

# Chapter 1

## Introduction

### History and Development of the *BWAP*

The *Becker Work Adjustment Profile* (*BWAP*) is the published version (Becker, 1989) of an earlier evaluation rating scale first developed at the Columbus State School in Columbus, Ohio for people with mental retardation. The forerunner of the *BWAP*, titled "Rating Scale in Sheltered Work" (Becker, 1966), was one of five core assessment scales devised to assess behavior change in institutionalized people with disabilities.

The core instruments were developed in response to a federal grant awarded to the State of Ohio through Title I of the Elementary and Secondary Education Act Amendment of 1965 (PL 89-13). Federal support extended by Title I required state governments to provide a detailed description of the project and samples of evaluation tools used in the collection of test scores on each participant.

State residential facilities having custodial care of people with mental retardation and related developmental disabilities, submitted proposals to an Ad Hoc Committee in the Ohio Division of Mental Hygiene (now called the Ohio Department of Mental Retardation and Developmental Disabilities) as strategies for the education, training, and evaluation of people with mental retardation. The program model and test protocols submitted by the author were unanimously adopted by members of the Ad Hoc Committee and introduced into each participating residential institution in

Ohio as the standard for instruction and client evaluation.

Following the completion of Title I projects in residential institutions in Ohio, two articles soon followed in the literature: special programs in family-living practices for EMR and TMR children (Becker, 1969) and the enhancement of oral-aural language skills in institutionalized children with mental retardation (Becker, 1970). Two later articles examined the topics of job placement of people with mental retardation (Becker, 1976) and barriers to fulfilling career training of children and young adults identified as trainable mentally retarded (Becker, 1979).

The *BWAP:2* is the year 2005 revision of the 1989 *Becker Work Adjustment Profile*. Like its predecessor, the test is gender fair, complying with the regulations of Title IX of the Education Amendment of 1972 prohibiting discrimination in education on the basis of gender. In 1975, the passage of PL 94-142, the Education for All Handicapped Children Act, and amended in 1997 as the Individuals with Disabilities Education Act (IDEA, PL 105-17), clearly established provisions that guaranteed that students with disabilities "shall receive a free, appropriate, public education in the least restrictive educational environment."

Implementation of the education acts and amendments have significantly contributed to the

early development of practical tools and strategies, much like the *BWAP:2*, that reliably and validly measure an individual's work habits, attitudes, and skills regardless of the degree of severity of each person's disability.

Longtime test users will find most of the standard test features intact: four domains and a composite or total score, administration and scoring procedures, norms for special needs students and adults, and a questionnaire booklet. However, the *BWAP:2* will reveal some important changes including a redesigned Individual Profile Form (IPF) that summarizes scores to yield an empirically based work placement track, a descriptive scale of work supports that is associated with the general level of work placements, and a single profile that is more easily read and interpreted using standard scores. Improved too, are the normative tables that are more expanded than in the earlier version. Included in this edition of the *BWAP:2* are norms for people who are economically (educationally) disadvantaged who were not represented in the original version. A user-friendly manual with a changed format includes measures on reliability and validity and an updated standardization sample of 4019 people with diverse disabilities. Included too, is a section on case studies of participants who were randomly selected from the *BWAP:2* standardization group.

## Work Evaluation Approaches

Before describing how the *BWAP:2* is designed to assess vocational competence in individuals, a brief discussion of approaches to work evaluation is beneficial. There are four major methods of client work evaluation, connected with as many different approaches of obtaining data. These are characterized as (a) work samples, (b) job analysis, (c) standardized testing, and (d) situational assessment.

**Work samples** are replicas or mock-ups of some work activity which resemble and closely simulate the actual job task as it occurs in industry (Hardy & Cull, 1973). McLaughlin and Lewis (2005) state that "work samples are designed to assess students' ability to perform tasks that are similar to those they might encounter in actual work situations" (p. 596).

**Job analysis** is a technique that involves the analysis of a job into tasks, and tasks into working units. Each individual is observed as he/she performs each unit of work. The procedure is fundamentally a task analysis of specific skills required by a job. Restructuring of the job may occur to accommodate the skills of individuals with disabilities (e.g., cerebral palsy).

