Reflections on DSM Classification and Its Utility in Primary Care: Case Studies in "Mental Disorders"

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Background: This case series was conducted to demonstrate the limitations of the DSM system in primary care patients.

Method: Sixty family health center patients free of mental disorders according to DSM-IV criteria completed monthly quantitative interviews, using multiple rating instruments, concerning the levels of psychiatric symptoms, presence of distress and/or a mental disorder, functional status, support, and stressors. In addition, a purposive sample of 16 subjects completed an in-depth qualitative interview concerning their situation at the time they crossed a DSM threshold. Data were collected from April 2000 to March 2001.

Results: Overall, there were 14 subjects with distress alone, 6 subjects with subthreshold disorders, and 3 subjects with known transient (< 2 months' duration) threshold disorders. Thus, even with the incomplete longitudinal data in this study, the clinical needs of 23 (38%) of the original 60 subjects were inadequately met by the DSM criteria. From the 10 subjects who crossed a DSM threshold and completed a qualitative interview, we selected 5 case studies with the most complete and complementary quantitative and qualitative data to illustrate several findings regarding the utility of the DSM classification in primary care. First, these cases show that psychological symptoms and DSM disorders vary considerably. Second, distress and subthreshold disorders are often seen in primary care patients. Third, the crossing of a DSM threshold corresponds to extreme levels of psychological symptoms and may therefore represent symptom severity. Fourth, psychological symptoms are often linked to physical illness. Finally, the context in which these symptoms and disorders develop often produces complex dynamic patterns.

Conclusions: The current DSM system failed to adequately reflect the spectrum and context of mental illness in patients from a predominantly low-income, Hispanic primary care population.

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Concerns about the utility of DSM classification have been expressed. These concerns have centered around issues of validity,[1] discrimination in comorbid disease,[2] and clinical significance criteria.[3] However, primary care physicians have additional concerns about the DSM system.[4]

First, many primary care patients feel distressed but do not exhibit other symptoms of mental illness. In primary care settings, the prevalence of distress ranges from 19% to 43%.[5–13] Many of these patients do not have a mental disorder.[6,7,9,10] However, primary care physicians often recognize this distress and manage these patients differently than those without distress.[5] Yet, distressed patients have no place in the DSM-IV. Even *adjustment disorder* does not adequately capture these distressed patients.[14]

Second, the cutoffs between disease and nondisease are often arbitrary.[15,16] Primary care patients often have mild Axis I disorders or borderline disorders.[17] Subthreshold mental illness (disorders that fail to meet full DSM criteria) is present in 13% to 30% of patients[13,18] and is seen without a major Axis I disorder in 15% of patients.[19] In addition, although primary care patients with major depression respond to antidepressants, their response rates are similar to those seen in minor depression and dysthymia.[20,21]

Third, even primary care patients who meet DSM criteria often do so transiently. Of patients with at least one psychiatric disorder, 20% recover within 3 months.[22] In fact, nosologic diagnoses last less than 4 weeks 30% of the time and less than 6 months 65% of the time.[23]

Finally, there is a growing belief that mental illness cannot be lumped within neat categories, that mental illness is dimensional rather than categorical.[24,25] Not only do dimensional approaches produce a similar number of "cases," but dimensional measures correlate better with illness.[26] Dimensionality is particularly appropriate for neurotic and personality disorders.[27,28]

Thus, due to the prevalence of distress and subthreshold disorders, the transient nature of psychological states, and the superiority of dimensional approaches in primary care patients, concerns exist about the validity of the DSM system to characterize mental illness in primary care settings. This case series was conducted to demonstrate these limitations of the DSM system in a predominantly low-income, Hispanic primary care population.

METHOD

Sample

As part of a pilot study on the stability of psychiatric symptoms in primary care, patients without mental disorders were enrolled from the waiting room of the University Family Health Center-Downtown in San Antonio, Texas. This low-income clinic population is 78% Hispanic, 56% female, and 75% adult. The screening form of the Structured Clinical Interview for DSM-IV (SCID)[29] was used to screen for mental disorders. English- or Spanish-speaking Hispanic and non-Hispanic white adults (aged ≥ 18 years) who had no mental disorders at screening and who had no history of active mental disorders or psychotropic therapy were asked to participate. Data were collected from April 2000 to March 2001.

Quantitative Interviews

Participating subjects completed baseline quantitative structured interviews as well as monthly quantitative interviews thereafter for up to 6 months. A purposive sample of subjects also participated in a qualitative interview. Half of these subjects had crossed a DSM threshold, and half had not.

