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Biopsychosocial Assessment of Cancer Patients: Methods and Suggestions

Patricia L. Dobkin
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ABSTRACT. Assessment of biopsychosocial factors in cancer patients is presented with an emphasis on methodological issues. Typical cancer patient problems are identified (e.g., depression, pain, nausea and vomiting) and various means of evaluating these are discussed. Types and criteria for assessment are briefly outlined so as to enable the reader to critique methods currently in use. Pertinent issues in psychosocial oncology assessment such as patient definition, assessment timing, and relevancy of assessment are addressed, as are considerations concerning the sensitive use of clinical judgment when working with this population. It was concluded that instruments and procedures employed should be relatively brief and that they need to be chosen judiciously. Finally, the clinician's understanding, sensitivity and empathy are viewed as paramount to accurate, comprehensive biopsychosocial assessment of cancer patients.

Historically cancer research has been focused on biomedical issues such as etiology and cancer treatment while less immediate problems, such as psychosocial consequences of disease, have received relatively little attention. In the 1950's, investigations with cancer patients which did include psychological variables attempted (without success) to demonstrate a causal link between certain personality factors and the devel-

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opment of specific cancers. Later work has addressed treatment related questions such as whether or not to inform patients of their diagnosis. More recently, research has been directed at such areas as helping patients adapt to treatment effects (e.g., mastectomy), and to increase knowledge of informed consent (Morrow, Gootnick, & Schmale, 1978).

In a reasonably short period, psychosocial oncology has developed into a broad field which encompasses aspects of cancer disease, its treatment, and the impact it has on the patient.

Typical problems experienced by cancer patients have been identified. For instance, upon learning of diagnosis or poor prognosis, some cancer patients become depressed. Many patients are extremely anxious about their symptomatology and treatments; others are angry about their fate. In addition to emotional distress, cancer patients may exhibit behavioral problems. For example, conditioned responses such as anticipatory nausea and vomiting in chemotherapy patients (i.e., becoming ill prior to treatment) or avoidance of medical procedures due to fear are recognized by health professionals as significant problems (Morrow, Arseneau, Asbury, Bennett, & Boros, 1982). In addition, some patients develop "psychosomatic symptoms" which potentially complicate treatment implementation (Redd, Rosenberger, & Hendler, 1983).

The cancer experience fundamentally disrupts a patient and his/her family's lifestyle. Future plans are arrested, roles are reversed, financial reserves are spent, and many things suddenly seem to be so unpredictable. These abrupt changes may have a profound impact on all individuals involved with the patient along with the patient.

A patient's experience of the cancer process may influence response to treatment and subsequent quality of life. We (Morrow, 1980) and others such as Holland (1984) have pointed out that few psychosocial assessment instruments are appropriate for assessment of cancer patients. Most available measures have been designed for physically healthy, psychiatrically impaired patients. These instruments thus may require modification in order to be used with cancer patients.

Here we focus on a pragmatic view of the psychosocial assessment of cancer patients. Following a brief outline of types and criteria for assessment, available instruments and

procedures are discussed in a representative, rather than exhaustive, review and critique. Important assessment issues are discussed with an emphasis on the practical considerations necessary when working with an advanced cancer population.

ASSESSMENT OF BIOPSYCHOSOCIAL FACTORS

Types of Assessment

Assessment encompasses a wide domain with various "schools of thought" (e.g., psychodynamic, humanistic) that emphasize different techniques. There are four principle means of assessment: self-report, direct observation, physiological recording, and indirect measure. These methods can be employed singularly or in combination. Each has both advantages and disadvantages.

Self-report involves having an individual disclose his/her perception of that which is being measured. This may be accomplished through an *interview*, completion of a *survey*, or by having the person self-rate or *self-monitor* the construct in question. Self-report methods are perhaps the most frequently used assessment tools in general practice since they are relatively easy to administer, cost-effective, and may be used with a large sample. A prominent problem with this approach is that it is potentially unreliable. Many factors such as reactivity (e.g., experimenter effect, social desirability), ignorance, or even a misunderstanding of instructions may have an effect on findings. Self-report is thus an important, but not always sufficient, means of information gathering. Self-report data are strengthened by corroboration from other sources.

Direct observation involves having the investigator (or a trained collaborator) record specific response occurrence. Data collection may be performed in either a natural environment (e.g., at home) or in contrived (analogue) situations. For instance, one may have a spouse record the number of times his/her wife/husband dresses a wound postoperatively. Direct observation may be subject to fewer biases than self-report but it is not without disadvantages. Reactivity and observer bias may distort findings. Observers must be carefully trained and reliability checks need to be made in order to

ensure accuracy (see Kent & Foster, 1977, for a thorough discussion of this assessment method).

