# Comorbidity in Social Anxiety Disorder: Impact on Disease Burden and Management

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Social anxiety disorder is a chronic, disabling disorder in which patients suffer with considerable morbidity that, more often than not, precedes the development of other psychiatric disorders. The development of comorbidity adds to the severity of the disorder, increases the risk of suicide attempts, and increases the overall burden of the disease for both the patient (greater disability) and the health care service (greater use of medical services). Comorbidity in social anxiety disorder may result in one good thing: increased recognition and treatment, because in the absence of comorbidity the level of recognition of the disorder is very low. However, the disorder is rarely recognized correctly and, consequently, patients are often offered inappropriate treatments. Given the degree of disability caused by social anxiety disorder, whether "pure" or comorbid, there is a need for improved education of both doctors and patients regarding its status as a disorder and its treatment.

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Social anxiety disorder (social phobia) is increasingly recognized as one of the more common anxiety disorders. Data collected from primary health care clinics in Paris from a study conducted in parallel to the World Health Organization (WHO) Study on Psychological Problems in General Health Care demonstrated a lifetime prevalence of 14.4% and a 1-month prevalence of 4.9%,[1] which makes it the third most frequent disorder after depression (10.4%) and generalized anxiety disorder (7.9%).[2] These rates are consistent with those encountered in the general population in the National Comorbidity Survey.[3] The disorder seldom occurs in patients in its "pure" form and it has been estimated that 70% to 80% of patients with social anxiety disorder have at least one other psychiatric disorder.[4–6]

This article explores the burden of social anxiety disorder, both for the patient and the community. Particular reference will be made to data from the French primary care study, the design, methodology, and results of which have been presented elsewhere.[1,4,7] The consequences of comorbidity on the recognition and management of social anxiety disorder will also be discussed.

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## WHAT ARE THE COMMON COMORBIDITIES IN SOCIAL ANXIETY DISORDER?

The common comorbid disorders associated with social anxiety disorder have been reported in epidemiologic studies conducted in the general population. For example the Epidemiologic Catchment Area (ECA) study, based on a United States community sample of more than 18,000 adults, reported that 59% of subjects with social anxiety disorder had simple phobia, 45% agoraphobia, and 17% major depression.[6] In addition, 19% and 13% of subjects, respectively, regularly abused alcohol or drugs.

The prevalence of comorbid depression with social anxiety disorder was found to be considerably higher in the French primary care sample than that reported in the general population. A major depressive episode was present in 33% of patients with current social anxiety disorder, while 27% met the criteria for generalized anxiety disorder and 19% for agoraphobia. Considering lifetime diagnoses, an association of social anxiety disorder with major depression was reported in 44%, and with agoraphobia in 19%, of patients[1] (Table 1). When comorbidity with other psychological disorders (e.g., eating disorders, posttraumatic stress disorder) is also considered, the proportion of patients with pure social anxiety disorder may be less than 20%. For example, lifetime and current prevalence rates from one study illustrated that more than 50% of young adults with anorexia nervosa or bulimia nervosa have comorbid social anxiety disorder.[8]

### Temporal Relationships

The onset of social anxiety disorder during early adolescence and infancy is a robust finding.[6,9] Part of the dis-

**Table 1. Lifetime Comorbidity of Social Anxiety Disorder With Other Anxiety Disorders and Depression in General Health Care***

| Comorbidity | Social Anxiety Disorder (%) | No Social Anxiety Disorder (%)[b] | Odds Ratio | 95% Confidence Interval |
|---|---|---|---|---|
| Any of below | 52.6[a] | 29.4 | 2.67 | 1.5 to 4.7 |
| Agoraphobia | 19.2[a] | 7.8 | 2.81 | 1.3 to 6.0 |
| Panic disorder | 5.2 | 3.5 | 1.53 | 0.4 to 5.5 |
| Major depression | 44.2[a] | 24.5 | 2.44 | 1.4 to 4.3 |

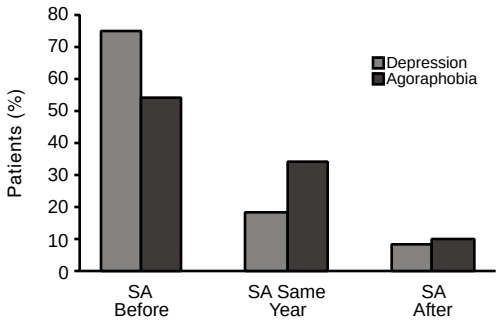
*Adapted from reference 1.
[a]p<.05 versus no social anxiety disorder.
[b]Estimated percentage in the initial sample of consecutive attenders.

