

# Measurement of Clinical Anxiety by Rating Scales: A review

By Per Bech, MD, DMSc

RCT  
Documentation Centre

93. Suppl. 1. 3

## Anxiety: Non-clinical versus clinical (disorders)

The nineteenth century was the century of anxiety. The first monograph on the concept of anxiety was published by the Danish philosopher Kierkegaard (1844). He emphasized the distinction between anxiety as a unique human element (a *conditio sine qua non* for being a man) and anxiety as a psychopathological, clinical phenomenon (disorder). The manifestation of anxiety clinically as well as non-clinically is a mixture of psychic and somatic phenomena. The differentiation between non-clinical and clinical anxiety is a matter of severity: clinical anxiety is often considered as an extreme variation of non-clinical anxiety.

At the end of the nineteenth century James (1884) and Lange (1885) formulated the James-Lange theory of anxiety emotions that the somatic symptoms always appear first and the psychic anxiety symptoms will appear second also in non-clinical states of anxiety.

In our century the two world wars gave further experiences of anxiety states, the post-traumatic anxiety states. Thus, Wimmer (1923) observed that in some soldiers participating in the First World War a state of post-traumatic anxiety neurosis had developed. In these cases the somatic manifestations of anxiety (e.g. palpitations, faintness, dizziness, trembling, hot or cold spells) had emerged immediately after the traumatic event, whereas the psychic manifestations of anxiety (e.g. worrying, neurasthenia, concentration difficulties and sleep disturbances) had emerged later and constituted the chronic symptomatology.

During the Second World War (Suchman, 1950) it was found by use of self-rating scales that soldiers who had been under fire experienced somatic anxiety symptoms where palpitations and sinking feelings in the stomach were among the indicators of mild to moderate states and vomiting and urinating were among the indicators of marked to extreme states of anxiety. This was one of the first scientific measurements of anxiety.

## The spectrum of clinical anxiety: Personality traits versus states

The term anxiety neurosis introduced by Freud (1894) referred both to the clinical states of anxiety (panic anxiety and generalized anxiety) and to a predisposed character neurosis. In one of the most comprehensive studies on the interaction between character neurosis and the clinical syndrome of anxiety neurosis Jacobsen (1965) showed that anxiety neurosis was correlated to personality traits with

avoidance behaviour which he called eridophobia (phobic avoidance of situations including conflicts or aggression).

The Spielberger State-Trait Anxiety Inventory (STAI, Spielberger et al 1970) was originally developed with non-clinical undergraduate and high school students samples, but has been used extensively in clinical settings. However, the results with the STAI have been clinically inconclusive (Beck et al 1988, Loldrup et al 1991). The Eysenck dimension of neuroticism seems more valid that the Spielberger trait of anxiety in psychosomatic disorders (Loldrup et al 1991). Another frequently used self-rating scale for the measurement of trait anxiety is the Taylor Manifest Anxiety Scale (Taylor 1953) which is a sub scale derived from the Minnesota Multiphasic Personality Inventory (MMPI, Hathaway and McKinley 1951).

## Measurement of anxiety syndromes by rating scales

The term anxiety neurosis has another implicit reference than the one referring to personality trait, name to severity. Neurosis when contrasted to psychosis means that the patient has a reasonable degree of insight. From a psychometric point of view this implies that self-rating scales are applicable, unlike psychosis where overvalued ideas or delusions might result in unreliable self-reports.

Most scales measuring anxiety syndromes are questionnaires or self-rating scales. Such scales can, of course, also be used as observer rating scales, i.e. scales administered by a psychiatrist, a psychologist or other skilled observers after an interview with the patient. Structured interviews are in principle orally administered questionnaires.

The third edition of Diagnostic and Statistical Manual for Mental Disorders (DSM-III, APA 1980) has had an unusual strong impact on the development on rating scales for anxiety. It seems therefore most appropriate to review the various anxiety scales with reference to DSM-II (APA 1968), DSM-III, DSM-III-R (APA 1987) and DSM-IV (APA 1991).

## Rating scales for anxiety neurosis, panic disorders and generalized anxiety

DSM-II followed Freud (1894) in using anxiety neurosis as a meta concept including both panic disorder and generalized anxiety. With DSM-III panic disorder was separated from generalized anxiety. In DSM-III-R and

DSM-IV panic disorder as well as generalized anxiety are clearly distinct from phobia.