Quantitative interviews assessed psychological symptoms, functional status, and support and stressors. Distress was measured using the 12-item General Health Questionnaire,[30] such that each item is scored 0 or 1, and a sum of at least 5 is defined as distressed. Psychiatric symptoms were measured using the mean scores for the anxiety, depression, and somatization scales of the Hopkins Symptom Checklist-90,[31] each item ranging from 0 to 4. DSM disorders were assessed using the panic disorder, major depressive episode (MDE), generalized anxiety disorder (GAD), somatization disorder, acute stress disorder, and mixed anxiety/depression sections of the SCID.[29] Subthreshold disorders were diagnosed if subjects met all but 1 criteria for the DSM disorders mentioned above.

Functional status was assessed via the Medical Outcome Study Short Form-36.[32] The physical functioning, physical and emotional role functioning (ability to physically and emotionally carry out responsibilities), social functioning (ability to function in social situations), mental health, and pain scales were used and are scored from 0 (low) to 100 (high).

Support was measured using the Duke Social Support and Stress Scale,[33] with scores ranging from 0 to 22; the Herth Hope Index,[34] with scores ranging from 0 to 30; and the Daily Uplifts Scale,[35] with scores ranging from 0 to 30. Stressors were assessed using the Holmes and Rahe Social Readjustment Rating Scale,[36] with its 43 items weighted from 11 to 100; the Duke Social Support and Stress Scale,[33] with scores ranging from 0 to 22; the Daily Hassles Scale,[35] with scores ranging from 0 to 30; and the Alcohol Use Disorders Identification Test,[37] with scores ranging from 0 to 40. Socioeconomic status was measured using Hollingshead's Scale[38] based on education and occupation.

Qualitative Interviews

The qualitative subsample was selected to represent the range of participants in the broader study sample. To select this sample, a grid was constructed with 16 cells labeled by sex (men vs. women), ethnicity (Hispanic vs. non-Hispanic white), age (aged ≤ 45 years vs. > 45 years), and whether or not the subject had crossed the DSM threshold. The sample was recruited sequentially as each subject was identified by the research associates, 1 subject per cell, until all 16 cells were completed. The second author (A.C.L.), using a semistructured interview guide, conducted the qualitative interviews in English or Spanish. Interviews lasted approximately 90 minutes and took place in subjects' homes or in a counseling room near the clinic. Open-ended questions illuminated the central research questions. For example: What was happening in subjects' lives at the time they crossed the DSM threshold? How do subjects cope with stresses in their lives? And what is their source of social support?

Case Presentation

Of the 16 subjects completing a qualitative interview, 5 were selected for presentation here because they completed more than 3 follow-up quantitative interviews and developed at least 1 DSM disorder; only 1 subject who met both of these criteria and had stable somatization disorder is not presented. For each case presentation, we present the context, the longitudinal course, the summary of DSM limitations, and a figure illustrating relevant issues. Figures show the longitudinal course of psychiatric symptoms during the study as well as points at which the subjects reported distress or met criteria for DSM disorders; an additional axis emphasizes changes in functional status or stress important to the case.

Table 1. Characteristics of Primary Care Sample and Subjects Participating in Qualitative Interview[a]

Characteristic	Total Sample, N = 80	Longitudinal Sample, N = 60	Participants in Qualitative Interview, N = 16	Cases Presented, N = 5
Sex, woman[b]	64 (80)	49 (82)	11 (69)	4 (80)
Ethnicity, Hispanic[b]	68 (85)	50 (83)	12 (75)	3 (60)
Age, mean, y[b]	48.7	49.6	48.1	43.0
Marital status				
Never married	13 (16)	9 (15)	3 (19)	2 (40)
Married	38 (48)	29 (48)	8 (50)	1 (20)
Education (≥ high school)	53 (66)	40 (67)	11 (69)	4 (80)
Employment (no)	49 (61)	38 (63)	13 (81)	4 (80)
Occupation				
Administrative	9 (11)	7 (12)	2 (13)	1 (20)
Unskilled	9 (11)	5 (8)	0 (0)	0 (0)
Income (< $20,000)	58 (73)	44 (73)	13 (81)	4 (80)
Chronic medical problem				
1 problem	28 (35)	20 (33)	5 (31)	3 (60)
> 1 problem	30 (38)	22 (37)	6 (38)	1 (20)
Mental illness				
Distress at baseline[b]	23 (29)	18 (30)	10 (63)	3 (60)
≥ 1 DSM disorder[b]	0 (0)	15 (25)	10 (63)	5 (100)

[a]All values are N (%) unless otherwise stated.
[b]Characteristics used in selecting subjects for qualitative interview.

