



## Exploratory examination of the utility of demoralization as a diagnostic specifier for adjustment disorder and major depression



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### ABSTRACT

**Objective:** Demoralization, a state of lowered morale and poor coping, has a prevalence of 13–18% among patients with advanced cancer. We surveyed clinicians' perspectives of the utility of "with demoralization" as a diagnostic specifier for adjustment and depressive disorders.

**Method:** Using comparative clinical vignettes in a field survey, clinicians from a range of disciplines were asked their perception of the utility of diagnosis and treatment options. Response frequencies were compared using Cochran's Q and McNemar's tests, with sensitivity and specificity rated against expert rankings of diagnosis. Analysis of variance and paired *t*-tests examined significant differences in ratings of utility.

**Results:** Vignettes were assessed by 280 clinicians; 77% supported utility of the category 'adjustment disorder with demoralization' compared to 33% supporting 'adjustment disorder with anxiety' (McNemar test,  $p < 0.001$ ), while 83% supported the utility of 'with demoralization' for major depressive episode, matching 83% perceiving utility for 'with melancholia.' Sensitivity and specificity ratings were 77% and 94% for adjustment disorder with demoralization and 83% and 91% for major depression with demoralization.

**Conclusion:** Clinicians perceived the specifier 'with demoralization' to deepen diagnostic understanding, treatment choice, and ability to communicate with clinicians and patients, particularly for the category of adjustment disorder with demoralization.

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### 1. Introduction

In the setting of a stressor such as a severe medical or life-threatening illness, patients can drop their morale, struggle to cope, and feel trapped in a predicament that leaves them hopeless, helpless, and pessimistic about their future. As they wonder about the point, value, and meaning of their continued life, they may develop suicidal thinking. Such a state of mind has been termed demoralization [1]; the concept was well understood historically by Viktor Frankl [2], George Engel [3] and Jerome Frank [4]. A recent systematic review of demoralization in 10 studies in the advanced cancer setting identified a prevalence of clinically significant demoralization in 13–18% of 2295 patients [5].

In differentiating between demoralization and depression, the latter has been firmly grounded in the experience of loss of interest and pleasure inducing lowered mood. In contrast, a sense of entrapment in a predicament that limits coping and removes anticipated meaning and purpose most aptly characterizes demoralization [6]. Empirical studies have revealed that the greatest divergence between demoralization and depression lies in the moderate range of the construct of demoralization [7,8], where coping is challenged and adjustment disorders are found. As depression becomes severe, a high correlation exists between demoralization and depression [5–8].

The Diagnostic and Statistical Manual of Mental Disorders (e.g. DSM-5) makes use of diagnostic "specifiers" that help "to define a more homogeneous subgrouping of individuals who share certain features (e.g., major depressive disorder with mixed features) and to convey information that is relevant to the management of the individual's disorder" (p. 21–22) [9]. The notion of demoralization as a specifier to better

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describe the phenomenology of adjustment disorders and major depression has therefore been proposed [6,8]. One method of exploring whether this would have clinical utility is to examine clinicians' perspectives about how useful they find demoralization as a specifier.

The conceptual model of clinical utility is based on the definition proposed by First [10,11] who argued that a mental disorder or diagnostic system has clinical utility if it: 1) facilitates communication of clinical information to practitioners, patients, families and healthcare administrators; 2) guides effective interventions; 3) predicts management needs and outcomes; and 4) differentiates disorder from non-disorder and co-morbid disorders. In this study, we examine the clinical utility of demoralization through the case vignette method [12].

Prototypic cases of a patient with a disorder can be presented as a vignette that captures the essential features of the disorder accurately and with credible detail and realism [13]. In such studies, clinicians are asked to review the vignettes, select a diagnosis, and confirm aspects of the usefulness of this diagnosis to their understanding of the patient, the potential management and communication about this patient. Our study aimed to assess clinicians' perceptions of the clinical utility of the diagnostic specifier 'demoralization' for cancer patients with diagnoses of Adjustment Disorder or Major Depressive Episode across a range of disciplines that may be involved in the care of cancer patients.

