

An empirically derived taxonomy of common distress syndromes in the medically ill

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Abstract

Objective: Contemporary psychiatric classifications have not proved to be useful in the understanding and care of people with physical illness. Distress syndromes are common, but classifications fail to differentiate syndromes relevantly. We sought to take a fresh look at the common distress syndromes in the medically ill. **Methods:** 312 medical inpatients were interviewed using a structured psychiatric interview [the Monash Interview for Liaison Psychiatry (MILP)] to elicit the presence of mood, anxiety and somatoform symptoms. A previously reported examination of these data using latent trait analysis revealed the dimensions of demoralization, anhedonia, autonomic anxiety, somatoform symptoms and grief. Patients were scored on these dimensions and, on the basis of these, subjected to cluster analysis. Derived classes were compared on a range of demographic and clinical data including psychiatric diagnosis. **Results:** Six classes were found, distinguished by general levels of distress (measured by demoralization, autonomic anxiety and somatoform symptoms), anhedonia and grief. The most distressed groups were Demoral-

ization and Demoralized Grief. Anhedonic Depression showed moderate levels of distress but the highest level of social dysfunction. Diagnostic and Statistical Manual of Mental Disorders (DSM-IV) categories of mood disorders did not follow any particular pattern other than reflecting severity of distress. The classes of high distress (Demoralization and Demoralized Grief) were significantly associated with younger age, past history of psychiatric treatment, low Global Assessment of Functioning (GAF) scores over the previous 12 months and DSM-IV somatoform disorders. Patients with Demoralized Grief tended to acknowledge their illness as a significant and relevant stressor. Patients with Demoralization identified other stressors as significant. **Conclusion:** Concepts of demoralization, anhedonia and grief differentiate between important clinical syndromes and have informed the development of a taxonomy of common distress syndromes in the medically ill. Research is required to further explore the validity and utility of these concepts. © 2003 Elsevier Science Inc. All rights reserved.

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Introduction

The development of diagnostic classifications using operationalised criteria, as exemplified by the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV) [1] and the International Classification of Diseases (ICD-10) [2], has undoubtedly had a major impact on psychiatry. It has provided reliability of diagnosis, a common language for psychiatrists and a focus for research. However, as the

early developers knew, the validity of such diagnostic systems would need to be tested [3]. Within the clinical area of consultation-liaison psychiatry—that is, in the situation of the presence of comorbid physical illness, there is a considerable body of literature highlighting the inability of these diagnostic systems to describe adequately the nature, range and aetiological understandings of the phenomena seen [4,5]. An important example is the diagnosis of depression where there is a high prevalence in this population but a lack of differentiation of syndromes within the depressive spectrum [6–8]. Although grades of severity of depression are recognised, there is little meaningful subtyping [9,10]. Furthermore, depressive symptoms frequently coexist with anxiety and somatic

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symptoms [11]. As van Praag [12] suggests, “syndromal differentiation has disappeared from the diagnosis of depression” (p. 767).

This difficulty in applying a standard psychiatric classification to the consultation-liaison setting is an example of “category fallacy” (to borrow a term from the transcultural literature) where a restrictive diagnostic template developed in one population is used in another culture “for whom it lacks coherence and its validity has not been established” [13, p. 452]. Upon this background, we decided to embark on a fresh examination of the psychopathology of patients presenting with physical illness, and specifically of the affective and somatic expressions, with a view of developing a more relevant taxonomy.

There are several steps in developing a classification. We have followed Paykel’s [14] advice: “first to group symptoms into syndromes and then to group individuals with syndromes into diagnostic categories” (p. 357). In the absence of a “gold standard” [15], we used latent trait analysis (as employed by Goldberg et al. [16] and Ormel et al. [17]) to examine the dimensional structure of the symptom data and a cluster analytic technique for the second stage of grouping individuals. The latent trait analysis identified five dimensions, which we named demoralization, anhedonia, autonomic anxiety, somatoform symptoms and grief, and has been reported previously [18]. This paper describes the second stage, involving a cluster analysis of subjects, and a comparison of the derived classes with standard DSM-IV diagnoses, demographic and clinical data.

