# The Clinical Process in Psychiatry: A Clinimetric Approach

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**ABSTRACT**

***Objective:*** The aim of this review was to examine the clinical process in psychiatry, with special reference to clinimetrics, a domain concerned with the measurement of clinical phenomena that do not find room in customary taxonomy.

***Data Sources:*** A MEDLINE search from inception to August 2010 was performed for English-language articles using the keywords *clinical judgment*, *clinimetric*, *staging*, *comorbidity*, *sequential treatment*, and *subclinical symptoms* in relation to psychiatric illness. It was supplemented by a manual search of the literature.

***Study Selection:*** Choice of assessment strategies was based on their established or potential incremental increase in clinical information compared to use of diagnostic criteria.

***Data Extraction:*** Contributions were evaluated according to the principles of clinimetrics.

***Results:*** Several innovative assessment strategies were identified: the use of diagnostic transfer stations with repeated assessments instead of diagnostic endpoints, subtyping versus integration of different diagnostic categories, staging methods, and broadening of clinical information through macroanalysis and microanalysis. The most representative examples were selected.

***Conclusions:*** Current assessment strategies in psychiatric research do not reflect the sophisticated thinking that underlies clinical decisions in practice. The clinimetric perspective provides an intellectual home for the reproduction and standardization of these clinical intuitions.

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Psychiatric diagnosis and classification have attracted considerable attention in the past decades.[1] The introduction of diagnostic criteria for the identification of psychiatric syndromes, such as the *DSM*,[2] has considerably decreased the variance of diagnoses due to different assessors and the use of inferential criteria rather than direct observation.

However, clinicians have become increasingly aware of the limitations of the current diagnostic systems[3] and concerned about future *DSM* or *ICD* developments.[4] The customary clinical taxonomy in psychiatry does not include patterns of symptoms, severity of illness, effects of comorbid conditions, timing of phenomena, rate of progression of illness, responses to previous treatments, and other clinical distinctions that demarcate major prognostic and therapeutic differences among patients who otherwise seem to be deceptively similar since they share the same psychiatric diagnosis.

Little consideration has been given to the clinical process in psychiatry, that is, how clinical judgment leading to medical decisions is formulated. The main emphasis has been given to the standardization of the assessment process by use of rating scales leading to diagnostic configuration.[5]

In 1967, Alvan Feinstein dedicated a monograph to an analysis of clinical reasoning that underlies medical evaluations, such as the appraisal of symptoms, signs, and the timing of individual manifestations.[6] In 1982, he introduced the term *clinimetrics*[7] to indicate a domain concerned with the measurement of clinical issues that do not find room in customary clinical taxonomy. Such issues include the types, severity, and sequence of symptoms; rate of progression in illness (staging); severity of comorbidity; problems of functional capacity; reasons for medical decisions (eg, treatment choices); and many other aspects of daily life, such as well-being and distress.[8] Feinstein, in his book on clinimetrics,[8] quotes Molière's bourgeois gentleman who was astonished to discover that he spoke in prose as an example of clinicians who may discover that they constantly communicate with clinimetric indices. Indeed, in clinical practice, psychiatrists weigh factors such as the progression of disease, the overall severity of the disorder, the patient's social support and adaptation, resilience and reaction to stressful life circumstances, and response to previous treatment.[9] However, current formal strategies of assessment fail to capture most of this information.

We will examine some emerging trends and perspectives in the clinical process in psychiatry, with special reference to the diagnostic process, the staging method, and the organization of information.

## DATA SOURCES AND STUDY SELECTION

A review of the literature, based on a MEDLINE search from inception to August 2010 using the keywords *clinical judgment*, *clinimetric*, *staging*, *comorbidity*, *sequential treatment*, and *subclinical symptoms* in relation to psychiatric illness was performed. It was supplemented by a manual search of the literature. Choice of assessment strategies was based on clinimetric principles[8] and on the concept of incremental validity,[10] which refers to the unique contribution or incremental increase in predictive power associated with the inclusion of a particular assessment procedure in the clinical decision process.[11,12] We will then discuss the implications that a renewed interest in these assessment strategies may entail.