## 2. Methods

### 2.1. Recruitment of participants

Our field trial invited clinicians from the disciplines of psychiatry, psychology, social work, medical oncology, palliative medicine, and nursing to participate in an online survey. Invitations to complete the survey were extended via email from the Section of Consultation-Liaison Psychiatry of the Royal Australian and New Zealand College of Psychiatrists, Australian Psychological Society, Clinical Oncology Society of Australia, Australian and New Zealand Society of Palliative Medicine, the Cancer and Palliative Care Network of the Royal Australian College of General Practitioners, Australian Association of Social Workers, and the Cancer Nurses Society of Australia. Ethical approval was granted by the Monash Health Human Research Ethics Committee.

We had no means of tracking whether emails from the varied societies were opened and so the sample should be viewed as a convenience sample. Reasons for non-response were not available. In the survey, respondents were provided with initial education about the nature of demoralization, how it might be treated, and the concept of clinical utility in communicating more effectively about a disorder, facilitating the optimal choice for its treatment, and predicting outcome.

### 2.2. Procedure

Participants completed an online survey in which they were presented with a range of different diagnostic criteria and with six vignettes of patients with cancer. They were then asked to select an appropriate diagnosis and treatment, and to rate the clinical utility of the diagnosis for each vignette.

### 2.3. Vignette development

Using a comparative methodology that made explicit the cognitive phenomena used to discern a diagnosis [14], we first contrasted three patient vignettes representing 1) a normal grief response to illness; 2) an adjustment disorder with anxiety; and 3) an adjustment disorder with demoralization. Key phenomena present in the vignette displaying normal grief included waves of tearfulness in an appropriate context, yet intact humor, and normal adaptive functioning. Key phenomena present in the adjustment disorder with anxiety vignette were prominent anxiety – represented by worry, fear, tension and tremor – with impaired social functioning evident by withholding news from family.

Key phenomena present in the adjustment disorder with demoralization vignette were low morale – represented by pessimism, pointlessness, lost meaning to life – with impaired social functioning and withdrawal from friends.

In a similar manner, we contrasted another three patient vignettes representing 4) Major Depressive Episode (MDE); 5) MDE with melancholia; and 6) MDE with demoralization. Key phenomena present in MDE were depressed mood, anhedonia and social withdrawal, while in MDE with melancholia, psychomotor retardation, non-reactivity, guilt and diurnal variation became discriminating. In MDE with demoralization, lowered morale with pessimism, pointlessness, helplessness and meaninglessness became discriminating.

An expert panel of psychiatrists, psychologists, and physicians reviewed and edited draft vignettes to ensure they were equivalent in diagnostic content except for the phenomena related to each specific diagnosis. Piloting with six independent clinicians from the disciplines of interest confirmed the vignettes' realism, accuracy of the background medical data, and clarity of the diagnostic features, as well as the vignettes' presentation in the survey design. The vignettes are attached as an online supplement.

### 2.4. Diagnostic criteria

Diagnostic criteria from DSM-5 were incorporated into the survey for the diagnoses of adjustment disorder with anxiety, MDE, and MDE with melancholia [9]. Drawing upon the extant literature on demoralization and, again using the agreement reached by our expert panel of clinicians, the following criteria for the specifier 'with demoralization' was also incorporated in the survey:

Specify as 'with demoralization' if presence of low morale, reduced optimism, feeling trapped or stuck, helpless, sense of poor coping, and loss of sense of meaning, purpose, hope or value in life predominant.

### 2.5. Field survey

Respondents were asked to identify their discipline, sex, age grouping, level of experience, and setting of practice. They were supplied with the DSM-5 diagnostic criteria for the diagnoses under consideration, and were asked to read each vignette. They were asked to select one diagnosis that they considered most useful for each vignette from a choice of 10 diagnoses. Respondents were also asked to select one treatment that they considered to be most useful for each vignette from a choice of 10 treatment options. Respondents were then asked to rate their perception of how useful the diagnosis was in understanding the person described in each vignette, guiding management, and communicating with the patient and others about the above, on a visual analogue scale from 1 "not at all useful" to 10 "very useful".

This survey was preliminary work, with a non-random (convenience) sample and no rotation of the order of presentation of vignettes. The order of presentation progressed from grief to adjustment disorder with anxiety, adjustment disorder with demoralization, MDE, MDE with melancholia, and MDE with demoralization.

