Psychosocial subgroups in patients with chronic pain: 
Evidence for maladaptive pain-related coping within the dysfunctional group based on the Multidimensional Pain Inventory

Adina Rusu* & Monika Hasenbringb

*Royal Holloway, University of London, U.K. & bRuhr-University Bochum, Germany

Introduction

- Researchers have pointed out the need to detect distinct subgroups to tailor interventions in order to improve outcome.
- Evidence for the robustness & accuracy of MPI subgroups across different medical diagnoses as well as support for the predictive validity of the MPI subgroups.
- Turk & Rudy (1988) identified three distinct clusters, labeled as Dysfunctional (DYS), Interpersonally Distressed (ID) and Adaptive Copers.

Aims

Although it is assumed that the DYS group is associated with dysfunctional coping, there exists, as yet, relatively little systematic knowledge about the relationship between DYS patients and dysfunctional pain-related coping strategies.

In particular groups were compared on patterns of:
- pain-related fear-avoidance coping (anxiety/depression; help/hopelessness; catastrophizing; avoidance of social; avoidance of physical activity) and
- endurance coping (positive mood; thought suppression; endurance behavior) based on the avoidance-endurance model (Hasenbring, 2000).

Method

Sample
- Participants were 120 outpatients with non-malignant chronic back pain; recruited in three general practices by GP’s.
- 53% female and 47% male.
- Average age M = 46.2 years (SD = 11.12, range 19 - 69).
- 75% married.
- 75.9% LBP, 18.3% cervical pain, 2.5% thoracic pain, 3.3% other sites.
- Average pain duration was 82.2 months (SD = 99.23), equivalent of 6.8 years.
- 68.3% were employed at time of recruitment.

Measures
- Patient background variables, pain history and pain intensity.
- Multidimensional Pain Inventory-German version (MPI-D).
- Kiel Pain Inventory (KPI) for the fear-avoidance and endurance variables.
- Depression Beck Inventory (BDI).

Statistical analyses
- The MPI computer program (Rudy, 2004) was used to classify patients’ MPI responses into the profiles.
- Differences between MPI-D subgroups, fear-avoidance and endurance variables were analyzed with multivariate analyses of variance (MANOVA), Bonferroni post-hoc tests and multivariate analyses of covariance (MANCOVA).
- BDI sum scores and pain intensity were used as covariates.
- 88% (n = 106/129) of patients were identified by the MPI program as one of the three main profiles. The program classified 19 patients as DYS, 13 as ID and 74 as AC. Additionally, patients with anomalous (n = 7) and hybrid (n = 7) data were identified.

Results

Figure 1. MPI-D scale scores for the DYS, ID and AC profile.

Figure 2. Fear-avoidance variables: means and results of the univariate effects among the three patient subgroups.

Figure 3. Endurance variables: means and results of the univariate effects among the three patient subgroups.

Conclusion

- DYS patients reported more anxiety/depression, help-/hopelessness and catastrophizing than did those classified as AC.
- DYS patients showed more thought suppression compared to the AC.
- However, contrary to our hypotheses, subgroups did not differ significantly with regard to endurance behavior and avoidance of social and physical activities.
- Despite their preliminary nature, our findings shed new light on the complex relation between pain-related fear-avoidance coping and endurance coping. However, further studies are needed to investigate the contribution of the Thought Suppression Scale and Behavioral Endurance Scale within the MPI groups.

Contact details

Adina Rusu
Consultant Clinical Psychologist
Department of Psychology
Royal Holloway, University of London
Egham, Surrey TW20 OEX
Tel: +44 (0)7910 271799
E-mail: adina.rusu@rhul.ac.uk, www.rhul.ac.uk