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Relationship and Chronology of Depression, Agoraphobia, and Panic Disorder in the General Population

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The comorbidity of disorders and chronology of first symptoms of depression, agoraphobia, and panic disorder were investigated. The Diagnostic Interview Schedule was administered to 3258 household residents. Strong associations were shown among all three disorders. However, the comorbidity of agoraphobia and panic disorder seemed to be accounted for by the relationship of both disorders with depression. The mean age at appearance of first symptoms was earlier for agoraphobia (low teens) than for depression or panic disorder (both about age 20). The results do not support the view that panic disorder is an integral component of agoraphobia, but rather that it is more closely associated with depression. The fact that agoraphobia precedes depression casts doubt on the thesis that depression is primary to anxiety disorders. Interpretation should, however, be viewed with caution because of the retrospective nature of the diagnostic instrument.

A relationship between depression and agoraphobia (and anxiety disorders in general) has been well supported in the literature (Bowen and Kohout, 1979; Boyd et al., 1984; Breier et al., 1984; Buglass et al., 1977; Foa et al., 1984; Gardos, 1981). This had led to speculation that agoraphobia may be a secondary symptom of primary affective disorder (Bowen and Kohout, 1979) or that both disorders may be a manifestation of a common underlying pathology (Breier et al., 1984). However, as pointed out by Gardos (1981), the existence of a relationship between the prevalence of the disorders suggests a variety of causative and noncausative hypotheses. None has received clear support in the literature, although there is considerable support for the position that anxiety disorders in general are precursors of depression (Clancy et al., 1978; Lesse, 1982; Sheehan, 1983).

The role of panic disorder has been discussed in terms of the strength of its association with either agoraphobia or depression. On one hand, strong associations between panic disorder and depression have been found (Clancy et al., 1978; Dealy et al., 1981; Fawcett and Kravitz, 1983), which perhaps suggests a common vulnerability (Breier et al., 1985). More commonly, panic has been viewed as an integral component of agoraphobia (Foa et al., 1984; Noyes et al., 1987; Sheehan, 1983). Simply put, the view is that panic attacks that occur in a public place cause the sensation of panic to become associated with that place (and with others through generalization), with the result being avoidance of public places. The presumed implication, then is that these disorders should be viewed as one syndrome and its relationship to depression examined in that light.

Support for this latter view is reflected in the fact that the DSM-III-R (American Psychiatric Association, 1985) classifies panic disorder and agoraphobia under a single heading. Although providing data supporting this unitary viewpoint, Noyes et al. (1987) suggest that it is nonetheless premature to end debate on the question of whether the two constructs represent separate disorders. Two lines of evidence are frequently presented that strengthen the view that panic and agoraphobia are representative of a single disorder. The first is the strong association between the two, as noted above. In fact, in clinical samples, cases of agoraphobia without panic are rare (Thyer et al. 1985a). It should be noted, however, that this relationship may not hold in a nonclinical sample. Weissman et al. (1986) found a significant proportion of agoraphobics without panic disorder in a large sample of the general population.

The second line of evidence of interest involves the similarity in the ages of onset of both disorders. Noyes et al. (1987) have indicated that a number of studies have placed the mean age of onset for panic and ago-

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raphobia at about 25 years (Marks, 1970; Tearnan et al., 1984; Thyer et al., 1985b). However, Klein (1981), Sheehan (1983), and Uhde et al. (1985) have found that the age of onset for panic precedes that of agoraphobia. On the other hand, phobic-type behaviors in children are relatively common and appear to be related to adult neurotic behavior, including panic disorder and agoraphobia (Gittelman and Klein, 1985; Klein, 1964; Tyrer and Tyrer, 1974). On the basis of such data, Gittelman (1986) has concluded that child and adult anxiety do not represent independent clinical phenomena. What is of interest here is that the age of onset of a fully diagnosable disorder is not necessarily the same as the age at first symptom or of first treatment.

Investigation of these relationships has been limited by methodological obstacles. The majority of studies has based their conclusions on clinical samples. These may not be representative of the disorder, because many sufferers do not seek treatment. Thus, little can be said about the relationship that holds in the general population. One exception is the recent study by Boyd et al. (1984). These investigators studied large, stratified samples of the general population using the Diagnostic Interview Schedule (Robins et al., 1981a, 1981b). Using odds ratios (*e.g.*, Mausner and Bahn, 1974), their data suggested that an individual who was in a major depressive episode (as defined by DSM-III) had approximately 15 times the chance of also having agoraphobia when compared with an individual who was not depressed. The odds ratio for depression with panic disorder was even higher, standing at 18.8, and that for panic and agoraphobia was 18.0. Note that these data reflect disorders that were contemporaneous (within 1 month prior to interview); thus, although an association is clear, speculations regarding causation are not warranted.