**Standardized tests** ensure that the administration, scoring, and interpretation procedures are standard or set. Although the tests are designed to assess specific areas (i.e., vocational interest, reading, motor skills) they often combine related areas as subtests to establish a subject's level of awareness and knowledge about careers, jobs, and work habits and attitudes. The *Reading-Free Vocational Interest Inventory:2* (Becker, 2000), is an example.

**Situational assessment** offers the opportunity by vocational evaluators or supervisory staff to observe regularly the work behavior of trainees or workers in actual job activities or work tasks. The general vocational (employability) skills observed include punctuality, dependability, cooperativeness, and the like. The on-site assessment is quantified using rating scales or checklists that assess work behaviors of vocational counselor interest. The assessment of general vocational skills of trainees and incumbent workers requires the method of situational assessment which is predictive of job maintenance (Chan et al., 1997). The *Becker Work Adjustment Profile:2* is classified as a situational assessment tool that assesses clients' general employability skills using a behavior rating form.

## The Nature of Vocational Competence

Vocational competence is a construct that is considered of central importance in the field of rehabilitation and vocational assessment of people with disabilities. It is operationally defined as a qualitative statement about the work adequacy (functioning) of persons who are mentally retarded, learning disabled, physically disabled, emotionally disturbed, and economically disadvantaged who lack basic adaptive work skills. The focus of vocational competence is directed at the work behaviors a person *typically* displays when performing vocational tasks at some job or in

his/her work environment. The early task of quantifying vocational competence was accomplished by two social scientists, Levine and Elzey (1968; 1969) who devised the *San Francisco Vocational Competency Scale (SFVCS)* to measure vocational performance (competence) of persons with mental retardation.

The underpinnings of vocational competence was *measurement of clients' observed work behaviors and not their presumed ability*. That is, the SFVCS was devised to assess an individual's work behaviors (e.g., relating to co-workers and supervisors, accepting change in routine, following safety instructions, etc.) rather than the mastery (ability) of some work task. A consideration of the nature of vocational competence is the level at which one may function. Accordingly, an individual who demonstrates successful work skills, habits and attitudes for some level of work demand (i.e., day care, work activity, supported sheltered employment), is presumed functioning at that level of vocational competence.

According to McCarron and Dial (1976) "General vocational competency refers to the individual's overall adjustment to a work environment" (p. 15). Kokaska and Brolin (1985) see vocational competency as a product of work adjustment "by which individuals can learn acceptable work behaviors and employment skills" (p. 209). McCarron and Dial (1993) further note that vocational competency may be viewed on a continuum from least performance in meeting the demands of work to very high technical and professional levels. According to these authors, there is a positive relationship between vocational competency and work adjustment. The *Becker Work Adjustment Profile:2* is designed to measure (match) job requirements with client performance (i.e., work behaviors: conceptual, practical, social, and physical) to yield an index of vocational competence or Broad Work Adjustment (BWA).

## Description of the Profile

The *BWAP:2*, like its predecessor, is an observer rating scale designed to assess work habits, attitudes, and skills of people with special needs. It

is crafted to measure vocational competency of individuals, ages 12 to adult, who are mentally retarded, learning disabled, emotionally disturbed, economically disadvantaged, and physically disabled. People with specific disabilities such as cerebral palsy, autism, epilepsy, and head injury can be assessed with the *BWAP:2* scales to determine their level of vocational competency (work demand).

Vocational competency of individuals with physical, intellectual, and emotional disabilities is judged by supervisory staff such as vocational evaluators, rehabilitation counselors, occupational therapists, work-study specialists, teachers, psychologists, and other professionals who interact with the client during the work day. *Vocational competency is defined by typical performance, not ability*. The rating scale is intended to assess observed work behavior and not ability. That is, each person who is rated with the *BWAP:2* earns a total score (BWA) that places him or her at some level of vocational competency (i.e., day care, sheltered work, transitional, etc.).

