Guide to Rehabilitation
Deutsch and Sawyer

Chapter 2

The Vocational Rehabilitation Evaluation: Individuals with an Established Work History

SCOPE

The vocational rehabilitation evaluation of clients with an established work history involves three basic steps: interviewing the client, vocationally assessing the client with the help of various standard tests, and reviewing the medical facts of the case. Its purpose is twofold: 1) to determine the areas of vocational damage and their economic value, and 2) to develop a realistic plan to return the client to his or her maximum vocational potential. Although standardized methods of interpretation exist, the personal involvement and insight of the rehabilitation professional is essential to making the evaluation effective. Keeping the client informed as to the aim of the evaluation and its role in the litigation process is also an important factor.

SYNOPSIS

§ 2.01 Introduction

Regardless of the particular approach used by the rehabilitation professional, the client interview, vocational assessment (in part based on standard tests of intelligence, achievement, and aptitude), and review of relevant medical facts are all necessary components of the evaluation. Although hypothetical case evaluations are possible, direct contact with the client is far more informative.

Because any individual case may present a broad range and combination of special circumstances, it is difficult to make generalizations about evaluations. It can be safely stated, however, that nothing can replace an actual interview with the client. An interview provides the professional with an opportunity to assess the spectrum of subtle verbalizations and behavior patterns of the client, as well as his or her performance on the tests administered. It also provides an opportunity for the development of a rapport between the client and the rehabilitation professional, and may facilitate an assessment of the client's motivation (although purely on a subjective basis). The interview enables the professional to assess the client more thoroughly, and to make a more accurate determination as to the type of rehabilitation plan which will be most amenable to the client's particular needs. Moreover, the fact that an interview has taken place can positively affect the weight of the rehabilitation professional's testimony in court, while the absence of an actual client interview certainly diminishes the weight of the testimony, particularly where very subtle or intricate aspects of the case must be considered.

If a client interview is not possible, a hypothetical case evaluation can be constructed by the rehabilitation professional, using the relevant medical facts and information gathered from the client.

§ 2.02 The Client Interview

The client interview should be more than the simple gathering of data for the evaluation process. It should help orient the client to goals, anticipated outcomes, and the part the evaluation might play in the litigation process. It should also allow for direct observation of the client's behavior and performance while providing an opportunity for the development of a rapport between the client and the rehabilitation professional.

Whether referred to as the client interview, clinical history, intake interview, or any of several other terms, the initial interview with the client is an integral part of the counseling process, regardless of the interviewer's area of specialization (e.g., clinical psychology, counseling psychology, educational counseling or rehabilitation counseling). On the surface, it appears that its primary purpose is the gathering of information, but the interaction between the rehabilitation professional and the client during the interview process goes far beyond the simple accumulation of data.

Three basic steps should be followed during the interview: 1) orientation and rapport building, 2) direct observation of the client's behavior and performance, and 3) information gathering. They represent integral stages in the development of the evaluation.

§ 2.03 Orientation and Rapport Building

The initial interview provides an opportunity for the rehabilitation professional to build a rapport with the client. If the client can be put at ease, the time needed for the evaluation will be lessened and the likelihood of obtaining complete and accurate information will be increased. As part of the orientation, it should be explained to

the client that the purpose of the evaluation is both to assess the areas of damages and to develop a rehabilitation plan.

The initial orientation should be seen as the first major step taken by the rehabilitation professional toward building a rapport with the client. Without such a rapport it can become difficult to complete a sufficiently accurate and thorough evaluation. The orientation should include a brief explanation of the professional's background and present role, as well as a description of the rehabilitation evaluation and explanation of its purpose. The goals which are to be met by the evaluation should be discussed, as well as what the client may anticipate in terms of outcome. Finally, the rehabilitation professional should explain how the evaluation fits into the overall litigation process, and what the client can expect during the course of the evaluation.

The orientation usually requires no more than 15 to 20 minutes at the beginning of the evaluation process. If a rapport can be established and the client put at ease during this short period, the overall time necessary for information gathering may be significantly reduced simply because the client has become more comfortable. All of the aspects of the evaluation process should be reviewed with the client, especially the purpose of the evaluation and what can be expected as an outcome. Whenever possible, the orientation should be relatively specific rather than general. Comments made by the rehabilitation professional regarding the evaluation, its goals, and anticipated outcomes should be tied to the individual's particular case.

It is important for the client and the rehabilitation professional, as well as all other third parties involved, to understand that the rehabilitation evaluation always has a twofold purpose. First, the areas of damage vocationally, and the value (economically) of such damages, must be determined. Second, and of equal importance, a realistic plan to return the client to his or her maximum potential should be developed. Such a plan must fully consider the client's quality of life as well as his or her vocational development. It is important to make this clear to the client and, if at all possible, to communicate the rehabilitation plan both before and after the completion of the litigation process. Often the client fails to absorb all of the comments and recommendations involved in the rehabilitation plan if they are communicated only once, especially if this is just prior to trial.

By keeping the twofold purpose in mind, the rehabilitation professional is not only fulfilling an important obligation to the attorneys and insurance carriers who require the information obtained from the evaluation, but he is also fulfilling an important professional and ethical obligation to communicate appropriate and realistic rehabilitation goals to the client.

§ 2.04 Direct Observation of Behavioral and Performance Aspects

Direct observation provides considerable information about the client's behavior, abilities, and level of skills. Interpretation of test results alone will not yield as complete a picture of the individual and his or her capabilities.

During the course of the evaluation process (specifically, the clinical interview, the gathering of medical and personal history, and the administering of vocational tests), the rehabilitation professional has the opportunity to observe different aspects of the client's character. Direct observation supplies information about the client's orientation, stream of thought, work attitudes, personal and vocational insights, and general approach to the evaluation, as well as his or her level of concentration and ability to attend to tasks over a sustained period of time. Remote and recent memory impairment, as well as delayed memory, can also be observed. These behavioral observations are extremely important in formulating a general opinion of the client. Moreover, the opportunity to observe the client in the actual performance of gross and fine motor skills tasks during the vocational assessment can provide information about the level of skills that may not be obvious from an interpretation of the test results alone.

§ 2.05 Information Gathering

The final step in the interview process is the gathering of information pertinent to the client's case file.

The information obtained from the client interview comprises what is referred to as the client

profile or master profile information, and can be divided into the following categories:

Identifying Information

General Case Information

Medical History of the Disabling Problem

Physical Limitations

Influence of the Environment and Work Setting

Present Medical Treatment

Activities of Daily Living

Social Activities

Personal Habits

Socio-economic Status

State or Federal Agency Involvement

Education and Training History

Vocational History

[1]--Identifying Information

General identifying information includes the client's name, social security number, address, and telephone number. The address must include the county, borough, or parish of residence so that accurate information can be obtained from the federal or state agencies that publish statistical information. The individual's status as a citizen, marital status, and place of birth are also recorded. Equally important is the state where the client received his or her public or private school education. The client's sex, race, age, and birth date must all be recorded accurately so that, again, proper use can be made of general statistical information obtained from state or federal publications, and to facilitate accurate interpretations of test results. Published statistical information is particularly important if a rehabilitation professional is not seeing the client but is attempting to interpret tests administered by another professional.

