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ABSTRACT

Traditional clinical techniques for the assessment of psychological functioning have proven to be highly inadequate for certain groups of elderly individuals, particularly in the area of differentiating "normal" from pathological aspects of aging. One such group is the population of community residents now being served by the Baer Consultation and Diagnostic unit of the Philadelphia Geriatric Center. These community residents have been referred to the Center primarily with problems of various degrees of organic brain syndrome. A brief description of the three-day evaluation procedure at the Center (which includes physical, social, and psychological services), the team conference, and the family conference is included. The presentation focuses on the on-going process of evaluating available test instruments and either accepting, rejecting, or revising these for use with this particular population as well as the implementation of new, broad-range tools in the assessment package. The paper also describes the usefulness of the latter, in helping to make decisions in regard to treatment and/or alternative living arrangements for the population of elderly community residents served. (Author/JLL)

A GERIATRIC CONSULTATION AND DIAGNOSTIC CENTER: ONE MODEL FOR ASSESSMENT[1]

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Standard psychological assessment devices have not proven to be very effective when utilized for the evaluation of cognitive and emotional status in the elderly client. Nor have these techniques been broad enough to address adaptive functioning in the environment - the "life-style competence" that Dr. Lawton has just spoken about. While he has suggested ways of dealing with the latter, I would like to examine in some detail preliminary attempts to devise a psychological test package in the context of a geriatric consultation and diagnostic center.

The following are some of the problems associated with clinical assessment techniques with the older person:

1. Most tests are based on norms for younger people.
2. Test-taking attitude assumes familiarity with the rationale for the use of testing.
3. Stimuli are often designed on the assumption of good vision, tactile sense, motor coordination, and muscular control.
4. Instructions are often complex and language is at times ambiguous.
5. Test length requires continuous attention and energy expenditure.
6. Few tests discriminate at the lowest levels of cognitive capacity.

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In addition to the difficulties associated with the tests, the greater cautiousness on the part of the elderly client along with a not unrealistic expectation of receiving negative feedback (Furry and Baltes, 1973) and the attitude of the examiner who may respond to his or her stereotypes about the old rather than the specific characteristics of the client (Ahammer and Baltes, 1972) are important considerations.

The criterion for choice of tests for the older person are therefore implied by the above:

1. Age-specific norms whenever possible - when these are not available, their establishment will be necessary.
2. Approach to testing, instructions, and choice of stimuli take into account the cultural background, educational experience, and the foreign quality of the test situation.
3. Large scale visual stimuli and large size objects.
4. Simplified instructions, clear language, repetition, and necessity for occasional paraphrasing.
5. Shorter tests, varied tasks, rest periods, shorter and more frequent testing sessions.
6. New tests to extend the bottom, a pool of tests that allows choice so as to represent a wide range of capacity. Tests with special purposes such as organicity, localization of lesions, motor tests, and perceptual tests.

Clearly, standard batteries of tests now available do not meet all or even most of these criteria. The lag in the development of a test battery suited to the needs of the elderly is partly due to a lack of interest in aged clients on the part of mental health professionals. However, it would be naive to simply eliminate from consideration all of the currently available psychological tests when making efforts to construct a battery

appropriate for the elderly. Some of these standard tests do meet a number of these criteria and so may be useful either directly or in a somewhat modified form. For example, the WAIS provides norms for an elderly sample though these are probably cohort-specific since they have been developed from cross-sectional studies. Schaie and Schaie (1976) have noted that the clinician has to be sensitive in interpreting test norms since many older clients may have had less education, are of lower socio-economic status, and are in poorer health than the population upon which the norms have been developed. It is equally apparent, though, that there is a definite need to devise new assessment instruments designed especially for the elderly person that take more of the above stated considerations into account.

Before going into a description of how we proceeded to develop a suitable psychological battery, it will be necessary to speak briefly about the Philadelphia Geriatric Center's Baer Consultation and Diagnostic (C&D) Center, the multi-disciplinary context within which the battery is being utilized.