**Table 2. Comorbidity and Age at Onset in Social Anxiety Disorder***

| Comorbidity | Patients, % | |
|---|---|---|
| | Age < 15 years | Age ≥ 15 years |
| Depressive episode | 70.0 | 40.0 |
| Generalized anxiety disorder | 15.8 | 33.3 |
| Agoraphobia | 21.1 | 23.1 |
| Alcoholism | 40.0 | 13.0 |

*Data from reference 11.

**Figure 1. The Sequence of Development of Social Anxiety Disorder (SA), Depression, and Agoraphobia in a French Primary Care Sample***




*Data from reference 1.

**Table 3. Characteristics of and Impairment in Patients With "Pure" Social Anxiety Disorder and Control Subjects With Chronic Physical Illness***

| Variable | Pure Social Anxiety Disorder (% patients) (N=65) | Control Subjects[a] (% patients) (N=65) |
|---|---|---|
| Sociodemographic parameters | | |
| Never married | 48 | 32 |
| Divorced | 17 | 8 |
| Unemployment | 11 | 3 |
| Homemakers | 3 | 12 |
| Impairment (SF-36) | | |
| Severe | 23.1 | 1.5 |
| Marked | 24.6 | 3.1 |
| None | 52.3 | 95.4 |

*Data from reference 12. Abbreviation: SF-36 = Short Form 36-item scale.
[a]Control subjects were selected from a database of patients with chronic herpes infections.

ability induced by social anxiety disorder may be a consequence of this very early burden. The temporal relationship between social anxiety disorder and comorbid psychological disorders was investigated in the French primary care study. Social anxiety disorder was found to precede major depression by at least 1 year in 75% of all patients with a lifetime diagnosis of social anxiety disorder, whereas in 15% of patients both conditions had an onset in the same year[1] (Figure 1). Similar findings were reported for the sequence of development of comorbid agoraphobia[1] and eating disorders in young adults.[8]

The observation that social anxiety disorder is predictive of the development of other psychological disorders warrants further investigation; an analogy with the predictive value of panic attacks for the development of further psychological disorders may be drawn.[10]

A further observation of considerable interest is the finding that the prevalence of comorbid depression and also of alcoholism or alcohol abuse is much higher in patients with early-onset (< 15 years of age) social anxiety disorder than in patients who develop the disorder at 15 years of age or later[11] (Table 2). In contrast, the prevalence of agoraphobia did not distinguish between the 2 groups, while generalized anxiety disorder appears to be more prevalent in patients who develop the disorder at a later age.

## HOW DOES COMORBIDITY AFFECT THE BURDEN OF SOCIAL ANXIETY DISORDER?

### Functional Ability

Social phobia is a very disabling condition. Wittchen and Beloch[12] demonstrated that primary care patients with pure social anxiety disorder still experienced a significant degree of disability. They were more impaired than age- and sex-matched control subjects who had a chronic physical illness, and the worst impairment was in the areas of partner and family relationships, education and career development, and household or work management. In accordance, the number of patients with social anxiety disorder who had never married was higher, divorce was more common, and unemployment rate was elevated (Table 3) as compared with controls.[12]

In the French primary care study, more than 50% of the patients who met the criteria for social anxiety disorder had moderate or severe disability in areas relating to adjustment to daily routine and performance. They had greater difficulty in carrying out daily activities and in their contact with other people than did patients with no disorder. On average, patients with social anxiety disorder reported 5.4 disability days in the previous month, compared with a mean of 2.3 disability days in the control group.[4]

That the presence of comorbid depression leads to an even greater level of patient disability has been demon-

Table 4. Social Disability Linked to Social Anxiety Disorder With and Without Comorbid Depression (Unweighted Figures)*

| Variable | Social Anxiety Disorder | | |
|---|---|---|---|
| | With Depression (N =22) | Without Depression (N =16) | Control Subjects (N =152) |
| Social Disability Schedule, % patients with moderate/ severe disability | | | |
| Adjustment to daily routine | 75.0[a] | 33.3 | 22.5 |
| Performance | 62.5[a] | 53.3[a] | 19.1 |
| Contact with other people | 37.5[a] | 40.0[a] | 10.7 |
| Other daily activities | 72.7[a] | 26.7 | 20.4 |
| Disability, d (mean in past month) | 9.6[a] | 1.4 | 1.9 |
| Symptomatic severity (mean (GHQ-28 score) | 16.3[b,c] | 8.3[b] | 3.5 |
| Overall health (% fair or poor) | 77.3[b,c] | 43.8[b] | 12.7 |
| Harmful use of/dependence on alcohol (%) | 31.8 | 25.0 | … |
| History of suicide ideation, % | 77.3[b] | 50.0[b] | 14.5 |
| History of suicide attempts, % | 45.5[c] | 6.3 | 5.3 |

*Data from reference 4. Abbreviation: GHQ-28 = 28-item General Health Questionnaire. Symbol: …= figures too low for calculation of a relevant percentage.
[a]p<.01 versus control subjects.
[b]p<.05 versus control subjects.
[c]p<.05 versus subjects with social anxiety disorder without depression.

