



Prevalence and comorbidity of pain symptoms in the general population

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Background

Most pain studies focus on specific disorders. Therefore it is hard to compare characteristics of different pain symptoms.

Here, we investigate how eight different pain sites are related to each other, to sex and age, and to anxious depression.

Methods

We analyzed questionnaire data from a population-based cohort of Dutch twin families (N = 11,787).

Occasional and frequent pain was assessed at eight anatomical sites: back, neck, head, abdomen, joints, chest, teeth and face.

Anxious depression was measured with the Adult Self Report scale (Achenbach, 1997).

Results

Sex differences – All pain types except chest pain and toothache were more common in women. The strongest association was found for headache and abdominal pain. Women were also more likely than men to report frequent pain.

Age – Joint pain showed a strong increase with age. Headache and abdominal pain decreased with age. Most other pain types were only weakly related to age (Fig. 1).

Comorbidity – We observed highly consistent patterns of comorbidity. Having any type of pain was associated with an increased the risk of any other type of pain (Table 1). Pain at all measured sites was significantly associated with anxious depression. Especially frequent and widespread pain (i.e. pain at multiple sites) was associated with anxious depression.

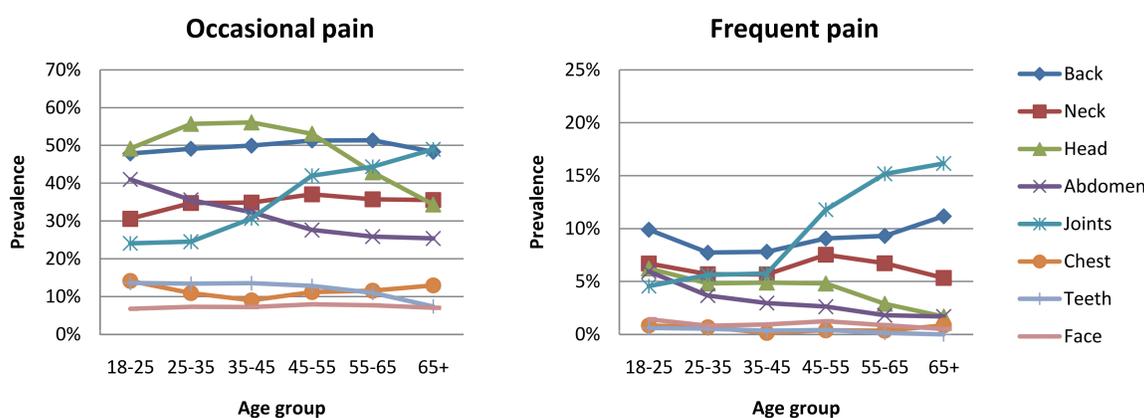


Figure 1. Prevalence of pain by age group and frequency.

Table 1. Polychoric correlations between pain sites.

	Back	Neck	Head	Abd.	Joints	Chest	Teeth	Face
Back	1.00							
Neck	0.48	1.00						
Head	0.29	0.44	1.00					
Abdomen	0.26	0.30	0.38	1.00				
Joints	0.35	0.38	0.19	0.18	1.00			
Chest	0.23	0.28	0.23	0.34	0.27	1.00		
Teeth	0.10	0.13	0.14	0.18	0.10	0.18	1.00	
Face	0.26	0.41	0.38	0.33	0.30	0.33	0.25	1.00

All correlations were significant (P < .001). Red indicates high correlations, green indicates low correlations.

Conclusions

How pain is related to sex and age strongly depends on the location of the pain. All pain symptoms are associated with increased risk of all other pain symptoms, and with anxious depression, suggesting an important role of anxious depression in pain, regardless of anatomical site.