A REALITY ORIENTATION QUESTIONNAIRE: ADMINISTRATION AND USES

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Confusion by the elderly about personal identity, knowledge of the physical and social environment, and aspects of time is referred to as disorientation. Disorientation to person, place, and time is a major diagnostic and treatment focus for many hospitalized older persons. As a result, clinicians and researchers working with the elderly need a precise, reliable and valid means for measuring an individual's level of orientation or disorientation.

Subjective assessment of orientation levels often is employed in clinical settings. But it has been demonstrated (Benton, Van Allen & Fogel, 1964) that clinicians' subjective evaluation of orientation levels can be inconsistent and inaccurate.

Evaluation instruments which, in whole or in part, are designed to systematically assess orientation levels have been developed during the past two decades. But these instruments typically contain shortcomings such as (a) many include only enough items to detect gross differences in orientation; (b) some include items irrelevant to a geriatric population; (c) some limit their focus to only one of the three spheres of orientation; (d) some include questions with difficult-to-verify answers; (e) some include questions that are too situation-specific for general use; (f) few include evidence of reliability, validity or norms; and (g) others involve distinct measures of orientation for every individual, which minimizes the generalizability of their scores.

As a result of these problems with assessment of orientation or disorientation, we have developed an Orientation Questionnaire (OQ) which has undergone rigorous psychometric development and was designed to overcome many of the noted problems. This contribution provides clinicians and researchers with the necessary information to administer and interpret the OQ.

The OQ provides a standardized measure of an individual's ability to communicate basic orientation information. For purposes of the OQ, orientation information is defined as basic facts regarding person, place and time. The OQ is designed to measure a continuum of levels from profoundly impaired to unimpaired, with emphasis on discriminating effectively at impaired levels. In order to increase discrimination power, recognition questions are provided for persons who do not display correct recall.

An overview of the OQ has been published previously (Hutzell & Eggert, 1987). The 1987 publication outlined studies that showed the OQ scores evidence adequate reliability (test-retest r = 969) and adequate validity (r with nurse ratings = 3798 and .793; r with behavioral assessment = .807). Further, the 1987 paper demonstrated that OQ scores discriminate groups on the basis of environmental structure (community v. nursing home v. neuropsychiatry hospital) and psychiatric diagnosis (organic v. schizophrenic v. no diagnosis). But, up to now, administration and interpretation materials for the OQ have been available only through personal correspondence with the authors.

ADMINISTRATION OF THE ORIENTATION QUESITONNAIRE (OQ)

USE OF THE OQ ITEM LIST

Throughout the OQ Item List, the exact questions that the administrator asks are printed in capital letters and the scoring or administration instructions are in lower case. Blank spaces in the questions are to be filled in by the administrator according to the instructions contained in parentheses following each blank. Read and score the questions in the order they appear on the OQ Item List. After obtaining a response, the administrator finds the appropriate scoring statement marked with a single asterisk. That scoring statement either designates a score or presents an additional question to be asked of the examinee. If an additional question is to be asked, then the administrator selects the appropriate scoring statement (marked with a double asterisk) directly below that question. At that point, a score is designated or an additional question is listed and followed by scoring alternatives (marked with a triple asterisk).

Throughout the OQ Item List, the statement "indicates correct alternative" follows recognition questions and means that the examinee does not necessarily repeat the correct alternative but does indicate what it is. For example, if the administrator must ask the recognition question from #5: AGE to a 72-year-old examinee, the question would be "ARE YOU 92 OR ARE YOU 72?" Responses which would be scored as "indicates correct alternative" (i.e., 2 points) include "I'm 72," "Not 92," "Not the first one," "The one you said last," and so on.

SCORING PROCEDURES

The OQ Scoring Sheet offers a convenient means of recording scores by circling the number of points earned for each question. When the OQ is completed, the various clusters of orientation questions can be scored in the blanks along the right hand edge of the OQ Scoring Sheet. That is, PERSON is scored as the total score for question number 1, PLACE is the total of questions 2 through 4, PERSONAL TIME is 5-8, IMPERSONAL TIME is 9-12 and HIGHER ORDER is 13-17. The total number of points is recorded at the end of the OQ.