Method

Subjects and data

The study was conducted at Monash Medical Centre, a university-affiliated general hospital in Melbourne, Australia. The subjects, described previously [18], were 312 patients admitted consecutively to the medical wards, screened for probable caseness with a 36-item General Health Questionnaire (GHQ) [19]. The binary scoring of Goodchild and Duncan-Jones [20], with a cutoff of 20/21, was used on the basis that it has good sensitivity for a broad range of disturbance in a medical population [21]. Thirty-four percent of screened patients scored above the cut-off. We excluded patients who were unable to participate because of mental or physical incapacity or inadequate fluency in the English language. The mean age of the patient sample was 47.5 years (range 18–85) and 61% were female. They had been admitted to hospital with a range of medical conditions: 22% cardiovascular, 17% gastrointestinal, 15% respiratory, 13% rheumatological and 11% neurological.

Symptom data from the sample were obtained by interview, carried out within the first 3 days of admission

to hospital, by experienced and trained research psychologists. The Monash Interview for Liaison Psychiatry (MILP) [20] was used. This is a structured interview able to make DSM-IV and ICD-10 diagnoses. Interrater reliability has been shown to be good with mean κ for agreement of items of 0.83 and of diagnoses 0.68. The κ value of agreement between MILP diagnoses and checklist diagnoses, used as a measure of procedural validity, has averaged 0.61 [22].

Information concerning demography, past psychiatric history and the presence of stressors was also obtained at interview. Immediately following the interview, the research psychologist assigned scores for current Global Assessment of Functioning (GAF) [1] and highest GAF over the previous 12 months. In collaboration with the hospital medical staff, medical diagnoses were coded using ICD-9CM and a Karnofsky rating [23] made of physical functioning.

After entry into computer, symptom data were submitted to latent trait analysis as previously described [18]. In addition, DSM-IV diagnoses were made using a previously validated computerised algorithm [22,24].

Statistical analysis

Scores were computed for each subject on each of the five dimensions by summing the symptoms present loading on each dimension. The Snob computer program [25,26] was used to derive the taxonomic classes. This cluster analytic technique, previously applied to psychiatric research [27–31], is based on information theory. Searching the data, Snob uses “minimum measure length” (MML), a numeric measure of model parsimony, for both allocating subjects to classes and for determining the number of classes within the multivariate population [32,33]. If the message length is diminished when classes are split or combined to make an assignment, then the assignment is retained; otherwise, it is rejected. An assumption underlying Snob is that, within each class, dimensions are essentially uncorrelated. Correlation of dimensions could be modelled by MML factor analysis [32], although development of MML clustering with factor analysis is in early stages [34].

After development of the model, subjects were assigned to classes using two different ways, described below. In order to characterise classes, mean dimension scores were derived for patients within each class and compared. Classes were also compared on demographic variables, GHQ scores, current GAF scores, highest GAF over the previous 12 months, presence of past psychiatric history (defined as any inpatient or outpatient psychiatric treatment), nature of any identified stressor (categorized “none,” “medical illness” or “other”), medical diagnosis and the Karnofsky rating of physical functioning. The GHQ scales of depression, anxiety and social dysfunction, derived from the 28-item version, were scored in a Likert