Clinical Points

- Exclusive reliance on diagnostic criteria has impoverished the clinical process and does not reflect the complex thinking that underlies decisions in psychiatric practice.
- The accuracy of clinical judgment can be greatly increased with specific strategies: global formulations, staging methods, and a better organization of clinical information (encompassing macroanalysis and microanalysis).
- The concept of disease is no longer adequate to guide psychiatric care; therefore, clinical decision making should be addressed to attainment of individual goals.

## DIAGNOSTIC ENDPOINTS VERSUS TRANSFER STATIONS

In most instances of diagnostic reasoning in psychiatry, the process ends with the identification of a disorder,[13] often subsumed under a rubric of the *Diagnostic and Statistical Manual of Mental Disorders* (*DSM*). A single assessment generates the prognostic and therapeutic judgments of the clinician. A *DSM* diagnosis (eg, major depressive disorder), however, encompasses a wide range of manifestations, comorbidity, seriousness, prognosis, and responses to treatment.

The majority of patients with mood and anxiety disorders do not qualify for 1, but for several Axis I and Axis II disorders.[14] As Cloninger[15] remarks, mental disorders can be characterized as manifestations of complex adaptive systems that are multidimensional in their description and multifactorial in their origins, and they involve nonlinear interactions in their development. As a result, efforts to describe psychopathology in terms of discrete categorical diagnoses result in extensive comorbidity and do not lend themselves to adequate treatment strategies.[15]

Very seldom do comorbid diagnoses undergo hierarchical organization (eg, generalized anxiety disorder and major depression) or is attention paid to the longitudinal development of mental illnesses. There is comorbidity that wanes upon successful treatment of 1 mental disease, eg, recovery from panic disorder with agoraphobia may result in remission from co-occurring hypochondriasis, without any specific treatment for the latter.[10] Other times, treatment of 1 disorder does not result in the disappearance of comorbidity. For instance, successful treatment of depression may not affect preexisting anxiety disturbances.[16]

The diagnostic criteria are particularly helpful in setting a threshold for conditions worthy of clinical attention. Accordingly, the diagnostic criteria for a major depressive disorder identify a syndrome that may be responsive to antidepressant drugs. At least 5 of a set of 9 symptoms should be present (and 1 should be either depressed mood or loss of interest). However, according to the psychometric model, all items are weighed the same, unlike in clinical medicine, where major and minor symptoms are often differentiated (eg, Jones criteria for rheumatic fever).[7] As a result, a patient with severe and pervasive anhedonia, incapacitating fatigue, and difficulties concentrating, which make him unable to work, would not be diagnosed with a major depressive disorder, despite the clinical intuition of potential benefit from pharmacotherapy. This diagnosis could be performed in a patient who barely meets the criteria for 5 symptoms. The hidden conceptual model is psychometric: severity is determined by the number of symptoms, not by their intensity or quality, to the same extent that a score in a depression self-rating scale depends on the number of symptoms that are scored as positive.[10] This is not surprising in view of the fact that the development of psychometrics took place outside of the clinical field, mainly in educational and social areas.[17] Since the phenomena under observation in the development of psychometric principles were not clinical, they could not be automatically adapted to clinical psychology and psychiatry.

Similar considerations apply to the longitudinal development of the disorder (prodromal phase, the fully developed disorder, and residual states).[9] Detre and Jarecki[18] provided a model for relating prodromal and residual symptomatology in psychiatric illness, defined as the rollback phenomenon, ie, as the illness remits, it progressively recapitulates, even though in a reverse order, many of the stages and symptoms that were seen during the time it developed. The rollback phenomenon has been substantiated in mood and anxiety disorders.[19,20] There is limited awareness of the fact that the current patient's symptomatology may have developed over the years and have reflected previous treatments.

Feinstein[13] remarks that, when making a diagnosis, thoughtful clinicians seldom leap from a clinical manifestation to a diagnostic endpoint. The clinical reasoning goes through a series of "transfer stations," where potential connections between presenting symptoms and pathophysiological process are drawn. These stations are a pause for verification or change to another direction.[13] This strategy particularly applies to psychiatric disorders. An initial state of generalized anxiety may assume phobic connotations at some later point in time. If major depression then ensues, mood symptomatology may overshadow the previous anxiety disturbances, but the diagnosis of depression is only a transfer from prodromal to residual anxiety.