The OQ Scoring Sheet provides room to record the examinee's responses. All of the examinee's responses should be recorded. Clinically, it is useful to know exactly how an examinee made certain errors. For example, some examinees may be aware that they do not know the name of the town, whereas other examinees may show confusion and believe that they actually are in some other town. An additional advantage of recording all of the examinee's responses rather than just marking the points earned, is that the scoring can be rechecked for accuracy at a later time. Rechecking can be particularly useful when persons are learning to administer the OQ. Errors can be detected quickly by an experienced administrator and pointed out to the learning administrator.

Of the OQ Scoring Sheet is to be rescored accurately at a later time, the time at which "#8: TIME" is asked should be written in the space provided at the end of the scoring line. The time should be written *after* the examinee has finished answering the question.

The direction the examinee points for "#17: DIRECTIONS" should be noted in the blanks with up to three capital letters. For example, if the examinee points due North for one of the questions, the administrator writes *N*; if the examinee points North-North-East, the administrator writes *NNE*.

GENERAL ADMINISTRATION INFORMATION

The OQ is meant to be administered orally on a one-to-one basis. The administrator should reward the examinee verbally for responding to the items, but the administrator must be careful not to differentially reward correct versus incorrect responses.
The OQ is designed to measure typical, day-to-day responding, and therefore the OQ generally is administered in the examinee's day-to-day environment. For example, when administering OQ's to nursing home residents, the OW's usually are presented to the residents in the day room of the

nursing home. The examinees are moved, or their chairs are turned, so that they are not distracted by excessive noise, TV or observers. Hearing impairments should not be allowed to penalize the examinee. They are faced in a direction that will not allow direct sight of clocks, calendars, newspapers or other items that affect their score.

If the examinee is cooperative but receives 0 points on item #1: NAME, the questionnaire is discontinued. If 1 or more points are scored for #1: NAME, then the OQ is continued to the end or until five consecutive items are scored as 0 points.

If the examinee refuses to respond, then the OQ can be discontinued and any remaining items unscored. The fact that the examinee was unresponsive or uncooperative should be written clearly on the OQ Scoring Sheet, and the reason for which the administrator feels the examinee did not respond should be noted. The most common reasons why examinees do not respond at al or cease to respond after they have started include long-term traits, physical illness and the examinee's unwillingness to admit lack of knowledge of the correct response. If the nonresponsiveness is caused by a short-term state, the OQ can be readministered at a later time to obtain a more accurate score. If a long-term trait is the cause, then the score from any responses the examinee did give orientation. If the examinee's nonresponsiveness is due to lack of knowledge, then the OQ score, including 0 points for each unanswered item, can be considered to reflect accurately the examinee's knowledge of basic orientation information.

Each time an examinee states "I don't know" or a similar response to an item read by the administrator, the administrator should state a friendly, positive command like "Make a guess for me." (The administrator should not ask, "Can you make a guess for me," which examinees readily will decline.) If the examinee then gives the correct response, the administrator scores the response as if "I don't know" had not been stated. On the other hand, if the examinee again indicates, "I don't know," the administrator should accept the response as incorrect and ask the alternative question or record the score, whichever is indicated by the OQ Item List. In other words, the administrator wants to reject an "I don't know" that might result from the examinee's cautiousness while simultaneously not pushing for a response to the point of angering or frustrating the examinee.

From time to time an examinee's response to an item must be clarified by the administrator before a score or additional question can be designated from the OQ Item List. In these rare cases, the administrator usually devises a question to clarify the response while carefully avoiding giving away the correct response or penalizing the examinee. For example, if the examinee answers "Dinner" to "WHAT IS YOUR NEXT MEAL?" (#7: MEAL) at 10:30am, the administrator asks a clarification question, such as "Is that your non meal or your evening meal?" If the examinee indicates "Noon Meal." Full points are scored as if "Noon Meal: were the examinee's original response.

On some rare occasions, an examinee's incorrect response at recall happens to be the incorrect alternative of the recognition question dictated by the OQ Item List. When this occurs, the administrator devises a different incorrect alternative that is equally as plausible as the intended incorrect alternative.