RESULTS

Table 1 presents the demographic characteristics of the entire sample and its subsamples. Of the 80 subjects enrolled, 60 completed at least 1 follow-up interview. Of those subjects with any follow-up, 28 (47%) crossed at least 1 distress-nondistress threshold, with 2 subjects crossing 4 times during the 6-month follow-up. Similarly, 15 subjects (25%) crossed at least 1 DSM threshold, with 1 subject crossing 5 times during the 6-month follow-up. Of these, 6 subjects (10%) had subthreshold disorders. Of the 24 total threshold and subthreshold disorders identified in these 15 subjects, in only 7 could stability be assessed the month after recognition; of these, only 1 threshold disorder was still present based on the SCID. Overall, there were 14 subjects with distress alone, 6 subjects with subthreshold disorders, and 3 subjects with known transient (< 2 months in duration) threshold disorders; thus, even with the incomplete longitudinal data in this study, the clinical needs of 23 (38%) of the original 60 subjects were inadequately met by the DSM criteria.

Sixteen subjects completed an in-depth qualitative interview. They included 11 women and 5 men, 12 Hispanics and 4 whites, and they ranged in age from 22 to 69 years. As this was a purposive sample intended to cover the range of study participants, proportions in the qualitative sample differed from the broader sample by sex, ethnicity, and age. In other characteristics (marital status, education, employment, occupation, income, chronic medical problems), few significant differences were found. Following the baseline quantitative interview, all subjects in the purposive subsample completed the qualitative interview within 1 month of being selected.

From the 10 subjects who crossed a DSM threshold and completed a qualitative interview, we selected 5 case studies with the most complete and complementary quantitative and qualitative data to illustrate several findings regarding the utility of the DSM classification in primary care.

Case Studies

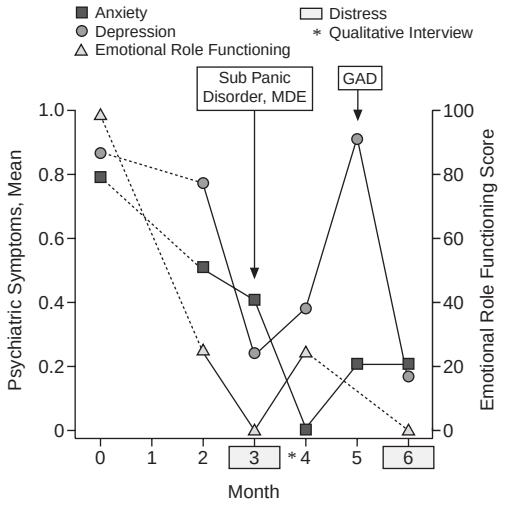
All 5 subjects presented here completed the baseline interview and at least 4 subsequent quantitative interviews. A poststudy chart audit found that, although 3 of the 5 subjects had sought care from their primary physician during the study period, none had sought care for psychological symptoms, none were diagnosed with a mental disorder, and none had received either psychotropic medication or referral to a mental health provider.

The 5 case studies illustrate several concerns that primary care physicians have about the applicability of DSM classification to primary care patients as mentioned in the introduction. First, these cases show that psychological symptoms and DSM disorders vary considerably. Second, distress and subthreshold disorders are often seen in primary care patients. Third, the crossing of a DSM threshold corresponds to extreme levels of psychological symptoms and may therefore represent symptom severity. Fourth, psychological symptoms are often linked to physical illness. Finally, the context in which these symptoms and disorders develop often produces complex dynamic patterns.

Case 1

Context. Mr. A is a 43-year-old Hispanic man who completed high school and works as an apartment manager for a small apartment house. He is divorced and cur-

Figure 1. Case 1 Fluctuations in Psychiatric Symptoms, Distress, Emotional Role Functioning, and DSM Diagnosis During Quantitative Study[a,b]



[a]Psychiatric symptoms (anxiety and depression) were measured using the Hopkins Symptom Checklist-90. Emotional role functioning was measured using the Medical Outcome Study Short Form-36.
[b]Dashed lines indicate missing quantitative data for the given month's assessment.
Abbreviations: GAD = generalized anxiety disorder, MDE = major depressive episode, Sub = subthreshold.

rently lives with a roommate. Mr. A described a strong social support network, including his family, his roommate and neighbors, and his church and parole officer. He has many ways of coping with and avoiding stress: his hobbies, his faith, performing maintenance on his apartment building, and alcohol. Mr. A considers his present life to be relatively calm. This contrasted with the past decade, which included divorce, unemployment and homelessness, the deaths of his father and a friend, attempted suicide, and imprisonment.