Table 1
Snob model taxonomy

Dimensions (range of scores)	Low distress (<i>n</i> = 22)	Uncomplicated grief (<i>n</i> = 100)	Moderate distress (<i>n</i> = 112)	Anhedonic depression (<i>n</i> = 29)	Demoralized grief (<i>n</i> = 36)	Demoralization (<i>n</i> = 14)	Total (<i>n</i> = 312) ^b
Demoralization (0–28)	2.2±1.5 (0.01%)	11.2±4.7 (10%)	11.0±4.8 (10%)	ns	19.7±3.9 (0.01%)	21.5±3.2 (0.01%)	12.2±6.2
Autonomic anxiety (0–25)	1.6±1.6 (0.01%)	4.5±2.9 (0.01%)	ns	ns	11.1±5.0 (0.01%)	13.7±5.3 (0.01%)	6.0±4.6
Somatoform symptoms (0–18)	1.1±1.2 (0.01%)	3.5±2.3 (1%)	ns	ns	7.2±3.5 (0.01%)	9.0±2.4 (0.01%)	4.6±3.1
Anhedonia (0–4)	0.1±0.4 (0.01%)	ns	1.2±1.0 (0.01%)	3.9±0.4 (0.01%)	3.5±0.7 (0.01%)	3.1±0.9 (5%)	1.9±1.5
Grief (0–6)	0.0±0.4 (0.01%)	3.8±1.4 (0.01%)	0.0±0.4 (0.01%)	0.1±0.4 (0.01%)	5.4±0.8 (0.01%)	0.0±0.4 (0.01%)	1.8±2.3

Mean ± S.D. dimension scores for each of the six classes with subjects assigned fractionally by Snob, with percent significance.^a

^a The significance testing in Snob is not unlike classical hypothesis testing. Where the message length of encoding the class distribution parameters and the class data is more than 7 or so bits cheaper than encoding the class data using the population (or null) distribution parameters, then, since $2^{-7} < 1\%$, we denote the class distribution parameters as significant (1%). Were that encoding more than 14 or so bits cheaper, then, since $2^{-14} < 0.01\%$, we denote the class distribution parameters as significant (0.01%). See Wallace and Dowe, Section 8 and documentation snob.doc, Section 11 [22]. When the distribution of an attribute in a class is deemed to be not significantly different from that attribute's distribution in the population, the Snob program output reports this "not significant" nature by a convention of setting all the attribute parameters (e.g., mean and S.D.) to zero. To clarify things for the reader, in these circumstances, we simply report "ns." The class attributes can be assumed to be approximately the same as the population attribute (reported in the last column).

^b As discussed in the Method, Snob does fractional or partial assignments. As such, the number of things (*n*) in each class will typically not be an integer. We have rounded these values to the nearest integer. The total is indeed 312.0.

manner. In addition, a comparison was made between the new taxonomic classes and the DSM-IV diagnoses made for each patient within the domains of depressive, anxiety and somatizing disorders.

The Snob method can be likened to what is known as fuzzy cluster analysis [35], in that it probabilistically assigns individuals to classes. Thus, a person might have partial membership in two or more classes. In addition, the Snob program indicates the single most likely class for each individual, except when the probability of assignment to the different classes is equal. To allow the assumption of normal or Gaussian distributions, a proportional assignment to class was carried out. In this method, a person who had a probability of 0.40 of belonging to one class and of 0.60 of belonging to another engendered two records for the variable of interest, one weighted by 0.40 and one weighted 0.60. Mean scores (e.g., for GHQ score) or numbers in a category (such as Major Depression) were thus proportionally created, with the total weights adding up to the number of observations (312). Dimensional variables were analysed using SPSS one-way analysis of variance (ANOVA)

[36]. SPSS χ^2 analysis does not allow the use of proportions (it rounds to integers), so a custom Fortran 90 program was employed. Significance was computed by a nonasymptotic procedure using the Fortran IV subroutine developed by Berry and Mielke [37].