Many investigators consider *psychophysiological* measures to be the most sophisticated means of psychological assessment. An advantage of this approach is that data yield is presumably maximized while data biases are minimized; a potential problem is that these data may easily be misinterpreted. An investigator needs expertise in psychophysiology to accurately interpret findings. Too often a single measure is taken out of the context of a dynamic physiological system. A second problem with psychophysiological assessment involves its cost. Few clinicians have at their disposal the expensive equipment required for accurate data collection of this type.

A final type of assessment involves *indirect* measures. Behavioral changes may be inferred from presumably related measures. For example, urine analysis may indicate drug usage or weight loss may suggest adherence to a diet.

Behavioral assessment is a relatively new approach to analyzing maladaptive patterns of behavior. A brief account will be outlined. More complete reviews have been given by Ciminero, Calhoun, and Adams (1977), and the following discussion is based on Kanfer and Saslow's (1969) S-O-R-C-K model. A functional analysis is carried out in order to determine antecedent stimuli (S) which affect an organism (O) who responds in a certain manner (R) with both consequences of that response (C) and contingencies which maintain it (K). As an example, a cancer patient (O) may enter a chemotherapy clinic and see an oncology nurse (S) and suddenly experience nausea (R). Consequently, the patient comes to dread his/her treatments (C). The contingencies (K) in this example are related to a learning process which underlies the development of the response.

Behavioral assessment may be accomplished through the combination of the four general approaches previously discussed, namely: self-report, direct and indirect behavioral observations, and physiological recordings. The advantage of this approach is that it leads directly to treatment selection and evaluation of treatment progress. Its major drawback is a product of the inevitability that the more an assessment approach is tailored to the individual, the more difficult it is to standardize across individuals.

Criteria for Assessment

Assessment is rendered meaningless if it does not accurately reflect that which is purportedly being measured. Psychometric issues in assessment become relevant when observations are transformed into numerical scores or when inferences are drawn from observed behavior (see Goldfried & Lineham, 1977). A brief review of essential criteria for assessment will be presented here as a basis for the subsequent section concerning procedures and instruments used to assess cancer patients' experiences.

The most important criteria for assessment are:

- a. Validity
- b. Reliability
- c. Standardization
- d. Norms
- e. Clinical utility
- f. Coverage

Validity comes in many forms and is an essential aspect of accurate measurement; it concerns the essence of what is being measured. There are basically three forms of validity: content, construct, and criterion-related (also termed concurrent) validity. The degree to which an instrument or approach is accepted as valid is a reflection on the degree to which it seems to measure that which it purports to measure. In general, a programmatic line of research is required to determine whether or not an instrument is valid.

Reliability is another important yardstick in assessment. It refers to the consistency of measurement. Derogatis and Spencer (1984) describe reliability as the converse of measurement error. Standardization of the measurement process can increase reliability. If the administration of a test differs across patients, one can hardly draw convincing conclusions from the results found. In self-report data collection, standardization can be accomplished through the use of structured interviews, forced-choice questionnaires, or by preprinted self-monitoring forms. In direct observation data collection, observers can be trained to complete preprinted rating forms. In psychophysiological measurement, procedures used and instrumentation

can be set up in a specific manner to insure that each patient response is measured consistently.

Norms are relevant in assessment because they provide a point of reference. Behavior is "abnormal" only with regard to a group standard. In psychosocial oncology it can be difficult to discern what is normal. Should one compare a depressed cancer patient to a healthy individual or a patient with a different illness? Derogatis and Spencer (1984) note that specific problems arise when seeking a normative sample for a cancer population because numerous factors (e.g., diagnosis, stage and duration of illness, prognosis) can influence characteristics relevant to assessment. Age and gender in particular may influence psychological responses. There is no simple solution to the norm question. Generally, normative data which best suits the hypothesis being tested is the appropriate comparison.

Clinical utility is an assessment issue which may appear to be obvious but is quite often overlooked. The purposes of assessment are (a) to determine the nature of a problem, (b) to select an intervention for that problem, and (c) to evaluate the effectiveness of the intervention employed. In an advanced cancer population there may be no rationale for assessing certain variables if all treatment options in the given problem area have been exhausted. Discretion and clinical judgment are essential in determining whether or not assessment is appropriate.