Course. At baseline in late June, Mr. A did not score as distressed, nor did he meet DSM criteria. However, he reported elevated levels of anxiety and depression, with extreme levels of somatization and alcohol use. His daily hassles and extreme level of life events, coupled with few uplifts, were associated with elevated levels of stress and low scores of social support and hope. Consequently, although his emotional role functioning was scored as excellent, his levels of physical functioning, social functioning, and mental health were diminished, and he perceived his health as only "fair." Over the next 5 interviews, anxiety and depression levels fluctuated, with DSM thresholds crossed for MDE and subthreshold panic in month 3 and for GAD in month 5; distress was reported in months 3 and 6 (Figure 1). Emotional role functioning dropped quickly and remained low. Although life events dropped initially, they rose again at the end of the study, while daily hassles, stress, alcohol use, and hope changed little.

Mr. A's qualitative interview, which took place approximately 3 weeks after he crossed the DSM threshold and 4 months after he enrolled in the study, explains some of these patterns. Shortly after enrolling, Mr. A went into a diabetic coma and lay alone in his apartment for several days before a friend, who later became his roommate, broke in and found him. His mother was sick and dying, which made him sad, although this had drawn him and his 7 siblings closer. His landlord/boss had given him a certificate for being a good apartment manager, which made him proud, but also increased pressures to excel. At the time of crossing the DSM threshold, Mr. A had been experiencing nightmares, anxiety, and a fear of dying, symptoms he said had worsened since his diabetic crisis.

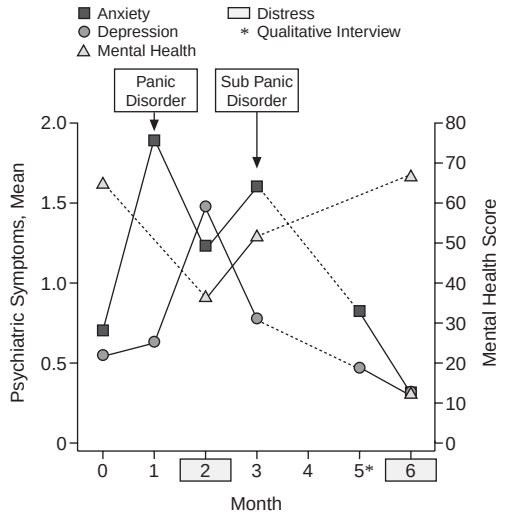
Summary. Several interesting patterns were noted. First, distress, DSM thresholds, and psychological symptom dimensions varied considerably and independently; they measure different constructs. The qualitative interview also noted the volatility of his emotions. This pattern may reflect the number of life events and variable coping strategies at work in Mr. A's life. Second, these measures did not change in the expected sequence. Third, extreme lack of emotional role functioning corresponded to distress, which, in turn, developed after peaks in depression. Fourth, crossing the GAD threshold coincided with a peak in depression, not anxiety. Finally, the level of social support increased steadily throughout the study, possibly reflecting the therapeutic effect of study participation.

Case 2

Context. Ms. B is a 28-year-old white woman who lives with her husband and 2 young children. She attended several years of college and is currently a stay-at-home mother. Ms. B's main social supports are her husband, family, and friends. She copes with stress through meditating, exercising, and spending time on the Internet. She experiences frequent colds, which she attributes to stress, and complains of severe, emotionally debilitating premenstrual symptoms, which last 1 week each month.

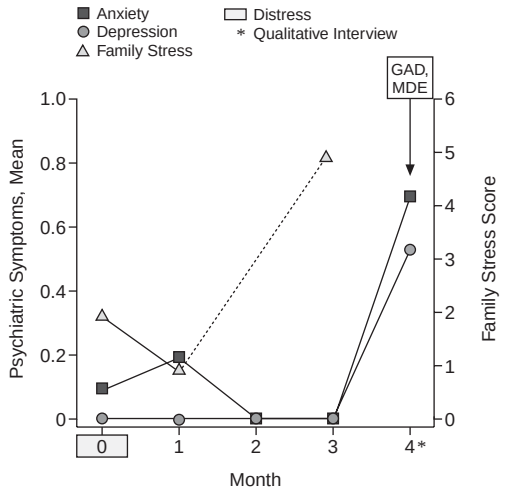
Course. At baseline, Ms. B reported elevated levels of anxiety and depression with generally normal levels of functioning. Although her daily hassles were elevated, she reported normal levels of life events, stress, uplifts and social support, and hope. Over the course of 5 interviews, Ms. B reported persistently elevated levels of depression peaking in month 2; bimodal peaks in anxiety in months 1 and 3 coinciding with crossing DSM thresholds for panic disorder and subthreshold panic, respectively; and elevated levels of somatization in months 2 and 3 (Figure 2). Distress was reported in month 2 and reported again in month 6. Emotional role functioning dropped to a score of 0 and remained there, while physical role functioning, social functioning, and mental health dropped for months 2 and 3, while pain scores were elevated.