General observations on the client's appearance, gait, and the use of any prosthetic, orthotic, or other assistive devices should be recorded. The client's pre-accident (pre-morbid) weight and any severe or significant fluctuation in weight post-accident along with the present weight should also be recorded, as well as the individual's height and the dominance of either the right or left hand. Miscellaneous identifying information including, for example, the client's use of eyeglasses and/or hearing aids should be noted, as well as the ability to speak other languages fluently.

[2]--General Case Information

General case information should be limited to facts directly pertinent to the case, including the date of accident, the job held by the client at that time, the pre-accident employer's name, and the names of any attorneys or other third parties involved. A very brief and general description of how the injury occurred and the initial treatment should be recorded. The events occurring after initial treatment, on the other hand, should be recorded in great detail on a chronological basis. Specific data regarding any work completed or attempted post-accident should include the dates of employment, earnings, location, and a job description. At this point, in addition to accumulating hard data, it should be possible for the professional to subjectively evaluate the client's level of career maturity and general vocational insight. In cases where the client has not been employed

post-accident, it is important to determine whether or not he or she has made any attempt to look for work, or has considered work alternatives consistent with his or her interests and physical capacities.

[3]--Medical History of the Disabling Problem

The next area to develop is the history of disabling problems, including not only the limitations resulting from the accident presently under litigation, but also any history of earlier accidents that might have produced physical or emotional residuals. Specific information regarding the date of any previous accident or injury and the residuals resulting from that injury should be recorded along with any history of childhood, adolescent or adult illnesses resulting in long-term medical intervention or chronic symptoms. The client is then asked to provide a description of his or her chief complaints along with any secondary problems which might be apparent, whether they are directly related to the accident, related to some other source of disability, or due to causes unrelated to either of these factors.

Stress-related problems can be assessed on the basis of a history of blackouts, dizziness, nausea, vomiting, ulcers, headaches, insomnia, or emotional problems such as anxiety, tension, or depression. Any history of such problems whether pre-accident or post-accident can provide significant insight into the personality of the individual and some of the factors which might prolong or exacerbate the disability or the chronic pain process. Additional information should also be gathered as to the range of conservative medical treatment modalities employed since the accident, as well as details of any surgical procedures or hospitalizations.

[4]--Physical Limitations

An extremely important part of the interview process is the client's own subjective evaluation of his or her physical limitations and residuals arising since the onset of disability. The client should be asked questions touching on a broad range of physical capacities and residual problems. It is important to question the client about his or her capacity to sit, stand, and walk, both in terms of time and, where appropriate, distance. Questions regarding these physical capacities should establish the individual's ability to perform such tasks throughout an eight-hour day. While recognizing that few, if any, jobs require an individual to stand or sit for a full eight hours, it is nonetheless important to establish the effect of standing, sitting, or walking on the client's pain or discomfort. It is especially important to note whether standing can reduce the residual effects of prolonged sitting, or whether sitting can reduce residual effects caused by standing. A distinction should be made between the ability to stand still and the ability to stand in a general work environment where the individual can shift weight and move about relatively freely within a confined area.

The client's ability to lift should be established, which can often be done best by determining what types of items the individual has actually lifted since the accident. A distinction should also be made between occasional lifting and frequent or repetitive lifting, and between lifting from tabletop height as opposed to bending forward to lift from ground level. The client's ability to move the upper extremities through a normal range of motion and the effect, if any, that reaching or stretching has on pain, discomfort, or balance should also be assessed. Any extremity numbness or loss of sensation should be reviewed. The client's ability to demonstrate normal grip strength, manual dexterity, and finger dexterity should be determined along with his or her ability to close and open the hands fully. Restrictions on bending forward from the waist, twisting the upper torso, kneeling, stooping, or squatting should be noted.

The effect on the client of climbing stairs and working on or near unprotected heights, ladders, or scaffolding should also be reviewed. If extremity impairments, back impairments, spinal cord injuries, or any other type of impairment which might affect balance is evident, questions regarding work on uneven terrain or near open or hazardous machinery should be asked. The existence of any history of blackouts, dizziness, or problems with equilibrium and balance should be determined, as well as any impairments of vision or hearing. Information about bowel or bladder dysfunction and pulmonary dysfunction should also be sought. Any history of shortness of breath, severe or unusual headaches, and speech problems must be reviewed. The rehabilitation professional should make observations on the ability of the client to communicate in an articulate manner, especially with regard to vocabulary level, and the ability to communicate his or her own thoughts and ideas clearly and concisely.

One aspect of the evaluation which the rehabilitation professional should develop in great detail is the ability of the client to work a normal eight-hour shift without the need for bedrest periodically during the day. If the client must be able to shift position on an as-needed basis during the day, or if he is restricted by a physician's recommendation to sedentary, light, or moderate work due to his or her physical condition, these are also important factors. The individual's ability to operate a motor vehicle can be evaluated at this point with specific questions regarding any restrictions or limitations on driving which may be an outgrowth of residual physical problems.

[5]--Influence of the Environment and Work Setting

It is not uncommon for clients suffering from a variety of personal injuries to complain of an exacerbation of pain or discomfort as a result of exposure to certain restrictions in environmental and/or work settings. For this reason, specific questions should be asked about any problems the individual might have with respect to exposure to air conditioning, heat, cold, wet or humid environments, sudden or marked temperature changes, indoor or outdoor work settings, or work settings which might expose the client to excessive noise or prolonged periods of stress. Any problems the client might have with respect to exposure to fumes, dust, odors, or poor ventilation should also be reviewed. The above list represents most of the more commonly encountered environmental or work setting restrictions, but is not meant to be a complete list; therefore any other exposure problems that are encountered should also be noted.

[6]--Present Medical Treatment

A review of the client's present medical treatment is an extremely important part of the evaluation. The names of the attending and consulting physicians along with their present treatment programs should be carefully reviewed in developing this part of the evaluation. Included in such a review would be any changes in treatment under consideration and likely to occur in the foreseeable future, such as invasive surgical techniques. A complete list of medications being taken by the client and the purpose for which each is prescribed (according to the client) should be noted, as well as the frequency with which the client is actually taking the medications. Specific questions regarding any residual effects the client may be experiencing as a result of the medication should be asked. If the client is also taking over-the-counter medication this should be taken into consideration. When medication is being received from a variety of sources, it is important to determine if the physicians are aware of the other prescriptions, and if an assessment has been made as to how the different medications interact.

[7]--Activities of Daily Living

A review of the activities that make up the client's daily routine can provide important information about his or her physical capacities, interests, and work values. Sleeping habits in particular may provide important clues in evaluating disability. Difficulty in sleeping may suggest that the client is experiencing depression, anxiety, or tension, but may also be indicative of new habits that reflect changing work attitudes. The client's performance of self-care chores and general household maintenance are among the other daily activities that should be considered in the evaluation.

[8]--Social Activities

The manner in which the individual spends his or her time (e.g. with or without social interaction, watching television, reading, or practicing a hobby) provides very important clues into the disability process. The client who tends to restrict social interaction, spends little time in leisure or hobby-type pursuits and spends much of the day watching television or idling away the hours is frequently a candidate for the development of a severe or exaggerated focus on physical trauma. Social activities such as club membership, involvement in social organizations, volunteer work, church attendance, or personal hobbies also provide very important insight into the individual. A complete list of hobbies and activities which the individual enjoyed previous to the accident along with a list of his present hobbies should be obtained.

