Manual for Administration: The Cornell-Brown Scale for Quality of Life in Dementia

Introduction: The Cornell-Brown Scale for Quality of Life (CBS) provides a global assessment of quality of life in patients diagnosed with dementia. The scale was developed based on the conceptualization that high quality of life (QOL) is indicated by presence of positive affect, physical and psychological satisfactions, self-esteem and the relative absence of negative affect and experiences.

The CBS was adapted from the Cornell Scale for Depression in Dementia, which has been validated to assess depression in both demented and nondemented elderly [1, 2]. Items for the Cornell Scale were written based on review of the phenomenology of depression in demented and nondemented patients and solicitation of input from geriatric psychiatrists. Ratings can be made based primarily on observation. The Cornell Scale was selected as the basis from which to develop the CBS because negative mood and experiences clearly reflect poor QOL. To measure positive aspects of QOL, the items were broadened to include assessment of positive emotions, experiences, and satisfactions. Thus, as measured by the CBS, high QOL is indicated not only by an absence of negative experiences, but by the presence of positive emotional experiences.

Scale Development: The Cornell Scale for Depression was modified in three important ways to create the CBS. First and most importantly, positive anchors for each item were added. For example, ‘Comfort’ was added as a positive anchor for the ‘Anxiety’ item. Anxiety is indicated by ‘anxious expression, ruminations, worrying;’ Comfort is indicated by ‘relaxed expression, assured, no worries.’ The remainder of the items are listed in the appendix.

Second, the rating scale for each item was altered to range from -2 (negative pole anchor) to +2 (positive pole anchor). Total scores can range from -38 to +38. Negative scores indicate that negative ratings of mood, behavior, physical signs, ideational disturbance, and cyclic functions outweigh positive ratings. Thus, the more negative the score, the poorer the QOL rating. Positive scores are obtained when positive ratings outweigh negative ratings and indicate higher QOL.

Third, the time-frame in which ratings are made was broadened. Most symptoms on the Cornell Scale are rated according to the patients’ behavior over the past week (exceptions are items about loss of interest, lack of energy, and weight loss which are based on changes that occurred in the past month). The one-week time frame is used for the Cornell Scale because depression in patients diagnosed with dementia was believed to be more short-lived and recurrent than in other populations. However, QOL is conceptualized as a somewhat more stable, broad, and less fluctuating construct than depression. Therefore, items for the CBS are rated for the past month, rather than the more limited time-frame of the past week.

Administration and Scoring: The CBS is rated by a clinician after a joint interview with the patient and caregiver. In some cases where the caregiver is uncomfortable with a joint interview, separate interviews with the patient and caregiver may be necessary to insure reliable and valid collection of data. This issue should be addressed before the interview is begun.

The interview is semi-structured. Each item is assessed by first asking about the negative pole. If the negative aspect of QOL is present, the interviewer determines the extent and severity of the symptom and rates the item as -1 (mild or intermittent) or -2 (severe or chronic). If the negative pole of the item is not endorsed or observed, then the interviewer assesses for presence of the positive pole of the item. If this is endorsed, the interviewer determines the magnitude of this characteristic and rates the item as +1 (mild or intermittent) or +2 (constant). If neither the negative nor positive aspects of an item are endorsed, the item is scored as a zero. Some items on the CBS require respondents to indicate if a patient is engaging in more or less of a particular type of behavior. Changes are in reference to the patient’s premorbid behavior, prior to the onset of dementia.

The goal of the CBS is to assess a patient’s quality of life as it is affected by dementia. When change on an item is clearly due to a factor other than dementia, the item should be rated as a zero. For example, when weight loss is due to a medical condition, the weight loss item should be scored as zero. It is possible that discrepancies will arise between a caregiver’s response to an item and a patient’s response. For example, a patient may deny feeling pessimistic about the future but the caregiver may report that the patient makes frequent statements indicating that she is expecting the worst to happen. Or a patient may deny depressed mood but the caregiver may report frequent tearful episodes and a sad appearance. In cases where disagreements arise between caregivers and patients, interviewers are encouraged to weight caregiver responses more heavily. Asking caregivers to provide specific examples in cases of disagreement is especially important to be sure that they fully understand the question and are answering accurately. Interviewers also are encouraged, when possible, to use their own observations of patients to help settle discrepancies. For example, an interviewer might observe that a patient appears sad and tearful but she denies depressed mood when directly questioned. In this case, patient self-report should not be weighted heavily in rating the Sadness item.

