苦

Beyond a Physical Symptom: The Importance of Psychosocial Factors in Multiple Sclerosis Pain

Harrison, A.M., Silber, E., McCracken, L.M. & Moss-Morris, R.
Health Psychology Section, Institute of Psychiatry, King's College London
Funded by the Multiple Sclerosis Society

MS — Multiple Sclerosis Society

KING'S College LONDON

Pain affects around two-thirds of people with Multiple Sclerosis (pwMS). Biomedical treatments show limited efficacy. A recently developed cognitive-behavioural model of Multiple Sclerosis (MS) pain suggests several psychosocial factors may worsen pain and related disability[1]. Whilst a number of studies have revealed relationships between some of the identified psychosocial factors in the model, such as depression and catastrophizing about pain[1, 2], few have looked at multiple psychosocial factors conjointly to examine which are most important. It is also unclear as to whether psychological correlates of pain are the same for neuropathic and non-neuropathic pain in MS.

Aims

1 Describe the type and severity of pain experienced by pwMS, how interfering pain is in relation to other symptoms, and use of medications to control pain.

2 Determine the contribution of several potentially modifiable cognitive, behavioural and emotional factors drawn from our previous MS pain model to pain severity and pain interference when controlling for measures of disease severity.

3 Conduct sensitivity analysis to determine the contribution of the cognitive-behavioural variables when anxiety and depression are removed.

4 Examine potential differences in patterns of regression findings between pwMS with neuropathic (due to nerve damage) and non-neuropathic (musculoskeletal) pain.

Methods

608 pwMS experiencing pain completed a nationwide cross-sectional survey (sources: National Health Service, MS UK Register and MS Society) including valid and reliable psychometric instruments:

➢ Self-administered Expanded Disability Status Scale (EDSS-S)
➢ Brief Pain Inventory Short Form (BPI)
➢ Self-report Leeds Assessment of Neuropathic Signs and Symptoms (S-LANSS)
➢ Hospital Anxiety and Depression Scale (HADS)
➢ Pain Catastrophizing Scale (PCS)
➢ Illness Perceptions Questionnaire-Revised (IPQ-R)
➢ Cognitive Fusion Questionnaire (CFQ)
➢ Avoidance-Endurance Questionnaire Pain-related Behavioural Responses Scale (AEQ)
➢ Chronic Pain Acceptance Questionnaire (CPAQ-8)

Results
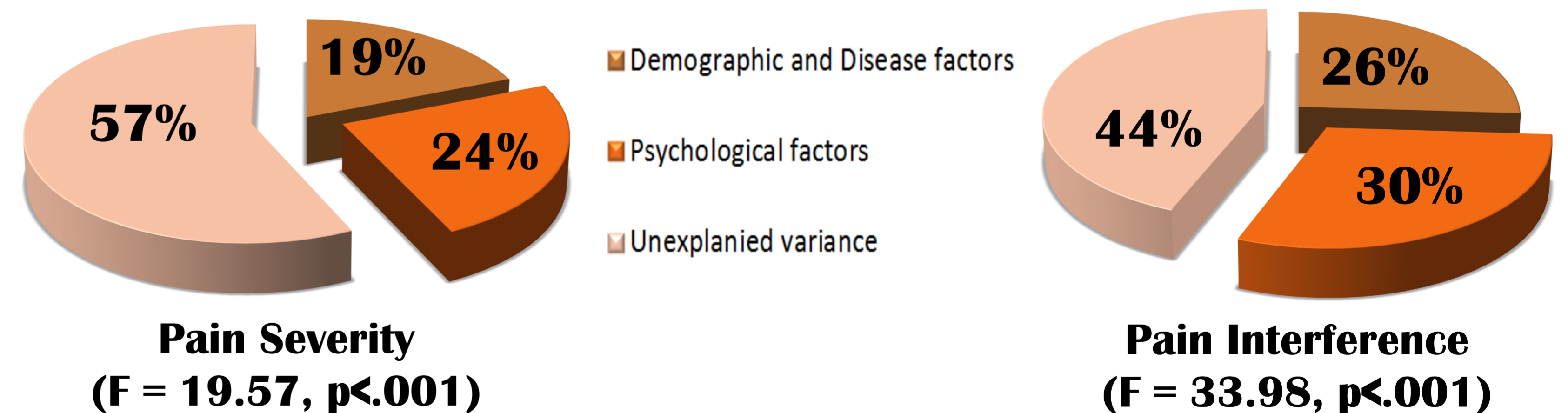
Sample (n = 608):
Demographic ad disease characteristics:
▪ Age M = 52.4 ± 11
▪ 74.3% Female
▪ 47% Relapsing Remitting MS
▪ EDSS-S Mobility M = 5.9 ± 1.3
▪ Disease duration years M = 12.8 ± 9.4
▪ 16.2% experiencing a current relapse