Figure 2. Case 2 Fluctuations in Psychiatric Symptoms, Distress, Mental Health, and DSM Diagnosis During Quantitative Study[a,b]



[a]Psychiatric symptoms (anxiety and depression) were measured using the Hopkins Symptom Checklist-90. Mental health was measured using the Medical Outcome Study Short Form-36.
[b]Dashed lines indicate missing quantitative data for the given month's assessment.
Abbreviation: Sub = subthreshold.

Figure 3. Case 3 Fluctuations in Psychiatric Symptoms, Distress, Family Stress, and DSM Diagnosis During Quantitative Study[a,b]



[a]Psychiatric symptoms (anxiety and depression) were measured using the Hopkins Symptom Checklist-90. Family stress was measured using the Duke Social Support and Stress Scale.
[b]Dashed lines indicate missing quantitative data for the given month's assessment.
Abbreviations: GAD = generalized anxiety disorder, MDE = major depressive episode.

Ms. B's qualitative interview took place approximately 5 months after she crossed the DSM threshold and 5 months after she enrolled in the study. Her stresses primarily related to her family life: she had to function as a single parent much of the time due to her husband's long work hours; her younger child would soon start school, and she felt she needed to decide what to do with her life after her mothering duties lessened; and her preadolescent son, fathered by another man prior to her current marriage, was asking who his real father was, and she didn't know how to handle his questions. Other concerns included Christmas finances, missing a friend who had recently moved, tensions with a neighbor, and the responsibility of caring for a friend's children while their mother dealt with a family crisis.

Summary. As in the previous case, Ms. B's distress did not coincide with peaks in symptom levels or DSM thresholds. Although spikes in anxiety levels corresponded to crossing DSM panic thresholds, the elevated levels of somatization corresponded to drops in physical role functioning, social functioning, and mental health with peaks in pain levels. The variability may reflect the cyclic stress of premenstrual dysphoric disorder and the conflicting nature of her role as caretaker.

Case 3

Context. Ms. C is a 69-year-old widowed Hispanic woman who completed some high school. She is retired and lives in a senior housing complex. Ms. C remains involved with family, which is a source of both stress and social support. Ms. C prefers to rely on herself to resolve problems rather than on family. She uses numerous strategies to cope, including books and television, social events and Mass, and humor. Although recent stresses had worsened her asthma, raised her blood pressure, and caused her to lose weight, she felt her chronic obstructive pulmonary disease was under control.

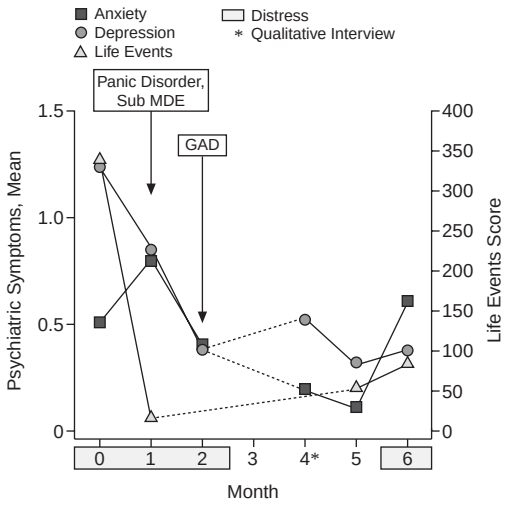
Course. At baseline, Ms. C's symptom levels were low, and her functional status was normal, but she was distressed, with a diminished mental health score. Despite normal levels of life events, daily hassles and uplifts, stress and social support, she reported 2 recent illnesses and diminished levels of hope. Over the next 4 interviews, Ms. C was not distressed, and her symptom levels remained low until month 4, when her anxiety and depression levels rose, and she crossed DSM thresholds for MDE and GAD. Physical role functioning and social functioning dropped in month 3 and remained low, and emotional role functioning dropped in month 4. Life events and daily hassles remained low throughout the study, but family stress rose in month 3, and uplifts dropped in month 4 (Figure 3).