Questions to guide assessment of the negative and positive poles of the 19 items are provided in the appendix. The questions are written for an interview with a caregiver but can be adapted for interviews with patients or joint interviews. These probes are provided to guide clinicians in asking about each item. Clinicians are encouraged to use additional questions and descriptions as necessary to fully describe and assess each item domain, to ensure that the most valid and reliable ratings are made. Clinicians also are encouraged to ask further questions when a respondent’s answer appears to contradict clinical observation. For example, when a patient appears sad and tearful but this symptom is not endorsed by respondents, the clinician is encouraged to ask further questions to clarify the respondents’ answer. Total time for administration of the CBS is approximately 10 to 20 minutes.

Reliability and Validity: Preliminary evidence regarding the CBS reliability and validity is published [3]. Data collected from joint interviews with 50 dementia patients and a knowledgeable informant indicated that the scale has adequate interrater reliability (intraclass r = .90) and internal consistency (Cronbach alpha = .81). Criterion validity was indicated by a positive correlation between CBS scores and visual analogue positive mood ratings by patients (Spearman rho = .63). QOL was negatively correlated with dementia severity as measured by the Clinical Dementia Rating scale (rho = -.35). Reliability and validity findings were similar for the more mildly and more severely impaired halves of the sample. All patients in the study had an MMSE of 9 or greater, indicating a preliminary cut-off for administration. Other investigators have found that patients with MMSE scores of 11 to 12 and greater can participate in the assessment of QOL, as indicated by their ability to provide reliable and valid data [4-6]. For patients with severe aphasia or severe dementia, the CBS may not provide reliable and valid information due to the lack of patient self-observations.

The text of the manual is printed here with format modifications to enable it to fit to this page. The manual and the CBS can be accessed online at http://med.brown.edu/neurology. Reference citations [1-6] are listed at this site along with the following statement: “Collaborators in dementia quality of life research include Dr Janet Grace and Dr Brian Ott from Brown University and Dr Rebecca Ready from the University of Massachusetts in Amherst. Contributions have included the Cornell-Brown Quality of Life in Dementia Scale, used world-wide, which has been translated into Spanish, Portuguese, and Dutch. The scale is in the public domain and may be used freely without permission from the original authors.”
# Cornell-Brown Scale for Quality of Life in Dementia

Name _______________________________        Age ___________       Sex ___________        Date __________________

Circle one:   Inpatient    Nursing Facility Resident   Outpatient

Use this measurement scale to document quality of life and depressive signs and symptoms of dementia patients.

**Scoring system**

-1 = mild or intermittent  
0 = absent  
+1 = mild or intermittent  
-2 = severe or constant  
a = unable to evaluate  
+2 = very or constant

Ratings should be based on symptoms and signs occurring during the month prior to interview. No score should be given if symptoms result from physical disability or illness.

## Mood-Related Signs

1. **Anxiety** (anxious expression, ruminations, worrying)
   -2  -1  0/a  +1  +2

2. **Sadness** (sad expression, sad voice, tearfulness)
   -2  -1  0/a  +1  +2

3. **Lack of reactivity to pleasant events**
   -2  -1  0/a  +1  +2

4. **Irritability** (easily annoyed, short tempered)
   -2  -1  0/a  +1  +2

## Ideational Disturbance

5. **Suicide** (feels life is not worth living, has suicidal wishes, or makes suicide attempt)
   -2  -1  0/a  +1  +2

6. **Self-deprecation** (self blame, poor self esteem, feelings of failure)
   -2  -1  0/a  +1  +2

7. **Pessimism** (anticipation of the worst)
   -2  -1  0/a  +1  +2

8. **Mood congruent delusions** (delusions of poverty, illness, or loss)
   -2  -1  0/a  +1  +2

## Behavioral Disturbances

9. **Agitation** (restlessness, handwringing, hairpulling)
   -2  -1  0/a  +1  +2

10. **Retardation** (slow in movement, speech, reactions)
    -2  -1  0/a  +1  +2

11. **Multiple physical complaints** (score 0 if GI symptoms only)
    -2  -1  0/a  +1  +2

12. **Loss of interest** (less involved in usual activities)
    (score only if change occurred acutely, ie, in less than one month)
    -2  -1  0/a  +1  +2

## Physical Signs

13. **Appetite loss** (eating less than usual)
    -2  -1  0/a  +1  +2

14. **Weight loss** (score 2 if > 5 lbs in one month)
    -2  -1  0/a  +1  +2

15. **Lack of energy** (fatigues easily, unable to sustain activities)
    (score only if change occurred acutely, ie, in less than one month)
    -2  -1  0/a  +1  +2

## Cyclic Functions

16. **Diurnal variation of mood** (symptoms worse in morning)
    -2  -1  0/a  +1  +2

17. **Difficulty falling asleep** (later than usual)
    -2  -1  0/a  +1  +2

18. **Multiple awakenings during sleep**
    -2  -1  0/a  +1  +2

19. **Early morning awakening** (earlier than usual)
    -2  -1  0/a  +1  +2

Score:_______ Total score:_______ Score:_______