Some assessment strategies have been developed to overcome the flat, cross-sectional view of *DSM*.

### Repeated Assessments

The use of diagnostic transfer stations has been suggested by the sequential treatment model,[21] an intensive, 2-stage approach, that includes the use of 1 treatment (eg, pharmacotherapy) after remission has been achieved. One type of treatment is thus employed to address the residual symptomatology that the other treatment was unable to affect. The sequential model relies on repeated assessments (after each line of treatment has been completed) that may modify an initial diagnosis (eg, preexisting anxiety disturbances may



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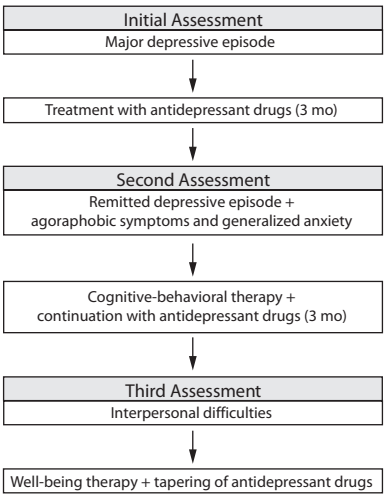
**Figure 1. Effects of Repeated Assessments on the Development of a Diagnostic Work**




emerge after pharmacotherapy of a major depressive episode). Robins and Guze[22] developed the primary/secondary dichotomy in depression, which was based on chronology and course of follow-up. An episode of depression was defined as secondary when it was superimposed on a preexisting psychiatric or medical disease. The *DSM-IV*,[2] however, does not differentiate primary and secondary manifestations of depressive illness, as is performed in general medicine (eg, hypertension). As outlined in Figure 1, in view of the rollback phenomenon, Robins and Guze's primary/secondary distinction[22] becomes feasible: the major depressive episode appears to be superimposed on long-standing agoraphobic fears and avoidance and generalized anxiety. Symptoms are qualitatively differentiated (eg, the fact they persisted upon treatment against a background of improved symptomatology). They may be elicited by a diary or daily rating scales, which yield information that is not readily apparent in interview.

### Subtyping

The need for subtyping major depressive disorder, since this category is too broad to yield meaningful treatment implications, has been recently underscored.[23,24] Lichtenberg and Belmaker,[23] for instance, differentiate between depression with anxiety (maintains functioning, positive response to favorable news or pleasurable activities) and late-life depression (no prior depressive history, reduced energy and interest, impaired cognitive function). Bech[24] has revived Robins and Guze's hierarchical primary/secondary distinction (eg, postnatal depression, poststroke late-life depression).[22] The basic assumption is that clinical manifestations that share the diagnosis of major depressive disorder may display substantial differences in prognostic and therapeutic terms.[23,24]

The underlying assumption is to increase the amount of clinical information that is conveyed by diagnosis. This requires use of instruments that yield a broad spectrum of information, such as hostility, irritable mood, and phobic avoidance, and are not ordinarily available.[24]

### Building Unitary Concepts

Tyrer and associates[25] remarked that what is shared by syndromes such as anxiety, panic, phobic disturbances, and irritability may be as important as the differences between them, and conditions that are apparently comorbid could be part of the same clinical syndrome. They argued that the combination of mixed anxiety and depressive disorders together with a certain type of abnormal personality (excessive timidity, poor-self-esteem, avoidance of anxiety-provoking situations, and dependence on others) constitutes a single syndrome, the general neurotic syndrome.[25] The syndrome was shown to be associated with a poor response to treatment, frequent symptoms throughout the neurotic diagnostic spectrum, and tendency to relapse. The concept of neurosis, in its phenomenological[26] and psychodynamic[27] traditions, still has a lot to teach in terms of clinical thinking.[28]

