

22 Assessment of Non-Cognitive Factors

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SUMMARY

The array of instruments and methods designed to assess communication skills, interpersonal skills and attitudes in undergraduate and postgraduate settings are reviewed. The literature points to an emerging evidence base for those elements in the doctor-patient interaction which should be assessed. Some instruments have undergone psychometric testing, mostly inter-rater reliability, but few have been tested for internal consistency or validity.

Communication and interpersonal skills are observable whilst attitudes are complex and have an emotional, intellectual and behavioral component. Attitudes in all their complexity can be explored in learning settings which provide feedback but methods reported for summative assessments are confined to either observed behavior in simulated surgeries, Objective Structured Clinical Examinations (OSCE) and real consultations, or to written examinations covering ethical principles, reasoning and psychosocial issues.

In addition to generic instruments described in the chapter, issue-specific guides have been designed for particular clinical situations. There is, however, a lack of instruments to assess empathy and especially non-verbal behaviors. Research reveals knowledge of clinical content to be a confounding variable and testing to date has not identified generalizable communication and interpersonal skills independent of clinical content. This has implications for the range and number of test cases needed. Recent studies are reported which indicate shorter testing times with more reliable global assessment instruments. The latter are now preferred over detailed checklists which produce negative effects on learning behavior and triviality of measurement.

Assessment may be from tutors, standardized patients, real patients, peers or self. Large numbers of ratings by real patients are needed to achieve reliability with faculty assessors. The importance of developing self-assessment skills is discussed but little research was found on improving such skills. Despite good reliability and lower costs with assessments made by standardized patients, faculty are still preferred in high stakes exams because of greater credibility. The various approaches to standard setting for pass/fail decisions are described. However,

there are no predictive validity studies of actual patient outcome to define a level of competency. Standard setting remains a difficult issue for every type of assessment including medical interviewing.

Despite problems in achieving reliability, assessment in real life clinical contexts enables judgements to be made of performance as distinct from competence. Guides in assessing professional behavior with clear explicit behavioral descriptors for attitudes in daily clinical practice have been reported. Assessment of non-cognitive factors needs to be an integral part of the educational process and not just summative assessment. Methods appropriate to postgraduate assessment and audit are also reviewed. Triangulation in assessments helps to corroborate findings and increase the reliability of judgements.

A number of instruments and methods have been developed for this complex and challenging area of assessment. Further research will enable educators to build upon advances already made.

INTRODUCTION

Non-cognitive factors in this chapter will be defined as those components of professional competence that relate to communication skills, interpersonal skills and attitudes. These elements fundamentally affect the practice of medicine in the interaction with patients, relatives, colleagues and other members of the health care team. Novack (1999) has pointed out that somewhere along the way, as scientific discovery and the possibilities it offers has burgeoned, the humanistic aspect of medicine and the therapeutic aspects of the clinical encounter have been lost. Enlightened teachers and practitioners have always emphasized and written about the therapeutic relationship (Balint, 1972; Engel, 1977). What then has prompted the resurgence of interest in the doctor-patient relationship? There is mounting evidence linking elements of the consultation to diagnosis, informed consent, concordance with treatment, coping with illness, satisfaction, complaints, litigation and health outcome (Levinson, 1997; Stewart et al., 1999; Simpson et al., 1991). In essence they are key components of the doctor-patient relationship and good medical practice.

Ironically it may well be the scientific advances themselves that are driving some of the present changes. Science has brought with it enormous possibilities together with more complex decision making and ethical dilemmas that pose particular challenges in the clinical encounter. Access to information has also increased markedly. Societal expectations have changed and prompted calls for greater involvement of patients in understanding their illness and decisions over their care. There is now too much research data to ignore and evidence based medicine has begun to include the doctor-patient relationship as a component of effectiveness (Stewart et al., 1999). With an organized approach to the therapeutic aspects of the doctor-patient relationship the result will be medical care that is both more

scientific and more humanistic (Novack, Epstein, & Paulsen, 1999). This requires educators to define a set of core skills and attitudes, to implement a curriculum, deliver a learning experience which fulfills these objectives and to use valid and reliable assessment methods to ensure they have been achieved.

It is really only in the last decade or so that medical schools and licensing bodies have seriously taken this on board. In Canada and the USA in 1994, some 39 out of 142 schools required students to pass an Objective Structured Clinical Examination which contained tests of communication and interpersonal skills, in order to graduate (Anderson, Stillman, & Wang, 1994). The creation of consortia for professional exams has enabled sharing of resources, research and expertise. This can help to reduce costs and develop a database of valid and reliable cases and assessment instruments to test core clinical skills and professional behaviors (Morrison & Barrows, 1994). Such assessments are used, although less commonly, in other parts of the world including the United Kingdom and Australasia (Newble & Wakeford, 1994). Competency in these areas of professional practice is still not tested in all countries and all schools in their qualifying examinations.

Assessment has two main purposes. Formative assessment is a vital part of shaping learning by providing feedback and identifying areas of strengths, weaknesses and plans for improvement. As Pololi (1995) points out, we shall be failing as educators if it is only at the end of a long course that we realize students have not attained a minimum acceptable standard. Assessment in the learning context does not demand a high level of psychometric rigor although it must focus on important and relevant educational goals (Case, 1997). Indeed, as Kurtz and colleagues (1998) stress, it is important for the method of assessment to mirror the method of instruction so that instruments for assessment and learning match. Assessment can be from self, peers, real patients, simulated patients and tutors. The development of a practitioner motivated to continue learning, to possess insight, to request feedback and to recognize his or her own shortcomings and learning needs is embodied in recommendations on medical education such as that of the General Medical Council in the United Kingdom (1993). Self-assessment skills and personal awareness are, therefore, a particular area of importance in medical education.