strated in the French primary care sample (Table 4). More than 70% of the patients in the comorbid group had moderate or severe disability in domains relating to adjustment to daily routine and impact on daily activities; in the group with social anxiety disorder in the absence of depression, the proportion of patients with the same level of disability was closer to 30%. The influence of major depression on the number of disability days was also striking: patients in the comorbid group reported 9.6 disability days in the past month compared with only 1.4 disability days in the group without depression. Only "contact with other people" was impaired at a comparable level whether or not depression was comorbid with social anxiety disorder. This finding is logical since it refers to the phobic symptomatology per se.

### Symptom Severity

The symptom severity of the French primary care sample who met the criteria for social anxiety disorder has also been reported by Lecrubier and Weiller.[4] The subjects had moderate symptom severity, with a significantly higher score on the 28-item General Health Questionnaire (GHQ-28)[13] than subjects without social phobia (9.0 vs. 4.4; $p < .05$). In addition, 64% of subjects with social anxiety disorder judged their overall health as fair or poor, compared with only 21% of the control group.

In patients with social anxiety disorder and a comorbid major depressive episode, symptomatic severity was even higher than in those without depression (mean GHQ-28 score = 16.3 vs. 8.3; $p < .05$) (Table 4).[4] Furthermore, significantly more patients with comorbid depression judged their overall health to be fair or poor, compared with those subjects without a comorbid depressive disorder (77% vs. 44%; $p < .05$).

### Alcohol Use or Dependence

Several epidemiologic studies conducted both in the community[6,9,14] or in a primary care sample[4] have reported that alcohol use or dependence is higher in subjects with social anxiety disorder than in matched control subjects.

Analysis of data from the French primary care study according to the presence or absence of a major depressive episode showed that comorbid depression had no effect on the prevalence of alcohol use or dependence in patients with social anxiety disorder (31.8% vs. 25.0%; p = N.S.) (Table 4). Therefore, alcohol abuse is directly linked to the presence of social anxiety disorder and not to depression.

### Suicidality

Social anxiety disorder is associated with increased rates of suicidal ideation, as reported by epidemiologic studies conducted both in the community and in primary care[4,6]; however, suicide attempts are not reported to be associated with uncomplicated social anxiety disorder in either sample. In contrast, a greatly increased prevalence of suicide attempts has been reported in subjects in the community with comorbid social anxiety disorder.[6]

The influence of comorbid major depression on the reported rates of suicidal ideation and suicide attempts in the French primary care patients is displayed in Table 4. Suicidal ideation was reported in both the uncomplicated social anxiety disorder patients and the comorbid group; however, the patients with comorbid depression had a history of significantly more suicide attempts than did those without depression (45.4% vs. 6.3%; $p < .05$).

It would appear that suicidal ideation is associated with social anxiety disorder, whereas suicide attempts are linked with the presence of comorbid depression. However, the prevalence of suicide attempts is lower in patients with pure depression. An analogy can be drawn with the situation in panic disorder, in which patients who attempt suicide are significantly more likely to have a comorbid depressive disorder than those who show no suicidal behavior.[15]

### Use of Health Care Services

Despite the significant level of disability and symptom severity associated with social anxiety disorder, Schneier et al.[6] found in their community sample that only 5% of patients with uncomplicated social anxiety disorder sought help from a mental health specialist, and only 20% of subjects utilized outpatient services of any kind. This level of treatment utilization did not differ from that re-

**Table 5. Use of Health Care Services in "Pure" and Comorbid Social Anxiety Disorder***

| Treatment Sought | Rate per 100 Patients With Social Anxiety Disorder: "Pure" (N =112) | Comorbid (N =249) | No Disorder (N =9953) |
|---|---|---|---|
| Any outpatient | 19.6 | 51.0 | 14.7 |
| Medical outpatient | 17.0 | 28.9 | 9.2 |
| Psychiatric outpatient | 5.4 | 37.8 | 7.9 |
| Emergency department | 1.8 | 11.2 | 1.4 |
| Psychiatric inpatient | 0.9 | 13.7 | 1.5 |

*Data from reference 6.