The two most frequently used rating scales for the measurement of anxiety neurosis (Table 1) are the Hamilton Anxiety Scale (HAM-A, Hamilton 1959, 1969) and the Hopkins Symptom Checklist (SCL-90, Guy 1976). The HAM-A is an observer scale and the SCL-90 is a self-rating scale (but can also be used as an observer scale). Both scales measure intensity of symptoms. In patients with both generalized anxiety and with attacks of anxiety (panic) the number and intensity of panic attacks are incalculated in the ratings. This seems not to cause problems even in patients where panic attacks are dominating (Bech et al 1992). A structured interview for the HAM-A has been developed by Williams (1990).

Table 1.  
Rating scales for anxiety neurosis, panic disorders and generalized anxiety.

DSM diagnoses	Rating scales
Anxiety neurosis (DSM-II)	Hamilton Anxiety Scale (HAM-A, Hamilton 1969) Hopkins Symptoms Checklist (SCL-90, Guy 1976) SCID-HAM-A (Williams, 1990)
Panic disorders (DSM-III)	Modified Hopkins (Sheehan, 1983) Modified HAM-A (Bech et al 1986) Panic Attack Scale (Sheehan, 1983) Panic Attack Diary (Sheehan 1983)
Generalized anxiety (DSM-III)	Hopkins SCL-90 (Guy, 1976) Modified HAM-A (Bech et al 1986) Zung Self-Rated Anxiety Scale (Zung, 1971) Beck Anxiety Inventory (Beck et al 1988)

However, when measuring anxiety in patients with DSM-III panic disorder it has been found most appropriate to modify both the SCL-90 and HAM-A. Thus, Sheehan (1983) has developed the Patient-Related Anxiety Scale to adequately cover the symptoms of panic disorder. A physician version of this scale has also been released (Sheehan, 1983). Actually, the physician version was found most valid in the Cross-National Panic Study (Albus et al 1990, Maier et al 1990). In such short-term trials with anti-anxiety drugs observer scales are more sensitive to measuring changes in anxiety neurosis. Thus, HAM-A was found superior to SCL-90 in this respect (Uhlenhuth et al 1982). These findings are similar to results with antidepressants where the Hamilton Depression Scale is more sensitive than self-rating scales like the Zung scale (Angst et al 1992) or the Beck Depression Inventory (Edwards et al 1984).

Table 1 shows that panic attacks should be measured globally, most appropriately both by the physicians (Panic Attack Scale) and by the patient (Panic Attack Diary), Sheehan (1983). These scales differentiate between spontaneous (unprovoked) attacks and situational attacks as well as anticipatory anxiety attacks. The number of the different attacks are then recorded as is the average duration (in minutes) and the average intensity (on a scale from 0 to 10).

A modified HAM-A to be used in panic disorders has been published by Bech et al (1986) in agreement with Hamilton. As a consequence, a modified HAM-A for measuring generalized anxiety has also been released (Bech et al 1986). As shown in Table 1 the SCL-90 can appropriately cover generalized anxiety. In a recent study the validity of SCL-90 in measuring generalized anxiety has been confirmed (Noyes et al 1992).

Factor analysis with the HAM-A both in anxiety neurosis (Hamilton 1969) and in panic disorders (Bech et al 1992) has identified two major factors, namely a factor of psychic anxiety and a factor of somatic anxiety. Of these factors the psychic anxiety factor seems most coherent when investigated by latent structure analysis (Maier et al 1988). In patients with generalized anxiety (Bjerrum et al 1992) the HAM-A factor of psychic anxiety obtained an acceptable Loevinger coefficient of homogeneity (0.46), the factor of somatic anxiety obtained an inadequate coefficient (0.29), while the full HAM-A obtained a just acceptable coefficient (0.35).

Factor analysis with SCL-90 in panic disorder (Bech et al 1992) has identified a general factor of discomfort (which was the original meaning of the scale, Parloff et al 1954), a factor of phobia, and a factor of generalized anxiety. Factor analysis of the SCL-90 in a heterogeneous sample of non-psychotic patients (Guy 1976) has identified factor of anxiety (SCL-11) and of phobia (SCL-9).

Table 1 shows the two other self-rating scales for measuring generalized anxiety, namely the Zung Self-rated Anxiety Scale (SAS, Zung, 1971) and the Beck Anxiety Inventory (BAI, Beck et al 1988). Both Zung and Beck have developed self-rating scales for measuring depression (Zung 1965, Beck et al 1961). As emphasized by Zung (1971) discriminant validity of depression versus anxiety scales is frequently a problem emerging in the later stages of the scale construction when attention has shifted from the individual item analysis to the total scale score. The correlation between the BAI and the Beck Depression Inventory is 0.48.