As the concept of proportional assignment is theoretical but not so easily related to the clinical situation, a second set of analyses was carried out, in which each person was assigned to the class with the highest probability of membership for them, provided that probability was at least 0.50. This was the strategy employed by Kissane et al. [30]. All subjects were successfully allocated, with more than 90% being assigned on the basis of a probability of 0.80 or greater. Analyses were carried out using SPSS one-way analysis of variance for dimensional variables and χ^2 for categorical variables. With the latter, the exact tests option was employed in order to perform a Monte Carlo permutation test, which makes less restrictive assumptions than the standard asymptotic significance test employed with χ^2 [38]. The results were also checked against those of the nonasymptotic method. Because analyses using the two methods of assignment gave similar

Table 2
Mean ± S.D. dimension scores for each of the six classes with subjects assigned wholly to their most probable class

Dimensions	Low distress (<i>n</i> = 21)	Uncomplicated grief (<i>n</i> = 98)	Moderate distress (<i>n</i> = 114)	Anhedonic depression (<i>n</i> = 28)	Demoralized grief (<i>n</i> = 36)	Demoralization (<i>n</i> = 15)	Total (<i>n</i> = 312)	
Demoralization	2.0±1.4	11.1±4.6	10.9±4.7	14.3±5.2	19.9±3.8	21.7±2.9	12.2±6.2	$F(5,305)=62.2, P<.001$
Autonomic anxiety	1.5±1.5	4.5±2.9	5.6±3.8	5.1±3.5	11.1±5.0	13.9±5.0	6.0±4.6	$F(5,305)=39.5, P<.001$
Somatoform symptoms	1.0±1.2	3.5±2.3	4.7±2.7	4.7±2.0	7.2±3.5	9.0±2.2	4.6±3.1	$F(5,305)=28.1, P<.001$
Anhedonia	0.1±0.3	1.8±1.3	1.2±1.0	4.0±0.0	3.6±0.7	3.1±0.8	1.9±1.5	$F(5,305)=71.6, P<.001$
Grief	0.05±0.2	3.8±1.3	0.01±0.09	0.1±0.3	5.4±0.8	0.07±0.2	1.8±2.3	$F(5,305)=43.4, P<.001$

Table 3
GHQ score, GAF score, age (mean \pm S.D.), past psychiatric history (%) and type of stressor (%) for each class

	Low distress	Uncomplicated grief	Moderate distress	Anhedonic depression	Demoralized grief	Demoralization	Total	
GHQ28 depression	11.0 \pm 3.3	13.1 \pm 5.0	12.0 \pm 4.0	15.4 \pm 6.4	18.4 \pm 5.7	18.0 \pm 4.2	13.5 \pm 5.2	$F(5,289) = 13.5, P < .001$
GHQ28 anxiety	12.6 \pm 2.8	15.6 \pm 3.7	15.2 \pm 3.3	17.0 \pm 3.9	19.2 \pm 3.3	19.4 \pm 3.7	16.0 \pm 3.8	$F(5,289) = 13.5, P < .001$
GHQ28 Social dysfunction	15.4 \pm 3.1	16.2 \pm 3.2	15.9 \pm 3.0	19.2 \pm 3.2	18.8 \pm 3.1	17.4 \pm 3.3	16.6 \pm 3.3	$F(5,289) = 9.0, P < .001$
Current GAF	80.9 \pm 7.6	71.9 \pm 7.7	66.7 \pm 11.2	65.7 \pm 11.8	56.1 \pm 9.5	53.2 \pm 12.9	67.3 \pm 11.9	$F(5,304) = 27.2, P < .001$
Highest 12-month GAF	86.2 \pm 7.2	80.7 \pm 9.1	79.9 \pm 9.4	79.0 \pm 12.0	70.7 \pm 11.4	68.9 \pm 10.2	78.9 \pm 10.5	$F(5,304) = 11.6, P < .001$
Age	52.4 \pm 19.8	49.4 \pm 17.7	47.2 \pm 18.5	51.2 \pm 14.5	38.9 \pm 14.9	41.4 \pm 13.6	47.8 \pm 17.9	$F(5,306) = 3.1, P < .01$
Past psychiatric history (%) ^a	15.8	39.8	41.4	53.8	72.2	80.0	46.0	$\chi^2(5) = 26.95, P < .001$
Stressor none (%)	33.3	10.2	14.9	10.7	5.6	6.7	12.8	
Stressor illness (%)	38.1	38.8	30.7	46.4	55.6	26.7	37.8	$\chi^2(10) = 19.84, P < .05$
Stressor other (%)	28.6	51.0	54.5	42.9	38.9	66.7	49.4	

^a "Past psychiatric history" includes a history of inpatient or outpatient psychiatric treatment.

results, we have opted to present only the results of the latter method.

