The Epidemiology of Common Fears and Phobia

By STEWART AGRAS, DAVID SYLVESTER AND DONALD OLIVEAU

LITTLE IS KNOWN about the distribution of phobia in the general population. Only a few epidemiological studies separate phobia from the other neuroses. Lemkau et al.[1] found a prevalence rate of 0.5/1000 for phobia. These workers counted cases receiving treatment in a number of health agencies, and the prevalence given is the sum of their rates for psychasthenia and hypochondriasis. Hollingshead and Redlich[2] found that phobia accounted for 20 per cent of all cases of neurosis in psychiatric treatment, and estimated the rate at 0.5/1000. These figures may underestimate prevalence since they represent individuals with more severe phobias and access to treatment. However, the prevalence of 260/1000 for phobia reported in the Midtown Manhattan study[3] is probably an over-estimate. The criteria used for diagnosis of phobia in the latter study were not precisely defined, nor was the degree of impairment studied, although it was estimated that few of those designated as phobic were severely impaired.

Thus no adequate information on the prevalence and treatment patterns of phobia within the general population exists. The present study examines the incidence, prevalence, and treatment of the common fears and phobia, based on data collected from a randomly selected sample of the general population.

METHOD

Data were collected by interviews of a probability sample of the household population of the Greater Burlington area, which provided a population reasonably representative of the smaller and medium-sized city. A 1:193 sampling fraction was used, 94 per cent of the sample being successfully interviewed, a total of 325 persons. Residents of institutions were excluded from the sample.

The interview schedule was based on a number of previously developed fear questionnaires.[4,5] It has been shown in populations of college students, that responses to similar questionnaires correlate well with the degree of avoidance shown by subjects exposed to a number of the actual feared situations, such as a feared animal.[5,6] In addition, the degree of emotional arousal as measured by the galvanic skin response evoked by presentation of slides of the feared stimulus, correlates well with the degree of fear reported to the same items on the questionnaire.[7] Thus, there is some evidence to suggest a correspondence between behavior reported on a fear questionnaire and behavior in the actual feared situation.

The final version of the interview schedule listed 40 commonly feared situations and contained questions as to the intensity and duration of fear and avoidance behavior, as well as attempts at treatment by the family or by clergy, physicians, and others. The interviews were conducted by carefully trained interviewers who saw each respondent privately. A separate questionnaire of 21 items was used for children below the age of fourteen years, for which the mother or a related adult acted as respondent. Responses to the questionnaire were coded independently by two coders, any discrepancies being resolved by a supervisor. Key punching for the computer program was also verified.

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Table 1.—Prevalence and Standard Errors of Prevalance of Common Fears, Intense Fears, and Phobia. Comparison of Clinical Series of Phobic Patients

Common Fears/1000 Populat'n		SE	Intense Fears/1000 Population		SE	Phobia/1000 Population (Including % of total)			SE	Clinical Phobic Series (% of series; n=50)		SE
Snakes	390	(M 199 40)	Snakes	253	(M 118 34)					Agoraphobia	50%	(M 22)
		(F 547 50)			(F 376 48)	Illness						(F 28)
Heights	307	(M 278 43)	Heights	120	(M 109 33)	Injury	42%	31	(M 22 15)	Injury		
		(F 333 47)			(F 128 36)				(F 39 20)	Illness	34%	(M 10)
Storms	211	(M 95 31)	Flying	109	(M 70 26)	Storms	18%	13	(M 0 0)			(F 24)
		(F 311 47)			(F 144 38)				(F 24 15)	Death		
Flying	198	(M 105 32)	Enclosures	50	(M 32 18)	Animal	14%	11	(M 6 8)	Crowds	8%	(M 4)
		(F 274 42)			(F 63 25)				(F 18 13)			(F 4)
Dentist	198	(M 174 38)	Illness	33	(M 31 18)	Agoraphobia	8%	6	(M 7 8)	Animal	4%	(M 0)
		(F 215 42)			(F 35 19)				(F 6 8)			(F 4)
Injury	182	(M 185 39)	Death	33	(M 46 21)	Death	7%	5	(M 4 6)	Heights	2%	(M 0)
		(F 179 38)			(F 21 15)				(F 6 8)			(F 2)
Illness	165	(M 122 35)	Injury	23	(M 24 15)	Crowds	5%	4	(M 2 5)	Darkness	2%	(M 0)
		(F 203 40)			(F 22 15)				(F 6 7)			(F 2)
Death	161	(M 129 36)	Storms	31	(M 9 9)	Heights	5%	4	(M 7 9)			
		(F 184 39)			(F 48 22)				(F 0 0)			
Enclosures	122	(M 99 32)	Dentists	24	(M 22 15)							
		(F 140 37)			(F 26 16)							
Journeys alone	74	(M 67 26)	Journeys alone	16	(M 0 0)							
		(F 101 32)			(F 31 18)							
Being alone	44	(M 17 13)	Being alone	10	(M 5 7)							
		(F 64 25)			(F 13 11)							