Breier et al. (1984) approached this issue by examining the chronology of depression and panic attacks in a group of patients presenting for treatment of agoraphobia and/or panic disorder. Their findings were that 68% of their subjects showed at least one previous or current episode of major depression, and that an average of 3 years separated the end of the last primary major depressive episode from the onset of the first panic attack. These findings, although provocative, cannot be taken as an accurate reflection of the relationship or of the course of the disorders in question because of the method of subject selection. That is, the use of a patient sample may introduce a bias in that agoraphobics seeking treatment may differ on their level of depression from those who do not seek treatment (Weissman et al., 1986). Thus, depression may be overrepresented in a treatment sample. In regard to the course of these disorders, the fact that the sample consisted of individuals who were seeking treatment for agoraphobia or panic disorder makes it likely that there would be a selection bias against those cases who may have been destined to experience depression but had not yet done so. To explain, let us assume that a) disorders X and Y have a relatively high comorbidity, b) episodes of the disorders do not tend to appear at the same time, and c) the proportion of patients in which X appears before Y is about the same as for Y preceding X. If a random sample of a population destined to experience both disorders is taken part of the way through the risk period, then some patients will have experienced both X and Y, and some will have experienced one of the disorders but not yet the other. It follows that if the sampling selection criterion was the presence of X (anxiety disorder in the present case), then all cases of Y (depression) followed by X would be in evidence. On the other hand, there will be a number of cases included in the sample where Y is destined to follow X, but has not yet appeared. In such cases, this will appear to the observer as an example of X occurring alone. The conclusion drawn would be that X often occurs alone, but that in instances of comorbidity Y precedes X more often than the reverse. Thus, when considering the relative age of onset of two or more disorders, it is crucial that selection on the basis of only one disorder be avoided.

Following from the issues above, the present paper reports an analysis of the interrelationships of these three disorders via an examination of comorbidity in a random sample of the general population. In view of the possibility that the disorders, although linked, will not necessarily occur at the same point in time, an individual will be counted as a "case" if a reported disorder surfaced at any time during the life span. In order to address the problem of the relative chronology of onset, data will be compared on the respondent's age at which first symptoms appeared for the disorders in question, rather than focusing on the point in time that full diagnostic criteria were met.

Methods

Subjects

The results reported here are based on 3258 interviews conducted in a study of the prevalence of psychiatric illness in the city of Edmonton, Alberta, Canada.

Edmonton, the capital city of the province of Alberta, had a population aged 18 years and over of 398,000 in the 1981 census. There is a relatively high proportion of young persons in the population and a low proportion of the population is over 65 years of age. Edmonton has seen rapid growth since World War II, with a boom economy based on oil and gas during the late 1970s and early 1980s, followed by a

downturn in the economy in the last few years. There have also been high rates of international immigration and of interprovincial migration to Alberta.

This study is limited to household respondents and does not include those living in institutions. Respondents were selected by randomly selecting addresses from a computerized listing of all residential addresses for the city, including group quarters and all apartments individually listed. Only one respondent in each household was interviewed, and respondent choice was based on the successive use of six versions of a respondent selection key (Backstrom and Hursh-Cesar, 1981) in an attempt to give all adults an equal chance of being selected. Only persons aged 18 and over were used as respondents.

The response rate of 71.6% represented the proportion of eligible addresses at which an interview was obtained. Nonresponse was due to refusal (17.3%), contact not being made at an address (8.8%), and language barriers (2.3%). Addresses that were vacant and those at which security systems precluded contact were considered ineligible and excluded from the calculations.

Diagnoses

The diagnoses under study here are used without DSM-III exclusion criteria. That is, the presence of one disorder does not exclude the diagnosis of another disorder. This is done for several reasons: the reports from the United States Epidemiological Catchment Area program do not use exclusion criteria in reporting lifetime prevalences and thus results are more comparable, diagnostic hierarchies as given in DSM-III may or may not be valid, and (most importantly) the use of exclusion criteria could mask relationships between disorders.