The components of generalized anxiety are according to DSM-III and DSM-IV psychic anxiety (anxious mood and psychic tension) and the following somatic components (motor tension, autonomic hyperactivity and hyperarousal). Table 2 shows the items distribution of the

Table 2.  
Item distributions (%) of rating scales measuring generalized anxiety.

Components	HAM-A	Hopkins SCL-11 (Guy 1976)	Zung (1971) Anxiety Scale	Beck (1988) Anxiety Inventory	Post-traumatic Anxiety Scale (Suchman 1950)
Anxious mood	7%	18%	15%	24%	0%
Psychic tension	7%	9%	10%	11%	0%
Motor tension	14%	9%	15%	11%	33%
Autonomic hyperactivity	43%	55%	45%	48%	66%
Hyperarousal	14%	9%	15%	0%	0%
Phobia	7%	0%	0%	0%	0%
Number of items	14	11	20	21	9

various scales for generalized anxiety. In the HAM-A one item measure phobia (7%), which is not included in the DSM-III concept of generalized anxiety. All the scales are weighted on the somatic components; the Beck Anxiety Inventory seems, however, most balanced in respect to psychic and somatic anxiety.

### Rating scales for phobic states

In DSM-IV phobia is defined as anxiety about being in places or situations in which escape might be difficult (or embarrassing) or in which help may not be available in the event of suddenly developing fear. Agoraphobic fears typically involve characteristic clusters of situations that include being outside the home alone; being in a crowd or standing in a line; travelling in a bus, train or car. Social phobia is anxiety in situations involving public performances such as giving a speech, eating, writing etc. Simple (DSM-III) or specific phobia refers to fear cued by the presence of a specific object or situation (e.g. flying).

Based on the work summarized by Gelder and Marks (1966) several phobia scales have been developed. Of these the Fear Scale (Marks and Mathews, 1979) is the most widely used scale covering the DSM-II concept of phobic neurosis. This scale has been modified by Sheehan (1983) to correspond to DSM-III (Table 3). However, the SCL-9 subscale (Guy 1976) on phobia covers reasonably well the three components of phobias in DSM-III: agoraphobia, social phobia and simple phobia.

Table 3.  
Rating scales for phobic or situational anxiety.

DSM diagnoses	Rating scales
Phobic neurosis (DSM-II)	Gelder-Marks Phobia Questionnaire (Gelder and Marks, 1966) The Fear Questionnaire (Marks and Mathews, 1979)
Phobic disorders (DSM-III)	Marks and Sheehan Phobia Scale (Sheehan, 1983) Hopkins subscale SCL-9 (Guy, 1976)

In ICD-10 (WHO, 1992) agoraphobia is accepted as a category independent of panic attacks. In DSM-IV there are categories of panic disorder without agoraphobia, panic disorder with agoraphobia and agoraphobia without history of panic disorder.

In a meta-analysis of double-blind placebo-controlled trials of antidepressants and benzodiazepines for patients with panic disorders Wilkinsons et al (1991) have included phobia as one of the outcome variables (the other being panic attacks, anxiety, depression, social functioning, physical symptoms and global clinical ratings). This emphasized that anxiety neurosis and phobic neurosis should be considered in their whole range in drug trials.

### Rating scales for obsessive-compulsive states

Obsessive-compulsive neurosis (DSM-II) was originally, like anxiety neurosis, considered as a pathological extension (symptoms) of a basic obsessive personality trait

(Reed 1985). In contrast, Rachmann and de Silva (1976) have, among others, advocated that clinical states of obsessions are an extreme variant of a normal psychological process involving intrusive thoughts. DSM-III used the terms obsessive-compulsive disorders, thereby excluding any link to a basic neurotic character type. In DSM-III obsessions and compulsions were considered as indicators of the same underlying dimension, but DSM-IV seems to consider obsessions and compulsions as separate dimensions.

The Leyton Obsessional Inventory has both trait and state items (Cooper 1970; Allan and Tune 1975). Empirical studies (Salkovskis, 1990) seem not to support a relationship between obsessional traits and the obsessive-compulsive syndrome.

The Maudsley Obsessive-Compulsive Inventory (Hodgson and Rachmann, 1977) measures mainly compulsion. This scale has been modified by Sanavio and Vidotte (1985). The scale differentiates between checking behaviour, cleaning behaviour, doubting behaviour and behaviour of slowness.