This unique multi-disciplinary facility for community residents and their families was established to provide a thorough assessment of functioning in the elderly person from a bio-medical, psychological, and social point of view. Applicants to the C&D Center represent an underserved population - many medical and service providers in the community have insufficient knowledge of the aging process or of ameliorative steps that may be taken, which include not only referrals to formal sources of help in the community but also attitude-related and behavior-management suggestions that seem to be highly therapeutic. The Center has been in existence for one year and

approximately 90 clients over 62 years of age and from many different states have completed the three-day evaluation. The problems encountered have been legion. Perhaps the most frequent seem clearly to be related to organic brain syndrome. An equally significant group are those experiencing less severe medical or adjustment problems where depression, loneliness, anxiety, marital problems, living arrangements, and unsatisfying ways of spending time are often equal in importance to medical problems. The diagnostic process begins with a complete medical history and physical examination followed routinely by medical laboratory and pulmonary function tests, X-ray and electrocardiograph studies, opthalmological and audiometric examinations, neurological and EEG studies, social work and activities of daily living evaluations (including life-style competence measures), nutritional assessment, and psychological and psychiatric examinations. Fairly regularly, computerized tomography studies and brain scans are performed. Furthermore, additional procedures are available when these are deemed necessary.

After the diagnostic procedures are completed and evaluated a team conference is scheduled. At this point the findings of the various disciplines are analyzed and integrated to provide a picture of overall strengths and weaknesses and recommendations are discussed. Shortly after this a conference is scheduled with the client and his or her family during which a detailed report is given verbally. Reports from each discipline are then sent to the primary-care physician and a shorter report in layman's language is forwarded to the client and family and implementation of the findings are worked out on this level. A six-month follow-up by members of the Center's staff provides information on the extent of implementation.

Answers to questions in the area of organic brain syndrome and psychosocial problems of the elderly are not likely to come from one single professional discipline, but from the collaboration and the pooling of information by many. The psychologist's contribution to this multi-disciplinary Center is two-fold. As the member of the team with perhaps the strongest research bias, the psychologist acts somewhat as a gadfly to encourage other disciplines to collect their data in a research-convertible manner. This entails much proselytizing of other members of the team to adopt a quantitative, in addition to a qualitative approach to the assessment of behaviors. The psychologist also takes a leading role in the formulation of research proposals, monitoring of data collection, and analysis and interpretation of this data for other members of the multi-disciplinary team.

The other major role of the psychologist is to provide a systematic evaluation of cognitive, behavioral, and emotional functioning in the elderly client. Psychological assessment makes a unique contribution in this multi-disciplinary setting insofar as it focuses on the individual's strengths as well as his or her weaknesses. This is in contrast to the medical model which has had a tendency to focus on disease and pathological processes. Functional analyses of the person vis a vis the environment, which Dr. Lawton has spoken about, as well as the administration of carefully constructed psychological tests designed especially for the elderly client, assure that all areas of functioning are considered. The psychologist's contribution in this analysis is essential and does much to insure that realistic treatment/placement recommendations are made.

The choice of tests for psychological assessment at our Consultation and Diagnostic Center has never been considered definitive - instead tests have been added to and deleted from the assessment battery at several points. The goal is to devise a package of tests which not only allows for evaluation over a broad functioning range, but also takes into consideration and corrects the unfair biases that may exist in standard adult psychological tests which are currently available. Whenever possible, the experience of others in this area was relied upon in choosing scales which they found to be valuable (Botwinick and Birren, 1963; Botwinick and Storandt, 1974). The initial battery of tests was chosen to evaluate orientation, memory functioning, reasoning, judgment, perceptual-motor skills, and morale. It consisted of the following: The P.G.C. Extended Mental Status Questionnaire (by addition of items to the Kahn-Goldfarb Scale so that individuals with a wider range of cognitive functioning can be assessed), WAIS Comprehension, Similarities, Digit Span, and Vocabulary (Raw scores converted to age-scaled scores); a Number Cancellation task; the Seguin Form Board; the Stroop Test; Trail-Making Part A; and the Philadelphia Geriatric Center Morale Scale.