Major depression, then, refers here to the presence of one or more major depressive episodes (an episode being of at least 2 weeks duration with four or more associated symptoms such as sleep disturbance, poor appetite, suicidal behavior), whether or not there is evidence of mania. Similarly, agoraphobia refers to a disorder that meets the DSM-III inclusion criteria, regardless of the presence or absence of major depression, obsessive-compulsive disorder, paranoid personality disorder, or schizophrenia.

Finally, the diagnosis of panic disorder requires evidence of at least three panic attacks within a 3-week period, whether these are associated with agoraphobia or "caused" by another mental disorder (including major depression).

Diagnostic Interview Schedule

The interview instrument, the Diagnostic Interview Schedule (DIS) Version III (Robins et al., 1981b), was designed to make DSM-III diagnoses, is suitable for use by trained lay interviewers, and gives diagnoses comparable to those achieved by a skilled clinician (Robins et al., 1981a). The questions are asked in a predetermined order and there is no deviation from the schedule. Probes to determine symptom severity and whether a symptom is due to psychiatric disorder are standardized. Accuracy and reliability of this or comparable instruments have been addressed in several studies and found to be satisfactory and as accurate as "best estimate" diagnoses based on all available data (Andreason et al., 1981; Mazure and Gershon, 1979; Pulver and Carpenter, 1983). Exceptions to this that may be relevant to the present study are that the DIS may underreport panic disorder (Katon et al., 1987) and may overreport agoraphobia (Anthony et al., 1985).

Age of onset of first symptoms is defined by the DIS as follows: For major depression it is the age at which the first period of a least 2 weeks of "sadness" plus some associated symptoms occurred. For agoraphobia, it is the age at which the subject was first "bothered" by any phobia-type fears. In the case of panic disorder, it is the age at which the first panic attack occurred. Note that, in all three cases, full evidence for diagnosis of the disorder would not necessarily be present to meet the definition of a first symptom. However, this information would only be garnered from those who had met full criteria for the diagnosis of the corresponding disorder at some time in their lives.

Procedure

All respondents were interviewed between January 1983 and May 1986. Before the interview, each was provided with written information regarding the project and was informed that participation was voluntary and that the interview could be terminated at any time. Names of subjects were not known.

Two of the authors (R. C. B. and H. E. O.) attended a DIS training course at Washington University (St. Louis, Missouri) and other interviewers were then trained by one of us (H. E. O.) over a 10-day period as required. Regular checks were made (at least weekly) on interview practices, procedures, and codings. All interview data were double entered, checked, screened for coding errors, and corrected. Protocols were scored using the Washington University program. An important feature of this computerized scoring approach is that it easily handles the production of diagnoses without exclusion criteria, leaving the actual interviewing procedure unaffected.

Lifetime prevalence is reported in this paper. This measure was used by Leighton et al. (1963) and refers to the proportion of those in the population who have ever had a particular disorder. Although criticized (Mausner and Bahn, 1974) because some individuals

will not have passed through the risk period at the time of rating, this index is being widely used in the epidemiology of mental disorders and does offer some advantages over its alternatives (Robins et al., 1984). In the present case, emphasis is on the study of observed cases of comorbidity, which is not amenable to study with the use of derived measures (*e.g.*, expectancies). Prevalences that are reported here have been poststratified to the 1981 census distribution by age and gender for Edmonton and weighted for household size. All other data will be reported in unweighted form.

A more detailed explanation of the overall methodology can be found in Orn et al. (1988).

Results

Sample Characteristics

The age and gender distributions of the sample, along with comparable census data for the total population, are shown in Table 1. Note that a disproportionate number of women appeared in the sample, and that persons aged 18 to 24 years were underrepresented and those 25 to 44 years were overrepresented. The poststratification procedure used to calculate prevalences readjusts the data to correspond to the census distribution.

Lifetime Prevalence

Of the 3258 subjects, the weighted lifetime prevalence of major depressive episode was 8.6% (men = 5.9%, women = 11.4%). Comparable figures for panic disorder were 1.2% for overall prevalence, with the male rate being 0.8%, and the female rate being 1.7%. The data for agoraphobia were 2.9% overall, and 1.5% and 4.3% respectively for men and women. Thus, prevalences for all these disorders are higher in women than in men.