Coverage in assessment refers to inclusiveness. It maintains an inverse relationship with specificity. If a test provides information concerning a vast array of responses it may be difficult to draw specific conclusions from the findings. On the other hand, if a test is too circumscribed it may be impossible to generalize the findings. Ideally, one should gather enough data so that something is learned but restrict measurement sufficiently so that findings can be interpreted parsimoniously.

PSYCHOSOCIAL ASSESSMENT OF CANCER PATIENTS

Research in psychosocial oncology has shown that assessment tools need to be designed specifically for this unique population. Currently, psychological tests and questionnaires

are being developed which measure general areas of cancer patients' lives such as "quality of life" or more specific aspects of the disease process such as physical and psychological side effects of cancer treatment. In the following section a sampling of assessment tools currently being used with cancer patients will be presented. These are summarized in Table 1.

Quality of Life

The construct "quality of life" is as difficult to define as it is to measure. Schipper et al. (1984) point out a lack of consensus on whether or not this construct is a distinct entity. Most investigators view quality of life as a composite of intrapersonal, interpersonal, occupational, and physical characteristics (e.g., see Padilla, Presant, Grant, et al., 1983).

Wellisch (1984) has suggested that at least three methodological issues need to be considered in the study of quality of life of a medical population: (a) when to make the assessment (i.e., disease stage), (b) which assessment techniques need to be used, and (c) who makes the assessment (e.g., doctor, nurse, social worker). After reviewing advantages and disadvantages of various methodological approaches in quality of life research, Wellisch advocates combining a structured interview with analogue scales and behavioral measures. As an example, he cites Sugarbaker and coworkers' (1981) study which employed (a) a semistructured interview in the form of the Psychosocial Adjustment to Illness Scale (Derogatis, 1975); (b) two measures of daily activities and functioning (Katz Activity of Daily Living Scale: Katz & Akpom, 1966; Barthel Index: Mahoney & Barthel, 1965); (c) data concerning the functional outcomes of cancer treatment (Sickness Impact Profile: Bergner, Bobbitt, Polland, Martin, & Gilson, 1976); (d) economic change indicators; and (e) clinical scales designed specifically for cancer patients relating treatment consequences to quality of life. The main problem with this comprehensive approach involves its cost; much time and energy on the part of both patient and investigator is required to complete the evaluation.

Padilla and her colleagues (1983) developed an instrument designed to measure the quality of life in cancer patients. The Quality of Life Index (QLI) is comprised of 14 linear ana-

Table 1

Examples of Instruments Used to Assess Psychosocial Problems in Oncology Patients

Instrument	Where Reported	Variable(s) Assessed
Linear Analogue Self-Assessment	Coates et al. (1983)	Quality of life
Functional Living Index	Schipper et al. (1984)	Quality of life
Quality of Life Index*	Padilla et al. (1983)	Quality of life
Cancer Inventory of Problem Situations *	Heinrich et al. (1984)	27 categories of problems
Psychosocial Problem Categories for Homebound Cancer Patients*	Wellisch et al. (1983)	5 main problem categories
Symptoms Checklist-90	Derogatis (1977) Farber et al. (1984)	Social adjustment
Psychosocial Adjustment to Illness	Derogatis (1977) Morrow et al. (1978)	Psychosocial adjustment
Rating of Psychosocial Function*	Morrow et al. (1981)	Coping style
Coping Adequate Rating	Morrow et al. (1981)	Coping style
Global Adjustment to Illness Scale	Morrow et al. (1981)	Adjustment to illness
Morrow Assessment of Nausea and Emesis*	Morrow (1982; 1984)	Nausea and vomiting
Wisconsin Brief Pain Questionnaire*	Daut et al. (1983)	Pain
McGill Pain Questionnaire	Graham et al. (1980)	Pain

*Indicates that the instrument was developed specifically for cancer patients.

logue scales which assess general physical condition, normal activities, and personal attitudes towards life. Padilla et al. (1983) investigated the reliability, internal consistency, construct validity, discriminant and concurrent validity of the QLI. They found that test-retest reliability varied as a function of patient status and treatment modality (outpatient versus inpatient, chemotherapy versus radiation therapy). Reportedly, reliability was highest for chemotherapy outpatients and lowest for a healthy control group. One cannot, however, determine if the QLI is reliable based on these findings be-

cause the timing of test administration differed across groups. Item analysis of the QLI resulted in an alpha reliability of .88 ($p < .01$), indicating good internal consistency.

Despite its simplicity and ease of administration, it appears that the QLI requires further development before it can be accepted as a useful assessment tool. Its reliability has yet to be demonstrated as does its concurrent validity. In addition, the QLI does not account for non-cancer related aspects of patients' lives which may interact with, and thereby confound, quality of life measurement.

