Psychiatric assessment and the art and science of clinical medicine

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ABSTRACT

The decline of phenomenology was associated with the corresponding rise of operational criteria for psychiatric diagnosis. Detailed and nuanced evaluations were replaced by symptom checklists, the diversity of clinical phenomena reduced to a few “typical symptom” and contexts ignored in favor of symptom criteria. This article highlights some issues related to the art and the science of clinical examination. It includes conceptual models, matching patients with typical typologies, cross-sectional and longitudinal perspectives, symptom checklists and contexts, population characteristics, prevalence and predictive values, demarcation of abnormalities, and the Bayesian approach to diagnosis. The challenge is to rekindle the interest in phenomenology, appreciate the complexity of the task of psychiatric assessment and to teach the principles of clinical examination.

Key words: Psychiatric assessment, psychiatric diagnosis, mental state examination

INTRODUCTION

The death of phenomenology has been mourned in literature.[1,2] The decline of phenomenology was associated with the corresponding rise of operational criteria for diagnosis (e.g. Feighner’s criteria and Research Diagnostic Criteria).[3,4] which culminated in the publication and use of the Diagnostic and Statistical Manual III[5] and its later editions III R and IV[6,7] and the International Classification of Disease-10.[8] The goals for the DSM III project, which represented the then current best efforts included: improving communication between clinicians, increasing the reliability of diagnosis, enhancing training in clinical interviewing and making the system more compatible with international approaches. Unfortunately, the DSM categories became definitive truths, reified and formed the basis of many training programs and health care delivery. The approach substituted authority for enquiry and simplification for subtlety.[1,2] Detailed and nuanced evaluations were replaced by symptom checklists, the diversity of clinical phenomena reduced to a few “typical symptom” and contexts ignored in favor of symptom criteria. This article discusses some issues related to the art and the science of clinical examination in psychiatry.

CONCEPTUAL MODELS

Diverse theoretical models have been employed to conceptualize psychiatric disorders.[9] The medical model views psychiatric disorders as diseases, supposes a central nervous system etiology and pathogenesis, documents signs and symptom, offers differential diagnoses, recommends somatic therapies and prognosticates about the course and outcome. Psychological, dynamic and analytical models focus on developmental stage and conflicts, emphasize distorted childhood relations, and highlight vulnerability to stress. Cognitive behavioral approaches concentrate on learning, identify maladaptive patterns and reinforcers and recommend retraining. Social models highlight the complex interaction with social systems. The failure of unitary theories and individual models to explain all psychiatric disorders suggests that they are part perceptions and argue for the use of the different conceptual models commonly

Access this article online

Website: www.indianjpsychiatry.org

DOI: 10.4103/0019-5545.99538

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How to cite this article: Jacob KS. Psychiatric assessment and the art and science of clinical medicine. Indian J Psychiatry 2012;54:184-7.
employed in psychiatry. These models need to be employed simultaneously and in sequence and are complementary and not competitive. While the biopsychosocial model is often recommended, the individual components are difficult to assimilate and hence demand a conscious effort at integration.

The choice of model(s) has a powerful impact on diagnosis and on treatment and are dependent on many factors including: the ideology of the clinician, the availability of expertise, the clinical presentation, the severity of condition and risk, the immediacy of social situation and the social class of the patient. While it was argued that the use of symptom for diagnosis in the DSM operational criteria suggest an atheoretical approach, these strategies are essentially biomedical and fail to recognize the context. While biomedical approaches are appropriate for delirium, dementia and the severe mental illness, their usefulness in non-psychotic and stress-related conditions, where they are divorced from the context, is debatable. There is a need to realize the importance of the choice of model(s) employed and its role in perception of the clinical presentation and in the solutions offered.

Matching patients with typical prototypes
Traditionally systems of psychiatric classification have employed categories.[10,11] Such systems use rules to recognize groupings whose boundaries are well defined and imply homogeneity within specified diagnostic heads. On the other hand, typologies are employed to assign individuals to a specific group if they resemble a typical member or prototype. This view permits the existence of borderline cases and allows for heterogeneity within categories. Typical prototypical classes have a clearly defined centre but the boundaries are is indistinct, depending on judgment or the use of a chosen cut-off. It is argued that prototypal (typological) models more closely resemble clinical reality in psychiatry. Although the ICD-10 and DSM-IV systems employ categories with operational criteria, they are essentially prototypical systems. This realization should result in matching clinical patterns with typical presentations and then employing the operational criteria for confirmation rather than using the criteria as a symptom checklist for diagnosis.

