Social Phobia Symptoms, Subtypes, and Severity

Findings From a Community Survey

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Objectives: Our goals were (1) to ascertain the range of functional impairment attributable to social phobia in a community sample, and (2) to verify the existence of social phobia subtypes in the community, and report on their relative prevalence, severity, and levels of impairment.

Methods: Community surveys were conducted contemporaneously in Winnipeg, Manitoba, and in Alberta, with a total of 1956 respondents. Instruments included the Comprehensive International Diagnostic Interview–Version 2.1 module for DSM-IV social phobia, enhanced with 6 additional (for a total of 12) social phobic situational probes to provide a more comprehensive assessment of possible subtypes, and additional questions about specific functional impairment due to social phobia.

Results: Of those persons in the community surveyed, most had no (60.4%) or few (ie, 1-3) (27.8%) social fears; few persons (3.4%) had many (ie, ≥7). Among those with DSM-IV social phobia (7.2%), classification based on number (normally distributed with median of 3, mode of 5) or content (eg, speaking-only vs other fears; performance-only vs interactional fears) of social fears failed to yield a defensible subtyping solution. Impairment increased linearly as the number of social fears was increased, with no clear threshold evident.

Conclusions: Social phobia is associated with substantial impairment in multiple functional domains. Support for subtyping based on the extent or pattern of social fears was not provided. Rather, social phobia in the community seems to exist on a continuum of severity, with a greater number of feared situations associated with greater disability.

Arch Gen Psychiatry. 2000;57:1046-1052

SOCIAL PHOBIA (also known as social anxiety disorder), a condition marked by extreme fear and/or avoidance of situations that involve possible scrutiny by others, has emerged from the shadows of research neglect to become a much-inspected entity in recent years. Within the past decade, investigations have shown that social phobia is surprisingly common within community and primary care settings, with point prevalence rates ranging from 2% to 16%. Whereas these studies have pushed social phobia into the limelight of the attention of mental health professionals and public health policy planners, they have also raised questions. Some of these questions concern the veracity of social phobia as a diagnostic entity and the proportion of persons in the community who have a serious form of this disorder. Is social phobia, as presently defined, a common but relatively innocuous disorder, with only a few persons adversely affected, or is it a more pernicious condition, interfering significantly with the lives of a high proportion of those with the condition?

Studies in clinical samples of patients with social phobia provide ample evidence of the seriousness of this disorder. However, few persons with social phobia in the community seek treatment, making it unlikely that those who do are representative of most persons with the disorder. To plan a rational public health approach toward social phobia, it would be important to know how many people in the community are impaired by their disorder, not merely how many meet diagnostic criteria.

To address these issues, we conducted a community survey of social phobia. We included a series of questions about the extent to which social phobia results (at least according to the beliefs of respondents) in impairment in important do-
SUBJECTS AND METHODS

SUBJECTS

The data reported herein were collected as a coordinated effort through the Winnipeg Area Study and the Alberta Survey, conducted from December 1996 through February 1997. The goal was to interview approximately 2000 respondents during a 1-month period, with 750 respondents in the city of Winnipeg, Manitoba, and approximately 1250 respondents in the province of Alberta (approximately one third each from Calgary and Edmonton, and the remainder from rural Alberta). Winnipeg is a city of approximately 650,000 inhabitants with a stable economy and population base, located in the Canadian Midwest. Calgary and Edmonton are western Canadian cities with populations of approximately 600,000 and 550,000, respectively. The remainder of Alberta has approximately 1 million residents.

Sampling was conducted independently for the Winnipeg and Alberta surveys. Both surveys used a 2-stage sampling frame to obtain a probability sample of households from Winnipeg and Alberta based on random-digit dialing, and a randomly predesignated selection of an adult respondent within each household to ensure an equal representation of male and female participants. Past experience indicates that women are more likely than men to answer the telephone. If the person answering the phone was of the specified sex, only that person could be interviewed. If the person was not of the specified sex, that person was asked the appropriate sex. If the person was not of the specified sex, that person was asked if someone of the appropriate sex was in the household. If there was no one of the specified sex living there, the respondent could only be the person who answered the telephone. If a person of the designated sex was living there, the interviewer asked for this person or the oldest if there was more than 1. If the respondent was not at home or for some other reason was not available, every effort was made to set up another appointment. No substitution was permitted if the eligible respondent refused. Additional selection criteria were that respondents were aged 18 years or older and that the dwelling unit was their usual place of residence. Calls were made between 9 AM and 9 PM. To reach the designated respondent, up to 10 callbacks were made at varying times and days (modal number of callbacks, 2).