Schipper, McMurray, and Levitt (1984) measure the quality of life in cancer patients using the Functional Living Index (FLIC). The FLIC is a self-administered 22 item questionnaire which is disease specific and functionally oriented. It can be used to evaluate trends both within and between patients. Four principal functional areas are measured: (a) vocation, (b) affect, (c) social interaction, and (d) somatic sensation. The questionnaire was developed over a series of trials in two Canadian cities with 837 cancer patients. Methods used to validate the FLIC included factor analysis, concurrent validity checks, and stratification of six groups representing broad categories of disease status.

Schipper et al. (1984) presented data which supports the view that the FLIC is a valid tool for the assessment of the quality of life in cancer patients. The authors caution that the FLIC is not "the ultimate measure" but that it can be used to provide adjunctive information in the interpretation of comparative clinical trials.

Psychosocial Adjustment

Much like quality of life, "psychosocial adjustment" is a complex and difficult construct to measure. The term psychosocial denotes an interaction between intrapersonal and interpersonal events. Adjustment concerns responding to the environment in an adaptive manner. Psychosocial adjustment in oncology refers to how the impact of having and being treated for cancer is handled by the individual. Patients often report that the cancer experience "changes their whole lives." What does this statement mean and how can such an impact be measured?

In a study involving 37 Hodgkin's disease patients and their parents, Morrow, Chiarello, and Derogatis (1978) investigated the psychometric properties of the Psychosocial Adjustment to Illness Scale (PAIS). The PAIS consists of 45 questions which are presented to the patient in a semi-structured interview format. The questions can be divided into seven relatively independent domains of functioning: (a) health care orientation, (b) vocational environment, (c) domestic environment, (d) sexual relationships, (e) extended family relationships, (f) social environment, and (g) psychological distress. Significant correlations between subscales of the PAIS and such psychological tests as the State Trait Anxiety Inventory, Beck Depression Inventory, and Symptom Checklist-90 suggest that the PAIS is a valid tool. Interrater reliability was sufficiently high ($r = 0.83$) to support the contention that despite its interview format, the PAIS is an acceptable means of assessing psychosocial adjustment. The authors concluded that although replication is required, the PAIS can be administered with an acceptable level of confidence in its reliability and validity.

In a more recent study, Morrow, Feldstein, Adler, et al. (1981) evaluated five brief instruments designed to measure psychosocial adjustment to medical illness (Rating of Psychosocial Function (RPF): Holland, 1976; Global Adjustment to Illness Scale (GAIS): Derogatis, 1976; Coping Strategies Inventory (CSI): Weissman, 1975; Coping Adequacy Rating (CAR): Balinsky & Berger, 1975; Rochester Psychosocial State Evaluation Form (RPSEF): Berg, 1976). These five instruments were administered to cancer patients by 105 health professionals (nurses, oncologists, social workers, psychologists) in five separate cancer centers. The instruments were selected based on three criteria: (a) brevity of test administration time, (b) global rating of patient status required (less than five minutes), and (c) conceptual relevance (i.e., construct validity).

Morrow and his coworkers (1981) videotaped the interviews and evaluated the instruments in terms of the time and effort required to complete them, the effects of rater experience on interrater reliability, and the effect of the raters' professional training on reliability. The RPF, CAR, and GAIS were found to be highly interrelated and most favora-

bly supported by the data. This finding suggests a degree of overlap supporting convergent validity. Discriminant validity was supported by a reasonable divergence of indices across psychological domains. Agreement on ratings was not influenced by the length of the interview but appeared to be affected by the structure of the interview and profession of the raters (nurse, social worker, etc.). All three instruments showed a relationship with clinical impressions, indicating concurrent validity. The GAIS was chosen as most adequate reflection of a clinical impression by the majority of raters. The authors concluded that, with adequate training, any of the three instruments could be used to assess psychosocial adjustment in cancer patients.

Affect

Cancer patients are a largely nonpsychiatric, heterogeneous group of individuals experiencing a health crisis. How patients respond to this extremely stressful situation may vary as a function of many factors. The stage of the disease process (diagnosis, treatment, remission, etc.), and individual's particular coping style, available social supports, and physical well-being potentially contribute to how a patient reacts. Typically cancer patients experience a high level of anxiety during the initial stages of treatment and during difficult treatment procedures. Depression is a common response with disease recurrence. Generally, health professionals determine patients' affective responses based on "clinical judgement"; this, however, is only a rough index of what patients are experiencing.