### 2.6. Statistical analyses

To investigate diagnostic categories that clinicians found most useful, frequencies and percentages of selected diagnoses for each vignette by discipline were calculated. Overall differences in proportion of correct diagnosis across vignettes within each professional discipline were examined using Cochran's Q test for comparison of multiple related groups. If an overall significant difference existed, the differences between separate pairs of vignettes were examined using McNemar's tests.

To investigate to what extent demoralization was correctly recognised by clinicians, sensitivity, specificity, Positive Predictive

Values (PPV), Negative Predictive Values (NPV) [15], and Cohen's kappa coefficients [16] were estimated for clinicians' diagnoses of adjustment disorder with demoralization and for MDE with demoralization. The correct diagnosis for each respective vignette was used as a 'gold standard,' also taking into account false positive diagnoses of demoralization on the other two vignettes of either grief/adjustment disorder or MDE. This analysis was also conducted for the diagnosis of normal grief reaction as a comparison benchmark.

To examine the utility of the diagnostic categories for treatment selection, frequencies and percentages of treatment selections for each vignette by discipline were calculated. To investigate clinicians' perceived usefulness of each diagnosis in helping them to understand the patient more fully, make an optimal treatment choice, and provide continued care over time, means and standard deviations of each of these three utility ratings were estimated. Overall mean difference in perceived usefulness for each of the three utility ratings were estimated using a repeated measures ANOVA. Where overall differences were found, paired *t*-tests were used to examine mean differences between pairs of vignettes. Statistical analysis was carried out with the IBM SPSS Version 22 [17] software.

### 3. Results

#### 3.1. Demographic characteristics

Respondents initially numbered 332, of whom 52 (15.7%) did not progress to the vignette portion of the survey, yielding an eventual sample of 280. Of these 280 responders, 64% (*n* = 179) were in the age range of 40–59 years, 75% (*n* = 209) were female, and 46% (*n* = 128) had >21 years of clinical experience. Their sociodemographic profile is shown in Supplementary Table 1A. Of the respondents, 17% (*n* = 46) were psychiatrists, 10% (*n* = 27) psychologists, 22% (*n* = 62) physicians, 21% (*n* = 58) social workers, and 30% (*n* = 84) nurses. Some 67% (*n* = 188) of respondents completed all 6 vignettes, response numbers decreasing across the survey. On average, respondents worked in more than one type of practice setting (*M* = 1.64, *SD* = 1.02). The most frequently cited settings of work were outpatient clinics (*n* = 134), followed by acute inpatient (*n* = 119), community care (*n* = 105), private practice (*n* = 80), palliative care (*n* = 69) and psycho-oncology clinics (*n* = 30).

Respondents that did not complete any of the vignettes did not differ significantly from those that completed at least some vignettes on sex, professional discipline, or years of experience. However, those who did not complete any vignettes were more likely to be in the younger age groups of 20–39 years (36.7%) than those who completed vignettes (17.4%) ( $\chi^2 = 10.5$ ; *p* = 0.005).

#### 3.2. Diagnosis

As shown in Table 1, the clinical vignette displaying grief served as a benchmark, with between 92% and 96% of clinicians selecting 'normal grief' as the diagnostic category that provided the greatest utility. For the vignette showing 'adjustment disorder with anxiety', the correct diagnosis was least frequently selected as being of greatest utility, with around half of those psychologically trained identifying utility, whereas only one third of physicians, one quarter of nurses and even fewer social workers saw usefulness in this diagnostic category. In contrast, for the category of 'adjustment disorder with demoralization', over two-thirds of social workers and more than three quarters of each of the other disciplines perceived utility in this diagnosis. When differences were compared statistically, psychiatrists and psychologists viewed the vignettes of normal grief and adjustment disorder with demoralization with comparable utility, whereas all disciplines provided low endorsements of the adjustment disorder with anxiety vignette. Preference for a specifier of 'demoralization' was significantly greater across all disciplines than preference for the category of adjustment disorder with anxiety.