[9]--Personal Habits

Cigarette smoking, alcohol consumption, and any history of alcohol abuse or drug abuse are among the personal habits which should also be noted.

[10]--Socio-economic Status

The individual's socio-economic status can play an important role in the rehabilitation process.

Some of the information obtained on socio-economic status may be inadmissible as evidence in courtroom testimony, but it should not be eliminated from the interview. This data can be important in the development of rehabilitation conclusions and recommendations.

The socio-economic evaluation should include the name of the spouse, along with his or her age and occupation. The number of children from the present marriage and the number of previous marriages should be recorded as well as the number of people presently residing in the same home as the client. A complete history of any disability present during the client's early childhood development or any role models for disability in his or her family background should be considered. In addition, the client's general description of his or her family environment during formative years can be helpful. For example, an individual who comes from a rigid, hardworking, and moralistic family environment where work was the central focus of the family life and few, if any, leisure activities or hobbies were pursued represents a classic demographic background which, when taken along with specific personality traits, can contribute to the professional's understanding of the client's development of chronic disability or chronic pain syndromes.

Under the socio-economic status category it is, of course, also important to develop the individual's present source of income. A frequently used but not exhaustive list might include income from the following areas: wages, disability policies, Veterans Administration, workers' compensation, the Division of Vocational Rehabilitation, Social Security Retirement, Social Security Disability Insurance, Supplemental Security Income, Aid to Families with Dependent Children, and food stamps. It is also helpful to establish the individual's monthly expenses and current financial status to help determine if a financial motivation for a return to work exists.

[11]--State or Federal Agency Involvement

The involvement of any other State or Federal agencies, such as the Division of Vocational Rehabilitation, the State Employment Service, the State Children's Medical Services Agency, or rehabilitation nurses from the State Department of Commerce or the Workers' Compensation Bureau should be determined. If the individual is evaluated as being eligible for such services and has not applied, the appropriate persons involved in the case should be informed. It is important to consider if services are being received and/or if contact with these agencies has been attempted, and if a determination has been made regarding the client's eligibility or ineligibility for services.

[12]--Education and Training History

A review of the client's education and training should be an integral part of the rehabilitation assessment. The level of formal education the person has achieved through public or private school programs should be noted, indicating classes or grades actually attended and any high school diploma obtained through a GED (General Educational Development) program under state or military guidelines. Specific information regarding the last school attended and any history of vocational or technical school training after high school should also be noted.

Any history of formal on-the-job training programs, apprenticeship programs, or skills learned through on-the-job experience should also be reviewed. Any licensure or certification held by the client in a specific area may also be important in assessing transferable skills. The client's history of military service including the branch, service dates, type of discharge, and whether or not any service connected disability exists should be listed along with the highest rank achieved, the duties performed during service, and any specialized training provided by the military. This will help in the development of transferable skills as well as in an assessment of the types of training programs which can be considered in the post-accident rehabilitation process.

[13]--Vocational History

A detailed vocational history is essential to a proper rehabilitation evaluation. Specific information as to the name(s) of the employer(s) and the state and city where located should be obtained along with the client's job title(s) and a complete or detailed list of job duties. The client's rate of pay and length of employment along with specific starting and ending dates should also be established. A complete analysis of the employment history will later be made for transferable skill purposes.

§ 2.06 Vocational Testing

A vocational testing profile of a client is developed using tests of intelligence, achievement, aptitude, and personality as well as other tests measuring interests and attitudes.

Vocational evaluation systems provide for the assessment of skills through specific work samples. Although these tests are standardized and widely used, there is still controversy regarding the value, purpose, and limitations of specific tests.

Vocational testing profiles may vary substantially from one rehabilitation professional to another. There is so broad a range of areas that can be tested and such a large selection of test instruments in each of these areas that it is impossible to make generalizations regarding specific tests or test areas within the context of this chapter. Remarks here will be limited to discussion of the areas in which tests can be utilized and the purpose of administering tests in each of those areas, with a focus on some of the tests more commonly encountered.

This discussion will avoid prolonged and in-depth discussions of the statistical background behind the development of test instruments. It is sufficient to indicate that the primary purpose behind the use of these tests is to provide a standardized measure of whatever trait, aptitude, skill, or ability is being assessed. Tests accomplish this with varying degrees of accuracy and statistical relevance and, although there should be little variation in interpretation between professionals, the fact is that such variation often occurs. Additional information and the manual of any given test can be obtained by referring to the Burros' Mental Measurements Yearbook which is a very thorough and comprehensive standard guide for the professional. It provides excellent insight and test critiques for all tests published throughout the psychological counseling and rehabilitation counseling fields.

Although it should not be expected that any rehabilitation professional or psychologist will have immediate recall of the statistical background and normative data for any given test, he or she should be able to obtain this data readily from the manuals for each test. Complete information is available as to the purpose of the test and its limitations in measuring whatever area is being assessed. Problems in the professional's evaluation can arise from the lack of a clear understanding of the purpose and limitations of each of the tests employed. For example, the counselor who interprets a reading skills test such as the Slosson Oral Reading Test or the Wide Range Achievement Test in such a fashion as to suggest it is a comprehensive reading skills test designed to assess not only word recognition and basic vocabulary but also sentence structure, grammar, comprehension, and reading rate is mistaking the test's true function. Although both the Slosson Oral Reading Test and the Wide Range Achievement Test for reading are excellent tools, they have their limitations, as do all tests. It is important to recognize that these tests provide limited information about the individual's reading skills. An accurate diagnostic assessment of reading problems and true assessment of grade equivalency or percentile rating cannot be determined by these tests alone.

Testing is used primarily as a means for the professional to develop as much insight as possible into the academic and vocational skills, aptitudes, attitudes, and personality of the client. This information can lead to final conclusions and recommendations only in conjunction with the other broad variables included in the evaluation. As noted above, the areas commonly tested are intelligence, achievement, aptitude, interests and attitudes, and personality. Each of these areas of testing will be explored in this chapter with a view to providing a greater understanding of its purpose and goals. Vocational evaluation systems, whereby a client's skills are assessed through specific work samples, will also be explored.

§ 2.07 Intelligence Tests

The validity of intelligence testing has been questioned because of the great importance of educational background and cultural factors to test scores. However, for the purposes of the rehabilitation evaluation, the tests serve as a measure of skills and abilities needed for specific types of employment.

Perhaps the most commonly discussed and most broadly misunderstood area of testing among laypersons is the intelligence test. Defining intelligence in and of itself is an extremely difficult task and one much argued about among professionals in psychology, counseling, and rehabilitation. The American Heritage Dictionary defines intelligence as "the capacity to acquire and apply knowledge

or the faculty of thought and reason."

Lee J. Cronbach (1970) addressed this problem when he wrote, "much misuse or misinterpretation of mental tests arises simply from the labels intelligence and capacity as they suggested inborn potentiality is being measured. Performance on the tests is influenced by many things not included in the concept of intelligence. Each test calls for knowledge, skills and attitudes developed in Western culture and better developed in some Western environments than in others. A mental test gives only indirect evidence on potentialities as we can observe potentiality only when it has flowered in performance."