Results

A six-class or -cluster structure was found by Snob analysis (see Tables 1 and 2). The classes were differentiated on the dimensions, particularly by high, moderate or low levels of demoralization, high or low grief and high or low anhedonia. There were two classes with high distress (demoralization, anxiety and somatoform symptoms). One we have called "Demoralization" because of the predominant demoralization. The other we have named "Demoralized Grief" because of the combination of high distress (particularly demoralization) and grief. There was also a large class with grief-like attribution but moderate levels of distress ("Uncomplicated Grief") and a large class of nonspecific "Moderate Distress". The latter class had measures of demoralization, autonomic anxiety and somatoform symptoms in the mid-range and was the largest group. "Anhedonic Depression" was associated with high anhedonia score but only moderate levels of distress. Despite the study sample having been screened with the GHQ, there was a small group of patients with low levels of distress ("Low Distress").

Comparison of mean GHQ scores (see Table 3) showed that there were statistically significant differences in severity of distress, as measured by these scales, between the taxonomic classes, and these differences were consistent with the results just described. Demoralization and Demoralized Grief had particularly high scores on the depression and anxiety scales. Anhedonic Depression had moderately high scores on these two scales but the highest score on social dysfunction. Current GAF score followed this pattern, being lowest for these three classes.

There were statistically significant differences between classes on mean age, with Demoralization and Demoralized Grief (the two classes with the highest distress) being younger than the other classes (Table 3). There were no differences, however, in other demographic characteristics: sex, years at school, religion, means of income, professional status of work and country of birth.

Regarding associated environmental circumstances, there was no difference between the groups in medical diagnoses or in Karnofsky measure of physical functioning. However, members of the groups did identify stressors significantly differently. Demoralized Grief was associated with a high rate of identifying the illness as the stressor, whereas people with Demoralization tended to acknowledge significant "other" stressors (Table 3).

Concerning vulnerability represented by past psychiatric difficulty, the Demoralization and the Demoralized Grief groups had high prevalences of past psychiatric history and the lowest GAF scores of the preceding 12 months.

Table 4 shows the cross-tabulations with DSM-IV diagnoses. Major Depressive Episode (MDE) and MDE with melancholic features were most represented in the Demoralization class and to a lesser extent in Demoralized Grief but were not particularly associated with Anhedonic Depression. Anxiety disorders, including phobias and depersonalization, were similarly most represented in these two classes. Post-Traumatic Stress Disorder was most commonly associated with Demoralized Grief. Patients with Uncomplicated Grief most often attracted diagnoses of Adjustment Disorder (both with depressed mood and with anxiety) or Psychological Factors Affecting Medical Condition.

DSM-IV somatoform disorders were similarly found most commonly in Demoralization and Demoralized Grief. The Demoralization group had the highest prevalence of Somatization Disorder and the Demoralized Grief group of Conversion Disorder (see Table 4). Patients with grief (both Uncomplicated Grief and Demoralized Grief)

Table 4
Comparison of “Snob” classes and DSM-IV diagnoses (percent with diagnosis within class)