The vignettes for MDE, MDE with melancholia, and MDE with demoralization are compared in Table 2. The percentage of responders selecting the correct diagnosis as most useful did not differ significantly between the three vignettes for psychiatrists, psychologists, and physicians. Social workers and nurses more frequently selected MDE with demoralization or MDE with melancholia as being more useful than MDE without a specifier.

#### 3.3. Sensitivity and specificity of diagnostic categories

Table 3 shows acceptable sensitivity, specificity, PPV, and NPV for the demoralization vignettes for the overall sample when compared to the correct ("gold standard") diagnoses identified by the expert panel. The Cohen's kappa coefficients indicate substantial agreement [18] among clinicians. The adjustment disorder with demoralization vignette had the lowest sensitivity of 77.1%. However, when only the psychological professions (psychiatrists, psychologists) were considered, sensitivity rose to 81.1%.

#### 3.4. Treatment selection

Frequencies of treatment selection for each vignette were examined for each discipline. For the normal grief reaction (Vignette 1), the majority of clinicians selected supportive counselling (92.1% of physicians to 80.0% of social workers). For adjustment disorder with anxiety (Vignette 2), supportive counselling was most frequently selected (70.3% of psychiatrists, 40.6% of nurses), with 30.4% of psychologists selecting cognitive-behavioral therapy (CBT). For adjustment disorder with demoralization (Vignette 3), most psychiatrists (77.8%), psychologists

**Table 1**  
Percentage of respondents who selected the correct diagnosis as being of greatest utility for Vignettes 1, 2 and 3.

Profession	Frequency of correct diagnosis						McNemar's tests of differences in % of correct diagnosis						Overall difference between the three vignettes (Cochran's test)
	Vignette 1 (normal grief reaction)		Vignette 2 (adjustment disorder with anxiety)		Vignette 3 (adjustment disorder with demoralization)		Vignette 3 vs Vignette 1		Vignette 3 vs Vignette 2		Vignette 2 vs Vignette 1		
	%	n	%	n	%	n	% difference	p	% difference	p	% difference	p	
Psychiatrist	95.7%	44/46	48.6%	18/37	86.1%	31/36	−9.6%	0.125	37.5%	0.001	−47.1%	<0.001	<0.001
Psychologist	92.6%	25/27	50.0%	12/24	79.2%	19/24	−13.4%	0.453	29.2%	0.039	−42.6%	0.006	0.004
Social Worker	94.8%	55/58	14.6%	7/48	67.4%	31/46	−27.4%	<0.001	52.8%	<0.001	−80.2%	<0.001	<0.001
Physician	96.8%	60/62	38.8%	19/49	79.2%	38/48	−17.6%	<0.021	40.4%	<0.001	−58%	<0.001	<0.001
Nurse	95.2%	80/84	25.8%	17/66	78.0%	46/59	−17.2%	0.013	52.2%	<0.001	−69.4%	<0.001	<0.001
Overall	95.3%	264/280	33.2%	75/226	77.2%	166/215	−18.2%	<0.001	44.0%	<0.001	−62.2%	<0.001	<0.001

Note: professional category was missing for 3 respondents.

**Table 2**

Percentage of respondents who selected the correct diagnosis as being of greatest utility for Vignettes 4, 5 and 6.

Profession	Frequency of correct diagnosis						McNemar's tests of differences in % of correct diagnosis						Overall difference between the three vignettes (Cochran's test)
	Vignette 4 (MDE)		Vignette 5 (MDE with melancholia)		Vignette 6 (MDE with demoralization)		Vignette 6 vs Vignette 4		Vignette 6 vs Vignette 5		Vignette 5 vs Vignette 4		
	%	n	%	n	%	n	% difference	p	% difference	p	% difference	p	
Psychiatrist	85.7%	30/35	94.1%	32/34	79.4%	27/34	-6.3%	–	-14.7%	–	8.40%	–	0.178
Psychologist	82.6%	19/23	82.6%	19/23	82.6%	19/23	0.0%	–	0.0%	–	0.0%	–	1.000
Social Worker	42.1%	16/38	83.8%	31/37	85.7%	30/35	43.6%	<0.001	1.9%	1.000	41.7%	0.001	<0.001
Physician	65.2%	30/46	80.4%	37/46	77.3%	34/44	12.1%	–	-3.1%	–	15.2%	–	0.155
Nurse	55.8%	29/52	80.4%	41/51	90.0%	45/50	34.2%	<0.001	9.6%	0.180	24.6%	0.008	<0.001
Overall	63.8%	125/196	83.4%	161/193	83.0%	156/188	19.2%	<0.001	-0.4%	1.000	19.6%	<0.001	<0.001

Abbreviations: MDE = Major Depressive Episode. Professional category was missing for 3 respondents. McNemar's tests were only carried out if the overall Cochran's test was significant.