Personnel were professional interviewers who had extensive experience with population surveys, including many who had worked on previous surveys from our research group on obsessive-compulsive disorder and/or posttraumatic stress disorder.17,18 All interviews were conducted by telephone, either at the respondent's residence or occasionally at another telephone number. The response rates for the survey were 74% of eligible households in Winnipeg and 62% in Alberta. The median and modal lengths of an interview were 30 minutes (range, 12-120 minutes). All respondents gave their informed, verbal consent to participate in this study. The study was approved by the human subjects committees at the University of Manitoba, Winnipeg, and University of Alberta, Edmonton.

SURVEY FORMAT AND CONTENT

The survey script in its entirety is available from the authors, but is summarized herein. After an introduction describing the nature of the survey, demographic data were obtained, and then the modified Comprehensive International Diagnostic Interview–Version 2.1 (CIDI 2.1) questions for social phobia were posed. A similar version of this CIDI interview has been shown to have excellent reliability and validity for the diagnosis of social phobia.19 Our interview followed the CIDI 2.1 format verbatim, with the exception of 6 additional situational probes for social phobia that were included. The reference time frame was the 12-month period ending 3 months prior to the survey.

Social fears and social phobia in the community

Included in the survey were 750 respondents from Winnipeg and 1206 respondents from Alberta (Table 1). The mean number of fears endorsed per respondent was 1.2 (SD, 2.0) (Figure 1). Most persons in the community (60.4%) reported no social fears (modal and median values, 0), whereas the 90th, 95th, and 99th percentiles for total number of social fears were 4, 6, and 9, respectively (range, 0-10). Each of the 12 types of social fears was endorsed by <4% to 15% of persons in the general population (Table 2), with the fear of eating while being observed as the least common and the fear of giving a speech in public as the most common.

Twelve-month prevalence of DSM-IV social phobia in the community was 7.2% (SE, 0.6%) (138/1922

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past 12 months, and all questions about social fears were posed as such, eg, “In the past 12 months, have you had an unusually strong fear or avoided...?” Response choices to the social fear questions were yes, no, or don’t know. The DSM-IV diagnoses of social phobia were assigned according to the CIDI 2.1 algorithm, with the exception that possible medical/organic explanations for social phobia were not assessed and excluded; previous research in community samples has shown this to be a rare occurrence. The DSM-IV interference/distress criterion was operationalized by requiring that the respondent report that their social fear(s) interfered with their life or activities a lot and/or that they were very distressed by their fear(s). Persons who reported social fears due to fear of embarrassment or drawing attention to themselves, but otherwise failed to meet DSM-IV diagnostic for social phobia, were given the label of “subthreshold social fears” for the purpose of subsequent analyses.

At the end of the diagnostic module, a series of questions were asked focusing on specific functional disability due to social anxiety. These questions were as follows: (1) How much has/have excessive fear(s) of being the center of attention or interacting with other people interfered with your education? (2) Have you actually dropped out of a class, not taken a particular course, or not taken advanced education? (2) How much has/have excessive fear(s) of being the center of attention or of interacting with other people hindered you in getting the kind of job you want? (2a) Have you actually turned down a job offer or a job promotion because it might involve being the center of attention or interacting with other people? (3) How much does/do excessive fear(s) of being the center of attention or of interacting with other people interfere with your ability to have the kind of personal life you would like to have? and (4) How much does/do this/these concern(s) interfere with other aspects of your life? Response options for questions 1 through 4 were a lot, some, a little, or none, and for questions 1a and 2a were yes or no.

DATA ANALYSES

Data were weighted for sex and region (eg, rural vs urban Alberta) to be proportional to the populations they represent. We generated frequency tables of the characteristics of subjects in the relevant response categories; sample sizes vary due to differences in the number of evaluable responses. The likelihood of particular outcomes (eg, educational impairment) was compared across diagnostic categories (eg, social phobia vs subthreshold social fears only) by means of logistic regression analyses. Results are presented as odds ratios (ORs) with 95% confidence intervals (CIs). Where appropriate, the ORs are adjusted for age and sex.