Pain characteristics:
▪ 70% Pain severity ≥3 (moderate to severe)[3]
▪ Pain Interference M =4.8 ± 2.5 (4th most interfering MS symptom)
▪ 96.3% pain duration >6 months (i.e. chronic)
▪ 342 (56%) Neuropathic pain (S-LANSS)
▪ HADS M = 15.6 ± 7.0 (>11 depression and anxiety)
▪ 93% used pain medication (72% used more than two)
▪ 49.7% ± 29.6 pain relief from medications.

Correlations (p >.01** p >.05*):	Pain Severity	Pain Interference
Depression/Anxiety	.35**	.52**
Pain catastrophizing	.38**	.51**
Cognitive fusion	.11**	.31**
Acceptance	-.29**	-.50**
Timeline	.43**	.33**
Consequences	.45**	.63**
Personal control	-.22**	-.20**
Avoidance (social activity)	.23**	.45**
Avoidance (physical activity)	.19**	.34**
Behavioural endurance	.06	-.09*

Multivariate Regression Analyses:

Pain Severity: 57% Unexplained variance, 19% Demographic and Disease factors, 24% Psychological factors
Pain Interference: 44% Unexplained variance, 26% Demographic and Disease factors, 30% Psychological factors

Legend: ■ Demographic and Disease factors ■ Psychological factors ■ Unexplained variance

Pain Severity (F = 19.57, p<.001)   **Pain Interference** (F = 33.98, p<.001)

On removing the HADS, cognitive-behavioural factors still accounted for 23% and 28% of the variance in pain severity and pain interference. Pain type interaction terms (using the S-LANSS) did not significantly contribute any additional variance to the model.

Conclusions

european journal of neurology — the official journal of the european academy of neurology

▪ Most pwMS reported significant pain and associated disability even though over 90% were taking pain medication.

▪ Consistent with our MS pain model[1], and other chronic pain conditions[4,5], psychological factors predicted a significant amount of the variance in pain severity and pain interference even after controlling for demographic and disease factors.

▪ Psychosocial factors identified in the current study reflect specific targets of well-established traditional and contextual cognitive-behavioural treatments, which demonstrate good efficacy in primary chronic pain populations. Therefore, designing an intervention based on these approaches and the refined MS pain model has the potential to reduce pain severity and improve pain-related functioning for pwMS.

[1]Harrison AM, McCracken LM, Bogosian A, Moss-Morris R. Towards a Better Understanding of MS Pain: A Systematic Review of Potentially Modifiable Psychosocial Factors. J Psychosom Res. 2015;78:12-24.
[2]Harrison AM, Bogosian A, Silber E, McCracken LM, Moss-Morris R. 'It feels like someone is hammering my feet': Understanding pain and its management from the perspective of people with multiple sclerosis. Multiple Sclerosis Journal. 2014;21 (4):466–76.
[3]Alschuler KN, Jensen MP, Ehde DM. Defining mild, moderate, and severe pain in persons with multiple sclerosis. Pain medicine (Malden, Mass). 2012;13(10):1358-65.
[4]Jensen MP, Moore MR, Bockow TB, Ehde DM, Engel JM. Psychosocial Factors and Adjustment to Chronic Pain in Persons With Physical Disabilities: A Systematic Review. Arch Phys Med Rehabil. 2011;92(1):146-60. Pincus T,
[5]Burton AK, Vogel S, Field AP. A systematic review of psychological factors as predictors of chronicity/disability in prospective cohorts of low back pain. Spine. 2002;27(5):E109-E20.

Anthony.harrison@kcl.ac.uk