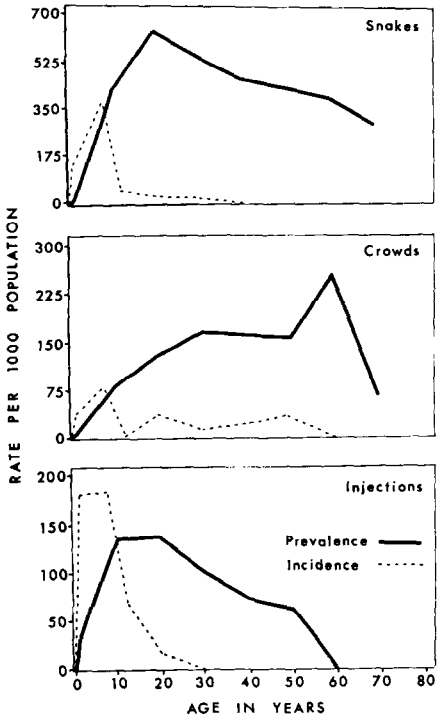

Fig. 1.—Three different patterns of incidence and prevalence rates for common fears. Fears of doctors, darkness, and strangers followed pattern shown for injection. Fears of death, inujry, illness, and separation followed that shown for crowds; fears of animals, heights, storms, enclosures, and social situations followed that shown for snakes.

Questionnaire responses were examined by the study psychiatrist to identify all phobic and possibly phobic subjects. This judgement was made by considering the number, type, and intensity of the reported fears, taking into account the spontaneous comments of the respondent as noted by the interviewer. Each of these subjects was then interviewed by another psychiatrist to determine the diagnosis, the history and treatment of the disorder, and the degree of disability using standard clinical definitions.[8] To minimize bias a number of nonphobic individuals were added to the subsample, the examining psychiatrist not knowing which were which. Only subjects agreed to be phobic by both psychiatrists were finally counted.

Incidence rates were calculated by dividing the number of persons who first contracted a fear during a given age interval by the average number of persons at risk (i.e., persons who had never had the fear) for that age interval. Prevalence rates were calculated by dividing man years of reported fear by man years at risk.

Findings

Prevalence and Incidence

The prevalences and standard errors of the more frequent mild and intense fears, and of phobia, expressed as rate per 1000 population, are shown in Table 1. It is interesting to note the relative change in position for each type of fear as the intensity changes from mild fear to phobia. Fears such as of snakes and heights decline in position, while fears of illness and injury, and agoraphobia increase. The total prevalence of phobia was estimated at 76.9/1000 population. Of these, 74.7/1000 were considered to be mildly disabling and 2.2/1000 severely disabling. Severe disability was defined as absence from work for an employed person, and inability to manage the common household tasks for a housewife.

A more detailed analysis of the prevalence and incidence of the common fears revealed three patterns which are shown in Fig. 1. Two of these show a high childhood incidence, but differ in prevalence. Fears of doctors, injections, darkness and strangers, show a sharply declining prevalence, suggesting that they are relatively short lived; while fears of animals, heights, storms, enclosed places, and social situations, show a slowly declining prevalence suggesting that once acquired they are long-lived. The third pattern shows a slowly declining incidence extending to the sixth decade and a prevalence peak in the late adult life.

Treatment

From the responses to questions concerning treatment, it is estimated that 57/1000 individuals have seen a physician about a severe fear or phobia of a medical procedure such as injection or blood test, so that he could minimize their fearful response in his treatment of them. Less common (9/1000) are those who have received active treatment for a phobia which was severely incapacitating at the time of treatment. Some 6/1000 had received inpatient treatment, about half in a medical ward and half in a psychiatric ward, while 3/1000 had received outpatient psychiatric treatment. Finally, a very few persons (<1/1000) are estimated to be presently receiving psychiatric treatment for a phobia, a finding similar to that of Hollingshead and Redlich,[2] and Lemkau et al.[1]

Discussion

These findings are similar to those of other epidemiological studies of neurosis in that the bulk of the population is affected by the mildest condition, namely common fears, while mild phobias affect a significant but lesser portion of the population, and severe disabling phobias are much less common.