Endicott (1984) proposed the use of scaled measures for the assessment of depression in cancer patients. She utilizes revisions of the standard (DSM III) criteria for classification of Major Depression in a medical population. As an example, "fearfulness or depressed appearance in face or body posture" are substituted for more easily misleading vegetative signs such as appetite and weight changes. In this way, the fact that anorexia or weight gain often occur as a result of cancer and its treatment is taken into account.

Gottschalk (1984) specifies three variables which are important to consider when measuring affect in cancer patients. The

first factor, direct effects of the disease, (e.g., an endocrine-producing tumor) may result in behavior which mimics depressive symptoms. The second factor, indirect effects, (e.g., aversive side effects of cancer treatment) may also influence a patient's affective state. For instance, it may be difficult to discern if fatigue is the result of cancer treatment or of psychological factors. Or, one could easily suppose that the patient is "just a nervous person" when, in fact, she or he is fearful of a specific medical procedure. The fact that cancer patients may be given psychoactive pharmacologic agents for non-psychiatric problems (e.g., compazine for nausea/emesis) is also relevant here. The side effects of these drugs may produce affect-related symptoms. Finally, the natural course of cancer may have a profound effect on a patient's response. Not surprisingly, depression may "spontaneously remit" when treatment is terminated with good prognosis or worsen when it is determined that cure is not possible.

Cognitions

Problems of a cognitive nature resulting from cancer and its treatment have received relatively little attention. Recently, Folstein, Fetting, Lobo, et al. (1984) reported that almost one-third of the oncology inpatients they measured on the Mini-Mental Status Examination were cognitively impaired. Since cognitive impairment may be the result of severe metabolic imbalances (Wolff & Curran, 1955) the biomedical etiology of dysfunction requires clarification.

Much like affect, cognitive functioning should be assessed in the general context of a patient's overall medical status and psychological state. An elderly person in acute pain may perform poorly on a test due to fatigue rather than incapacity. A depressed parent preoccupied with child care problems may respond in a distracted manner. These potentially confounding factors need to be acknowledged and taken into account to accurately assess cognitive abilities. Once impairment is indicated, it is important to define the associated syndrome.

Folstein et al. (1984) administered a brief bedside battery of tests to assess cognitive functioning in cancer patients. One test in the battery, the linear analogue scale of consciousness, is simple to use with acceptable interrater reliability (r 's = .81

to .97). The scale rates consciousness on a 0 to 10 cm scale (from very drowsy (0) to normally alert (10)). A second test, a hand held Tachistoscope, is employed in order to determine the patient's ability to perceive stimuli. Delirious patients are unable to perform this task within normal time limits (1/60th second). Perception time will thus identify most clinically delirious cancer patients. The third test in the battery is the Mini-Mental State Examination (MMSE: Folstein, Folstein, & McHugh, 1975) which assesses (a) orientation, (b) registration, (c) attention and calculation, (d) recall, and (e) language. The MMSE is derived from the National Institute of Mental Health Diagnostic Interview. The original diagnostic interview has been administered to a normative sample of approximately 15,000 individuals in five geographic locations.

This test battery is claimed to enable the examiner to assess delirium according to DSM III criteria (Folstein et al., 1984). However, numerous factors such as fatigue, medical status, age, drug usage (to name just a few) may distort test scores. Another weakness of this approach is that the test battery measures essentially *gross* cognitive functioning, which may be more parsimoniously assessed by clinical interview (Silberfarb, 1984).

Silberfarb, Philibert, and Levine (1980) advocate using a different set of procedures to assess cognitive deficits in cancer patients. Interestingly, these authors measure affective responses in conjunction with cognitions in order to account for potential interactions between these variables. Patient examination lasts approximately 30–60 minutes and involves (a) The Cognitive Capacity Screening Test, a standardized mental status exam; (b) The Trail Making B Test; and (c) The Digit Symbol Test, a subtest of the Wechsler Adult Intelligence Scale. The latter two tests have been shown to be quite sensitive in detecting brain damage (Reitan, 1955; 1958). In a study of 50 medical oncology patients, Silberfarb et al. found that impaired cognition was quite common, independent of affective responses. Notably, patients treated with chemotherapy were more likely than any other group to be cognitively impaired.

Silverfarb's battery (1980) seems more practical and comprehensive than Folstein and his coworkers' (1984) assessment of delirium—only one of several types of cognitive

deficit evident in cancer patients. Examiners investigating cognitive functioning should be well-versed in neuropsychology and brain-behavior relationships in order to accurately interpret their findings.