Another example of search for unitary mechanisms of symptom formation is van Praag's Scale for Personality Disturbances.[29] On the basis of a structured interview, the rater is asked to score the following experiential qualities: (1) basic feelings of discontent with one's life situation and psychological makeup, (2) unhappiness with one's personal relationships, and (3) emotional instability. The scale aims to overcome the difficulties in incorporating the I and II Axes of *DSM* and was found to allow important differentiations from residual symptomatology.[30]

The concept of allostatic load (the cumulative effects of stressful experiences in daily life) originated from basic science.[31] However, it offers another clinical opportunity of assessing the presence of a source of distress in the form of recent life events and/or chronic stress that exceed the individual's coping skills together with symptomatic manifestations encompassing psychological symptoms.[32] These approaches may be subsumed under the clinimetric rubric of global assessment indices. While the sensitivity of these methods is acknowledged in drug trials, where they often yield the most sensitive discrimination between drug and placebo effects,[33] the clinical value of these global evaluations in assessment and treatment planning is currently underestimated.

## STAGING

In 1993, Fava and Kellner[9] introduced the clinimetric concept of staging in psychiatric classification. Unlike in clinical medicine, where this method had achieved wide currency (eg, the New York Heart Association Functional Classification, the Ann Arbor staging classification of Hodgkin's disease), staging was largely neglected in psychiatry. Staging differs from the conventional diagnostic practice in that it not only defines the extent of progression of a disorder at a particular point in time but also reveals a person's current location on the continuum of the course of illness. Thus,

**Table 1. Stages of a Psychiatric Disorder**

| |
|---|
| Stage 1: Prodromal phase |
| Stage 2: Acute manifestations |
| Stage 3: Residual phase |
| Stage 4: Chronic (in attenuated or persistent form) |

**Table 2. Staging of Levels of Treatment Resistance**

| |
|---|
| Stage 0: No history of failure to respond to therapeutic trial |
| Stage 1: Failure of at least 1 adequate therapeutic trial |
| Stage 2: Failure of at least 2 adequate therapeutic trials |
| Stage 3: Failure of 3 or more adequate therapeutic trials |
| Stage 4: Failure of 3 or more adequate trials including at least 1 concerned with augmentation/combination |

**Table 3. Staging of Loss of Therapeutic Effects During Continuation or Maintenance Treatment**

| |
|---|
| Stage 0: No loss of therapeutic effect |
| Stage 1: Loss of therapeutic effects after adequate response in a therapeutic trial |
| Stage 2: Loss of therapeutic effects after adequate response in 2 therapeutic trials |
| Stage 3: Loss of therapeutic effects after adequate responses in 3 or more therapeutic trials |

once an index defines the existence of a particular disease state, its seriousness, extent, and longitudinal characteristics need to be evaluated.[8]

Fava and Kellner[9] developed staging methods for unipolar depression, bipolar disorder, panic disorder, and schizophrenia. Table 1 outlines the basic steps of development of a psychiatric disorder, ranging from the prodromal to the residual and chronic forms, in a longitudinal view of development of disturbances. Staging models have subsequently been refined in schizophrenia,[34] mood disorders,[35–38] and agoraphobia,[28] and they have been introduced in anorexia.[39] Staging instruments have also been developed.[40,41] In 2 randomized controlled trials,[42,43] psychotherapeutic intervention was applied according to a staging method and was found to yield long-term benefits.[44,45]

Further, the staging method has been applied to treatment response in depression.[46–48] It appears that the more information included in the method, the stronger its predictive value.[49] This information may encompass the number of trials completed,[49] the intensity/optimization of each trial,[49] issues of pseudoresistance (nonresponse to inadequate treatment in terms of duration, doses, or indications),[50] or occurrence of loss of therapeutic effects after clinical response.[51] Table 2 provides an illustration of the various levels of treatment resistance. By a clinical viewpoint, it is quite different to treat a patient with a major depressive episode who displayed positive responses to previous therapeutic trials (stage 0) and a patient who failed to respond to various adequate trials, including one concerned with augmentation/combination (stage 4). Similarly, if we encounter a depressed patient who repeatedly displayed loss of therapeutic response using various antidepressant drugs (Table 3), we should be aware that use of a new antidepressant is likely to yield the same phenomenon, probably because of a mechanism of oppositional tolerance.[51] For instance, many patients who did not respond to initial treatment in the Sequenced Treatment Alternatives to Relieve Depression (STAR*D) trial and went through various types of treatments, including augmentation/combination, were characterized by a refractory state with low remission, high relapse, and high intolerance rates.[35] Accordingly, their likelihood of lasting remission would be very low, as indicated by the staging methods of Tables 2 and 3.