Finally, if for some reason a particular OQ item cannot be administered or if the examinee observes an answer, the particular problem with the item should be noted on the scoring blank and a line should be drawn through all the scoring numbers of that item to signal the difficulty. The rest of the OQ should be completed as usual. Then, for purposes of obtaining a pro-rated OQ TOTAL score after the OQ is completed, the administrator calculates the average (to one decimal place) of the scores of the unspoiled items, that averaged number when calculating the OQ TOTAL score. OQ TOTAL scores that have a decimal place (including .0) remind the administrator that a pro-rated score has been used.

ORIENTATION IMPAIRMENT LABELS

Data from available samples (reviewed in Hutzell & Eggert, 1987) were used to establish cutoff points for levels of impairment. IT was assumed that the majority of noninstitutionalized geriatric individuals were unimpaired in their orientation. Thus, the No Impairment Level was chosen as scores not more than two standard deviations below the mean of a noninstitutionalized geriatric group, resulting in approximately 98% of this group being rated as unimpaired.

Some nursing home residents appeared to have a deficiency in orientation, but the residents frequently were transferred to other institutions providing higher levels of care if the deficiency resulted in behavior difficulties, such as getting lost. Thus, the mean nursing home resident score served as a cutoff point between the levels of Mild and Moderate disorientation.

Many institutionalized geriatric individuals who were admitted as patients to extended care units of the neuropsychiatric hospital suffered from considerable disorientation, while a good number of these patients were admitted for reasons unrelated to orientation levels. Thus, the mean scores for geriatric individuals hospitalized on extended care units of the neuropsychiatric hospital were taken as the cutoffs between the Moderate and Severe levels.

Disorientation is a symptom of chronic organic brain syndrome (OBS), and the most severely disoriented persons diagnosed with OBS would likely be the most profoundly disoriented individuals one could meet. Thus, the scores representing the lowest OBS quartile were taken as the cutoff points separating the Severe and Profound levels.

To assure that a very small change in OQ TOTAL score does not result in a drastic change of label, “boundary” labels were established. Each boundary label extends across three OQ TOTAL score points, so that in order to completely pass over a boundary range, an examinee’s score must change by an amount larger than the standard error of estimate (3.1), thus assuring an infrequent occurrence. These orientation impairment labels and their corresponding OQ TOTAL scores are shown in Table 1.

To assess the stability of these impairment labels, the data from 90 subjects of a test-retest reliability study were examined. Subjects’ scores were counted as stable if the Week 2 OQ TOTAL score resulted in either the same label as the Week 1 score or the label immediately adjacent to the Week 1 label. Using this method, 92% of the subjects’ scores were counted as stable.

USES OF THE OQ

The OW primarily has been used clinically to assess an individual's level of disorientation. Beyond the test score itself, clinicians have reported the OQ's helpfulness in opening an interview or mental status examination, particularly with an elderly person who may be wary or confused. The individual can be told that the session will include both easy and hard questions, and the OQ does start with easier questions of a non-threatening nature. Besides helping to establish rapport with the patient and ease into further testing, the OQ gives an opportunity for observing more subjective qualities, such as cooperation level, tangentially, affect, eye contact and self-confidence.

Another use of the OQ is for research. Although the OQ itself has not been published previously, it has been used in several investigations. As noted in our 198 paper, one investigation (Joslyn & Hutzell, 1979) used the OQ to gather data from a long-stay group of neuropsychiatric inpatients and demonstrated that hospitalized brain-damaged patients were more likely to be disoriented to time than were schizophrenic patients. A second investigation (Starratt et al, 1981) used the OQ to gather data for a program in which students provided remotivation therapy to institutionalized patients, and the results did not show statistically significant changes in orientation level. A third previous investigation (Hutzell, 1984) used the OQ to gather orientation information from patients with Huntington's disease, and demonstrated that Huntington's disease patients suffer from disorientation long before the development of terminal stages of the disease. A fourth previous investigation (Graca & Hutzell, 1984) used the OQ to gather multiple-baseline data and assess the effectiveness of a Reality Orientation Radio Program for institutional geriatric individuals, showing that the program was effective and that the overall enhancement of orientation level was maintained at follow-up.

TABLE 1: ORIENTATION IMPAIRMENT LABELS

Label	OQ Total Score
Unimpaired	37-40
No to Mild Impairment	34-36
Mild	30-33
Mild to Moderate	27-29
Moderate	20-26
Moderate to Severe	17-19
Severe	12-16
Severe to Profound	9-11
Profound	0-8