Ms. C's qualitative interview took place 4 months after she enrolled in the study and a day after she crossed the DSM threshold, and helps to explain the above pattern. In the weeks prior to the interview, Ms. C was experiencing

a family crisis with her granddaughter, whom she had raised. She had tried to extricate her granddaughter from an abusive relationship, incurring a large legal debt in the process. Despite these efforts, her granddaughter had returned to her common-law husband and her children, and the man was now threatening Ms. C with physical harm for interfering. In addition to worrying about her granddaughter, Ms. C was worried about the children, aged 1 and 2 years, living in an abusive household and about being denied contact with them. The worst of the crisis had occurred in the previous month, and she reported that she was trying to stay uninvolved, distracting herself with other activities.

Summary. Distress again did not coincide with peaks in symptom levels or DSM thresholds, but instead corresponded to acute illness in this case. GAD and MDE developed as anxiety and depression levels rose, which in turn paralleled decline in emotional role functioning. Crossing DSM thresholds occurred after a rise in family stress and drops in physical role functioning and social functioning. Her central caretaking role in the family and consequent stress belies her independent situation and social support.

Figure 4. Case 4 Fluctuations in Psychiatric Symptoms, Distress, Life Events, and DSM Diagnosis During Quantitative Study[a,b]



[a]Psychiatric symptoms (anxiety and depression) were measured using the Hopkins Symptom Checklist-90. Life events were measured using the Holmes and Rahe Social Readjustment Rating Scale.
[b]Dashed lines indicate missing quantitative data for the given month's assessment.
Abbreviations: GAD = generalized anxiety disorder, MDE = major depressive episode, Sub = subthreshold.

Case 4

Context. Ms. D is a 25-year-old unmarried Hispanic woman. She lives with her boyfriend, who works at a fast-food restaurant. Ms. D had attended college for a time but was currently experiencing health problems related to multiple sclerosis and was not working. Ms. D described a strong social support network, including her family, her boyfriend, and his family. To cope with her stresses, she noted that she generally relies on herself to figure things out and attempts to focus on positive aspects of her life.

Course. At baseline in June, Ms. D was distressed with elevated levels of anxiety, depression, and somatization. She reported reduced levels of physical, social, and role functioning. She had increased life events, daily hassles, and stress but normal levels of hope, social support, and uplifts. Over the next 5 interviews, Ms. D maintained elevated somatization scores. Her depression and anxiety scores dropped in month 2 but peaked again in months 4 and 6, respectively. Panic disorder and subthreshold MDE were present in month 1, while GAD was present in month 2 (Figure 4). Ms. D became nondistressed in month 3, but distress resumed in month 6. Physical functioning and emotional role functioning remained diminished throughout the study. Social functioning dropped in month 3, while pain rose. Social support levels rose steadily throughout the study.

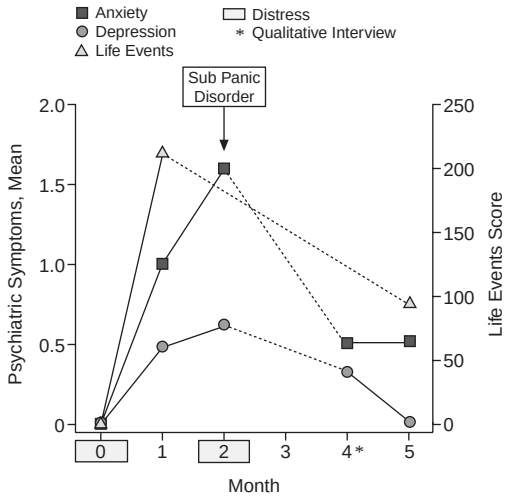
Ms. D's qualitative interview took place 3 months after she crossed the DSM threshold and 4 months after she enrolled in the study. She recalled that a month into the study (when she had crossed the DSM threshold), she felt angry about her recent diagnosis of multiple sclerosis and felt restless, bored, "crazy," and unable to sleep. However, in the past few months, she had enjoyed preparing for a family wedding and attending several family birthday celebrations. Stresses at the time of the interview included a new multiple sclerosis symptom (numbness and tingling in her arm) and feelings of boredom and loneliness while her boyfriend was at work.

Summary. Although distress was associated with DSM diagnoses and symptom levels, these constructs were not equivalent. Anxiety levels again peaked during panic disorder, but MDE developed after the peak in depression levels. GAD developed after panic disorder and subthreshold MDE and could represent residual disease. Emotional role functioning and social functioning were lowest after the DSM disorders. These changes in her emotional state may represent reactions to the chronic stress of her multiple sclerosis and the volatile nature of the illness. The temporary nature of these states may reflect adaptation to her illness via strong coping skills and social support. Finally, the progressive increases in social support may indicate a therapeutic role of participation in the study or adaptation to her multiple sclerosis diagnosis and symptoms with family and friends rallying to support her in coping.