Motivation to treatment and changing behavior has also been submitted to a staging system and may yield valuable insights into psychological resistances of the patient.[52] Di Clemente and Prochaska[52] developed a helpful staging method: "precontemplation" (people do not recognize that a problem exists and have no intention to change), "contemplation" (individuals accept that a problem exists but are ambivalent about it), "preparation/determination" (a perceived discrepancy between current and desired study), "action," and "maintenance" of the new patterns. It is difficult to suggest a psychotherapeutic treatment, despite pertinent indications, to a patient who is in the "precontemplation" stage. However, this is seldom considered, particularly in randomized controlled trials of psychotherapy.

## ORGANIZATION OF CLINICAL INFORMATION

The information we previously mentioned adds to other customary domains of the clinical evaluation, such as psychiatric history, background of alcohol and other substance abuse, general medical history, physical examination, laboratory tests, and diagnostic interviews, whether they follow specific instruments or a more personal format.[5] There are other areas, however, that need to be addressed and are currently neglected.

### Subclinical Distress and Illness Behavior

A diagnostic interview and a set of criteria have been used extensively in psychosomatic research.[53–55] The Diagnostic Criteria for Psychosomatic Research allow one to translate in clinical terms the spectrum of manifestations of illness behavior, ie, the ways in which individuals experience, perceive, evaluate, and respond to their health status.[53–55] The 2 main forms of abnormal illness behavior (illness affirming and illness denying) have several common expressions in psychiatric practice. However, the psychopathology of insight—as defined by Lewis[56]—is seldom examined. When this happens, the results can be quite interesting. For instance, in a recent investigation on the spectrum of anxiety disorders in the medically ill, agoraphobia without history of panic attacks was found to be closely related to the Diagnostic Criteria for Psychosomatic Research illness denial.[57] Persistent denial of having a medical disorder and needing treatment frequently occurs in the medical setting.[53] If panic attacks have not taken place (illness denial was not associated with panic disorder and agoraphobia), agoraphobic fears tend to be highly rationalized and do not lead

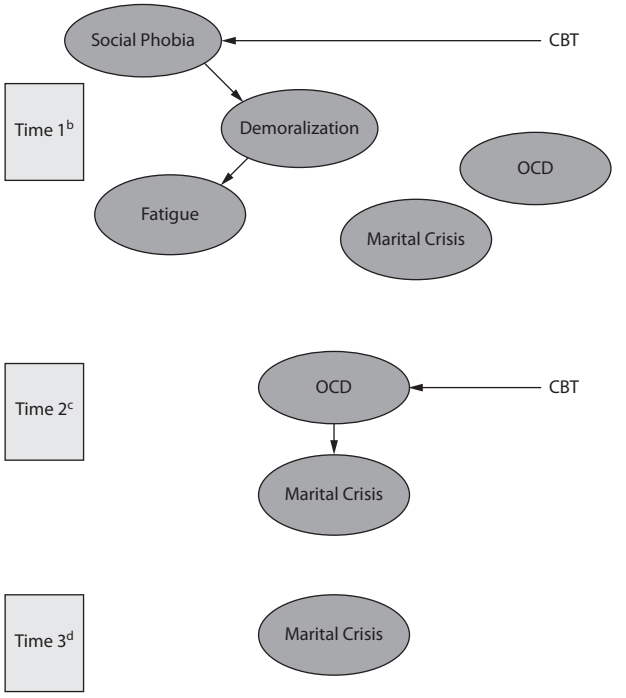
individuals to seek medical attention.[57] The identification of these fears requires careful expert interviewing, well beyond the checklist use of diagnostic instruments, to overcome the denial that underlies agoraphobia and other distress manifestations. The linking between agoraphobia without history of panic attacks and Diagnostic Criteria for Psychosomatic Research illness denial provides an explanation for some discrepancies that have occurred in the literature as to the prevalence of agoraphobia in clinical samples compared to epidemiologic studies.[28] Other important constructs covered by the Diagnostic Criteria for Psychosomatic Research are demoralization,[58] irritable mood,[53] and alexithymia.[27,59]