For subtype analyses, we began by looking at a DSM-IV generalized subtype, operationalized here as involving 7 or more (ie, most) of the 12 fears surveyed. We reasoned that if subtypes existed, then they should differ from one another in meaningful ways with regard to symptom coherence, eg, performance-only vs other fears; or speaking-only vs other fears). We further reasoned that these subdivisions should not be arbitrary, but should rather be based on evident cut points in the data, and that they should identify groups of persons who differ from one another with respect to their patterns or extent of functional impairment. For these analyses, logistic regression was used to model indicators of interest, controlling for relevant covariates (eg, age and sex). Odds ratios and 95% CIs were calculated for each subtype definition (among persons with DSM-IV social phobia) compared with persons with subthreshold social fears. All statistical tests were 2-tailed, and \( P<.05 \) was considered statistically significant.

IMPAIRMENT ATtributed TO SOCIAL PHOBIA

Persons with DSM-IV social phobia reported impairment (that they attributed to their social fears and/or avoidance) across a variety of functional domains (Table 3). The odds of interference were significantly greater for persons with DSM-IV social phobia than for persons with subthreshold social fears (Table 3). Overall, 52 (37.7%) of 138 persons with social phobia reported substantial (ie, a lot of) interference with at least 1 of these functional domains (ie, education, occupational life, or other) compared with 37 (13.2%) of 281 persons with subthreshold social fears (OR adjusted for age and sex, 4.04; 95% CI, 2.52-6.48).

SOCIAL PHOBIA SUBTYPES

We found that only 37 (26.8%) of the 138 persons with social phobia met our operational criteria for the DSM-IV generalized subtype (ie, \( \geq 7 \) of 12 social fears). However, these persons were significantly more impaired on most of the indexes examined (ie, those referred to in Table 3) than the remaining 101 persons (73.2%) who
did not have generalized social phobia (ie, those with the nongeneralized subtype). We also examined the data in this same fashion using a more inclusive definition of generalized social phobia based on a cutoff along the median number (ie, 5) of social fears in persons with social phobia. This approach generated very similar findings (data not shown). However, given the lack of bimodality in the data (Figure 2), the rationale for making the cut at 7 fears or more, 5 fears or more, or anywhere else along the distribution of the number of social fears is weak.

We also tested a model of 2 subtypes of social phobia based on the exclusive presence of speaking fears vs other fears.16 In the current survey, we included giving a speech in public and taking part or speaking in a meeting or class as speaking fears. Only 4 persons with social phobia (2.9%) had either (or both) of these speaking fears in the absence of other social fears, too small a subset to compare statistically with the larger group with broader social fears. The limited number of respondents with speaking-only fears suggests that, although this may be a useful clinical category, this classification scheme (ie, speaking-only vs other social fears) does not fit the data when a broad range of social fears is surveyed.

Similarly, only 12 persons with social phobia (8.7%) had performance fears only. For the same reasons outlined above, we abandoned this subtyping scheme (ie, performance-only vs other fears) as untenable.

EMPIRICALLY BASED SUBTypING APPROACHES

Significant correlations were observed between the number of social fears and the extent of interference attrib-
Table 3. Functional Impairment Attributed to Social Fears and/or Avoidance*

<table>
<thead>
<tr>
<th>Index of Impairment</th>
<th>No. (%) of Persons With Social Phobia (n = 138)</th>
<th>No. (%) of Persons With Subthreshold Social Fears (n = 281)</th>
<th>OR (95% CI)†</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interfered with education</td>
<td>A lot 30 (22.1) 26 (9.3)</td>
<td>2.47 (1.62-3.76)</td>
<td></td>
</tr>
<tr>
<td>A little 37 (27.2) 56 (20.0)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>None 34 (25.0) 84 (30.0)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dropped class because of these concerns</td>
<td>Yes 67 (48.6) 70 (25.0)</td>
<td>2.87 (1.90-4.34)</td>
<td></td>
</tr>
<tr>
<td>No 71 (51.4) 210 (75.0)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hindered getting a job</td>
<td>A lot 28 (20.4) 16 (5.8)</td>
<td>3.23 (2.09-5.00)</td>
<td></td>
</tr>
<tr>
<td>Some 32 (23.4) 39 (14.1)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A little 23 (16.8) 60 (21.7)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>None 54 (39.4) 161 (58.3)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Turned down job or promotion</td>
<td>Yes 24 (17.4) 29 (10.4)</td>
<td>1.82 (1.02-3.25)</td>
<td></td>
</tr>
<tr>
<td>No 114 (82.6) 251 (89.6)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interfered with personal life</td>
<td>A lot 29 (21.0) 9 (3.2)</td>
<td>3.36 (2.19-5.15)</td>
<td></td>
</tr>
<tr>
<td>Some 41 (29.7) 58 (20.9)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A little 47 (34.1) 78 (28.1)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>None 21 (15.2) 133 (47.8)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interfered with other aspects of life</td>
<td>A lot 20 (14.5) 3 (1.1)</td>
<td>4.70 (3.03-7.30)</td>
<td></td>
</tr>
<tr>
<td>Some 50 (36.2) 47 (16.8)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A little 49 (35.5) 104 (37.1)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>None 19 (13.8) 126 (45.0)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* OR indicates odds ratio; CI, confidence interval. Sample sizes vary for particular questions due to nonresponse. Percentages have been rounded and may not sum 100.
† Adjusted for age and sex. “A lot” and “some” were collapsed into 1 category, and “a little” or “none” into 1 category. The OR reflects odds for persons with social phobia vs persons with subthreshold social fears.

