Comorbidity of Anxiety Disorders with General Medical Conditions in the US National Comorbidity Survey

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Objective:

- Although, depression has clearly been demonstrated to be associated with general medical conditions, few studies have examined whether anxiety disorders are independently associated with medical conditions after adjusting for comorbid mental disorders.
- We examined the relationship between anxiety disorders and a wide range of general medical conditions in a nationally representative sample.

Methods:

- Data came from the National Comorbidity Survey (N=5,877; age 15-54 years, response rate 82.4%).
- The Composite International Diagnostic Interview was used to make DSM-III-R mental disorder diagnoses.
- General medical conditions were assessed on the basis of self-report.
- All analyses utilized multiple logistic regression to examine the relationship between past year anxiety disorder diagnosis and past year general medical condition.

Results:

- Anxiety disorders were positively associated with general medical conditions after adjusting for depression, substance use disorders and sociodemographics.
- Among those with one or more general medical conditions, comorbid anxiety disorders were associated with an increased likelihood of disability and past 30 day role impairment after adjusting for severity of pain.
- Among specific anxiety disorders, posttraumatic stress disorder, panic attacks and agoraphobia were more likely to be associated with specific medical conditions than generalized anxiety disorder, social phobia or simple phobia.

Table 1. Hierarchical multiple logistic regression analyses examining the relationship between each anxiety disorder with general medical conditions.

Past Year General Medical Conditions	Past Year Anxiety Disorder Diagnosis					
	PTSD[a] (n=223)	Panic attacks (n=249)	Agoraphobia without panic (n=160)	GAD[b] (n=172)	Social Phobia (n=474)	Simple Phobia (n=516)
	AOR[c]	AOR	AOR	AOR	AOR	AOR
Any neurological condition (epilepsy, multiple sclerosis, stroke) [n=173]	2.84**	1.83	1.76	1.13	0.83	1.35
Any vascular condition (hypertension, cardiac disease) [n=508]	1.80*	2.29**	2.54**	1.05	1.11	0.84
Any respiratory condition (asthma, tuberculosis, bronchitis, or other lung problems) [n=309]	1.46	1.70	1.05	1.35	0.95	1.64**
Any gastrointestinal disease (ulcer, stomach problems, hernia, liver or kidney disease) [n=346]	1.96*	1.21	1.72	1.74*	1.41	1.43
Any metabolic/autoimmune condition (diabetes, thyroid disease, lupus or other autoimmune disease) [n=203]	3.26**	0.83	2.03	1.45	1.92**	0.99
Any bone or joint condition (arthritis, rheumatism, or other bone/joint disease) [n=382]	2.52**	2.02**	2.27*	1.07	0.96	1.24
Any one or more past year general medical condition (includes above conditions and AIDS, cancer, "other") [n=1726]	2.37**	1.73**	1.68*	1.10	1.26*	1.32

a Posttraumatic stress disorder
b Generalized anxiety disorder
c Adjusted odds ratios (adjusted for age, gender, low income, education, past year major depression, past year alcohol use disorder, past year substance use disorder and all the other anxiety disorder in the Table)
*p<0.05; **p<0.01

Table 2. Multiple logistic regression analyses among individuals with one or more medical conditions (n=1726).

Independent Variables	Disability due to medical problems		Number of days of role impairment in the past 30 days	
	Little or None (n=1273)	Some or a lot (n=453)	Zero (n=991)	One or more (n=735)
	AOR[c]	AOR	AOR	AOR
Past year major depression	1	1.61 (1.11-2.35)*	1	1.96 (1.37-2.82)**
Past year alcohol abuse or dependence	1	0.87 (0.63-1.21)	1	1.09 (0.77-1.56)
Past year substance abuse or dependence	1	1.54 (1.01-2.35)*	1	2.03 (1.22-3.36)**
Hi levels of pain due to medical condition	1	7.19 (4.86-10.64)**	1	2.58 (1.68-3.97)**
Past year anxiety disorder	1	1.57 (1.27-1.95)**	1	1.47 (1.10-1.96)**

Conclusions:

- **There is a strong, unique, association between anxiety disorders and general medical conditions.**
- **Among the anxiety disorders, posttraumatic stress disorder, agoraphobia and panic are particularly important to consider in patients with general medical conditions**

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