	Low distress (<i>n</i> =21)	Uncomplicated grief (<i>n</i> =98)	Moderate distress (<i>n</i> =114)	Anhedonic depression (<i>n</i> =28)	Demoralized grief (<i>n</i> =36)	Demoralization (<i>n</i> =15)	Total (<i>n</i> =312)	
<i>Depressive syndromes</i>								
MDE	0	10.2	8.8	35.7	55.6	73.3	19.6	$\chi^2(5)=80.9, P<.001$
MDE with melancholic features	0	6.1	0.9	14.3	38.9	60.0	10.9	$\chi^2(5)=83.3, P<.001$
Adjustment disorder with depressed mood	4.8	38.8	21.9	21.4	13.9	0	24.0	$\chi^2(5)=23.1, P<.001$
Dysthymic disorder	0	4.1	5.3	3.6	5.6	13.3	4.8	$\chi^2(5)=3.7, ns$
<i>Anxiety syndromes</i>								
Generalized anxiety disorders	0	3.1	14.9	14.3	41.7	26.7	13.8	$\chi^2(5)=38.6, P<.001$
Phobic disorders ^a	0	8.2	14.0	14.3	44.4	66.7	17.3	$\chi^2(5)=55.2, P<.001$
Obsessive-compulsive disorder	0	2.0	2.6	3.6	16.7	26.7	5.1	$\chi^2(5)=28.8, P<.01$
Depersonalization disorder	0	8.2	3.5	7.1	16.7	20.0	7.4	$\chi^2(5)=12.3, P<.05$
Post-traumatic stress disorder	0	0	0.9	0	11.1	0	1.6	$\chi^2(5)=23.7, P<.01$
Adjustment disorder with anxiety	9.5	12.2	5.3	17.9	11.1	6.7	9.6	$\chi^2(5)=5.7, ns$
<i>Somatic syndromes</i>								
Somatization disorder	0	0	1.8	0	11.1	26.7	3.2	$\chi^2(5)=39.5, P<.01$
Conversion disorder	0	7.1	4.4	3.6	19.4	0	.4	$\chi^2(5)=13.9, P<.001$
Hypochondriacal disorder	0	7.1	1.8	3.6	5.6	6.7	4.2	$\chi^2(5)=5.2, ns$
Pain disorder ^b	4.8	4.1	13.2	3.6	22.2	13.3	9.9	$\chi^2(5)=13.2, P<.05$
Undifferentiated somatoform disorders	9.5	11.2	14.0	0	11.1	46.7	12.8	$\chi^2(5)=20.2, P<.001$
Psychological factors affecting medical condition	0	11.2	1.8	0	11.1	0	5.4	$\chi^2(5)=15.3, P<.02$

^a “Phobic disorder” includes agoraphobia, social phobia and specific phobia.

^b “Pain disorder” includes pain disorder associated with psychological factors and pain disorder associated with both psychological factors and a general medical condition.

had the highest rate of diagnosis of Psychological Factors Affecting Medical Condition. Low Distress patients attracted few diagnoses.

Discussion

Although it is generally recognised that nonpsychotic disturbances are dimensional in nature [39], categorization is important in deciding when and how to offer interventions. In other words, whilst a dimensional view of psychiatric disturbance may be theoretically more correct and have construct validity, a categorical view has a certain utility. In the tradition of Kraepelin, categorization assumes there is a boundary between normal and sick and those requiring treatment and those who do not [40]. Although it is acknowledged that boundaries can be “fuzzy” (for example, see Ref. [41, p.19]), one of the goals of any taxonomy is to help identify boundaries. The aim of taxonomy, says Margolis [42], is to collect categories that have some constancy precisely because this pattern indicates “natural kinds” of phenomena that can be explained by laws of nature. One of the characteristics of the so-called atheoretical system of DSM is an increasing number of

diagnostic categories and increasing occurrence of comorbidity [43]. Follette and Houts [44] have argued that such taxonomies, divorced from theoretical frameworks, are no longer doing the job of explaining but instead have become the thing to be explained.

It is these thoughts that have underpinned this research. The aim was to derive empirically a taxonomy that was parsimonious, would make intuitive sense and have descriptive validity. We have followed the method, described by Paykel, of first looking at the latent structure of symptoms using a dimensional approach and then examining whether the subjects fall into distinct categories (“natural kinds”) described by these dimensions. Using latent trait analysis, we have described five dimensions: demoralization, autonomic anxiety, somatoform symptoms, anhedonia and grief [18]. Using these dimensions, we report here the application of a cluster analytic technique to derive a numerical taxonomy. Such empirically derived classes are dependent on the data that are measured and entered into analysis. We have included, in the first instance, a wide range of symptom data (reported patient experiences)—affective, somatic, dissociative and grief-related—even though the latent trait analysis was limited to “common” symptoms with prevalence in the sample of 5% or more. It

is the inclusion of this breadth of data that has perhaps allowed the differentiation of anhedonic depression from demoralization and grief states.