Relationship of Depression, Agoraphobia, and Panic Disorder

A total of 416 subjects (12.8%) was assigned one or more of the three diagnoses (the weighted prevalence was 10.9%). The distribution of these individuals over all mutually exclusive diagnostic categories is shown in Table 2. Of the 416 subjects, 344 (83%) showed major depression. Of these, 281 cases (82%) occur in isolation, rather than in combination with either agoraphobia or panic disorder. Similarly, for agoraphobia, of the 104 cases of the disorder, a majority (60%) occur in the absence of depression and/or panic. This is not the case for panic disorder where only 21% of the cases occur unassociated with depression. It is interesting that there are no cases of comorbidity of agoraphobia and panic disorder in the absence of depression.

The relationships of the three disorders, in the form of odds ratios, are shown in Table 3. It is clear that depression, agoraphobia, and panic disorder are interrelated. However, in comparison to the odds ratio for panic and depression, the relationship between panic disorder and agoraphobia is relatively weak. This reflects the just-mentioned finding that there are no cases of the co-occurrence of these two disorders without the presence of major depression.

Note that the odds ratio for depression with agoraphobia at 6.40 is lower than that found for either of the other two pairings. This points out a problem in the interpretation of measures of association, such as the odds ratio, without the examination of the influence of other associated variables. The question here is, how is it that the odds ratio for panic and agoraphobia is higher than that for depression and agoraphobia, when the data from Table 2 indicate that the former relationship is accounted for by the presence of depression? The answer, in part, is that there are relatively few cases of panic disorder (47, in compar-

TABLE 1
Demographic Characteristics

	Edmonton (N = 398,000)[a]	Sample (N = 3314)
Gender		
M	50	41
F	50	59
Age		
18–24 yrs	25	16
25–44 yrs	42	49
45–64 yrs	23	24
65+	10	11

[a] 1981 Census, population aged 18 years and over.
[b] All values are percentages.

TABLE 2
Distribution of Affected Subjects across Mutually Exclusive Diagnostic Categories

	N	%
Depression only	281	68
Agoraphobia only	62	15
Panic disorder only	10	2
Depression and agoraphobia only	26	6
Depression and panic disorder only	21	5
Agoraphobia and panic disorder only	0	0
Depression, agoraphobia, and panic disorder	16	4
Total	416	100

TABLE 3
Odds Ratios for Paired Relationships between Depression, Agoraphobia, and Panic Disorder

	Odds Ratio	χ^2
Depression and agoraphobia	6.40	100.92***
Depression and panic disorder	35.00	232.56***
Agoraphobia and panic disorder	18.32	146.89***

***$p < .001$.

TABLE 4
Mean Age of First Symptoms of Depression, Agoraphobia and Panic Disorder

	N	Depression	Agoraphobia	Panic	*t*
Mutually exclusive groupings					
Depression and agoraphobia only	25	19.3±6.6	16.8±11.4		1.20
Depression and panic only	21	21.9±8.9		24.2±8.9	1.56
Agoraphobia and panic only	0				
Depression/agoraphobia/panic only	15	20.6±12.1	11.3±10.7	19.7±14.3	1.97[a]
Combined groupings					
Depression and agoraphobia total	40	19.8±8.9	14.7±11.3		2.32*
Depression and panic total	36	21.4±10.2		22.3±11.5	.76
Agoraphobia and panic total	15		11.3±10.7	19.7±14.3	1.91

[a] F-ratio.
*$p < .05$.

ison with 344 for depression), so that cases of comorbidity of panic and depression can have a significant impact on our calculations. That is, 16 of the 47 cases of panic disorder also received a diagnosis of agoraphobia. Thus, given the presence of panic disorder, the chances of also showing agoraphobia are about one in three. However, all of the 16 cases also received a diagnosis of major depression. If all cases of depression were removed from the sample, there would be no association between panic and agoraphobia. On the other hand, the association between depression and agoraphobia is much more stable. The odds ratio for these two disorders remains at a meaningful level even with all cases of panic disorder removed (odds ratio = 4.24, $\chi^2 = 41.91$, $p < .001$). The implication of this is that any study that examines the relationship of panic disorder and agoraphobia without considering the role of depression is liable to draw conclusions based on an association that is spurious.

Course

Sixty-three subjects exhibited more than one of the three disorders. Two of these were dropped from this particular analysis because of missing data in regard to age of onset.

Mean age of first symptoms of each of the three disorders according to both the mutually exclusive combinations (as in Table 2) and nonexclusive pairings (*i.e.*, all those showing two disorders regardless of the presence or absence of the third) is shown in Table 4. Note that these figures refer to the age at which the first symptom appeared, not the age of the onset of a diagnosable disorder. Thus, it is expected that the present data will show relatively low ages. This is quite evident in the case of agoraphobia where the age of first symptoms is much lower than the reported age of onset of the disorder (as discussed above).