One of the most frequently used observer scales within the frame of DSM-III is the Obsessive-Compulsive Subscale of the Comprehensive Psychopathological Rating Scale (Thoren et al 1980). A modification of this scale to correspond with the Hamilton Scales has been released (Bech 1992).

Another scale measuring the combined obsessive-compulsive states is the Hopkins SCL sub scale including 10 items (Guy 1976).

The most comprehensive scale which seems especially to cover the DSM-IV separation of obsessions and compulsions is the Yale-Brown Obsessive Compulsive Scale (Y-BOCS, Goodman et al 1989).

Table 4 shows a review of scales measuring obsessive-compulsive states.

Table 4.  
Rating scales for obsessive-compulsive states.

DSM diagnoses	Rating scales
Obsessive-compulsive neurosis (DSM-II)	Leyton Obsessional Inventory (Cooper, 1970; Allen and Tune, 1975) Maudsley Obsessive Compulsive Inventory (Hodgson and Rachmann, 1977)
Obsessive-compulsive disorder (DSM-III)	Obsessive-Compulsive Rating Scale (Thoren et al, 1980) Hopkins Obsessive-Compulsive Subscale (SCL-10, Guy 1976)
Obsessive-compulsive disorder (DSM-IV)	Yale-Brown Obsessive-Compulsive Scale (Goodmann et al, 1989)

### Rating scales for post traumatic stress disorders

Whereas panic disorder as well as generalized anxiety disorder according to DSM-III and DSM-IV are considered as primary disorders, post traumatic stress disorder is considered as a reaction to severe psychosocial stressors. In DSM-III-R the stressor is defined as an event "outside

the range of usual human experience". In DSM-IV more specific descriptions of the nature of the allowable stressors have been suggested taking a subjective component into account, e.g. the person's response of intense fear, helplessness or horror. In other words the severity of the anxiety or depression.

Already Wimmer (1923) showed that the acute stress reaction induces somatic anxiety symptoms and that the prolonged reaction includes psychic anxiety symptoms and depression. At the phenomenological level, therefore, measurements of post traumatic stress symptoms can be adequately covered by the self-rating scales for anxiety and depression. Thus, Horowitz et al (1980 a,b) used Hopkins SCL-90. Analogously the Hamilton scales for anxiety and depression can be considered as adequate observer scales.

However, specific scales for post traumatic stress disorder have been developed, among them the Impact of Events Scale (Horowitz et al, 1979). So far, no specific scale for post traumatic stress disorder has obtained status of international standard. Both DSM-III-R and DSM-IV require that a persistent avoidance of stimuli associated with the trauma should be taking into account.

When reviewing drug therapy of post traumatic stress disorder Davidson (1992) identified six goals for treatment:

- 1) reduction of phasic intrusive symptoms,
- 2) improvement of avoidance symptoms,
- 3) reduction of tonic hyperarousal,
- 4) relief of depression,
- 5) improvement of impulse regulation and
- 6) control of acute dissociative symptoms. Whereas the Impact of Events Scale measures intrusive as well as avoidance symptoms, and the SCL-90 or Hamilton Scales cover arousal, depression and impulse regulation. The acute dissociative symptoms are only insufficiently covered by these scales. It is, therefore, recommended to include the Dissociative Experience Scale (Bernstein and Putnam, 1986) when measuring the full range of post traumatic stress disorder. However, in many situations, especially when evaluating the prolonged stress disorder, the SCL-90 and the Hamilton Scales are sufficient.

An overview of the different scales in accordance with DSM-III-R and DSM-IV is shown in Table 5.

### Rating scales for mixed anxiety-depressive disorders

In DSM-IV it has been considered to include mixed anxiety-depressive disorder in the chapter of anxiety because a number of patients in the primary care setting seem not to meet the full syndrome criteria for either a mood disorder or an anxiety disorder. It has also been considered to include in the chapter of anxiety disorders secondary anxiety (due to a non - psychiatric medical condition). Thus, in the setting of primary care and in the medical setting mixed anxiety-depressive symptoms have been found important to take into account not least from a treatment point of view.

Table 5.  
Rating scales for posttraumatic stress disorder.