Cross-sectional assessment versus longitudinal perspective
Psychiatric history elicits a longitudinal perspective while the mental status examination (MSE) focuses on the cross-sectional assessment of patients. While many disorders have symptom criteria, other issues like family history of specific disorders (e.g. schizophrenia, bipolar), corresponding personality disorders (e.g. Schizoid/schizotypal, cyclothymia) are also taken into consideration in many clinical contexts. The total duration spent in psychosis and duration of mood syndromes are also employed to reach a specific diagnosis of schizophrenia, schizoaffective or psychotic bipolar disorders. While treatment response is not a criterion in the operational definitions, they may be useful pointers to the diagnosis.

The current descriptive and cross-sectional approach to the diagnosis of depression fail to take into account longitudinal issues which delineate the different prototypes of the depressive presentations.[11] Depressive symptom are part of normal reaction to day-to-day stress, due to diseases like melancholia, secondary to poor coping and personality deficits and due to severe stress in well-adjusted people. The differentiation of such presentations argues for a need for a longitudinal assessment rather than a cross-sectional symptom count. Personality traits, coping styles, age of onset, type and severity of stressors, duration of illness, past response to treatment and family history of depression are useful in matching prototypical categories and should be employed in diagnosis.

Checklist versus clinical presentation and context
The use of operational criteria as checklists rather than as minimum symptom for diagnosis has resulted in the loss of interest in eliciting a detailed history, identifying other characteristics or recognizing the context with issues related to vulnerability, stress and coping.[12] Divorcing the context from the clinical presentations and employing a symptom counts result in diagnoses of major depression and mixed anxiety depression,[11] which specify severity rather than quality of depression and are less useful in management than the traditional typologies of melancholia, dysthymia and adjustment disorders. Understanding the clinical contexts in addition to the psychiatric presentations will result in holistic care.

POPULATION CHARACTERISTICS
The principles of elicitation of symptom during the MSE are comparable to those employed to interpret diagnostic laboratory tests in medicine.[12] The indices of efficacy of a diagnostic test (i.e., sensitivity and specificity) are generally considered constant.[13] However, this assumption is valid only when the test and population characteristics remain stable. Thus, subroutines useful in specific populations may prove inaccurate in others. For example, the denial of persecutory delusions in a paranoid individual would not necessarily imply the absence of such pathology. The generalization of paranoid ideation in such patients, who incorporate the interviewer into their belief system, would result in refutation of psychopathology. Patients who are not cooperative for the MSE would have a high false negative rate. Negative or equivocal answers in such situations have to be reviewed in the light of patient characteristics. The standard MSE may not be valid in patients who are hostile, violent and apathetic or are in stupor as they lack the properties required for evaluations designed for cooperative patients,
and would demand caution in interpretation. Illiteracy and differences in ethnic, cultural and linguistic backgrounds can also distort the results of the MSE. Although separate schedules for the examination of non-cooperative patients exist,[14] they do not account for the diversity seen in clinical practice. The variations commonly seen in patients demand an understanding of issues.[12]

**PREVALENCE AND PREDICTIVE VALUES**

While the sensitivity and specificity of diagnostic procedure is constant in similar populations, their clinical usefulness is dependent on their predictive values which are prevalence dependent.[12,13,15,16] Diagnostic tests when employed in situations of low prevalence are bound to have high false positive rates while those employed in clinical situations of very high prevalence will necessarily have high false negative rates. For example, the indiscriminate use of specific questions to elicit delusions in all patients, where the prevalence of the symptom is low, will result in many false positives. Confirmatory questions about the presence of delusions should only be asked to individuals who are positive on screening for such phenomena. This would artificially raise the prevalence of delusions in the population tested and would result in more accurate prediction. Optimum results are obtained when the probability of the phenomenon is 0.5 and confirmatory questions when employed at extremes of probability will demand caution in interpretation as it would increase the likelihood of misclassification.[12]