(75.0%), and social workers (71.7%) selected meaning-centred therapy. This was also most frequently selected by nurses and physicians, although at lower rates of 32.2% and 58.3% respectively.

The majority of clinicians selected antidepressants with meaning-centred therapy for MDE with demoralization (Vignette 6) (81.8% of physicians to 59.2% of nurses). The treatment selection patterns were less well defined for MDE (Vignette 4) and MDE with melancholia (Vignette 5), although most clinicians recommended antidepressants. The two most commonly selected treatments for Vignette 4 were antidepressants with CBT (48.9% of physicians to 23.7% of social workers) and antidepressants with supportive counselling (40.0% of psychiatrists to 21.7% of psychologists). Clinicians' treatment selection varied the most for Vignette 5. Psychiatrists (50.0%) and psychologists (30.4%) most commonly chose antidepressants with supportive counselling, but a fair proportion of these two disciplines also selected antidepressants with CBT (29.4% and 21.7% respectively) or antidepressants with meaning-centred therapy (20.6% and 34.8%). Among other disciplines, the two most frequently selected treatments for Vignette 5 were antidepressants with meaning-centred therapy (24.4% to 45.1%) and antidepressants with CBT (27.0% to 37.8%).

### 3.5. Utility ratings

Finally, Table 4 reports on the perceived usefulness of each diagnosis in assisting clinicians to more deeply understand the patient, make an optimal treatment choice, and communicate about continued care over time. Adjustment disorder with demoralization and MDE with demoralization received consistently high endorsements for utility. All diagnostic categories received high utility ratings. However, adjustment disorder with demoralization and MDE with demoralization were rated slightly higher on usefulness for understanding the patient than the other diagnoses. Adjustment disorder with demoralization was also rated slightly higher on usefulness for choice of treatment than both normal grief reaction and adjustment disorder with anxiety, and higher on usefulness for communication about continued care than adjustment disorder with anxiety.

**Table 3**

Sensitivity, specificity and Cohen's kappa coefficients of clinicians' diagnoses of demoralization.

Diagnosis	Sensitivity	Specificity	PPV	NPV	Cohen's kappa
Normal grief reaction	94.0%	79.8%	75.0%	95.4%	0.70
Adjustment disorder with demoralization	77.1%	94.1%	84.6%	90.7%	0.73
Major depressive episode with demoralization	82.5%	90.7%	79.5%	91.4%	0.71

Abbreviations: PPV = Positive Predictive Value; NPV = Negative Predictive Value.

## 4. Discussion

Clinicians recognize the utility of using the specifier 'demoralization' to describe the nature of an adjustment disorder when a patient is challenged to cope with an advanced cancer illness as the stressor. The comparison with vignettes displaying normal grief and adjustment disorder with anxiety allowed for the relative value of the usefulness of this specifier to be appreciated.

Similarly, clinicians overall conveyed their sense of the utility of the specifier 'demoralization' in considering the diagnosis of MDE when compared with both straightforward MDE and MDE with melancholia. Across both comparison sets of vignettes, clinicians perceived the specifier 'demoralization' to improve their ability to select an optimal treatment for the patient. This specifier 'demoralization' was further perceived to assist clinicians in more deeply understanding the patient, aiding in comprehensive and relevant aspects of management, and helping to communicate about appropriate continuity of care over time.