Despite efforts to establish a standardized terminology so that professionals can better understand one another when talking about intelligence, the issue of what is being measured by intelligence testing remains controversial. This problem is further exacerbated by the great misunderstanding and misuse of I.Q. in society generally. For the purposes of the rehabilitation professional, intelligence can perhaps best be defined as whatever general fund of knowledge or performance skill is being measured by any given intelligence test on any given day. Any gross generalizations about a client based solely on intelligence tests are likely to be inadequate; but if their limitations are understood and their purpose is specific, then the tests can, of course, provide a great deal of insight into the individual's ability to perform in specific areas. It is for this purpose that intelligence testing is applied to a rehabilitation setting.

Although many of the arguments regarding the impact of educational and cultural deprivation on intelligence test scores are justified and are relevant to rehabilitation, the tests should be used primarily as a measure of performance within the specific areas of education, training or employment that have been developed as possible vocational directions for the client in career counseling. To say that an individual's performance on an intelligence test is due to past educational or cultural factors does not seem important when the only real question is whether the individual can demonstrate a level of skills and abilities sufficient to warrant pursuing the vocational direction being developed.

There is a broad range of tests available for establishing intelligence, or "I.Q.," scores. Many achievement tests such as the Differential Aptitude Test and Wide Range Achievement Test have an I.Q.-like score which is developed out of achievement subtest scores. There are numerous reading tests which also develop an I.Q.-like score, but in both instances there are relatively severe limitations to the application of the test results. The score is developed in a different fashion and based on a different sampling of skills and performance than the more traditional I.Q. tests and cannot always be directly related to those developed from some of the more standardized samples.

Assessment of the tests used through Burros' Mental Measurements Yearbook and other reference books will be helpful in determining the accuracy and meaning of such scores. In addition, a review of the research literature can be most helpful in determining how much research has been done in assessing the correlation between I.Q. scores developed through these tests and those developed on more traditional standardized samples.

Some of the intelligence tests more commonly used by psychologists, counselors, and rehabilitation professionals include the Wechsler Adult Intelligence Scale (WAIS), the Wechsler Intelligence Scale for Children (WISC), the Wechsler Pre-School Primary Scale of Intelligence (WPPSI), the Stanford-Binet Intelligence Scale, the Slosson Intelligence Scale, and tests for the non-reader, such as the Revised BETA.

[1]--Wechsler Tests

The Wechsler tests are divided into verbal and performance sections, each of which has numerous subtests covering a broad range of general knowledge and skills. The following outline lists the subtests included in the Wechsler Adult Intelligence Scale (WAIS) and the Wechsler Intelligence Scale for Children (WISC).

Verbal Scale

1)General Information

2)General Comprehension

3)Arithmetic

4)Similarities

5)Vocabulary (Digit Span used as an Alternate)

Performance Scale

6)Picture Completion
7)Picture Arrangement
8)Block Design
9)Object Assembly
10)Coding (Mazes as an Alternate)

The Wechsler Pre-School and Primary Scale of Intelligence (WPPSI) has a verbal scale and performance scale similar to the other types of Wechslers with slightly different subtests. Those subtests include:

Verbal Scale
1)Information
2)Vocabulary
3)Arithmetic
4)Similarities
5)Comprehension (Sentences as an Alternate or Supplementary Test)
Performance Scale
6)Picture Completion
7)Mazes
8)Block Design (Animal House as an Alternate or Supplementary Test)

(Geometric Design as an Alternate or Supplementary Test)

After the administration of the Wechsler scales each subtest raw score is converted to a scaled score. The scaled scores are used to develop a verbal I.Q. score, a performance I.Q. score and a full scale I.Q. score. Anne Anastasi in her book on psychological testing provides a thorough review of the norms and scoring procedures for all of the Wechsler tests. She notes that the Wechsler Adult Intelligence Scale was standardized on a carefully chosen normative sample of 1700 cases including an equal number of men and women in each of seven age levels between 16 and 64 years. Also taken into consideration in the development of the sample was the distribution of the population relative to national origin, urban-rural environment, race (white versus non-white), occupational level, and education (all based on the 1950 United States Census). The normative standardization also included 475 persons age 60 years and over, providing an "old age sample." When the test is scored, the resulting I.Q. is a deviation I.Q. comparing the individual directly with members of his own age group.

[2]--Stanford-Binet Intelligence Scale

Although the Wechsler scales are now more frequently used by psychologists and counselors, the Stanford-Binet scale is still considered a very acceptable measure of intelligence and may quite possibly be encountered in the review of a client evaluation. This test views intelligence as a continuum and includes a scale of tests of increasing difficulty. The score achieved is a measurement of how far up this scale a child or adult can go before the task becomes too difficult. The Stanford-Binet Intelligence Scale is broken down into levels of complexity with each level containing six subtests.

[3]--Slosson Intelligence Scale

The Slosson Intelligence Scale is a short-form measure of intelligence requiring approximately 20 to 30 minutes to administer as compared to approximately one hour for the Wechsler Adult Intelligence Scale. The client is presented with an increasingly more difficult set of verbal questions covering a general fund of knowledge. Although a select number of questions on the scale may be considered performance oriented, generally it is a verbal scale only. Research literature suggests a relatively high correlation between scores achieved on the Slosson Intelligence Scale and those achieved on the Wechsler Adult Intelligence Scale.

[4]--Special Tests for the Handicapped

Less commonly encountered, although still important for evaluating intelligence, are a select number of tests designed to be used specifically with the handicapped. Hearing-impaired clients may be administered a number of tests including the Army Beta or other similar nonlanguage tests, but more specific to their needs may be tests like the Hiskey-Nebraska Test of Learning Aptitude which are developed and standardized on deaf and/or hard-of-hearing children (Hiskey, 1966).

Visually impaired children should have no difficulty responding to the verbal scales on the Wechsler or Slosson Intelligence Scale.

Performance scales, of course, can represent a problem for handicapped persons. For orthopedically impaired individuals, choosing a test can depend on the severity as well as the type of handicap involved. In many instances those standard tests already described prove sufficient. For persons with severe motor handicaps such as cerebral palsy, there are other tests that can be considered. The Leiter International Performance Scale and the Porteus Mazes are suitable overall although Anastasi (1976) suggests that the normative and validity data for these tests is "meager." For handicapped persons who use a pointing response to answer questions, tests relying on picture classification include the Peabody Picture Vocabulary Test (PPVT) and the Columbia Mental Maturity Scale (CMMS).

The above list of tests represents only a portion of those published scales for the measurement of intellectual function. Although perhaps a cliche, it is nevertheless important to stress that the test is only as good as the individual administering and interpreting it. (Refer to Chart 2-1 for Intelligence Tests and applicable grade or age levels.)

§ 2.08 Achievement Tests

There is considerable overlap between achievement and aptitude tests. Whereas achievement tests measure proficiency in specific subjects or skills, aptitude tests reflect ability to learn and provide an indication of the level of achievement that can be anticipated.

Tests falling under the single classification of achievement tests actually represent a broad spectrum of tests designed to assess an equally comprehensive range of skills. If you ask twelve rehabilitation professionals to define achievement tests, you may well receive twelve answers, all loosely suggestive of one or two central themes. Many different areas of achievement can be tested, and there is some mutual overlap between achievement tests and others that are nominally aptitude tests.

