ -, κ - and δ -receptors. They may therefore possess another analgesic profile compared to other opioids with a more mono-receptor binding profile such as fentanyl. In the present study 22 healthy volunteers were randomized to treatment with transdermal fentanyl (25 μ g/h, 72 h), buprenorphine (20 μ g/h, 144 h) or placebo in a crossover experimental pain study. The experimental pain tests (phasic and tonic pain, sensitization) involved pressure at the tibial bone, intramuscular nerve growth factor (NGF), UVB burn injury