Clinical phenomena and demarcation of abnormalities

Dichotomous demarcations of the results of diagnostic tests (e.g. positive and negative), despite their mathematical and clinical convenience, often misrepresent common observations in medical practice.[12,16] Clinical phenomena located midway on the spectrum pose problems when classified into two categories. Although dimensions have been postulated for many clinical phenomena, they are difficult to handle in practice and hence categorical approaches are preferred. However, the advantages of continuums and the convenience of clinical categories can be achieved by if trichotomous categorizations involving three zones of operations are employed (e.g., positive, negative and equivocal).[12,16] This would increase the diagnostic accuracy of the positive and negative zones and the intermediate zone, a place of diagnostic uncertainty, will require additional confirmatory procedures. The categorization of the continuum of delusion (e.g., normal thought through overvalued ideas to morbid beliefs) into three zones will help the accuracy of the definitive zones while the equivocal response will demand additional testing. Uncertainty in the elicitation of delusions commonly attributed to inexperience is not imperative and doubtful phenomena are part of clinical practice and should be labeled as such.

The differentiation of commonly confused phenomena should be seriously attempted with the aim of fixing symptom. For example, hallucinations need to be differentiated from pseudohallucinations based on details including sensation through the sensory end organ, origin in subjective/objective space and from external/internal environment, vividness and clarity, mental control and insight. Similarly, the separation of delusions from obsessions and seizures from pseudoseizures should be based on clinical details.

**BAYESIAN APPROACH**

The MSE essentially employs a Bayesian approach to the identification of clinical phenomena.[12] It depends on acknowledging the examiner’s belief about the patient’s mental state (prior probability) before data on a specific aspect is available and modifying it to reach a conclusion (posterior probability). Thus, sociodemographic details, history, general impressions during MSE and the results of screening questions are employed to assess the pre-test probability related to the presence of delusions. The specific questions eliciting and confirming delusions are used to modify this prior probability to reach a conclusion about morbid beliefs. For example, a definite history of acting on persecutory beliefs, hypervigilance and constantly scanning the environment and a defensive attitude to the examiner’s questions during the MSE would suggest a high prior probability of paranoid psychopathology. A denial of such abnormal beliefs during the MSE under the circumstances should be considered as a false negative response. Similarly, the results of assessments during the MSE can also be considered as false positive. For example, if an individual is considered to be feigning a mental illness from a detailed history and from the inconsistencies of the clinical presentation, a positive result to questions related to abnormal thought processes can be considered false positive.

**Principles in standardized interview schedules**

Many of these principles are employed in standardized interview schedules (e.g., Present State Examination 10th edition which forms part of the Schedules for Clinical Assessments in Neuropsychiatry and the Structured Clinical Interview for DSM).[17,18] These schedules incorporate a 4-category division of phenomena, thus, using the advantages of dimension. Although these categories are rated on severity, other qualities may also be employed for such division in actual practice.

These schedules also employ a system of screening thresholds followed by confirmatory questions. The cut-off system restricts the assessment of specific symptom to particular clinical subgroups and ensures an increase in pretest probability reducing false positives by artificially increasing the prevalence of the symptom in the population tested. The interviewer is also allowed discretion to code for
noncooperation for subsections or for the whole interview. The schedules have different thresholds for use in different settings. However, a detailed reading of these schedules suggests that many of these principles are employed from a practical perspective rather than grounded in principles of epidemiology and science.

The science and the art of clinical examination
Competent clinicians tend to automatically employ these strategies.[12] However, many skilled psychiatrists learn these lessons from practical experience rather from an understanding of the underlying scientific standards. The systematic study of the principles of elicitation of symptom would help the beginner and allow for a more nuanced psychiatric assessment. The use of epidemiological tenets would increase clinical confidence by confirming lessons learnt through experience. They would also improve performance in doubtful situations where one can rely on science rather than intuition. The principles would allow for a rational basis for psychiatric assessments. The understanding of scientific rules will go a long way in improving the application and interpretation involved in psychiatric assessments and in the use of the operational criteria for diagnosis. The enunciation of these standards during training will empower clinicians.

CONCLUSIONS
There is a need to refocus on psychiatric assessments and to move beyond the operational diagnostic criteria. The challenge is to rekindle the interest in phenomenology and in the complexity of the task of psychiatric assessment. It is mandatory that the scientific basis of psychiatric evaluation is routinely taught to psychiatrists and the principles of clinical examination integrated into routine psychiatric practice.

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Source of Support: Nil, Conflict of Interest: None declared