DSM diagnoses	Rating scales
DSM-III-R	
Intrusive symptoms and avoidance behaviour	Impact of Events Scale (Horowitz et al, 1979)
Arousal	Hopkins Symptom Checklist (SCL-90, Guy 1976)
	Hamilton Anxiety Scale (HAM-A, Hamilton 1969)
DSM-IV	
Severity (acute)	Dissociative Experience Scale (Bernstein and Putnam, 1986)
Severity (prolonged)	Hamilton Depression Scale (HAM-D, Hamilton 1967; Bech et al 1986)

The Hamilton Depression Scale includes a factor of anxiety (psychic anxiety, somatic anxiety, agitation, hypochondriasis) and Hamilton (1989) emphasized that anxiety is an important factor in depression. According to DSM-III and DSM-IV mood disorders including major depression have been described without any anxiety symptoms.

One of the most frequently used self-rating scales for depression is the Beck Depression Inventory (Beck et al 1961) which like DSM-III and DSM-IV has no items covering anxiety. The relationship between the Beck Depression Inventory and the Hamilton Depression Scale in a population of depressed outpatients has been studied by Steer et al (1987). They found that both scales were needed to cover the factors of anxiety and depression.

The Hospital Anxiety-Depression Scale was developed by Zigmond and Snaith (1983) to screen for anxiety and depression secondary to medical disorders. The scale is a self-rating scale with few somatic items because in the medical setting such items can be difficult to interpret.

The Melancholia Scale (MES, Bech and Rafaelsen 1980, Bech 1981) was designed as a Hamilton scale with special focus on cognitive and motor symptoms of depression. A self-rating version of this scale has also been developed (Bech, 1992).

In patients with chronic idiopathic pain disorders the Melancholia Scale (MES) was found valid in predicting outcome of antidepressants (Loldrup et al 1991). The concept of "less than major depression" emerged in this study as an important condition from which 33% of these patients suffered. This confirmed the study by Paykel (1990) who found in the primary care setting that amitriptyline was superior to placebo in depressed patients with HAM-D score of 13 or more (i.e. "less than" or "probable" major depression according to Research Diagnostic Criteria, RDC, Spitzer et al 1978). This has also been confirmed by Philipp et al (1992).

"Less than major depression" (i.e. a score of 13 to 17 on HAM-D or between 10 and 14 on MES) equals a score between 15 and 20 on the Beck Depression Scale or a score between 15 and 20 on the Hamilton Anxiety Scale (HAM-A) as shown by Loldrup et al (1991). In this study the MES and the Beck Depression Inventory

were more homogenous than the Hamilton Anxiety Scale. Thus, depression seems to be the most valid dimension in mixed anxiety-depression disorder.

In DSM-IV "less than major depression" has been included as a mood disorder referred to as minor depression disorder. This category, like mixed anxiety-depression disorder, has been considered because many individuals in primary care settings fall short of the DSM-III-R thresholds for major depression. In ICD-10 recurrent depressive disorder has also been sub-divided into mild, moderate and severe. Likewise, ICD-10 has under anxiety disorders included a category of mixed anxiety and depressive disorder.

Table 6 shows a review of scales to be considered for mixed anxiety-depressive disorder.

Table 6.  
Rating scales for mixed anxiety-depressive disorder.

DSM diagnoses	Rating scales
Mixed anxiety-depressive disorder (DSM-IV)	Hospital Anxiety-Depression Scale (Zigmond and Smith, 1983)
Minor depressive disorder (DSM-IV) or "less than major depression"	Hamilton Depression Scale (score 13-17, Paykel 1990) Melancholia Scale (score 10-14, Loldrup et al 1991) Beck Depression Inventory (score 15-20, Loldrup et al 1991) Hamilton Anxiety Scale (score 15-20, Loldrup et al 1991)

### Rating scales for other "neurotic" target syndromes

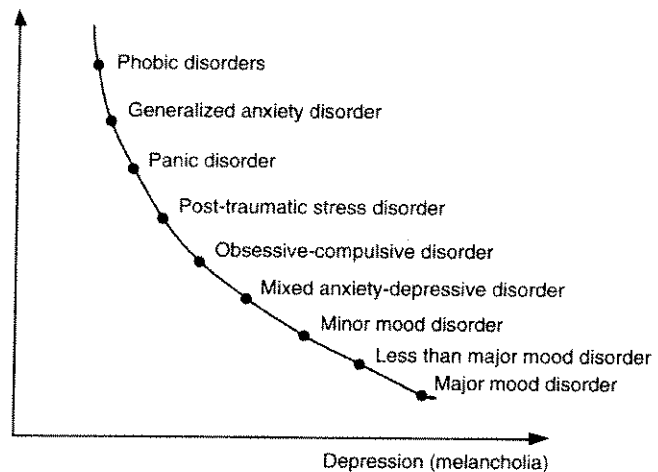
The DSM-II categories of neurosis have in DSM-III and DSM-IV been separated into rather distinct (*global* or *gestalt*) syndromes such as panic, obsessions and compulsions. At the same time, however, syndromes defined by a group of symptoms with shared phenomenology have also emerged such as generalized anxiety disorder, minor depressive disorder and mixed anxiety-depressive disorder.