The results indicate what others have previously shown (for example, Ref. [11])—that although at the symptom level dimensions of demoralization, anxiety and somatoform symptoms can be identified, at the “person” level these symptoms tend to be present together—as in a general distress syndrome [45]. However, further to this, the results show that a number of patient groups can be differentiated on the basis of previously elucidated dimensions—particularly with respect to demoralization, grief and anhedonia. The most common experience was that of grief. This involves particular grief symptoms (pining, yearning, feeling pangs of grief, experiencing memories and mental pictures) [46,47] as well as an attribution—that is, a recognition that there has been a “loss” of some kind. The “Uncomplicated Grief” is similar to what is traditionally diagnosed Adjustment Disorder—a minor depression in the context of an identifiable stressor. On the other hand, amongst the severely distressed, there are those who recognise a loss and are experiencing severe grief (called Demoralized Grief) and those who do not make such an attribution (called here Demoralization). Fig. 1 illustrates how we might schematically represent these classes.

Demoralization is characterised by feeling anxious, apprehensive, unable to cope, loss of confidence, helplessness and hopelessness [48]. Anhedonia (diminished interest and ability to experience pleasure) is evident in a number of classes but did not correlate strongly with the demoralization score. That is, the highest anhedonia and demoralization scores occurred in different classes (see Tables 1 and 2), allowing a differentiation between Anhedonic Depression and Demoralization. This is consistent with the described phenomenology of these states [49]. It is of note that no pure somatization class was elaborated. This supports the finding that somatoform symptoms usually occur in the presence of other symptoms of distress, namely depression and anxiety [11], and

that pure somatoform syndromes are not common [50]. Similarly, no pure anxiety class resulted.

The new classes were compared with DSM categories as a means of characterising and, to some extent, validating them. It was not expected that there would be close agreement—because of the assumptions of the study in the first place. Nevertheless, the results do add to the differentiation of the classes.

In the comparison, DSM-IV categories of mood disorders did not follow a specific pattern. The diagnosis of MDE was associated with classes representing the greatest distress (Demoralization and Demoralized Grief). Adjustment Disorder was most strongly associated with the class of Moderate Distress. We interpret this to reflect the lack of descriptive differentiation between the DSM-IV categories, which are distinguished mainly by severity.

The Demoralized Grief group had a high prevalence of Post-Traumatic Stress Disorder—a syndrome that has some symptom overlap (e.g., intrusive thoughts, memories and mental pictures).

Although no somatization classes resulted from the analysis, the new taxonomic classes did show some differentiation on the basis of somatoform syndromes. Demoralization was most strongly associated with the more chronic forms of somatic illnesses of unknown origin (Somatization Disorder and Undifferentiated Somatoform Disorder). Demoralized Grief was more associated with acute somatoform symptoms (Conversion Disorder) and pain. There were no statistically significant differences between classes on medical diagnosis or physical functioning.

Psychological Factors Affecting Medical Condition was diagnosed almost exclusively in grief patients, both Demoralized Grief and Uncomplicated Grief. Patients with grief, whose emotional experience is one of “loss,” seem to have a bidirectional attribution, whereby they might attribute their emotional upset to losses associated with the illness, whilst at the same time psychological factors are considered to some extent causal in the physical condition. When physical illness and psychiatric disturbance coexist, it can be difficult to tease out causal direction. Nevertheless, doctors and patients alike attempt to do this and do make causal attributions.