Achievement tests may be administered either as group tests or to one client at a time. They may cover specific funds of knowledge (e.g., grammar or math computation), assess a general educational development level, evaluate reasoning ability, or provide insight into the client's analytical ability.

Group tests are most often used in the context of an educational setting and can be helpful in providing insight into the pre-accident status of the client. There are, of course, a variety of limitations to the group-testing technique. It does not allow the examiner to establish a rapport with the client and prevents the assessment of motivation. Without the client-counselor interaction to enhance cooperation, place the client at ease and encourage the client to perform the test with his best effort, there is no method by which the professional can judge the effects of pain, illness, fatigue, lack of physical stamina, or test anxiety on the outcome of the test. It is strongly suggested that no final recommendations regarding vocational development or rehabilitation be made on the basis of group testing alone.

Group testing can provide insight into the varying skill levels of the client. However, as with any test instrument, it is essential that the counselor know what is being measured, how it is being measured, and how best to interpret the test results so that they can be correctly understood by laypersons as well as by other professionals. The manner in which these scores are reported can, in and of itself, foster a great deal of misunderstanding. An excellent example is the reporting of reading test results as grade equivalents rather than percentile rankings. Grade equivalency scores can provide all parties involved in a case with a general idea of an individual's level of functioning in a given reading skills area, but a percentile ranking helps to clarify more specifically and perhaps more accurately how a given individual is functioning in relation to his or her peer group.

Achievement tests are often criticized for tending to overlap many of the aptitude tests on the market (Cronbach, 1970). This criticism is most true of the tests which assess analytical skills (as opposed to those which examine specific funds of knowledge or general educational development). Both aptitude tests and achievement tests which are used in an attempt to assess reasoning and analytical ability involve a difficult-to-define area of assessment. To reduce the difference between

achievement and aptitude tests to its simplest terms, achievement tests are generally a measure of an individual's proficiency in specific subject areas or general educational development, while the aptitude test tends more to be a reflection of an individual's ability to learn, to reason, and to analyze.

Many rehabilitation professionals will indicate that they use aptitude tests in an effort to measure a client's ability to learn, but this use has been sharply attacked in the literature. Neither intelligence tests nor aptitude tests really provide full insight into an individual's ability to learn, so much as they suggest levels of achievement that might be possible for the client. By choosing the most reliable tests available and combining the information they provide with the psychosocial and medical data already collected, it is possible for the rehabilitation professional to make recommendations with respect to future vocational development, education and rehabilitation more accurately and more within the bounds of reasonable rehabilitation probability than would otherwise be possible. This is not to say that any of the data collected, particularly the data developed through testing, is absolutely accurate, but rather that the combination of this information with the other aspects of the patient's master profile will usually permit the most accurate general assessment of a client that is practically attainable. (For a representative list of achievement tests, their purpose and applicable age or grade levels see Chart 2-2.)

§ 2.09 Aptitude Tests

Aptitude tests provide a profile of an individual's intellectual strengths and weaknesses, as well as his or her ability in areas of task performance and motor function. Specialized tests can also be administered to evaluate mechanical, spatial, artistic, musical, and creative aptitudes.

Psychologists and rehabilitation professionals have long found general intelligence tests to be quite useful. Nevertheless, over the past 40 years there has been an increasing demand for tests to measure performance with regard to different aspects of intellectual functioning. These tests give the professional a set of scores in different aptitudes rather than a single measure such as an I.Q. More to the point, they provide an intellectual profile of the strengths and weaknesses of an individual. Aptitude tests are widely used by professionals in rehabilitation, psychology, and public and private sector school systems. Some aptitude tests may be administered individually while others are given in group settings.

Development of multiple aptitude batteries has been spurred by the realization that intelligence tests are less generalized than previously supposed. While intelligence tests could be said to measure some combinations of special aptitudes, the areas they cover tend to be loosely and poorly defined.

The development of aptitude testing was also prompted by an increasing need for individual measurement by industrial, military, college and other professional people. Anastasi (1976) concluded that, in general, multiple aptitude batteries contribute little at the elementary school age, when abilities tend to be highly intercorrelated. At the high school level, they become much more functional in that the differentiation of abilities has progressed sufficiently to allow practical use of such tests. One example of multiple aptitude test batteries on the market is the Primary Mental Abilities Test. Chart 2-3 provides a sample of some of the other commonly used multiple aptitude test batteries, their purposes, and their applicable age or grade levels.

In addition to the multiple aptitude test batteries already discussed, certain specialized aptitude tests have been developed to provide information about a client's skills with respect to mechanical ability, musical ability, and artistic abilities. Included in this area are tests of hearing, vision, and general motor coordination (see Chart 2-4). These tests somewhat overlap tests like the Detroit Test of Learning Aptitudes which help to determine deficiency areas such as auditory sequential memory, visual perception, and social maturity, among others.

In rehabilitation, the most commonly seen tests are in the areas of performance and motor function, tests designed specifically to provide a rehabilitation professional with information about a client's manual and finger dexterity, arm-hand coordination, eye-hand coordination, spatial perception, and use of small hand tools. They are typically timed tests, which provides additional information about an individual's ability to respond to specific auditory and visual stimuli. The

timed aspect of the tests also helps to determine how a client compares against a variety of normative populations with respect to precision and the maintenance of qualitative and quantitative standards.

Chart 2-5 provides a sample of special aptitude tests reflecting mechanical, spatial, clerical, artistic, musical, and creative aptitudes.

§ 2.10 Measures of Interests and Attitudes

When the individual's vocational interests, work attitudes, and work values are taken into account, vocational rehabilitation is more likely to be successful. Establishing a profile of work interests and attitudes can also be helpful when the individual has a limited work history or has been unsuccessful at past jobs. The tests used for evaluation can be grouped into three areas: work values, career maturity, and vocational interests.

Measurement of a client's interests and attitudes with respect to work and vocational choice is a critical part of the rehabilitation professional's function. By taking these attitudes and interests into consideration in the evaluation of vocational handicaps and their impact on vocational development, the professional is providing all parties involved in a personal injury action with a much more accurate assessment of the manner in which the injury or disability affects the particular client. This approach is helpful in avoiding the extremes which often occur when one side argues that the individual should be considered for any job for which he might be physically capable without regard to interests, work values and job satisfaction while the other side argues that only the job for which the individual has been trained by education or experience can be considered.

The rehabilitation professional has as one of his responsibilities the goal of assessing the generalized interest pattern being expressed by an individual and the manner in which it plays a role in the career decision-making process. Taking into account an individual's work attitudes, vocational interests, and work values will help the client bring to the rehabilitation process and work setting a good deal more motivation. If, on the other hand, these areas are ignored and jobs are chosen which fail to meet an individual's interests, work values and job satisfaction needs, the result will frequently be failure rather than success in the rehabilitation effort.

In addition to the direct information obtained through testing the client's interests and attitudes, these tests can have another equally important value. In the case of a client who is unable to set priorities in his work values and job satisfaction needs, does not demonstrate a well-defined work identity, or lacks vocational goals or vocational insight, a new area of recommendations should be considered by the professional. Such a pattern is very commonly seen in young workers with a limited vocational history or individuals who have been working at jobs which clearly seem beneath their educational and vocational abilities. Establishing a profile of this nature may help the counselor understand why a client appears to be an underachiever and why the earnings record does not accurately reflect vocational potential or earning capacity. This topic will be covered more thoroughly in Chapter 6, which discusses the rehabilitation evaluation of individuals who have a limited or non-existent work history.