We examined the perception of a range of professional groups that form the multidisciplinary team engaged in care provision in this setting of medical illness. This provides a richer test of utility than a focus on a single discipline, because all these disciplines require an understanding of the diagnostic category and how this informs treatment planning. The diagnostic criteria were provided with each vignette in this survey, maintaining our emphasis on assessing utility rather than diagnostic accuracy. Our data reveal the conceptual difficulty that exists with the adjustment disorder category [19], with little response uniformity for the vignette about adjustment disorder with anxiety. Indeed, even the category of MDE was less well appreciated than MDE with melancholia. The specifier of 'demoralization' appears to be well understood by this clinical field involved in the care of patients with cancer. The category may be less stigmatised, more readily acknowledged by patients, and thus carry a greater usefulness to care provision, especially for a diagnosis that is commonly used in consultation-liaison psychiatry [20].

There are limitations to the generalizability of this study. Our focus was on the cancer setting and we sought a convenience sample by distributing the survey via professional membership lists. As such, this should be viewed as exploratory work that informs the value of assessing this proposed specifier in a future study using a random sample. We employed the written vignette method here, with resultant tiring of the respondents across the series of vignettes. A better response rate would be expected to video vignettes with a smaller comparator number being offered to each participant. Nevertheless, we obtained sufficient responses in this preliminary survey to gain valuable initial evidence to support the utility of 'demoralization' as a diagnostic specifier.

Future work needs to examine the specifier of 'demoralization' not only in other types of medical illness, but also mental illness. Early data suggest the relevance of the construct of demoralization in drug and alcohol settings [21], postnatal depression [22], adolescent

**Table 4**  
Mean and standard deviation on a visual analogue scale (0–10) for respondents reporting on the perceived usefulness of each diagnosis in helping to understand the patient more fully, make an optimal treatment choice and communicate about continued care over time.

Perceived usefulness	Utility ratings									Differences in utility ratings between pairs of vignettes (paired t-tests)						Overall differences between the three vignettes (F-test)
	Vignette 1–normal grief reaction			Vignette 2–adjustment disorder with anxiety			Vignette 3–adjustment disorder with demoralization			Vignette 3 vs Vignette 1		Vignette 3 vs Vignette 2		Vignette 2 vs Vignette 1		
	n	M	SD	n	M	SD	n	M	SD	Mean difference	p	Mean difference	p	Mean difference	p	
Understanding	280	7.15	2.34	226	7.21	1.96	216	7.68	1.82	0.53	0.001	0.47	<0.001	0.06	0.511	<0.001
Treatment choice	280	7.30	2.29	226	7.26	1.89	216	7.59	1.76	0.29	0.318	0.33	0.001	–0.04	0.027	0.009
Communication re continued care	280	7.17	2.49	226	7.42	1.90	216	7.71	1.74	0.54	0.001	0.29	0.004	0.25	0.168	0.001

  

Perceived usefulness	Utility ratings									Differences in utility ratings between pairs of vignettes (paired t-tests)						Overall differences between the three vignettes (F-test)
	Vignette 4 – Major depressive disorder			Vignette 5 – Major depression with melancholia			Vignette 6 – Major depression with demoralization			Vignette 6 vs Vignette 4		Vignette 6 vs Vignette 5		Vignette 5 vs Vignette 4		
	n	M	SD	n	M	SD	n	M	SD	Mean difference	p	Mean difference	p	Mean difference	p	
Understanding	197	7.70	1.76	193	7.72	1.75	188	7.84	1.73	0.14	0.049	0.12	0.035	0.14	0.788	0.046
Treatment choice	197	7.71	1.73	193	7.68	1.70	188	7.82	1.69	0.11	–	0.14	–	0.11	–	0.085
Communication re continued care	197	7.70	1.69	193	7.88	1.64	188	7.84	1.71	0.14	–	–0.04	–	0.14	–	0.210

depression [23] and among the elderly [24]. Much field work is needed across many settings before firm conclusions can be drawn about the utility of any diagnostic category. Our preliminary work provides strong encouragement nevertheless that this specifier category of ‘demoralization’ warrants further study.

Our work on demoralization has been based on empirical studies that support its prevalence as a common mental state and one that clinicians working in the general hospital need to respond to therapeutically. Other studies are examining clinical thresholds on quantitative measures and helping to better guide its recognition. This study has specially examined its utility to bring yet another dimension to the evidence base in support of its recognition as an important clinical entity.

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#### Appendix A. Supplementary data

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