The common fears have a high incidence during childhood which falls off rapidly during adolescence and early adult life except in the case of fears of death, injury, illness, separation, and crowds (see Fig. 1). Fears of medical procedures decline most quickly, followed by fears of injury, illness, and separation, and lastly fears of snakes, heights, etc. Such a difference may be due to differences in the fear-evoking properties of the different stimulus situations or to differences in the opportunity to meet different feared objects or situations in the population studied. Different stimuli evoke varying degrees of avoidance behavior in animals,[9] while practice within a feared situation leads to reduction of fear in humans.[10] That both fears and phobia tend to disappear once acquired suggests the operation of a mechanism such as extinction or habituation, well-documented phenomena with learned and unlearned avoidance-arousing stimuli.

Phobia (see Fig. 2) runs a prolonged course, for the most part being mildly disabling. This appears to differ from Shepard and Gruenberg's[11] conclusion that neurosis is of short duration. However, the definition of a "new case" in their study, was a diagnosis of neurosis by the patient's physician. This may represent the recognition of an exacerbation of a milder long-term condition for which the patient had not sought treatment. This conclusion is supported by a

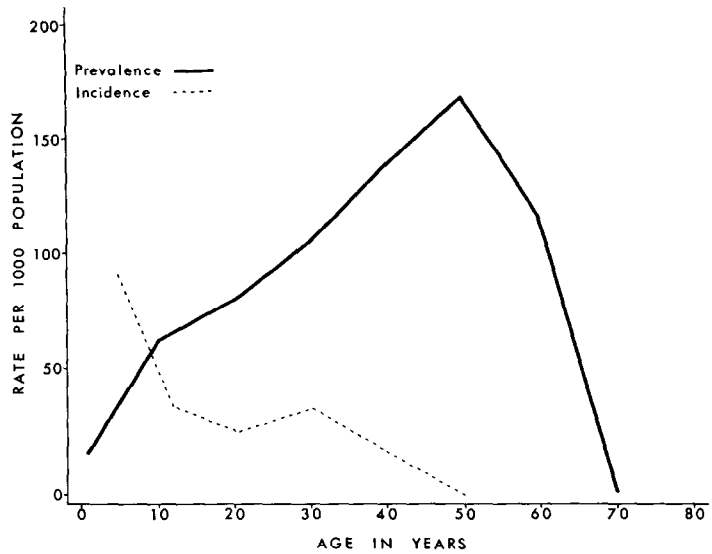

Fig. 2.—Incidence and prevalence rates for phobia within general population.

follow-up study[12] of 19 phobic patients at a mean of 23 years after brief outpatient treatment. It was found that only one was free of phobic complaints. The authors concluded that phobia runs a prolonged course, and that an intensification of symptoms had led to the initial clinic visit.

The long, mildly disabling course of phobia and the more severe common fears, with infrequent episodes of severe disability, leads to a pattern of physician utilization in which the major medical effort is supportive in nature, aimed at helping the patient face anxiety-provoking situations related to medical procedures. Thus the pediatrician and internist are involved in helping patients overcome fears of their procedures. Failure of this help leads to an adult who will not use medical help properly since they avoid physicians. Such persons form a small fraction of the population (<1/1000) but are obviously a major health hazard.

Finally it is to be noted that psychiatrists see only a small percentage of the phobic population, usually the more severely disabled, although only a quarter of the latter group were receiving psychiatric care at the time of the study. Psychiatrists do not see the milder cases of phobia nor, as was illustrated in Table 1, do they see a representative sample of the different types of phobia. Thus theories based on psychiatric experience with a few individual cases cannot be generalized to all phobia.

Summary

Incidence and prevalence data for common fears and phobia based on a probability sample of the general population show the frequency of mild phobia to be 76:9/1000 and of severe phobia to be 2.2/1000. Clinical samples are not representative of the distribution of phobia in the general population, agora-

phobia being over-represented. The most frequent reason for consulting a physician is for him to minimize a severe fear or phobia of a medical procedure. Psychiatrists tend to see only the more severe phobics, although only a quarter of this group were found to be in treatment.

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