### Psychological Well-Being

An area that is currently neglected in assessment is psychological well-being, despite the availability of validated instruments and its growing importance in establishing resilience.[3,60] Dimensions such as environmental mastery, personal growth, purpose in life, autonomy, self-acceptance, and positive relations with others were found to affect vulnerability to life adversities and complex balance between positive and negative affects in mood and anxiety disorders.[60]

Mezzich and Salloum[3] developed the Person-centered Integrative Diagnosis, which encompasses both the positive and negative aspects of health, in an interactive way, within the person's life context. The Person-centered Integrative Diagnosis includes both the symptomatology of mental disorders and the positive aspects of health (adaptive functioning, protective factors, quality of life, etc) according to a holistic view of the person (including his/her dignity, values, and aspirations).[3] Rehabilitation of mental disorders is targeted as much on the patient's strengths and wishes as it is on alleviating symptoms and psychopathology.[61]

**Figure 2. Example of Macroanalysis[a]**




[a]A patient presents with work situational social phobia, demoralization, fatigue, obsessive-compulsive disorder (OCD) symptoms, and marital crisis.
[b]At time 1, the therapist could give priority to cognitive-behavioral therapy (CBT) of social phobia, expecting a consequent improvement in demoralization and sense of fatigue.
[c]At time 2, the therapist could decide to intervene on OCD symptoms by using CBT techniques to emphasize the negative effects of the patient's excessive preoccupation for order and precision, leading to a chronic malaise and communicative difficulties with the partner.
[d]At posttherapy assessment (time 3), the therapist could determine the relationship of OCD symptoms to marital crisis.

### Macroanalysis and Microanalysis

Feinstein, when he introduced the concept of comorbidity, referred to any "additional coexisting ailment" separate from the primary disease, even if this secondary phenomenon does not qualify as a disease per se.[62] Indeed, in clinical medicine, the many methods that are available for measuring comorbidity are not limited to disease entities.[63]

A method has been developed in psychiatry for organizing clinical data as variables in clinical reasoning. Emmelkamp et al[64,65] have introduced the concept of macroanalysis (a relationship between co-occurring syndromes and problems is established on the basis of when treatment should commence). Fava and Sonino[54] have applied macroanalysis to assessing the relationship between medical and psychological variables. Macroanalysis starts from the assumption that, in most cases, there are functional relationships with other more or less clearly defined problem areas[64] and that the targets of treatment may vary during the course of disturbances.[54] For instance, a patient may present with work situational social phobia (which leads him or her to avoid important opportunities for improving his or her job), demoralization (which increases his or her sense of fatigue), marital crisis (as a result of obsessional traits of mental order incompatible with that of his or her spouse), and obsessive ruminations (which lead to a chronic state of indecision). In terms of macroanalysis, the clinician, after a thorough interview with the patient, could place into a hierarchy the syndromes and symptoms of comorbidity by considering also the patient's needs. The clinician could thus give priority to the cognitive-behavioral treatment of social phobia, leaving to posttherapy assessment the determination of the relationship of social phobia to demoralization, marital crisis, and obsessional ruminations. Will they wane as anxious epiphenomena or will they persist, despite some degree of improvement? Should, in this latter case, further treatment be necessary? What type of relationship do demoralization and obsessive-compulsive symptoms entertain? If the clinical decision of tackling one syndrome may be taken during the initial assessment, the subsequent steps of macroanalysis require a reassessment after the first line of treatment has terminated (Figure 2). The hierarchical organization that is chosen may depend on a variety of factors (urgency, availability of treatment tools, etc) that include also the patient's preferences and priorities. Macroanalysis is a tool that allows the therapist to not