The *BWAP:2* measures work behavior and related activities on a 5-point descriptive-graphic rating tool (Cronbach, 1970). The scale is descriptive as each of five points corresponds to a recognizable or definable behavior state. It is graphic in that the rating scale has multiple units on a horizontal line that range from "0" (least skill) to "4" (most skill). Items are written developmentally. That is, descriptions of each measurable trait/behavior demonstrate increased progress of vocational competence from the lower through the upper end of the 5-point scale. The *BWAP:2* is composed of a series of vocational coping skills that when combined allow an individual with disabilities to be assessed for his or her level of work demand.

## The *BWAP:2* Questionnaire Booklet

The Questionnaire Booklet contains 63 items, extensively researched and factor analyzed distributed within four domains (factors) and a composite or total score called Broad Work Adjustment (BWA).

The domains and total score are listed as:

Work Habits/Attitudes	HA
Interpersonal Relations	IR
Cognitive Skills	CO
Work Performance Skills	WP
Broad Work Adjustment	BWA

The questionnaire is administered by vocational personnel who are familiar with the person's adjustment to the daily demands of the work environment. Examiner requirements to administer and interpret the *BWAP:2* is Level B, as defined by the American Psychological Association on Test Standards (APA, 1999). In practice, qualified raters include personnel who have a close working relationship with the trainee or worker.

The *BWAP:2* questionnaire was developed for use in a wide range of vocational facilities and for numerous types of placements where individuals with disabilities are employed as full- or part-time employees. These facilities include residential developmental centers, vocational rehabilitation centers, sheltered workshops, work activity centers, day care centers, enclaves, supervised work-study placements, and community-competitive employment.

The Questionnaire Booklet contains the test items, rater information on scoring an individual's work behavior, and space for recording relevant data about the individual being evaluated and about the evaluator. The Individual Profile Form (IPF), located at the back of the test booklet, contains a *Score Summary* section for the evaluator to record an individual's raw and derived scores and space to enter levels of work placement and work support needs for each domain and composite score. A profile of work demand, called the *Vocational Competency Profile*, presents test scores in graphic form that highlights the composite (total) score or BWA that estimates an individual's placement in one of six categories of job training or employment. The IPF sheet is detachable from the Questionnaire Booklet and may be filed with or without the Booklet. When the *BWAP:2* is used with the *R-FVII:2* for a comprehensive assessment of worker traits and vocational interest, the Summary Forms (score sheets) of each instrument are attached for a quick and easy review of an individual's performance.

This second edition, called the *BWAP:2*, is the product of a comprehensive review of 15 years

since first introduced to assess individuals with disabilities in the United States and foreign countries. The items of the *BWAP:2* have undergone many item analyses with samples of persons with disabilities to attain the current level of item content. The *BWAP:2* domain scales were normed on 4019 persons that included 1621 who were classified at different levels of mental retardation using the diagnostic code of the American Psychiatric Association (2000). A discussion of the norming sample and process is presented in chapter 4.

## Research

The *BWAP:2* may be used in research projects when vocational habits, attitudes, and skills are investigated.

Examples of specific topics are:

1. To determine the strength and weakness among *BWAP:2* domains for people in sheltered employment. For people in community employment.
2. To identify people who are significantly below their peers in vocational areas as measured by the *BWAP:2* domains.
3. Is there a significant relationship between measured intelligence and total score on the *BWAP:2*? Between measured intelligence and levels of work placement?
4. What is the relationship between job satisfaction and *BWAP:2* total score? Between self-concept and *BWAP:2* total score? Between vocational interest and *BWAP:2* domains and total score?
5. Are there significant differences between males and females on the *BWAP:2* domains and total score? Between people with different disabilities?
6. What is the relationship between subscales of the *Supports Intensity Scales (SIS)* and the *BWAP:2* domains and total score? Between *BWAP:2* levels of work placement? Between *BWAP:2* levels of work supports?

# Chapter 2

## Administration and Scoring

### General Administration Guidelines

The amount of training required of the evaluator to administer, interpret, and use the test results of the *BWAP:2* is level B as defined in chapter 1. The *BWAP:2* is administered by an evaluator who has closely observed the daily work habits, attitudes, and skills of the trainee or worker.