Among *global* syndromes not covered under the heading of anxiety disorders are outward attacks of aggression, suicidal impulses, self-mutilation, emotional instability, sleep and pain. As discussed elsewhere (Bech 1992) these syndromes might most appropriately be measured by global scales such as Visual Analogue Scales. They are target symptoms rather than target syndromes. Among these target symptoms emotional instability might be considered as a *neurotic* symptoms in dementia (Nyth and Gottfries 1990), self-mutilation as a *pseudo-neurotic* symptom in borderline disorders (ERAG, 1992) and outward attacks of aggression as a *non-neurotic* or *psychotic* symptom in schizophrenia and mania. Thus, pain, sleep and suicide symptoms remain, but they are often most appropriately considered as ingredients of the respective anxiety or mood disorders.

### Conclusion

The anxiety disorders considered in this review have been discussed in relation to the historical development of DSM-II, DSM-III, DSM-III-R and DSM-IV, because the DSM has had a major impact on the rating scale approach to measure clinical anxiety, but the ICD-10 development in this field has also been considered. This scale approach to the specific anxiety disorders such as post traumatic stress disorder, phobia, generalized anxiety disorder, panic and obsessive-compulsive disorder has shown that they all should be measured in a diagram of anxiety and depression as shown in Table 7. It has been concluded that mixed anxiety-depressive disorder and minor or less than major mood disorder are a matter of severity on the abscissa in Table 7. From a treatment point of view the dimension of anxiety and depression in Table 7 is often more important than sub-diagnosing the individual categories. Thus, the term antianxiety and antidepressive drugs.

Table 7.  
Anxiety



### References

- Albus M, Maier W, Shera D, Bech P (1990). Consistencies and discrepancies in self- and observer-related anxiety scales. *Eur Arch Psychiatr Clin Neurosci* 240, 96-102.
- Allen JJ, Tune GS. (1975). The Lynfield-obsessional/compulsive questionnaire. *Scott med J* 201, 21-26.
- American Psychiatric Association (1968). *Diagnostic and Statistical Manual of Mental Disorders*. 2nd edition (DSM-II). American Psychiatric Association. Washington DC.
- American Psychiatric Association (1987). *Diagnostic and Statistical Manual of Mental Disorders*. 3rd revised edition (DSM-III-R). American Psychiatric Association. Washington DC.
- American Psychiatric Association (1991). *DSM-IV options book: Work in progress*. American Psychiatric Association. Washington DC.
- Angst J, Stassen HH, Delini-Stula A (1992). Onset of improvement under antidepressant treatment: A survival analytic approach. *Strasbourg Forum*.
- Bech P (1987). DSM-III and ICD-9: Developments and levels of communicative validity. *Psychometric and international perspective*. The Upjohn Company, Kalamazoo.
- Bech P (1992). Rating scales for psychopathology, health status and quality of life. A compendium on documentation in accordance with the DSM-III-R and WHO systems. Springer Verlag, Berlin.
- Bech P, Kastrup M, Rafaelsen O-J (1986). Mini-compendium of rating scales. *Acta Psychiatr Scand* 73 (suppl 326), 7-37.