Overall, first symptoms for agoraphobia appeared at a much earlier age than first symptoms for either major depression or panic disorder. However, using paired *t*-tests, the only statistically significant difference found was between depression and agoraphobia for the subjects experiencing both of the disorders (regardless of the presence of panic disorder; $t = 2.32$, $p < .02$, 2-tailed). The comparison for the small sample exhibiting agoraphobia and panic disorder ($N = 15$) did, however, approach significance ($t = 1.91, p < .07$, 2-tailed), with agoraphobia again showing the earlier onset.

Another way of viewing this relationship is to compare the chronology of onset for subjects with comorbidity pairings. Thus, in the case of the comorbidity of depression and agoraphobia there are three possibilities for any individual: a) depression will appear at an earlier age than agoraphobia, b) agoraphobia will appear first, or c) the appearance of both will be more or less contemporaneous (within the same year in the present case). The frequency distributions for the three possible pairings are shown in Table 5. χ^2 statistics were calculated on each pairing by considering only those cases in which a discrepancy in chronology of onset occurred (*i.e.*, ignoring "contemporaneous" cases). Expected values were derived on the basis of the null hypothesis that the number of observed cases in each of the two cells would be equal. Again, the only statistically significant finding was in the case of the depression/agoraphobia comparison ($\chi^2 = 4.50$, $p < .05$), with agoraphobia showing earlier onset in the greater proportion of cases.

The data on the appearance of first symptoms provide support for the view that agoraphobic behavior precedes depression and indicate rejection of the hypothesis that depression, as a rule, precedes the onset of anxiety disorders.

Discussion

In view of the fact that the results of the present study have important implications for theory and practice, methodological concerns need to be discussed before interpretations of the data are made.

There are two major concerns about studies using the DIS or similar instruments. The first question is

TABLE 5

Chronology of Age of Appearance of First Symptoms For Co-Morbidity Pairings of the Three Disorders

	N	Depression First	Contemporaneous	Agoraphobia First
Depression *vs.* agoraphobia	40	10 (25)[a]	8 (20)	22 (55)
		Depression First	Contemporaneous	Panic First
Depression *vs.* panic	36	14 (39)	12 (33)	10 (28)
		Agoraphobia First	Contemporaneous	Panic First
Agoraphobia *vs.* panic	15	7 (47)	5 (33)	3 (20)

[a] Numbers in parentheses, percentage.

whether or not the DIS has sufficient validity to justify conclusions based on the derived diagnoses. As noted earlier, there is some evidence that is encouraging in this area. The possiblity that the DIS underreports panic disorder (Katon et al., 1987) is not seen as a difficulty here. Although prevalence rates may be somewhat understated, the fact that underreporting tends to produce a sample of relatively severe cases would not weaken conclusions drawn from the age of onset and comorbidity aspects of the study. The possibility that the DIS may be overinclusive for agoraphobia (Anthony et al., 1985) would ordinarily pose a greater problem of interpretation than underreporting in that we would expect noncases to differ from those with a disorder on characteristics of relevance to the study. In the present study, however, the supposed additional cases would not change the fact that there were no instances of agoraphobia plus panic without major depression. Logic aside, this is, in the end, an empirical question that should be addressed in future research.

The second issue is more problematic. Studies such as the present investigation are retrospective in nature. As is well known, people forget and/or selectively recall particular life experiences, leaving retrospective studies constantly vulnerable to criticism. Some concern in this area has been alleviated by Robins et al. (1985), who showed that there can be substantial concordance in the recall of childhood events between disordered and nondisordered siblings. This has relevance in view of the concern that disordered individuals may remember events in a manner unlike those who are not disordered. However, it has little to say about the possibility that different types of events are remembered differentially. An important possibility for such bias lies in the finding in the present study that first symptoms of phobia appear at a much earlier time than symptoms of depression. It may well be that the difference reflects the possibility that fears are more easily remembered than unhappy times, or that an agoraphobic event is easier to define and classify than is a depressive event. That is, "depression" to an interviewee might likely be construed as a subjective sensation of unhappiness which is experienced in varying degrees by all people, and thus it may be difficult to determine the level at which this feeling could be described as a serious symptom. Phobic behavior may also involve sensation, but it is defined by behavior. Thus, avoidance behavior may be much easier to classify than a subjective expression of affect, with the result that early identification of agoraphobic symptomatology (or later identification of depressive symptoms) may reflect an artifact of selective recall and definition rather than actual chronology.