**Table 6. Recognition of Social Anxiety Disorder by General Practitioners***

| Variable | Social Anxiety Disorder: With Depression (N =18) % | Social Anxiety Disorder: Without Depression (N =18) % | Other Anxiety Disorder and No Depression (N =39) % | No Anxiety Disorder and No Depression (N =235) % |
|---|---|---|---|---|
| Psychological problems as main reason for contact | 61.1[a] | 5.6[b] | 15.4[b] | 7.2 |
| Patients identified as presenting with | | | | |
| Any psychiatric disorder | 76.5[a] | 46.7 | 64.9[a] | 32.6 |
| An anxiety disorder | 11.1 | 40.0[a,b] | 18.9 | 12.8 |

*Adapted from reference 1.
[a]p<.05 versus no anxiety disorder and no depression.
[b]p<.05 versus social anxiety disorder with depression.

ported by subjects with no psychiatric disorder. In marked contrast, over 50% of subjects with comorbid social anxiety disorder sought outpatient treatment, and 38% of the comorbid group utilized psychiatric outpatient services. Comorbidity in social anxiety disorder thus leads to an increased level of treatment utilization and to a greater access to patients suffering from social anxiety disorder (Table 5).

## COMORBIDITY AND RECOGNITION OF SOCIAL ANXIETY DISORDER

Weiller et al.[1] reported that the ability of general practitioners to identify psychological problems was much higher in primary care subjects with social anxiety disorder and comorbid depression than in those with social anxiety disorder alone (76.5% vs. 46.7%). This may be related to the finding that subjects with the comorbid condition frequently present with a psychological problem, whereas subjects with social anxiety disorder (in the absence of depression) rarely give a psychological reason for contacting their general practitioner (61.1% vs. 5.6%, respectively) (Table 6). The level of discrimination by general practitioners of psychological problems in subjects with social anxiety disorder is low; the presence of comorbid depression raises the awareness of the general practitioners to the psychological problems; however, the subjects are not necessarily correctly diagnosed.

**Table 7. Treatments Offered to Patients With Social Anxiety Disorder***

| Treatment | Social Anxiety Disorder: With Depression (N =18) % | Social Anxiety Disorder: Without Depression (N =18) % | Other Anxiety Disorder and No Depression (N =39) % | No Anxiety Disorder and No Depression (N =235) % |
|---|---|---|---|---|
| Any psychotropic drug | 70.6[a] | 23.5[b] | 50.5[a] | 19.1 |
| Anxiolytics | 35.3[a] | 17.6 | 34.2[a] | 7.0 |
| Antidepressants | 29.4[a] | …[b] | 7.9[b] | 2.6 |
| Hypnotics | 17.6[a] | 5.9 | 7.9 | 2.6 |
| Other drugs | 35.3[a] | 11.8 | 28.9[a] | 14.3 |
| Any nondrug treatment | 47.1[a] | 17.6 | 31.6 | 19.1 |

*Adapted from reference 1. Symbol: … =figures too low for calculation of a relevant percentage.
[a]p<.05 versus no anxiety disorder and no depression.
[b]p<.05 versus social anxiety disorder and depression.

## COMORBIDITY AND MANAGEMENT OF SOCIAL ANXIETY DISORDER

The prescription pattern of patients, with and without social anxiety disorder, in the French primary care sample is displayed in Table 7. Psychotropic drugs were offered to subjects with social anxiety disorder more frequently than they were to subjects with no anxiety or depressive disorder.[1] However, significantly more subjects with social anxiety disorder and comorbid major depression were offered treatment than patients with social anxiety disorder in the absence of depression (71% vs. 24%; $p < .05$). Anxiolytics were the most commonly prescribed class of psychotropic drug, whereas antidepressants and hypnotics were predominantly offered only to subjects with comorbid depression.

The availability of medication that is effective across the range of comorbid symptoms should aid effective and efficient treatment of social anxiety disorder and encourage patient compliance.

## CONCLUSIONS

Social anxiety disorder is a chronic, disabling disorder in which patients suffer with considerable morbidity that, more often than not, precedes the development of other psychiatric disorders, including depression, agoraphobia, and eating disorders. Such comorbidity has been shown to increase symptomatic severity and social disability and to increase the risk of suicide attempts. The overall burden of the comorbid disease is greater both for the patient (greater disability) and for the health care service (greater

use of medical services). Of considerable interest is the finding that there is a difference in the level of comorbidity linked to the age at onset of the social anxiety disorder. In subjects with an early onset (< 15 years of age) of the disorder there is a higher risk of developing further depressive comorbidity compared with that in those with a late onset (≥ 15 years of age) of the disorder. Further research is required to ascertain whether early intervention in social anxiety disorder can prevent the development of secondary comorbid conditions such as depression, alcoholism, agoraphobia, and eating disorders.

Social anxiety disorder is underrecognized by general practitioners; this lack of recognition is to a certain extent due to the low presentation of psychological problems in subjects with uncomplicated social anxiety disorder. When social anxiety disorder is comorbid with depression, approximately three quarters of such subjects are recognized as suffering from a psychological disorder; however, only a small percentage are identified as presenting with an anxiety disorder. This has important consequences in the subsequent design of appropriate treatment strategies. There is clearly a need for clinicians to both recognize and initiate appropriate treatment strategies for social anxiety disorder and its common comorbid conditions.

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