- Bech P, Allerpup P, Maier W, Albus M, Lavori P, Ayoso JL (1992). The Hamilton Scales and the Hopkins Symptom Checklist (SCL-90): A cross-national validity study in patients with panic disorders. *Br J Psychiat* 160, 206-211.
- Beck AT, Brown G, Epstein N, Steer RA (1988). An inventory for measuring clinical anxiety: Psychometric properties. *J Consult Clin Psychol* 56, 893-897.
- Bernstein EM, Putman FW (1986). Development, reliability, and validity of a dissociation scale. *J Nerv Ment Dis* 174, 727-734.
- Bjerrum H, Allerpup P, Thunedborg K, Jakobsen K, Bech P (1992). Treatment of generalized anxiety disorders: Comparison of a new beta-blocking drug (CGP 361A), a low-dose neuroleptic (flupenthixol) and placebo. *Pharmacopsychiatry* 25 (5): 229-32.
- Cooper J (1970). The Leyton Obsessional Inventory. *Psychol Med* 1, 48-64.
- Davidson J (1992). Drug therapy of post-traumatic stress disorder. *Br J Psychiat* 160, 309-314.
- Edwards BC, Lambert MJ, Moran PW, McCully T, Smith KC, Ellingson AG (1984). A meta-analytic comparison of the Beck Depression Inventory and the Hamilton Rating Scale for Depression as measures of treatment outcome. *Br J Clin Psychology* 23, 93-99.
- European Rating Aggression Group (ERAG) (1992). Social Dysfunction and Aggression Scale (SDAS-21) in generalized aggression and in aggressive attacks: A validity and reliability study. *Int J Methods in Psych Res* 2, 15-29.
- Freud S (1895). The justification for detaching from neurasthenia a particular syndrome: The anxiety neurosis (First published in *Neurologisches Zentralblatt* 1895). Collected papers (vol 4). Basic Books, New York 1959, pp 76-106.
- Gelden MG, Marks IM (1966). Severe agoraphobia. A controlled trial of behaviour therapy. *Br J Psychiat* 112, 309-319.
- Goodman WK, Rasmussen SA, Price LH, Mazure C, Heninger G, Charney DS (1989). The Yale-Brown Obsessive Compulsive Scale (Y-BOCS). *Clin Neurosc Res Unit, Connecticut Mental Health Center, New Haven*.
- Guy W (1976). *Early Clinical Drug Evaluation (ECDEU) Assessment Manual for Psychopharmacology*. National Inst Ment Health, Rockville.
- Hamilton M (1967). Development of a rating scale for primary depressive illness. *Br J Soc Clin Psychol* 6, 278-296.
- Hamilton M (1969). Diagnosis and rating of anxiety. *Br J Psychiat* (special publ), 76-79.
- Hamilton M (1989). Frequency of symptoms in melancholia (depressive states). *Br J Psychiat* 154, 201-206.
- Hathaway SR, McKinley JC (1951). *Minnesota Multiphasic Personality Inventory*. The Psychological Corporation, New York.
- Hodgson RS, Rachman S (1977). Obsessional-compulsive complaints. *Beh Res Ther* 15, 389-395.
- Horowitz M, Wilner N, Alvarez W (1979). Impact of Events Scale: A measure of subjective distress. *Psychosom Med* 41, 209-218.
- Horowitz M, Wilner N, Kaltreida N, Alvarez W (1980a). Signs and symptoms of posttraumatic stress disorder. *Arch Gen Psychiat* 37, 85-92.
- Horowitz M, Wilner N, Marnar C, Krupnick J (1980b). Pathological grief and the activation of altern self-images. *Am J Psychiat* 137, 1157-1162.
- Jacobsen E (1965). *Psychoneuroser (psychoneuroses)*. Munksgaard, Copenhagen.
- James W (1884). What is an emotion? *Mind* 9, 188-205.
- Kierkegaard S (1844). *Begrebet angst (concept of anxiety)*. Reitzel CA, Copenhagen (English version: Princeton University Press, Princeton, 1980).
- Lange C (1885). *Om sindsbevægelse (Emotions)*. Jacob Lunds Forlag, Copenhagen.
- Loldrup D, Langemark M, Hansen HJ, Kastrup M, Jeppesen K, Bonnevie O, Elsborg L, Olesen J, Bech P (1991). The validity of the Melancholia Scale (MES) in predicting outcome of antidepressants in chronic pain disorders. *Eur Psychiat* 6, 119-125.
- Maier W, Buller R, Philipp M, Heuser I (1988). The Hamilton Anxiety Scale: Reliability, validity, and sensitivity to change in anxiety and depressive disorders. *J Aff Dis* 14, 61-68.
- Maier W, Albus M, Buller R, Nutzinger D, Spera D, Bech P (1990). Self- and observer assessment in anxiolytic drug trials: A comparison of their validity. *Eur Arch Psychiat Clin Neurosci* 240, 103-108.