It is extremely important for the rehabilitation professional to recognize that an individual's interests, work attitudes, work values, job satisfaction needs, and general motivation represent aspects of his personality as important as the aspects typically measured by tests such as the Minnesota Multiphasic Personality Inventory (MMPI). Not only will such information provide insight into an individual vocationally, but it will provide insight also into the individual's general personality profile.

A description of the client's interests and attitudes should take into consideration not only the vocational, but also the avocational aspects. It is only by deriving this assessment from the whole person that the rehabilitation professional can draw his most accurate conclusions and recommendations. Again, this is not to say that responses to hypothetical questions cannot demonstrate clearly the impact of a set of vocational handicaps on future vocational development and/or also demonstrate the vocational potential of an individual. Certainly, general conclusions of this nature can be drawn from hypothetical information, but many of the subtle recommendations which help to tailor a rehabilitation plan to the needs of a specific client cannot be communicated

unless such data is available.

Specific tests of attitudes and interests fall into three categories: tests of work values, tests of career maturity, and tests of vocational interests, also called interest inventories.

[1]--Work Values

Donald E. Super (1968), developed and published the Work Values Inventory. Based on research in the field of vocational interests and work values, he identified 15 value categories: creativity, management, achievement, supervisory relationships, work surroundings, way of life, job security, peer group associations, aesthetics, prestige, independence on the job, variety, economic return, altruism, and intellectual stimulation. The client is presented with 45 items which he rates on a scale of one to five from unimportant to very important.

A client with good vocational insight, who is able to set priorities in his or her work values and job satisfaction needs, will generally have a healthy distribution of scores across the 15 values presented. The inventory helps to identify appropriate vocational alternatives and helps the professional keep such alternatives consistent with the client's own desires. A tightly skewed distribution of responses, with scores clustered at one point on the scale, may suggest limited vocational insight or at least an inability to set priorities. In such cases intensive career development counseling should be sought, in large part to help the client develop his or her vocational insight. The client who is unable to demonstrate skills in this area is often one who has had little work experience pre-accident, although this is not always the case. Many clients with a fairly well-defined work identity pre-accident, now finding themselves physically disabled and unsure of vocational directions, may also suddenly find themselves unable to set priorities. In either instance, an inability to set vocational priorities must be carefully reviewed by the professional, as it can have a tremendous impact on vocational conclusions and rehabilitation recommendations.

[2]--Career Maturity

The career maturity indexes are designed to provide insight into the client's understanding of the career decision-making process. The client's view of, or approach toward, career decision-making can be a critical part of his or her potential for a good prognosis. Clients who simply do not understand how to make adequately informed decisions and/or who are unknowledgeable about ways of exploring career options and utilizing appropriate vocational resource materials, may find themselves foundering in the labor market. Without any real understanding of how to match job satisfaction needs, work values, interests, and physical capacities to career options that are viable and present an opportunity to maximize future vocational potential and earning potential, the client is not likely to improve this situation. A client with a low level of career maturity can best be helped through an appropriate career development counseling approach which is designed, at least in part, to expand the resources available for exploring career options and which will also train the individual in a specific step-by-step process of career decision-making.

[3]--Interest Inventory

Of the various tests that are used with a rehabilitation client, perhaps none is so misunderstood by both professionals and clients as the interest inventory. The vocational interest inventory does not demonstrate an individual's aptitude for any of the areas included in the test. It does not, in fact, necessarily demonstrate a direct interest in the specific careers being reviewed. What the test does accomplish is the development of a profile, or pattern of interests, for the particular client which is then compared to the interest profiles of individuals already working in a variety of fields. If a client's interest profile correlates highly with those of individuals in a specific field, then an assumption is made that the client will also have an interest in that specific vocational area.

Far too often a professional administers an interest inventory and uses it as the final step in the career decision-making process. This is perhaps the worst possible use for such a test. These tests represent a beginning point rather than an ending point in the career counseling effort. They should be used to help organize an individual's thoughts about interests and work attitudes, but to assume that the jobs which are listed represent the best alternatives for the career counseling client is most inappropriate.

Interest inventories do not include a complete review of all the jobs in the labor market, and too often there is a broad overlap between jobs and/or occupational groups on the test, leaving the client confused. It is a function of the rehabilitation professional to determine in what manner these areas overlap. Once jobs have been broken down into their basic components, a determination can be

made as to the extent of overlap and it can be inferred that areas of overlap represent the interest areas being identified by the client.

It is also important to recognize, as previously stated, that none of the interest inventories represents an all inclusive list of job titles in existence in the national economy. Accordingly, when certain vocational areas are designated by a client as having interest profiles correlating highly with his own, they should be researched through appropriate resource materials, (e.g., the Dictionary of Occupational Titles, the Occupational Outlook Handbook, the Encyclopedia of Careers and Vocational Guidance) to determine closely related occupations which may also prove viable. This research helps to expand the range of alternatives that are to be considered. All job alternatives within work groups/worker trait groups are explored as possible vocational goals while at the same time, by exclusion, all those jobs which represent inappropriate alternatives for the client because of the injury and resultant disability are eliminated.

A number of commonly used interest inventories are available on the market, including the Strong Campbell Interest Inventory, the Minnesota Vocational Interest Inventory, the Kuder Preference Records, and the Holland Vocational Preference Inventory (see Chart 2-6). <HL41520>The Strong Campbell Interest Inventory represents one of the better interest inventories available. It is the product of broad research and development efforts and has undergone substantial revision resulting in a continuing update of the test, making it one of the more easily used and better developed interest inventories.

As with any test, the Strong Campbell has its limitations in terms of its target population. Professionals using it for clients coming from a lower socio-economic background who intend primarily to enter the unskilled or skilled labor crafts will find that this instrument falls far short of meeting their needs. Instruments such as the Minnesota Vocational Interest Inventory provide a much better resource in such cases. Here again, as with all tests, it is imperative that the professional understands the test's proper application, purpose and target population. The Strong Campbell tends to have an advantage over many similar instruments in that it is easy to take, its directions are not difficult to follow, and the computer scoring represents an in-depth interpretation which can be easily enhanced by the skill of the professional. A cautionary note must be added, however, that, once again, computer interpretation should not in and of itself be utilized as an end to the career counseling process. Further development of the interpretation by the professional will greatly broaden the related job categories which can be considered and will substantially improve both the quality of the test results and the final conclusions and recommendations that are developed from them.

Another frequently seen interest inventory is the Kuder. This name actually represents a variety of related tests which approach the assessment of interests from many different directions. A major difference between the Kuder Preference Record-Vocational and the Strong Campbell Interest Inventory is that the Kuder indicates relative interests in a broad number of vocational areas rather than in specific occupations. Although the Strong Campbell also provides information as to relative interests in a broad occupational category rather than in specific jobs only, it breaks this information down into specific job categories. Both of these inventories, as well as many others, can be used quite effectively if properly handled by the rehabilitation professional, but improper handling can make even an excellent interest inventory an inadequate tool in career decision-making.