Different options are available to an evaluator when responding to items of the Questionnaire Booklet. In *first person* assessment, the evaluator independently scores each item having sufficient opportunity to observe the person's behavior on each task. However, if an evaluator has little or no opportunity to observe a person's work behavior, or if the person has not had an opportunity to perform an activity, *estimate* the person's performance using your observations of his/her behavior on similar tasks. Complete *all* items even if the person is not currently performing a listed activity.

In *third party* assessment, the evaluator requires an additional informant to complete the scale. This is usually another employee or a parent or guardian who knows the person well. The scale can be administered in 15 minutes or less.

The *BWAP:2* is suitable for use with persons from age 12 through adult (age 69). Males and females are assessed using one Questionnaire Booklet. The cover page of the Questionnaire Booklet provides space for descriptive information about the person being evaluated. In the spaces identified, record the person's name, gen-

der, date of testing, school/facility, grade (if applicable), chronological age, and IQ. Record the person's primary disability or diagnosis. Examples of a person's primary disability are mental retardation, cerebral palsy, or learning disability and these are entered in the appropriate space. When the secondary disability is known, this is recorded as epilepsy, speech disorder, or hearing impaired. Record the name and title of the evaluator who is rating the client. Write "none" in the spaces that do not apply to the person being rated.

### Scoring

#### Rating Performance Level

Each item in the four domains represents a behavioral activity or trait (e.g., "Motivation," "Cooperation," "Quantity of Work") designed to be rated on a 5-point scale. Each item is scored (rated) from 0 to 4 determined by the rater's judgment of the individual's performance on a task *without help or other supervision*. Few items are scored with help or other assistance and these are indicated by the item in the Questionnaire Booklet. The important feature to remember in scoring performance of a task is whether the individual *does* perform rather than *can* perform the activity.

The brief descriptive phrases inserted above each numerical point (0 through 4) are intended to be illustrative of the behavior which would justify a rating in that section of the scale. The descriptive phrases within each item are ordered developmentally with numerical rating "0" representing least vocational competency and numerical rating "4" representing most vocational competency.

The rating of the individual on each item is indicated by circling the numerical value on the scale that is most representative of the worker's behavior over a period of time. All items on the questionnaire must be completed—*skip no items*. Where necessary, *estimate* the individual's performance from your observation on other tasks.

### General Rating Guidelines

The numerical points on the 5-point scale are associated with the following general criteria when used in rating an individual.

**A score of 0**, the lowest rating, signifies that the individual's performance is limited. A rating of "0" indicates that the individual is unable, never or rarely exhibits the behavior although there is opportunity to do so. When a physical or sensory disability prohibits a behavior, rate "0". For example, deafness prohibits the individual from taking a phone message; a physical disability of the lower extremities prohibits the individual from engaging in gross motor activities; or when the behavior is beyond the individual's capabilities, as for example, profound retardation prohibits ability to do banking, budgeting, and related money handling tasks—rate "0". *If the individual does not perform a task, regardless of the reason, rate "0".*

**A score of 1** signifies that the individual's performance is moderately low. A rating of "1" indicates that the individual exhibits the behavior but does not do it well or the result is unsatisfactory.

**A score of 2**, the middle rating, signifies that the individual's performance is adequate. A rating of "2" indicates that the individual exhibits the behavior and does it fairly well or the result is generally satisfactory but could be improved upon.

**A score of 3** signifies that the individual's performance is moderately high and exceeds adequate or typical performance. A rating of "3" indicates that the individual exhibits the behavior and does it well or the result is satisfactory.

**A score of 4**, the highest rating, signifies that the individual's performance is exceptional. A rating of "4" indicates that the individual routinely or habitually exhibits the behavior and does it very well or the results are highly satisfactory. Rate the activity "3" if performance is exceptional, but not routinely performed. Rate "4" if the performance is exceptional and routinely or habitually performed. For example, when responses to change in work routine are accepted willingly by the individual on 8 out of 10 occasions—rate "4".