Pain

Pain is a distressing and debilitating problem for many cancer patients. Research shows that one-third of adult cancer patients experience pain in the non-terminal stage and as many as two-thirds of dying patients are in some degree of pain during the terminal stage of illness (Foley, 1984). Foley (1984) classifies cancer pain as follows: (1) acute, cancer-related; (2) chronic, cancer-related; (3) preexisting chronic in addition to cancer-related pain; and (4) pain in terminal patients. Acute cancer pain may be associated with the diagnosis of cancer (i.e., a presenting symptom) and/or with cancer treatment. Chronic pain may be associated with cancer treatment and disease progression. Foley emphasizes that the clinician assessing cancer pain needs to have a solid background in oncology in order to be able to recognize clinical syndromes that signal metastasis. She advocates that clinical assessment of pain involve adherence to nine principles:

1. Believing in the patient's pain complaint
2. Taking a careful history of the pain complaint
3. Assessing the psychosocial status of the patient
4. Performing a careful medical and neurological examination
5. Ordering and personally reviewing the appropriate diagnostic procedures
6. Evaluating the extent of the patient's disease
7. Treating the pain to facilitate the diagnostic study
8. Considering alternative methods to pain control during the initial evaluation
9. Reassessing the pain complaint during the prescribed therapy (Foley, 1984, p. 22).

This approach relies heavily, of necessity, on clinical judgement. Usually examiners ask patients to rate pain intensity in terms of categories (e.g., "none", "slight", "moderate", "se-

vere", "intolerable"), or on a numerical rating scale (e.g., 0 to 10, where 0 indicates no pain and 10 indicates excruciating pain). As an alternative, Wallenstein (1984) suggests using the Visual Analogue Scale (VAS) to measure pain. The VAS consists of a 10 cm line drawn on a page with the words "least possible pain" and "worst possible pain" on the two ends of the continuum. The patient is requested to place a mark on the line in order to indicate his/her pain level. Wallenstein and his coworkers (Wallenstein, Rogers, Kaiko, Hendrich, & Houde, 1980) propose that the VAS is a reliable instrument which is more sensitive than rating scales (both numerical and categories) and more acceptable to patients. The shortcoming of the VAS is that it measures only one aspect of the pain experience, namely intensity. Therefore, it is recommended that the VAS be used in conjunction with other measures.

Graham, Bond, Gerkovich, and Cook (1980) have used the McGill Pain Questionnaire (MPQ; Melzack, 1975) in order to provide quantitative data concerning pain in cancer patients. The MPQ is an attractive assessment instrument for several reasons. First of all, it is easy to administer and is cost-efficient. Secondly, it categorizes pain into three dimensions (sensory, affective and evaluative). Another feature of the MPQ is that it can be used to assess the effectiveness of pain intervention. The MPQ is, however, an imperfect instrument. Since the number of categories per dimension and the number of words per category are not proportionally distributed, statistical analyses performed on MPQ data may result in inaccurate data. Another inherent problem of the MPQ concerns its language use; the adjectives included on the questionnaire may be too difficult for patients without a college education to comprehend. Finally, Melzack (1975) and Graham et al. (1980) suggest that the MPQ reflects current pain levels rather than a summary of pain over a specified period of time. While the MPQ may be clinically useful, it appears of restricted value for research purposes.

The Wisconsin Brief Pain Questionnaire (BPQ) is a newly devised, self-administered questionnaire developed by Daut, Cleeland, and Flanery (1983). The BPQ focuses on several aspects of pain: history, intensity, location, quality, cause, and interference with activities. It represents a compromise between coverage and inherent limitations imposed by a

medically ill population. While it is important to recognize the complex nature of pain perception, one should not demand too much time or energy from patients who are experiencing discomfort.

In a test of the psychometric qualities of the BPQ, 1200 consecutive in- and outpatients at the Wisconsin Clinical Cancer Center were studied. In order to limit variation in type and severity of pain, patients were selected with cancer at four primary sites (breast, prostate, colon-rectal, and gynecological). Significant correlations were found for high pain ratings and the use of pain relievers. High pain ratings also correlated significantly with activity interference and mood. These results suggest that the BPQ is a valid instrument.

Reliability of the BPQ was assessed by readministering the test to two groups. One group was retested over a short period of time ($M = 1.9$ days). A second group was retested over an extended period of time ($M = 91.4$ days). Not surprisingly, the test-retest correlation were higher for the former group. This finding may reflect either poor reliability over longer periods, or actual temporal fluctuations in pain levels as measured by the BPQ. Overall, the BPQ appears to be a useful means of measuring pain. But, as the authors caution, no single instrument can adequately assess all relevant aspects of pain. The BPQ does not gather information on the emotional significance of pain nor on the situational determinants of pain behavior.