This study confirms previous reports of the high prevalence of social phobia in the community and extends them by demonstrating that many persons with this disorder report that it has interfered substantially with meaningful aspects of their lives. Whereas previous epidemiological studies had highlighted various aspects of poor functioning associated with social phobia (eg, more frequent dropouts from school),20 it was not possible to attribute these outcomes specifically to social phobia. In our study, respondents were asked to rate how social fears and/or avoidance had had an impact on their functioning associated with social phobia (eg, reduced likelihood of graduation from high school) and high illness interference (ie, respondent reports a lot of interference attributed to social fears and/or avoidance) for persons with DSM-IV social phobia (n=138) compared with persons with subthreshold social fears (n=281). Respondents with social phobia are grouped into those with 1 to 3 (n=47), 4 to 6 (n=54), and 7 to 12 (n=37) social fears. Odds ratios shown are adjusted for age and sex.

COMMENT

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Although we surveyed twice as many social situations as had been surveyed previously using CIDI interviews, the 12-month prevalence rate of social phobia found herein (7.2%) was within the range of rates for social phobia.
found in those previous surveys (5%-8%).

When we limited our analysis to the 6 CIDI 2.1 situational probes, the prevalence rate dropped only marginally (to 6.8%). This finding is reassuring because it implies that those previous surveys, despite their more limited sphere of inquiry, still provided a reasonably accurate portrayal of the prevalence of social phobia in the general population. Although more extensive situational probing provides a more detailed perspective on severity and functional impairment, it does not appear to substantially increase the overall detection rate for social phobia.

How serious a public health problem is social phobia? The answer depends on what level of functional impairment one is willing to accept as serious. Our data show that 1 in 5 persons with social phobia believe that their social fears have interfered a lot with their education, and an even greater proportion (almost 1 in 2) report actually having dropped a class because of these fears. One in 5 persons reports that their social fears have hindered them a lot in getting or keeping a job, and a similar proportion report actually having turned down a job or promotion because of these fears. Overall, our data show that approximately one third (37.7%) of persons with social phobia in the community report a lot of interference—that they attribute to their social anxiety and/or avoidance—with 1 or more areas of functioning. Using even the most conservative prevalence estimates available to us, this translates into a generalized subtype as defined by DSM-IV, at least not a generalized subtype as defined by DSM-IV, at least not

From a research perspective, there is some evidence of biological heterogeneity between persons with few and many social fears, although a priori notions of subtype constitution may have influenced the design and interpretation of these studies. This topic should be further explored by measuring relevant indexes (eg, psychophysioligic, cognitive, functional neuroanatomical, heritability) across the full spectrum of persons with social anxiety and letting the findings guide the organization and validation of diagnostic subtypes as warranted.

Finally, we must consider limitations of our work. This survey was focused very narrowly on social phobia. A strength of this approach is that it enabled us to ask impairment questions specifically in relation to social fears and avoidance, something that would be difficult to do in a more general mental health survey where more extensive territory pertaining to multiple disorders must be covered. At the same time, this is a weakness of our approach in that we have not looked at co-morbidity, family history, longitudinal course, and other indicators that might help validate subtypes and predict impairment. These are areas worthy of further investigation.

Accepted for publication May 15, 2000.

We are grateful to Ronald C. Kessler, PhD, for his assistance with the construction of many of the questions used in this study. We also wish to thank the staffs of the Winnipeg Area Survey and the Alberta Survey for their contributions to the design and implementation of this study.

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