§ 2.11 Vocational Evaluation Systems

Vocational evaluation systems provide samples of work in various fields, giving the rehabilitation client an opportunity to experience specific job tasks. Because the systems entail observation of the client's work performance, they permit in-depth evaluation of skills.

Although not specifically test instruments, vocational evaluation systems have grown in number and in the prevalence of their use over the past two decades. These systems provide work samples which, if carefully selected, are representative of actual jobs within a given community. They provide an opportunity for a more in-depth evaluation of an individual's basic performance skills relative to specific job tasks, and in some instances they may be keyed into job data banks or the Dictionary of Occupational Titles to assist in the matching of the client's skills to job titles.

A proliferation of new vocational evaluation systems have entered the market during the past ten to fifteen years. The popularity of commercial work sample systems, for example, increased with the rise in available funds for vocational evaluation services, and a corresponding influx of state and federal mandates to serve more disabled populations in rehabilitation facilities. Work sample systems, although relatively expensive, do provide the client an opportunity to "experience" samples of specific job area tasks, thus providing a hands-on approach to career exploration. Due to the amount of time necessary to participate in them, an assessment of behavior observation is included in many of the systems. The utility of vocational evaluation systems for rehabilitation professionals has been a source of debate for many years and their use has primarily been limited to rehabilitation facilities and educational centers. Botterbusch (1982) presents a comprehensive comparison of 17 commercial work sample systems that will assist rehabilitation professionals in making decisions about the selection and use of these systems. This comparison includes a discussion of the target group, organization of work samples, process involved, administration procedures, scoring and norms, behavior observation process, and reporting format, as well as other specific information. Botterbusch also discusses each system in terms of its utility in vocational exploration, vocational recommendations, and counselor utilization. Several of the most prevalent vocational evaluation systems are discussed below.

One of the more widely used systems is the Valpar Component Worksample series. The original target group for this work sample was the general population, but it is extensively used with injured industrial workers. The system can be modified for use with the visually handicapped as needed. The system contains 16 work samples in the following categories:

(1)small tools (mechanical);
(2)size discrimination;
(3)numerical sorting;
(4)upper extremity range of motion;
(5)clerical comprehension and aptitude;
(6)independent problem solving;
(7)multilevel sorting;
(8)simulated assembly;
(9)whole body range of motion;
(10)tri-level measurement;
(11)eye-hand-foot coordination;
(12)soldering and inspection (electronics);
(13)money handling;
(14)integrated peer performance;
(15)electrical circuitry and print reading;
(16)drafting.

Administration and scoring seem relatively easy and the overall system tends to appeal to clients. Primary difficulties may include the limited opportunity for vocational exploration and difficulties relating a specific work sample to work groups listed in the Dictionary of Occupational Titles or specific jobs in the community.

The Singer Vocational Evaluation System is another representative work sample frequently encountered in the vocational evaluation field. This system is organized into 24 work stations representing a wide diversity of work areas.

The test administrator is required to make observations of work performance in such categories as attention span, form discrimination, neatness, and use of hand tools. This system seems to provide a better assessment of interests than the average work sample program, but it also retains many limitations that must be taken into consideration in the interpretation of the results. In contrast to the Singer System, the Jewish Employment and Vocational Service Work Sample System (JEVS) utilizes a trait-factor approach and relates 28 work samples to 12 Work Groups of the GOE (Guide for Occupational Exploration). In this system, the focus is more on assessment of specific abilities and less on vocational exploration. Chart 2-7 provides a list of some of the major work sample systems on the market along with some basic information regarding each system.

A recent innovation is the increasing number of computerized job matching systems that are being marketed in the field of rehabilitation. It is very likely that these new and developing systems

will eventually replace or significantly affect the use of work sample systems. Chapter 5 provides a discussion of computer programs in rehabilitation.

CHART 2-7

Representative Commercial Vocational Evaluation Systems

Test Name	Purpose	Age or Target Group
Career Evaluation System	Work evaluation using a battery of psychological tests and ratings	Physically and mentally handicapped
McCarron-Dial	Work evaluation sample grouped into five factors	Mentally retarded, psychologically disturbed, learning disabled
Micro-Tower	Work Evaluation sample in general aptitudes (5 groups)	General rehabilitation population
Jewish Employment and Vocational Service (JEVS)	Work evaluation sample using 28 work samples referenced to 12 work roups (GOE)	Special needs populations
Valpar # 17	Work evaluation sample using 11 different assessment techniques	Mentally retarded
Valpar	Work evaluation using 16 work samples	General population, industrially injured
Talent Assessment Programs	Work evaluation sample using 10 independent tasks or subtests	Age 14 - adult levels above TMR (trainably mentally retarded)
Tower	Job analysis in 14 training areas	Physically and emotionally disabled
Singer	Work evaluation sample using 24 groups of related jobs	Special needs population

§ 2.12 Personality Testing

A broad range of personality inventories are available for use in the psychological testing market. They basically fall into two groups: self-report inventories and projective tests.

The number and variety of personality inventories on the market makes it difficult to provide a comprehensive list here. The representative sample of personality inventories discussed will include those most commonly used by counselors and psychologists in this country.

[1]--Self-report Inventories

The most frequently used test of this nature is the Minnesota Multiphasic Personality Inventory (MMPI). It is essential to recognize that the degree to which an individual scale on the MMPI is elevated, and the intercorrelation of scales, both play an important part in the interpretation. Elevations on schizophrenia or psychopathic deviate scales do not necessarily suggest a diagnosis or even a tendency toward schizophrenia and psychopathic deviation.

There are three validity scales or control keys on the MMPI: the L (lie scale), the F (false) scale, and the K scale. Just as with the specific clinical scales, the validity or control scales must be interpreted based both on the elevations within a scale and on the intercorrelation between scales. The L or lie scale, for example, reflects answers that are a denial of reality. A high score may evoke several interpretations. It is important that the test interpreter determine how this scale may correlate with other scales, and that the interpreter know his or her client so that an appropriate interpretation or diagnosis can be made.

As with all tests, the skill of the test administrator and interpreter plays an important role in the final effectiveness of the test results. It is not necessary to have a qualified counselor or psychologist administer the tests, but these professionals should be responsible for the interpretation and use of the test results. Many psychologists and counselors make use of psychometrists who are

skilled and trained in providing the test instructions, controlling the test environment, and relaxing the individual preparatory to taking the test. Although a professional can provide an interpretation without having previously interviewed the client, there is no doubt that such client-professional interaction greatly enhances the value of the interpretation. Many test administrators will utilize a machine scoring program for the development of the interpretation. This machine scoring interpretation carries with it the same limitations as interpretation by a professional who has never met the client. A lack of familiarity reduces the value of the test and forces the interpreter to pass over many of the more subtle, but still important areas, that might help to better understand the problems and needs of the particular client being tested.

A word of caution regarding the MMPI: the usefulness of this test will depend in large part on the specific qualifications of the rehabilitation professional who assesses the impact of personality traits on the individual's vocational development. Certainly, specific personality traits will have an impact on the work circumstance, both in terms of physical environment and in terms of the degree to which an individual may be able to adapt to the situational stress and pressure that may be encountered on the job. Public contact, the ability to deal with a variety of tasks, and the extent to which the individual is able to work as part of a team rather than independently are all examples of some of the vocational applications that a rehabilitation counselor can make when using this personality inventory.