only increase accuracy in clinical decision making but also inform the patient about the relationship between different problem areas and motivate the patient for changing.[64,65] The concept of shared decision making is getting increasing attention in clinical medicine,[66] but it is still seldom practiced in psychiatry.[67] Macroanalysis also requires reference to the staging method, whereby a disorder is characterized according to seriousness, extension, and longitudinal development.[9] For instance, certain psychotherapeutic strategies can be deferred to a residual stage of depression when state-dependent learning has been improved by use of antidepressant drugs.[68] The planning of treatment thus requires determination of the symptomatic target of the first-line approach (eg, pharmacotherapy) and tentative identification of other areas of concern to be addressed by subsequent treatment (eg, psychotherapy).

Macroanalysis should be supplemented by microanalysis, a detailed analysis of specific symptoms (onset and course of the complaints, circumstances that worsen symptoms and consequences).[64,65] For instance, when anxiety characterizes the clinical picture, it is necessary to know under which circumstances the anxiety become manifest and how the patient responds when he/she becomes anxious, and also to know whether an avoidant behavior occurs and, if so, what are the long-term consequences of the avoidant behavior.

Targum and associates[69] have developed specific criteria (SAFER) to be used in drug trials for improving the assessment accuracy of symptoms: State versus trait (the identified symptoms must reflect the current state of illness and not long-standing traits), Accessibility, Face validity, Ecological validity, and Rule of the 3 *p*'s (symptoms must be present, persistent, and pathological). The SAFER criteria inventory constitutes a valid method of microanalysis. Microanalysis also consists of dimensional measurements, such as observer or self-rating scales for assessing anxiety and fears. Choice of these instruments is dictated by the clinimetric concept of incremental validity.[10–12] Each distinct aspect of psychological measurement should deliver a unique increase in information in order to qualify for inclusion. The concept can also be applied to the selection of instruments in a psychometric battery. In clinical research, several highly redundant scales are often used under the misguided assumption that nothing will be missed. On the contrary, violation of the concept of incremental validity leads to only conflicting results. Microanalysis is consequential and secondary to macroanalysis and leads to overcoming the assumption that there is a common assessment strategy for all clinical encounters.

## CONCLUSION

Part of the challenge and, at the same time, fascination of being a clinician lies in applying scientific methods in the care of patients and in understanding disease.[70] Greater knowledge should result in significant benefits for the patients, and, in a sense, continued development on the part of the physician.[71] We are witnessing, however, a progressive detachment of clinicians from research, which is often accompanied by a sense of personal stagnation and tiredness.[71] This detachment is mainly the reflection of an intellectual crisis that has become more and more manifest in recent years.[71–73]

In 1967, Feinstein[6] urged clinicians to develop a "basic science" of their own—to study the clinical phenomena directly, to specify the importance of different types of clinical data, to create appropriate systems of taxonomy for classifying the information, and to develop intellectual models and pragmatic methods that would articulate the clinical process and use the results for quantified analyses.

More recently, Tinetti and Fried[74] have argued that time has come to abandon disease as the focus of medical care. Clinical decision making for all patients should be addressed to attainment of individual goals and identification and treatment of all modifiable and nonbiological factors, rather than solely to the diagnosis and treatment of individual diseases.[74]

Often, in their clinical practice, psychiatrists use sophisticated forms of clinical judgment that are suitable for clinical challenges but are not addressed by current research strategies. Exclusive reliance on diagnostic criteria has impoverished the clinical process and does not reflect the complex thinking that underlies decisions in psychiatric practice. The use of transfer stations with repeated assessments instead of diagnostic endpoints, the building of global formulations of clinical integration, staging methods, and a better organization of clinical information (encompassing subclinical distress, illness behavior, psychological well-being, macroanalysis, and microanalysis) may be an antidote to oversimplified models that derive from biological reductionism, neglect individual responses to treatment, and clash with clinical reality.[71,75]

The clinimetric perspective provides an intellectual home for the reproduction and standardization of the clinical intuitions. It allows the clinician to make full use of the clinical information that is available. It opens a new exciting area of research that is likely to yield improved targets for neurobiological studies and treatment trials.

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