Stimulus materials for the Cancellation, Stroop, and Trail Making Tests were enlarged to compensate for visual deficits that can be present in this subject population. In addition, practice trials were designed and wording of instructions analyzed to insure that the tasks were completely understood. If fatigue appears to be influencing performance, rest periods are incorporated or an additional testing session is scheduled.

This battery was modified slightly after 20 clients were evaluated by substituting a new motor speed test with three parts for the original Number Cancellation Test. Part A, taken from Botwinick and Storandt (1974), requires the client to cross off a series of horizontal lines as quickly as possible. This eliminates the distraction of numbers which were stimuli in the original task, and makes the task more purely a motor one. Part B asks the client to cross off only the letter "E" from an array of many letters, and Part C adds the constraint that the letter "E" be crossed off only when followed by the letter "B". Again these tasks were designed to minimize the effect of visual deficits. Sample items are administered for each part. This altered cross-off test makes progressively more demands on central decision-making processes while emphasizing that the elderly individual respond as rapidly as she or he can.

Statistical analysis of the data after approximately 35 clients had passed through the Consultation and Diagnostic Center indicated that additional trials on the Form Board and on Stroop names and Stroop squares were highly correlated with initial trials and appeared to have lower validities, so the battery was shortened at this point by eliminating all but the first trial on these tests.

As the Consultation and Diagnostic Center became better known in the Philadelphia area, higher-functioning community elderly began to apply for the evaluation. These individuals usually found the perceptual-motor tests in the battery to be of little challenge. As a result, a second battery of tests was devised. This included the P.G.C. Extended Mental Status Questionnaire, the same WAIS Verbal subtests, the WAIS Digit Symbol, Picture Arrangement, and Block Design, the P.G.C. Morale Scale, and several cards from the Gerontological Apperception Test.

At the present time, we must acknowledge that there is still a problem with Digit Symbol and Picture Arrangement stimuli being too small for some subjects. For some older persons, unfamiliarity with the use of a pencil is an additional problem on the Digit Symbol task.

The Gerontological Apperception Test (GAT), a test which taps emotional functioning, was added to this second battery since these clients were less cognitively impaired and often came with presenting problems of psychosocial difficulties. Although choice of tests in this area is limited due to lack of norms for the elderly, the GAT, as a thematic test, is more concrete and certainly less threatening and ambiguous than the Rorschach and MMPI for this population.

At the time of this second revision, the logical memory subtest of the Wechsler Memory Scale was added to both batteries. Recent memory functioning can be assessed over a fairly broad range by this scale.

A more recent statistical analysis of the data from these two batteries has been summarized in the handout. Means and standard deviations on each measure are presented as well as their correlations with two criteria. One criterion that has been employed for this rudimentary analysis is the Organic Brain Syndrome (OBS) rating. This rating which ranges from 1 - normal to 4 - severe OBS, is a team consensus rating arrived at after the team conference for each client. A second criterion is the neuro-radiologist's rating - again from 1 to 4 - of the degree of the brain cell atrophy based on the computerized tomogram (CT). This prelminary analysis of the data indicates that the CT ratings are clearly significantly related to scores on a fair number of scales in the psychological battery - especially scales associated with verbal functions. Given the sensitivity of measures of fluid intelligence to OBS that has been demonstrated in past research, it was

initially expected that these CT measures would correlate more strongly with the performance subtests in the battery. However, as Dr. Woodruff has indicated, there has been a frequent lack of correspondence between CT findings and behavioral observations of OBS. This raises interesting questions as to what the CT scan relates to from a psychological or behavioral point of view. The overall clinical OBS ratings are significantly related to many psychological test measures. These OBS ratings are better estimates of overall functioning in so far as they are based on behavioral observations and not simply on degree of generalized brain cell atrophy. The correlation of OBS rating and CT rating was 0.509 -- significant at the .001 level of confidence. A portion of the variance shared between OBS ratings and both CT and test measures is, of course, accounted for by the fact that OBS ratings were based on all clinical material that was available. Nonetheless, these pilot data do show a general concordance among data from several sources.