### Scoring the Booklet

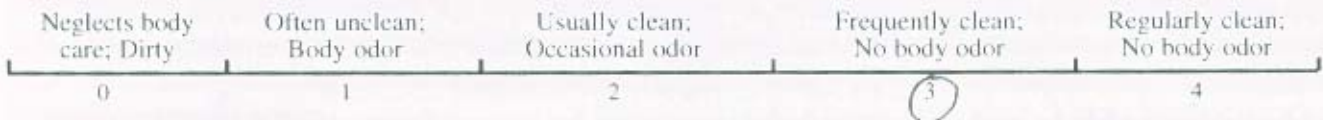
1. Beginning on page 2 of the *Questionnaire Booklet*, circle the numerical rating that best describes the person's "Personal Hygiene" in item one. By way of example, in Figure 2.1 the evaluator circled the numerical rating "3", ("Frequently clean; No body odor") that best described the person's personal hygiene. For item 2, "Appropriate Clothing," the evaluator circled numerical rating "4" as the person regularly wore proper dress in the workplace. Similarly, continue to circle the numerical rating of each item, in each of the four domains, that best describes the person's usual or customary work behavior.
2. Next, sum the circled numerical ratings that apply to each domain. Record the raw score total of each domain in the square box at the bottom of the page. Figure 2.1 presents the scoring of individual items and raw score total for the Work Habits/Attitudes domain.

### Description of the Domains

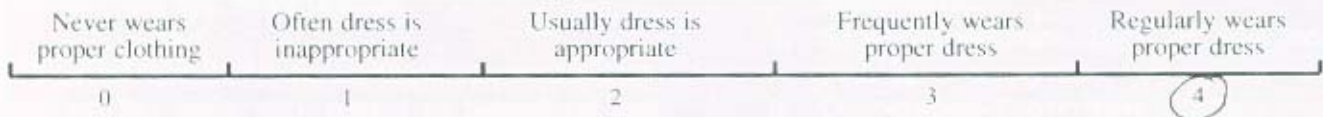
Responses to 63 items were keyed to yield scores in four domains and a global score. Each domain consists of item clusters that assess work habits, attitudes, and skills that correlate with that scale. The name of each domain was determined from

## WORK HABITS/ATTITUDES DOMAIN (HA)

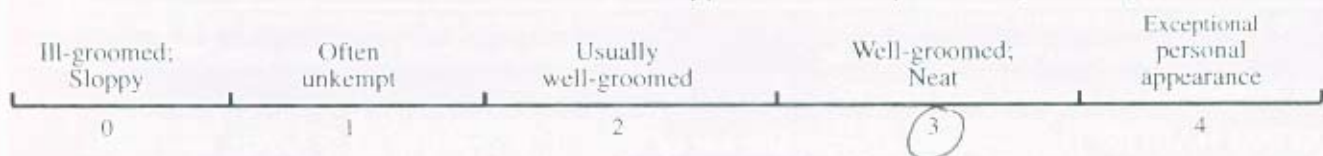
### 1. PERSONAL HYGIENE: *Bathes, washes, and uses deodorants to maintain body cleanliness.*



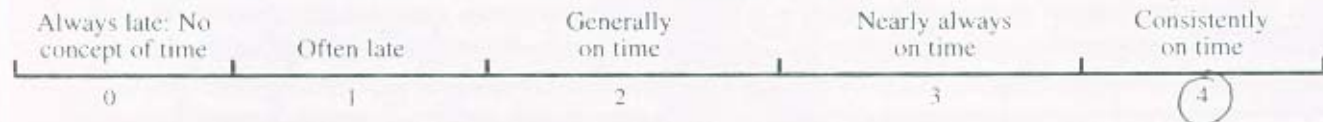
### 2. APPROPRIATE CLOTHING: *Wears appropriate dress in the work situation.*



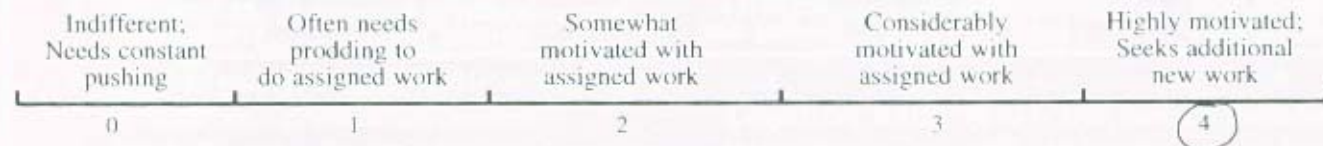
### 3. PERSONAL APPEARANCE: *Maintains a neat appearance and personal grooming.*