Case 5

Context. Ms. E is a 50-year-old divorced white woman whose elderly father moved into her apartment during the

Figure 5. Case 5 Fluctuations in Psychiatric Symptoms, Distress, Life Events, and DSM Diagnosis During Quantitative Study[a,b]



[a]Psychiatric symptoms (anxiety and depression) were measured using the Hopkins Symptom Checklist-90. Life events were measured using the Holmes and Rahe Social Readjustment Rating Scale.
[b]Dashed lines indicate missing quantitative data for the given month's assessment.
Abbreviation: Sub = subthreshold.

course of the study. She has some college education, and works sporadically for an agency that places temporary employees, but was unemployed at the time of the study due to health problems. Sources of social support include a boyfriend, a close woman friend, and 35 penpals. Ways of coping include having a strong religious faith, maintaining a positive attitude, accepting the things she can't change, and staying busy with penpals, crafts, and sketching still lifes. Ms. E is adamantly opposed to mood-altering medications, although her doctor has recommended them.

Course. At baseline, Ms. E scored as distressed but exhibited low symptom levels. Her physical functioning score was poor with a high level of pain. With no life events or daily hassles and normal levels of social support and uplifts, her hope score was high. As the study continued, her life events score and acute illnesses rose precipitously in month 1. Her anxiety and somatization levels also rose, with anxiety and depression peaking in month 2, as distress returned and subthreshold panic developed (Figure 5). Subsequently, her physical and emotional role and social functioning dropped.

Ms. E's qualitative interview took place 2 months after crossing the DSM threshold and 4 months after enrolling in the study. She had been experiencing stress due to unstable work as a temp and lack of money, which sometimes left her without food in the house. However, several positive things had happened recently in her life. A few weeks before the interview she had been baptized and had "accepted Jesus," and in August, her father had moved into her apartment, which was a great relief because she no longer had to travel by bus across town to look after him in his home.

Summary. Again, anxiety levels peaked when panic developed. Distress did not reflect symptom levels. Life events and acute illnesses peaked prior to the development of panic, while functional status dropped subsequently. Despite the strong social support and coping strategies, the impact of chronic disease with superimposed stress was associated with functional status decline.

DISCUSSION

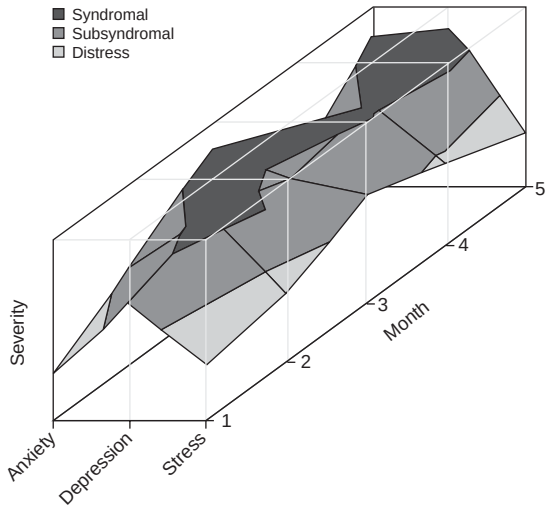
These cases support the validity of concerns about the applicability of DSM classification to primary care patients.[4] Subjects often reported distress without meeting DSM criteria or fell short of meeting full criteria for a given disorder. Even when they did cross, such conditions were often temporary. In addition, psychological symptoms and disorders showed complex patterns when considering their context (chronic medical illness, life events, functional status, social support, and coping strategies). Although the current DSM system and recommended treatment strategies may be appropriate for primary care patients meeting criteria for Axis I disorders over a sustained period, patients seen in a low-income, urban primary care setting often did not conform to DSM criteria and categorizations like patients in controlled research settings from which the DSM criteria were derived.

Old Model

DSM classification cannot reflect the richness and complexity of mental health in the primary care setting. Although the DSM system does delineate mental disorders as well as stressors, chronic medical illness, and global functional status, it cannot adequately represent the prevalence of distress and subthreshold diversity seen in primary care, the coping strategies used, or the context.