The differentiation of classes on the basis of grief, anhedonia and demoralization suggests that the classes do represent important clinical phenomena. In addition, the results indicate that the more distressed syndromes (Demoralization and Demoralized Grief) occurring in medically ill patients are associated with younger age, somatoform illness, past psychiatric history and lower GAF scores over the previous year—the last two factors suggesting that the distress is not necessarily an isolated response to a current predicament. These results provide further evidence for the differentiation of the classes (discriminant validity) whilst also raising the question of what factors might make a person vulnerable to these syndromes of distress in the context of physical illness.

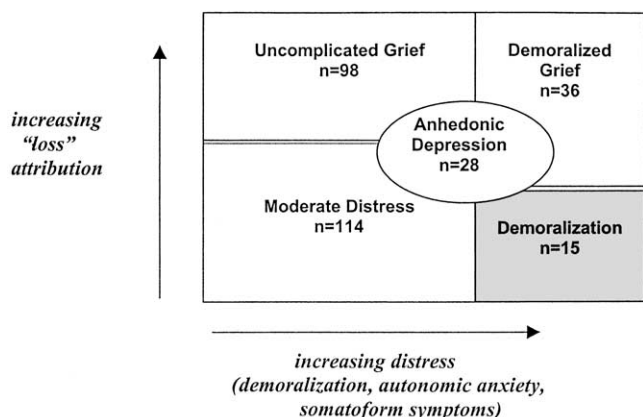


Fig. 1. A pictorial schema of common distress syndromes in the medically ill.

An important measure of the value of work such as this is whether or not it facilitates understanding and management. A key question in the management of depression and distress is when to prescribe antidepressants. The commonly made distinction between major and minor depression is not a strong guide, and suicidal ideation, although often providing a strong motivation to act, is not an indicator for the efficacy of drug treatment. Amongst the nonpsychotic depressions, it is suggested that anhedonia defines a “biogenic” depression—one responsive to medication [6]. Although psychotherapy is considered a treatment for depression, it is often spoken of in nonspecific terms or as an alternative to medication [51]. The concepts of demoralization and of grief provide a framework for the application of specific psychotherapies in the care of distressed medical patients, in the former employing supportive measures, the strengthening of coping skills and examination of hope and meaning [48,52], whilst in grief encouraging emotional expression and reality-based problem-solving to facilitate the grieving process [53,54]. These applications need to be tested. Showing a differential response to psychotherapy and drug treatments would further validate these classes.

In summary, we have studied empirically the psychopathology experienced in a group of medically ill patients. In the first analysis, five dimensions were evident: demoralization, autonomic anxiety, somatoform symptoms, anhedonia and grief. The first three dimensions were moderately correlated [18]. In the second analysis reported here, using a cluster analytic technique, classes of patients were identified, characterised by Demoralization, Anhedonic Depression, Demoralized Grief, Uncomplicated Grief and a nonspecific Moderate Distress. There was no specific class of anxiety or of somatization—both these symptom types correlated with demoralization. The classes were distinguished particularly by three characteristics: degree of distress (demoralization, autonomic anxiety and somatoform symptoms), presence or absence of “loss” attribution and the presence or absence of anhedonia (see Fig. 1). A comparison with DSM-IV diagnoses showed that MDE was associated with the distress syndromes of Demoralization and Demoralized Grief but not particularly with the anhedonic state. Adjustment Disorder was associated with moderate distress coupled with an identified loss (Uncomplicated Grief). The classes appeared to be differentiated by the type of somatoform symptoms, with Demoralization associated with long-standing somatoform symptoms and Demoralized Grief with Conversion Disorder and pain.

We do not present this as the last word on taxonomy of psychiatric disturbance in the medically ill, and there is room for a nomenclature to describe specific syndromes that have utility in special settings [55]. Nevertheless, for the *common* syndromes of distress—depression, anxiety and somatoform symptoms, we believe the taxonomy

presented here represents a clearer characterisation of the experience of medical patients. It is suggested that this new taxonomy has clinical validity in the medically ill and may have greater utility than currently used classifications. Further examination will be required to demonstrate if this is so.

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