### 4. PUNCTUALITY: *Promptness for reporting to work at starting times in the morning, after lunch, and after break periods for a randomly selected 20-day work period.*



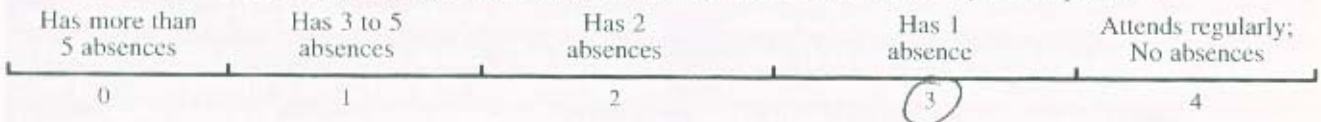
### 5. MOTIVATION: *Initiative and interest when performing job assignments.*



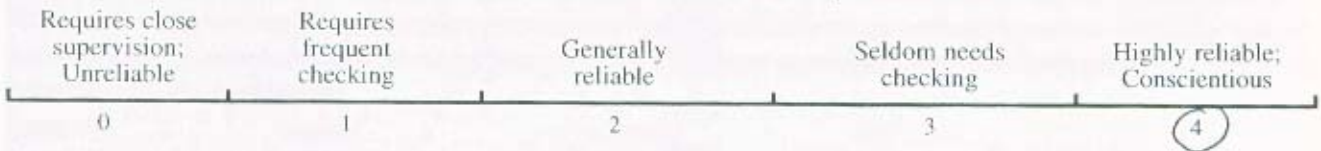
The next item for this domain is on the following page

Figure 2.1. Completed item page. The numerical rating that best describes the client's behavior is circled for each item.

6. ATTENDANCE: *Frequency of absences for a randomly selected 20-day work period.*



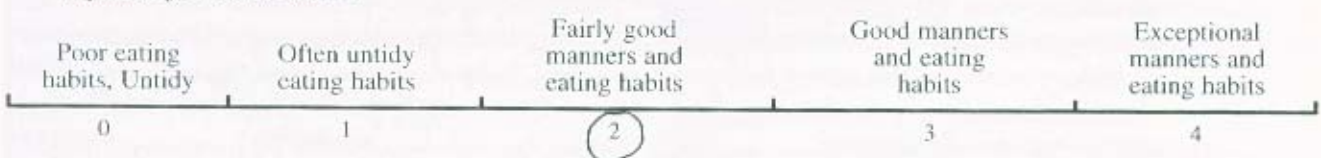
7. DEPENDABILITY: *Fulfills assignments in a reliable and dependable manner.*



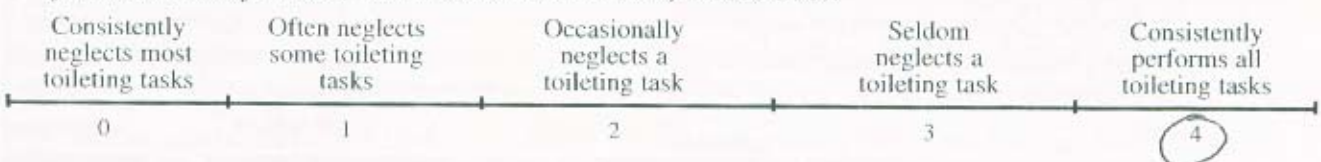
8. WORK POSTURE: *Works with good posture and positioning.*



9. EATING HABITS: *Demonstrates appropriate use of utensils, acceptable table habits, and polite requests for table items.*



10. RESTROOM USE: *Demonstrates self-care toileting tasks — uses toilet tissue appropriately flushes toilet after use, washes and dries hands, closes door.*



WORK HABITS/ATTITUDES DOMAIN  
RAW SCORE TOTAL

35

The next domain begins on  
the following page.

Figure 2.1. (Continued). Completed item page. The summed numerical ratings are inserted in the Raw Score Box.