Alternatives in classification to the DSM system have been considered. One approach would be to recognize a distinct group of mixed disorders. Finlay-Jones and Brown[39] showed that the nature of life events differed in those with mixed anxiety/depression from those with depressive or anxiety disorders. Systems based on psychoanalytic factors[40] and personality traits[41] have also been proposed. These proposed systems rely upon patients' traits on a variety of dimensions. Taking a dimensional approach further, Brown et al.[42] found support for a 3-factor model involving positive and negative affect as well as autonomic arousal in explaining depression and anxiety disorders. Vaillant and Schnurr[43] compared 6 models of classification in their prediction of outcomes. Although the DSM system did correlate with outcomes, systems based on symptomatology and immaturity of

Figure 6. Dynamic Model of Mental Health Problems in a Primary Care Patient During Quantitative Study



defenses did as well, usually yielding higher correlation coefficients. Thus, previous work in psychiatric patients supports the validity of using continuous dimensions for classification. Such systems compare favorably with the DSM system in terms of patient outcomes.

New Model

On the basis of the literature, deliberations of the mental health forum of the North American Primary Care Research Group,[4] and the findings of this study, we propose a dynamic model in which the levels of anxiety, depression, and stress are in constant flux; only when levels exceed certain thresholds do patients become diagnosable with specific Axis I disorders. In the example in Figure 6, although the patient is distressed, his levels of depression are only sufficient to meet the threshold for a subsyndromal DSM disorder during month 1. However, in month 2, he meets criteria for a syndromal depressive disorder and a subsyndromal anxiety disorder. In month 3, anxiety and stress levels continue to increase so that the patient now meets criteria for a syndromal anxiety disorder, but the levels of depression and stress are only in the subsyndromal range. Under this model, DSM disorders represent the "tip of the iceberg." Depending upon the point at which a patient is questioned, he or she may or may not meet DSM criteria for a specific disorder, and that disorder may change depending upon when in its course it is recognized. The specific DSM disorder seen is a reflection of the stressors and context in which they occur. Thus, the artificial nature of the DSM system would not accurately reflect the spectrum of mental health problems seen in primary care.[44]

If this dynamic model more accurately reflects mental health problems in primary care than does the DSM system, it has implications for the health care system. Such a model may explain health care utilization and costs in seemingly healthy primary care patients. This would improve understanding of patients who account for high levels of utilization. This model could also improve our understanding of factors that impair quality of life in patients who otherwise lack chronic medical problems. Such understanding could lead to early recognition of distress apart from DSM diagnoses, enable intervention at an earlier stage in the course of mental health problems, and suggest interventions to reduce or prevent psychological symptoms resulting from the occurrence of intermittent stressors.

Implications

The implications for the practitioner are profound. First, most of the research literature on DSM disorders may not apply to many family practice patients because it focuses on a small portion of the patients we see and because it was conducted in tertiary care settings. Consequently, there is little appropriate information available to guide management of subthreshold disorders and distress. Second, the transient nature of most mental illness in primary care suggests that watchful waiting, with encouragement of coping strategies and social support, and appropriate follow-up, is a valid, perhaps the state-of-the-art, approach to mental disorders seen in primary care. Finally, because the DSM system is so entrenched, the management of mental disorders by family physicians may be denigrated by mental health professionals, and reimbursement for mental disorders may be difficult at best.

Alternative methods of classification of mental disorders should be considered for primary care. One approach would be to reconceptualize the current DSM system to include distress and subthreshold disorders. Alternatively, the CATEGO, a computerized diagnostic system, may produce better diagnostic stability and discrimination than DSM-III.[45,46] Finally, a primary care–based system for classification of mental health problems based on symptom dimensions may be a valid and useful approach.

Limitations

This study has several limitations. First, follow-up was inconsistent, leaving gaps in the longitudinal assessments; we cannot rule out that subjects not completing follow-up interviews may have had more severe symptoms. Second, the qualitative interviews were conducted at one point in time and are therefore limited in their ability to explain longitudinal developments. In addition, subjects often could not recall details about their lives at the point at which they crossed a threshold. Third, the quantitative measurements may not reflect chronic illnesses or temporary developments well and may have missed developments that occurred between follow-up interviews. Due to the predominance of low-income, Hispanic patients in

this study, the results may not generalize to other populations. Finally, the proposed model only applies to Axis I disorders.

In conclusion, these cases demonstrate the frequent failure of the DSM system to adequately reflect mental illness in a predominantly low-income, Hispanic primary care population. Obviously, more primary care research is needed that focuses on the transitions between distress and subthreshold disorders as well as from subthreshold to threshold disorder. In addition, this research should look at the longitudinal course of these states.

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