The next step in the process of designing a broad-range assessment device will be the integration of selected neuropsychological tests into the evaluation procedure. Although these tests have been demonstrated to be highly sensitive to brain damage (Reitan, 1964, 1967; Reitan and Fitzhugh, 1971), they have not been used to any great extent in evaluating the elderly. This package of scales will allow for the collection of data on very low-functioning clients - for example, the finger-tapping, aphasia-screening, and sensory-perceptual examination - as well as extend the range of the battery on the opposite pole by including a sophisticated concept-formation task for higher functioning clients. Since these tests have also been used to localize pathology in the brain, they may also serve to corroborate neurological findings or suggest the need for a more extensive neurological work-up. Again, these

tests may require modification to be used effectively with an elderly population.

With the incorporation of the neuropsychological tests, and anticipating the continued addition, modification, and discarding of other segments in each battery (e.g. by looking at tests which are being used for the mentally retarded, visually or auditorily handicapped, and subjects lacking verbal skills), it would undoubtedly be advantageous to ultimately structure a single arsenal of tests from which the psychologist, on the basis of a chart review or simple screening device, would chose those scales which would give the most useful information on a particular client. As Schaie and Schaie have noted (1976), modern clinical assessment should focus on first defining assessment goals and expressing these in the form of hypotheses about the client. The psychologist can then select appropriate tests and interview procedures which are relevant to a test of such hypotheses.

The two batteries described in the paper were designed in response to the needs of different client groups who came to the Philadelphia Geriatric Center's Consultation and Diagnostic unit: (1) a group with major adjustment problems, very frequently found upon study to be related to OBS, and (2) a better functioning group whose problems tended to be related much more to psychosocial adjustment - i.e., depression, marital problems, anxiety over age changes, etc. These two batteries are quite clearly not the last word - they were dictated by the specific characters of the subject population whose characteristics were not really predictable beforehand.

PHILADELPHIA GERIATRIC CENTER

A GERIATRIC CONSULTATION AND DIAGNOSTIC CENTER:

ONE MODEL FOR ASSESSMENT

William M. Whelihan, Ph.D.

Variables	N	$\bar{X}$	S.D.	CT Rating r	CT Rating N	CT Rating Sig	Overall Clinical OBS Rating r	Overall Clinical OBS Rating N	Overall Clinical OBS Rating Sig
Age	71	73.55	5.57	.007	57	.479	.094	71	.218
EMSQ (%)	59	67.71	29.98	-.427	47	.001	-.889	59	.001
Kahn-Goldfarb	54	5.61	3.82	-.397	42	.005	-.869	54	.001
Comprehension -Raw	71	12.96	6.39	-.341	57	.005	-.770	71	.001
Comprehension -Age	71	9.24	5.06	-.335	57	.005	-.744	71	.001
Similarities - Raw	71	6.56	6.22	-.276	57	.019	-.620	71	.001
Similarities - Age	71	7.79	4.99	-.401	57	.001	-.699	71	.001
Digit Span - Raw	69	8.35	3.12	-.348	56	.004	-.623	69	.001
Digit Span - Age	69	8.80	4.00	-.328	56	.007	-.648	69	.001
Vocabulary - Raw	70	37.83	21.75	-.408	56	.001	-.734	70	.001
Vocabulary - Age	69	10.10	4.36	-.456	56	.001	-.785	69	.001
Cross Off A - Time (Secs)	21	53.52	29.45	.180	14	.269	.654	21	.001
Cross Off A - Errors	21	0.57	1.91	-.306	14	.143	.244	21	.143
Cross Off B - Time (Secs.)	20	60.30	25.06	-.240	13	.215	.535	20	.008
Cross Off B - Errors	20	2.20	3.74	.326	13	.139	.591	20	.003
Cross Off C - Time (Secs.)	19	67.32	27.81	.275	12	.194	.467	19	.022
Cross Off C - Errors	19	2.63	3.15	.306	12	.167	.471	19	.021
Form Board - Time (Secs.)	40	49.63	41.56	-.032	31	.432	.735	40	.001
Stroop Squares - Time (Secs.)	38	24.71	13.07	.023	29	.454	.606	38	.001
Stroop Squares - Errors	38	1.08	2.19	-.085	29	.330	.406	38	.006
Stroop Names - Time (Secs.)	39	22.00	20.20	.446	30	.007	.565	39	.001
Stroop Names - Errors	39	0.41	1.04	.293	30	.058	.485	39	.001
Stroop Interference - Time 1 (Secs.)	34	42.00	19.41	-.235	25	.129	.187	34	.144
Stroop Interference - Errors 1	34	3.27	4.44	.018	25	.465	.504	34	.001
Stroop Interference - Time 2 (Secs.)	31	33.61	16.72	.015	23	.472	.241	31	.096
Stroop Interference - Errors 2	31	2.10	3.38	-.154	23	.242	.362	31	.023