The following short summaries list some of the major self-report personality inventories on the market but by no means represent an all inclusive list of available tests.

The Adjective Check List (ACL) system is used primarily with adults as a simple self-rating technique. The scores correlate well with other personality inventories but the test is used primarily for research purposes.

The California Psychological Inventory (CPI) covers sixteen scales including tolerance, sociability and intellectual efficiency. Again, validity coefficients appear low based on research with the instrument. The test, used primarily by well-trained counselors, is designed as a screening inventory and its interpretation should be used with great caution.

The California Test of Personality comes in several forms covering primary, elementary, secondary, and adult age groups. Subtests cover personal adjustment and social adjustment, including personal worth, nervous symptomatology, and family relationships. It is used primarily as a screening instrument and is seen more in the school systems than in private practice.

The Edwards Personal Preference Schedule is used primarily with adults, typically in college populations. The test is primarily used to examine the client's need for achievement conformity, for exhibition, and for dominance, among other traits. The test has only limited research usefulness, and should be used cautiously.

The Edwards Personality Inventory, primarily for high school and college level students, is an unwieldy test comprised of fifty-three scales. In describing this test Cronbach (1970) indicates that "there is no validity information and no statement regarding intended uses of this instrument. Reliabilities of many scales are low and the test should be restricted to research use only at this time."

The use of the Minnesota Counseling Inventory is restricted to high school students. The subjects of subtests include emotional stability, family relations, and conformity. It is used more by high school counselors than by counselors in other settings.

The Mooney Problem Check List, used in junior high school, high school, college, and adult populations, is a self-report inventory in which the client endorses problems he has in eleven separate areas. The purpose is to identify those who may need counseling. It is considered a relatively simple instrument for use by a broad range of counselors.

The 16 P.F. Test is available in various versions, for use by school-aged children as well as adults. As the name reflects, there are sixteen score areas in this relatively widely used instrument. Although limitations do exist with respect to the test's reliability and validity studies, it appears to be enjoying a gradually increasing acceptance.

The Survey of Personal Values test is restricted primarily to high school and adult populations. It is a short-form, forced-choice instrument covering six preference areas. It is used primarily in employee placement and secondarily in the counseling setting. Both this test and the Survey of Interpersonal Values, produced by the same group (SRA), have little research to demonstrate their

validity at this time. The authors are frank in their discussion of the limitations of the test and suggest that local validation procedures be utilized.

[2]--Projective Tests

Projective techniques for assessing personality differ dramatically from the self-report inventories. They are seldom referred to as performance tests in that the results are based on the test administrator's observations of what a person is doing rather than on measurements of how well he has accomplished a standard task. Perhaps the most common of the projective tests known to professionals and layman alike is the ink blots or the Rorschach. Anastasi (1976) notes, "projective techniques are characterized by a global approach to the appraisal of personality. Attention is focused on a composite picture of the whole personality, rather than on the measurement of separate traits. Finally, projective techniques are regarded by their exponents as effective in revealing covert, latent or unconscious aspects of personality." The argument with projective techniques is that the less structure, the more sensitive the test is liable to be to covert or latent personality traits.

A sampling of projective tests and their purpose in the age group to which they are applicable is presented in Chart 2-8, and paragraph summaries of these tests are provided below.

As previously noted, the Rorschach ink blots test is perhaps the most commonly known projective test of personality. The technique, developed by Hermann Rorschach, was first used in 1921. Ten cards on which bilaterally symmetrical ink blots are printed are used to elicit meaningful responses from the client. An exact record of the client's responses is maintained by the examining counselor or psychologist, along with an exact record of the position in which the cards are held. Any spontaneous remarks made by the client, as well as any expressions of emotion or incidental patterns of behavior are also noted. The examiner must determine whether the client uses a part of the blot or its entirety for his or her responses. The examiner must also note if the client uses any particular region of the blot or any combination of specific regions. Any observation made by the client while taking the test which denotes movement, depth, texture, vagueness or haziness should be noted. Finally, of course, the examiner notes in detail what the individual reports seeing in the blot (e.g., human features, animal features, diagrams, etc.). A popularity score is developed on the basis of the frequency of responses given by the client relative to responses from the general population.

The Holtzman ink blot technique, while similar to the Rorschach in that it also uses ink blots, differs dramatically from it in other ways. The Holtzman provides two series containing 45 cards each, with standardized scoring methods which are clearly described in an accompanying manual. Twenty-two response variables are scored and percentile ratings are attributed based on the normative sampling. The test can be used with persons ranging in age from early childhood through adulthood.

The Thematic Apperception Test (TAT) is a projective test for personality assessment using a highly structured series of stimuli to elicit complex and well organized verbal reponses. The interpretation is based on a qualitative analysis by the examiner. The test is comprised of 19 cards presenting relatively vague pictures in black and white, as well as one card that is blank. The person being examined is asked to make up a story to fit each card presented and is also asked to tell what led up to the event shown in the picture. The client is then asked to describe what is happening at the present moment and what the characters in the card are feeling and thinking, and is also asked to suggest an anticipated outcome. It is the context of these stories that must be analyzed by the examiner in the interpretation.

Word association tests such as the Rotter Incomplete Sentences Blank consisting of 40 sentence stems are also used for personality assessment and are considered projective tests. Each completed sentence is scored based on a seven-point scale reflecting the degree of adjustment or maladjustment indicated.

The Machover Draw A Person Test (DAP) is a qualitative measure with many factors, including the absolute and relative size of the male and female figures, the quality of the lines, the sequence of the parts drawn, the stance of the figures, whether a front or profile view is drawn, the position of the arms, the depiction of clothing, and the background effects presented.

A similar test to the DAP is the house-tree-person projective technique. The client is asked to

draw a picture of a house, a tree, and a person in turn with the examiner making extensive notes on the sequence of parts drawn, the spontaneous comments being made by the client and any expressions of emotion. The drawings are analyzed in a quantitative and qualitative fashion.

§ 2.13 Review of Medical Information

A review of medical information such as physician's reports, hospital records, etc., is a primary part of the rehabilitation evaluation as it provides a basis for further research to identify transferable skills and vocational handicaps. Failure to review the medical facts of the case will also have a negative impact on the credibility of the rehabilitation professional's report and his testimony in court.

The final aspect of the rehabilitation evaluation is the review of the pertinent medical information, emphasizing the present disability but also including any related medical information. The medical record should include reports of the attending physician or physicians and independent medical evaluations, along with any physician's depositions. Also reviewed should be the hospital records and the nursing, physical therapy, occupational therapy, speech therapy, and cognitive retraining notes, as applicable, of course, to each client.

There are several reasons for the review of medical information. The first, and most obvious, is the development of an accurate understanding of the objective medical findings involved in the case. Once this is accomplished, it is possible to review the information to determine how it affects the individual's vocational potential. The medical evaluation should also be studied to evaluate any inconsistency between the physician's reports, objective medical findings and subjective statements in relation to the client's history of medical treatment and subjective complaints. Once this review of the medical information is thoroughly accomplished, it is possible to begin evaluating existing vocational handicaps as well as the client's present and potential transferable skills.

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