However, taking the data as they stand, an important implication of the results of this study is that the view of depression as a precursor of anxiety disorders is not supported. This hypothesis would ordinarily predict that first symptoms of depression would appear before, rather than after, agoraphobia. It should be noted that this conclusion is based on the assumption that these "first symptoms" are early signs of the associated, fully diagnosable disorder. It may be that they are not, particularly in the instance of early phobic behaviors that are common in children. Unfortunately, in the DIS procedure used in the present study, only those with diagnosable phobias are asked about early phobic-like behavior. Thus, a proper comparison of phobic and nonphobic individuals could not be made on this factor. However, a strong link between phobic behavior in children and anxiety disorders in adults has been posited by a number of researchers (*e.g.*, Berg, 1976; Gittelman, 1986; Tyrer and Tyrer, 1974). This appears to make it clear that such behavior in childhood does not merely reflect trivial or random phenomena with no impact on later life.

It could be argued, nonetheless, that if depression acts as the primary disorder, it would not always be evidenced by depressive symptomatology. That is, depending on the stage of the disorder, other symptoms such as anxiety could predominate. Tyrer (1985), for example, points out that anxiety disorders often change to depressive illness, and in between there are usually subclinical symptoms such as generalized anxiety, dysthymia, and/or hypochondriasis. The view of the present authors is that, although there may be some "pri-

mary" internal mechanism or process, there is no justification for labeling it "depression." Given the strong association between the disorders and the data on chronology of onset, it may be more appropriate to investigate a possible common predisposition for a cluster of affective and/or anxiety disorders. Thus, although it is important to continue to discriminate between distinct types of symptomatology, it may be useful to search for a common underlying process or vulnerability. Family morbidity studies (*e.g.*, Weissman et al., 1984) and longitudinal investigations are possible avenues toward further understanding of this subject.

The fact that studies of the general population seem to produce results that differ from those taken from clinical samples suggests that it would be important to investigate factors differentiating those with a disorder who seek treatment from those with the same disorder who do not. Weissman et al. (1986) have suggested that perhaps those with an anxiety disorder plus depression would be more likely to seek treatment than those with anxiety alone. Another possibility is that the adequacy of coping behavior may determine which disordered individuals decide to seek treatment. Vitaliano and his colleagues (1987) found that, in a group of panic disorder patients, poor coping skill was a better predictor of the development of phobic behavior than was distress. Interestingly, poor coping ability is strongly associated with depression (Abramson et al., 1978), suggesting that the two do not represent competing explanations of treatment-seeking behavior.

The unexpected finding that panic disorder is not associated with agoraphobia, except in individuals who also exhibit depression, has important theoretical implications. That is, this finding casts serious doubt on the view that panic disorder is an essential component of, and leads to, agoraphobia. This is consistent with the above-noted finding of Weissman et al. (1986) that many agoraphobics in the general population do not show evidence of panic disorder. These authors concluded that the data suggest that there may be several pathways to agoraphobia other than as an avoidance of panic. This, coupled with the finding that panic disorder and major depression are highly related, suggests that further research on the relationship of all of these three disorders is preferable to studying any two to the exclusion of the third.

Conclusions

The results of this study are not in accord with current thinking on the relationship between agoraphobia and panic disorder. Rather, the data support the view that panic disorder is strongly associated with depression. Panic was associated with agoraphobia only in cases in which depression was also evident. This discrepancy between clinical findings and community sample data lends support to the view that those with anxiety disorders are much more likely to seek treatment if they are also suffering from depression.

The data pertaining to appearance of first symptoms are congruent with the view that anxiety disorders (at least phobias, in the present case) precede the onset of depression. Much more research is needed in this area, however, with longitudinal studies having the likelihood of showing the greatest impact in terms of determining the order of onset of associated disorders and which "first symptoms" are actually predictive of later disorders. This point notwithstanding, major advances are now being made as a result of large-scale epidemiological studies that use the DIS (or instruments like it). In view of the fact that these studies have such great potential, it is important that possible shortcomings in the DIS (*e.g.*, its retrospective nature, over/underinclusiveness) be examined and dealt with so that researchers can continue to use this instrument with confidence.

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