Variables	N	$\bar{X}$	S.D.	CT Rating r	CT Rating N	CT Rating Sig	Overall Clinical OBS Rating r	Overall Clinical OBS Rating N	Overall Clinical OBS Rating Sig
Philadelphia Geriatric Center Morale	65	9.74	4.76	.023	53	.434	-.250	65	.022
Trail Making A (Secs.)	29	89.97	66.00	-.022	20	.464	.418	29	.012
Digit Symbol - Raw	22	31.05	12.86	-.234	19	.167	-.231	22	.151
Digit Symbol - Age	22	12.91	2.98	-.240	19	.162	-.367	22	.046
Picture Arrangement - Raw	19	13.26	4.18	-.023	16	.467	-.260	19	.141
Picture Arrangement - Age	19	10.47	2.84	.000	16	.500	-.329	19	.085
Block Design - Raw	22	19.23	7.33	-.023	19	.463	-.349	22	.056
Block Design - Age	22	10.05	2.54	-.081	19	.371	-.344	22	.058
Recent Memory	27	6.33	3.41	-.258	24	.112	-.604	27	.001

Correlation between OBS Rating and CT Raging is 0.509 [N = 57, Sig. = 0.001]

References

Ahammer, I.M., & Baltes, P.B. Objective versus perceived age differences in personality: How do adolescents, adults, and older people view themselves and each other. Journal of Gerontology, 1972, 27, 46-51.

Botwinick, J. & Birren, J.E. Mental Abilities and Psychomotor Responses in Healthy Aged Men. In J.E. Birren & R.N. Butler, et al. (eds.) Human Aging I. Washington, D.C.: U.S. Government Printing Office, 1963.

Botwinick, J. & Storandt, M. Memory, Related Functions and Age. Springfield, Ill: Chas. C. Thomas, 1974.

Furry, C.A., & Baltes, P.B. The effect of age differences in ability on extraneous variables on the assessment of intelligence in children, adults, and the elderly. Journal of Gerontology, 1973, 28, 73-80.

Reitan, Ralph M. Psychological Deficits Resulting from Cerebral Lesions in Man. In Warren, J.M., & Akert, K. (eds.) The Frontal Granular Cortex and Behavior, New York: McGraw-Hill, 1964.

Reitan, Ralph M. Psychologic changes associated with aging and with cerebral damage. Mayo Clin. Proc., 1967, 42:653-673.

Reitan, Ralph M. & Fitzhugh, Kathleen B. Behavioral deficits in groups with cerebral vascular lesions. Journal of Consulting and Clinical Psychology, 1971, 37, 215-223.

Schaie, Joyce P. & Schaie, K. Warner. Psychological Evaluation of the Cognitively Impaired Elderly. In press , 1976.