The other essential purpose of assessment is to ensure students progress and graduate with an acceptable level of competence to practice and that they maintain their competency as tested through re-certification mechanisms. These high stakes summative exams must fulfill the psychometric requirements of validity, reliability and accuracy, in addition to being feasible in terms of cost and time.

Assessments of non-cognitive interactional behaviors and attributes present considerable challenges. One of these is how to avoid deconstructing complex processes and trivializing them down to checklists of preferred behaviors in artificial contexts, to the extent that they have no real meaning in terms of professional practice and patient care. Inappropriate reductionism is in danger of arising because of the need for rigorous observation of things which are difficult to

assess. It has been argued that this is already occurring and that reliability in measurement is winning out over validity (Marinker, 1997).

This chapter will attempt to answer the following questions:

- What specifically are we trying to assess and is there a consensus on this?
- What criteria do assessment methods need to fulfill?
- What assessment guides, instruments and methods exist?
- What research has been carried out on these assessment instruments?
- Can and should non-cognitive factors be assessed independent of clinical content?
- How is a level of competency in this area defined and how are standards set?
- How important is context, with respect to both environment and clinical content, when assessing non-cognitive factors?

WHAT TO ASSESS?

A starting point must be how educators define the set of non-cognitive factors that the curriculum aims to deliver and assess. This must be based on first defining what is considered to be “good” patient-doctor interactions. Over the years ideas and evidence have been derived from:

- theoretical and conceptual models, e.g. the biopsychosocial model of health and health care, behavioral science, counseling theory and concepts of therapeutic relationships (Engel, 1977; Levenstein et al., 1989; Davis & Fallowfield, 1991),
- clinical practice-based studies involving observation, analysis of interactions and definitions of effective consultations (Korsch & Negrete, 1972; Byrne & Long, 1976; Tuckett, 1985; Pendleton, 1984; Ley, 1988) and
- research findings which indicate a relationship between specific aspects of communication and outcomes including satisfaction, compliance and, most recently and importantly, health status (Stewart et al., 1999; Simpson et al., 1991; Levinson & Roter, 1995; Levinson et al., 1997; Davis & Fallowfield, 1991).

This body of knowledge is drawn together in what is generally called the Biopsychosocial model of medicine and its associated clinical method of Patient-Centred Medical Interviewing (Levenstein et al., 1989). Excellence in communication is now recognized as founded on a more active role for patients, leading to mutuality in the doctor-patient relationship and resulting in better health outcomes (Stewart & Roter, 1989, p. 19). Patient-centered medical interviewing encompasses communication skills, interpersonal skills and attitudinal aspects of the relationship. A further term, history taking skills, is often to be found in the literature.

Is there an evidence base for what should be incorporated into assessment? Is there a consensus in the literature on a defined set of communication, interpersonal skills and attitudes to test for?

Some of the theoretical and analytical frameworks for the consultation have been devised by experts from observation of consultations. This was done prior to research evidence on outcome. These frameworks may present functions or tasks within a consultation and specify skills that help to achieve these functions, providing guides for feedback and learning (Bird & Cohen-Cole, 1990; Pendleton et al., 1984). Other approaches incorporate a time line and interactional structure to the consultation with different activities being the focus at different times (Byrne & Long, 1976). Identifying what it is that recognized exemplary physicians do in their consultations is another approach to defining desirable behaviors in the clinical encounter (Marvel et al., 1998).

More recently some authors have supported the inclusion of items in their guides by reference to the research evidence on outcome. They have included individual skills that have been shown to constitute effective doctor-patient communication (Silverman et al., 1998).

Roter (1989) reviewed existing studies and applied a meta analysis technique to identify patterns and to investigate the relationship of these to outcomes. This methodology represents a consensual validation of the resulting groupings which, one can then assume, have both content and face validity. In 61 studies using 28 instruments, over 200 communication skills process variables were identified. These could be grouped into six categories: information giving, information seeking, social talk, positive talk, negative talk and partnership building. They also differentiated between socioemotional and task-oriented domains. They found significant relations between patient satisfaction, recall and compliance with all of the six categories of physician behavior. Their groupings were consistent with prior conceptual work in the field (Parsons, 1951; Bales, 1965; Bloom, 1983; Ben-Sira, 1980). The relationship between task domain and socioemotional domain was interesting. They noted that when doctors provide more medical information (task domain) they speak with an interested voice (socioemotional domain). Similarly, proficient or active advice giving is interpreted by patients as being interested and caring. Hence, a positive inference is made about the doctors' motivation for engaging in this task behavior.

The reviewers were struck, moreover, by the fact that so many authors devised their own schemes to analyze interactions rather than use previously developed schemes, and they recommended that future efforts be aimed at refining existing instruments rather than development of new measures.

Other reviewers have found an overlap in assessment instruments. Ovadia, Yager, and Heinrich (1982) investigated eight instruments used to assess medical interviewing and found many common items in five of the eight instruments, although each instrument had at least one item not mentioned in any of the others.

Stewart et al. (1999) note a striking similarity in the key findings on effective doctor communication from a review of the studies of malpractice, adherence and patient's health outcome. They identify four common and important dimensions of

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