- Marks IM, Mathews AM (1979). Brief standard self-rating for phobic patients. *Behav Rec Therap* 17, 263-267.
- Noyes R, Woodman C, Garvey MJ, Cook BL, Suelzer M, Clancy J, Anderson DJ (1992). Generalized Anxiety Disorder vs Panic Disorder. *J Nerv Ment Dis* 180, 369-379.
- Nyth AL, Gottfries CG (1990). The clinical efficacy of citalopram in treatment of emotional disturbances in dementia disorders. A Nordic multicentre study. *Brit J Psychiat* 157: 894-901.
- Parloff MD, Kelman HC, Frank GD (1954). Comfort, effectiveness and self-awareness as criteria of improvement in psychotherapy. *Am J Psychiat* 111, 343-351.
- Paykel ES (1990). Use of the Hamilton Depression Scale in general practice. In: *Hamilton Scales* (Bech P, Coppen A eds). Springer Verlag, Berlin 40-47.
- Philipp M, Delmo CD, Buller R, Schwarze H, Winter P, Maier W, Benkert O (1992). Differentiation between major and minor depression. *Psychopharmacol* 106 (suppl) 575-578.
- Rachman SJ, de Silva P (1978). Abnormal and normal obsessions. *Beh Res Ther* 16, 233-238.
- Reed GF (1985). *Obsessional experience and compulsive behaviour: A cognitive-structural approach*. Academic Press, London.
- Salkovskis PM (1990). Obsessions, compulsions and intrusive cognitions. In: *Measuring human problems* (Peck DF, Shapiro CM eds). John Wiley, Chichester 90-118.
- Sanovio E, Vidotto G (1985). The components of the Maudsley obsessional compulsive questionnaire. *Beh Res Ther* 23, 659-662.
- Sheehan DV (1983). *The anxiety disease*. C Schribner's Sons, New York.
- Spielberger CD, Gorsuch RL, Lushene RE (1970). *State-Trait Anxiety Inventory*. Consulting Psychologists Press, Palo Alto.
- Spitzer RL, Endicott J, Robins E (1978). Research diagnostic criteria: rationale and reliability. *Arch Gen Psychiat* 35, 773-782.
- Steer RA, Beck AT, Riskind JH, Brown G (1987). Relationships between the Beck Depression Inventory and the Hamilton Psychiatric Rating Scale for depression in depressed outpatients. *J Psychopath Beh Assessm* 9, 327-339.
- Suchman EA (1950). The utility of scalogram analysis. In: *Measurement and prediction* (Stouffer SA, Guttman L, Suchman EA, Lazarsfeld PF, Starr SA, Clausen JA eds). Princeton University Press, Princeton 122-171.
- Taylor JA (1953). A personality scale of manifest anxiety. *J Abnorm Soc Psychol* 48, 285-290.
- Thoren P, Åsberg M, Cronholm B, Jörnstedt L, Träskman L (1980). Clomipramine treatment of obsessive-compulsive disorder. *Arch Gen Psychiat* 37, 1281-1285.
- Uhlenhuth EH, Glass RM, Habermann SJ, Kellner R (1982). Relative sensitivity of clinical measures in trials of anti-anxiety agents. In: *The behaviour of psychiatric patients. Quantitative techniques for evaluation* (Burdock EI, Sudilovsky A, Gersholm S eds). Marcel Dekker: New York 393-409.
- Williams JBW (1990). Structured interview guides for the Hamilton rating scales. In: *The Hamilton Scales* (Bech P, Coppen A eds). Springer Verlag, Berlin 48-63.
- Wilkinson G, Ballestrieri M, Ruggeri M, Bellantuono C (1991). Meta-analysis of double-blind placebo-controlled trials of antidepressants and benzodiazepines for patients with panic disorders. *Psychol Med* 21, 991-998.
- Wimmer A (1923). *Psychogene forstyrrelser efter ulykkestilfælde: "Traumatisk neurose" (Posttraumatic neurosis)*. MP Madsen, Copenhagen.
- Zigmond AS, Snaith RP (1983). The Hospital Anxiety and Depression Scale. *Acta Psychiatr Scand* 67, 361-370.
- Zung WWK (1971). A rating instrument for anxiety disorders. *Psychosom* 12, 371-379.
- World Health Organization (1990). *International Classification of Disease. Tenth revision (ICD-10). Draft of chapter V. Mental and behavioural disorders*. World Health Organization, Geneva.



# TORTURE

Conceptualizing anxiety in torture survivors

## TORTURE

Quarterly Journal on Rehabilitation of Torture  
Victims and Prevention of Torture  
Supplementum No. 1, 1993



RCT | IRCT

Juliane Maries Vej 34  
DK-2100 Copenhagen Ø  
Denmark  
Phone: +45 31 39 46 94  
Telefax: +45 31 39 50 20