Nausea and Vomiting

A recent study reviewed over 120 studies that included assessment of nausea and emesis as a portion of their outcome measures for 1512 cancer patients (Morrow, 1984). Key issues discussed were: (a) definition of response terms, (b) self-report *versus* observer-rated assessment, (c) the usefulness of both direct and indirect assessments of nausea and emesis, (d) whether combining nausea and vomiting responses into overall measures is justified, (e) timing in assessing postchemotherapy nausea and vomiting, and (f) the need to include measures of anticipatory nausea/emesis in an assessment schema.

Morrow (1984) notes that there may be as many scales for

assessing nausea/vomiting as there are researchers studying the phenomenon. Different investigators have used different criteria in developing overall ratings. Morrow consolidates the many viewpoints with the following suggestions: (1) The assessment of nausea (including frequency, duration, severity) should be separate from the assessment of vomiting. (2) When assessing change in nausea and emesis it is important to select a consistent time frame that makes sense clinically. (3) The use of observer-rated measures is an appropriate assessment strategy for the frequency of vomiting. Its accuracy in nausea assessment, however, may be suspect. In addition, one should employ two independent raters whenever possible to allow for reliability checks. (4) Anticipatory nausea/emesis assessment needs to be included in studies involving cancer chemotherapy patients.

Morrow has developed the Morrow Assessment of Nausea and Emesis (MANE), a self-administered questionnaire that includes distinct questions concerning anticipatory nausea, anticipatory vomiting, postchemotherapy nausea, and postchemotherapy vomiting. Specific parameters of nausea and vomiting (i.e., frequency, duration, and severity) are also measured. Content validity of the MANE was supported by the finding that patient-reported anticipatory symptoms and posttreatment side effects were statistically unrelated. A general pattern of independence among the topographic elements of nausea and vomiting supported their inclusion in the scale as distinct phenomena. Convergent validity was supported by the finding that independent measures associated with nausea and vomiting were more highly correlated with the MANE than with measures of other chemotherapy side effects. The scale was shown to be sensitive to changes in emetogenic chemotherapy drugs in that a change in drug protocol was reflected in changes in scale values. Test-retest reliability correlations for the MANE ranged from .72 to .96 for four consecutive treatments cycles. These results provide support for the view that the MANE reliably assesses patient-reported nausea and vomiting. An initial degree of confidence appears warranted concerning the MANE's validity. The future employment of the MANE should be determined by its support in independent study by other investigators.

Ahles and his coworkers (Ahles, Cohen, Little, Balducci,

Dubbert, & Keane, 1984) describe a practical, unobtrusive method for conducting a trimodal assessment of anticipatory nausea and vomiting. In a recent pilot study, nine cancer patients receiving chemotherapy were selected by the staff oncology nurse. Three presented with postchemotherapy nausea and vomiting (PCNV), three with anticipatory nausea and vomiting (ANV) and three with anticipatory nausea without vomiting (AN). The diagnosis and treatment regimens administered varied across patients. Patients' responses were measured using the following procedures: (1) MANE, (2) VAS for nausea and anxiety, and (3) experimenter-observed emesis. Heart rate was recorded using an unobtrusive monitoring device (Respironics Inc., Model EX-3 Excentry).

Ahles et al. (1984) found three separate response patterns for patients undergoing cancer chemotherapy. PCNV patients reported low levels of nausea and anxiety and showed no evidence of physiological arousal. AN patients reported elevations on measures of nausea and anxiety only. ANV patients reported increased nausea and anxiety, and showed elevated levels of physiological arousal (increased heart rate and heart rate variability). Correlational data concerning the relationship between measures on the MANE and VAS for nausea were not presented. One should, however, be cautious in interpreting heart rate data out of context. Heart rate is a function of a dynamic physiological system and it is affected by many complex interacting factors.

Sexual Dysfunction

Greenberg (1984) has written a thoughtful paper on assessment of sexual dysfunction in cancer patients. She points out that since sexual behavior is simultaneously somatic, psychological, and interpersonal, it must be measured accordingly. Information regarding the patient's premorbid sexual experience, developmental stage, expectations, and relationships are required in order to understand a patient's problem. In addition, organic variables such as the severity of illness and pharmacologic agents administered need to be included in assessment so as to allow the patient's perspective to be viewed in the context of his/her disease process. The main point to keep in mind when assessing sexual (dys)function in a cancer patient

population is that a biopsychosocial approach will help the examiner to understand and treat these types of problems.

Pertinent Issues in Assessment of Cancer Patients

Certain pertinent issues arise when making a psychosocial assessment in a cancer patient population. First, the disease *stage* and *status* of the patient should be clearly identified. For instance, an inpatient differs considerably from a hospice patient in terms of environmental and psychosocial factors. The *timing* of assessment is also an important measurement consideration. Patients' responses vary as a function of disease stage. Advanced cancer patients may be physically disabled, in pain, and are likely to have experienced significant emotional distress. These factors need to be considered when interpreting assessment findings.

Psychometric issues previously discussed are also relevant here. The validity and reliability of instruments and procedures used are critical to an adequate assessment of the patient. Has an instrument been modified to suit a cancer population? Are there norms with whom to compare the results? Have interviews been standardized? Importantly, is the assessment itself *relevant*? i.e., Will it lead to a better understanding of the patient and subsequent intervention selection? These questions may appear commonsensical, but they often are left either unasked or unanswered.

Relevant Considerations in Assessment of Cancer Patients

Cancer patients, especially those in the terminal stage, are physically ill and are often distressed. Assessment should be as *brief* and as *unobtrusive* as possible so as not to add to patients' difficulties. Clinical judgment must be used concerning the appropriateness of measurement techniques. Sensitivity to the situation at hand is a prerequisite to patient contact. It is often helpful to be familiar with a patient's chart prior to assessment so as to require the least amount of patient time necessary.

Certain types of cancer result in typical problems. For example, breast and prostate cancer patients often experience sexual dysfunction during or following treatment. It is logical

and appropriate to select assessment methods based on diagnosis and treatment modality. A "shot-gun" approach, often seen in the form of an extensive battery of tests, may exhaust the patient and elude parsimonious explanations of findings. It is to be avoided whenever possible.

Finally, it is important to know patients' education levels and cultural backgrounds. Not all individuals understand questions on inventories nor are they accustomed to completing forms. It is the investigator's responsibility to ensure that effective communication is accomplished.

Homebound Cancer Patients

Wellish, Landsverk, Guidera, et al. (1983) studied the types and frequency of problems in advanced cancer patients and their families in a home setting by administering The Psychosocial Problem Categories for Homebound Cancer Patients. Included in the questionnaire were 70 problems which were subdivided into 13 categories. The five most frequent reported difficulties were: (a) somatic side effects (30% of total problems, of which pain involved 13%); (b) mood disturbance (15% of total problems); (c) equipment problems (8% of total problems); (d) family relationship impairment (7% of total problems); and (e) cognitive impairment (6% of total problems). Unfortunately, the methodology used in this study render these findings tentative, at best. First of all, data were amassed through chart review. Anyone who has audited medical records is aware that missing or incorrect chart data constitutes a serious problem. Secondly, when raters disagreed about how to code data they negotiated a consensual agreement. This procedure devalues the interpretability of the interrater reliability coefficient ($r = .96$). In addition, it is impossible to determine whether these findings reflect the health care professionals' perceptions and charting habits or the true experiences of cancer patients.

Wellisch et al.'s (1983) investigation does highlight the fact that it is difficult to carry out assessment in an advanced cancer patient population. The examiner must be sensitive to questions such as, "Is it ethical to intrude on a patient's (and family members') privacy at this critical stage of illness?" Patients and/or their significant others may resent being "studied" at

this time or they may simply be experiencing too much stress to endure an evaluation.

The most important factor to keep in mind during clinical assessment is its purpose: to select the intervention which is most likely to alleviate suffering. In order to accomplish this goal one should carefully consider the biological, psychological, and social factors influencing the patient at the time of measurement. Clearly, experience with cancer patients aids assessment. For instance, being cognizant of which side effects are likely to occur with the various treatment modalities or knowing where metastasis often occur in particular types of cancer (e.g., lung cancer: metastasis to the brain) can aid in the selection of procedures and assessment methods.

Adequate assessment demands extensive training and experience on the part of the examiner. Patience and empathy are part of the job; patients respond best (and thereby give the most information) when they sense a caring approach. Oncology staff members are more cooperative when they feel that their patients will *benefit* from psychosocial assessment. These are hardly minor considerations. (See McCorkle, Packard, & Landenburger, 1985 for a discussion of success in psychosocial oncology research). If one wishes to collect data which accurately reflect an ongoing experience it is crucial to become an integral part of what is happening in the clinical setting.

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