

Job Observation and Behavior Scale: A Supported Employment Assessment Instrument

Michael P. Brady
Florida Atlantic University

Howard Rosenberg
Florida International University

Abstract: As the benefits of supported employment are extended to increased numbers of people with disabilities and other employment challenges, the need for objective employee performance evaluations has become obvious. The Job Observation and Behavior Scale (JOBS) is one such assessment instrument that is sensitive to both the work performance and support needs of people who participate in supported employment. This paper presents the role of JOBS in promoting objective employee performance evaluations, and summarizes the technical properties of the instrument.

For most Americans, work is central to the role they occupy in society, intricately tied to culture and social values. As such, work takes on a high priority in an individual's life (Bullis, Nishioka-Evans, Fredericks & Davis, 1993; Kronick, 1981). Most people spend $\frac{1}{3}$ of each day for $\frac{2}{3}$ of their lives working. Benefits of employment are both economic and social. Economic benefits include movement toward financial independence, opportunity to contribute to one's community, and a decreased reliance on others for support (Anthony, 1994; Reisman & Reisman, 1993; Rosenberg, Cheyney, & Greenberg, 1991). Social benefits include the opportunity to establish personal and professional relationships, develop self-confidence, and add personal meaning to one's life (Griffin, Rosenberg, Cheyney, & Greenberg, 1996; Mancuso, 1990; Storey, Rhodes, Sandow, Loewinger, & Petherbridge, 1991).

The personal benefits attained from work are intricately linked to one's success on the job, a phenomenon established in one's early work history. For nearly four decades employment professionals have linked success in entry level jobs to development of work behaviors and dispositions. As early as 1961, patterns of social and work behavior associ-

ated with successful employment were identified, including getting along with others, following directions, cooperation, cheerfulness, accepting criticism, concentrating on one's work assignment, initiative, and promptness (Kolstoe, 1961; Warren, 1961). A decade later, Krantz (1971) identified these patterns as "critical vocational behaviors" — specific behaviors that all employees must demonstrate to obtain and maintain employment. Murphy's research (1972) expanded these critical work behaviors to include responsibility, pride in one's work, being well groomed, honesty, and quality of one's work.

In more recent years employment professionals have sought to extend the benefits of work to entry level workers and workers with disabilities (Brady & Rosenberg, 2002). For school-aged students, this involves shifting one's curriculum focus from school to work. For adults, attention has focused on moving from sheltered to competitive models of employment. A specific initiative of the last two decades has been development of supported employment models that involve integrating workers with unique employment needs into the competitive workforce, along with supports to enable workers to maintain employment and advance within their jobs. While various models of supported employment exist (Conley, Rusch, McCaughrin, & Tines, 1989), nearly 2/3 of adults with disabilities remain unemployed, and those who are employed are seven times more likely to remain

Correspondence concerning this article should be addressed to Michael P. Brady, Department of Exceptional Student Education, Florida Atlantic University, Boca Raton, FL 33431.

in sheltered workshops than in community jobs (Levy, Jessop, Rimmerman, Francis, & Levy, 1993; Nietupski, Hamre-Nietupski, Vanderhart, & Fishback, 1996). Similar challenges exist for other chronically under-employed persons. Language and cultural differences, socioeconomic status, and negative stereotypes involving ethnicity and gender are frequent inhibitors to employment (Alston & McCowan, 1994; Smart & Smart, 1992). The salaries associated with entry level jobs work against beginning employees who must struggle with childcare, transportation, and health care expenses (Alston & McCowan, 1994; Vash, 1982). Many welfare reform initiatives of the 1990s have recognized that these factors are serious obstacles for entry level workers.

Where conditions such as disability, language differences, and welfare status were once considered de facto barriers to employment, Wehman (1996) noted the positive outcomes associated with supported employment typically replace the barriers by those who face employment obstacles. Thus, the focus of supported employment has shifted to a more pragmatic focus of finding and designing supports for workers entering the job market (Nisbet & Callahan, 1987; Olney & Salomone, 1992; Rusch & Hughes, 1989). Ultimately, for supported employees to successfully maintain their jobs and receive promotions and pay increases they must demonstrate critical vocational behaviors (Krantz, 1971). These relevant behaviors must be uniformly evaluated if they are to form a consistent set of criteria that is fair to all employees and useful to job coaches, employers, and supervisors. Unfortunately, employers and professionals have few resources available to help them make employment-related decisions (e.g., job retention, promotions, salary increases) about entry-level workers and those who require support. The lack of resources is exacerbated by federal and state initiatives that establish employment as an expected outcome of both education and human service assistance programs.

The Job Observation and Behavior Scale

The Job Observation and Behavior Scale (JOBS) is a work performance evaluation sensitive to the needs of entry-level workers and

workers who require support (Rosenberg & Brady, 2001). JOBS was developed to meet the critical need for an employment instrument which is standardized, based upon realistic supported employment practices and expectations. It is intended for employers, job coaches, educators, and rehabilitation professionals who are involved in the evaluation, training, and placement of secondary students and adults with special employment needs into the competitive workforce. JOBS' standardization permits professionals (a) to evaluate the quality of workers' job performance, (b) to assess their need for supports, and (c) to compare the quality of their performance to workers not receiving supports who perform the same competitive jobs.

JOBS content reflects actual performance of employees' observable work-related daily living skills, behavior, and job duties. Items are behaviorally anchored and include the skills, attitudes and behaviors necessary for continued employment, promotions and pay increases in entry-level work settings. JOBS content and organization allow at least 6 specific applications including:

1. Determining the *quality of performance* of supported employees in their current jobs;
2. Determining the *types of supports* that employees use or need to use in their current jobs;
3. Monitoring supported employees' *growth and development* in employability over time;
4. Providing a set of evaluation data for *objective employment decisions* involving continued employment, pay raises and/or promotions;
5. Determining the *need to modify* current supports that would assist employees to maintain employment, acquire pay raises, or receive promotions; and
6. Assessing the *differential effects of training strategies and supports* on the quality of supported employees' job performance.

How JOBS is Organized

The Job Observation and Behavior Scale is composed of three subscales. *Work-Required Daily Living Activities* (DLA) (13 items), summarizes the self care and personal behavior expectations within a competitive work environment. *Work-Required Behavior* (BEH) (8

TABLE 1

JOBS Subscales and Item Summaries

<i>Work-Required Daily Living</i>	<i>Work-Required Behavior</i>	<i>Work-Required Job Duties</i>
Attendance	Stress Tolerance	Quality of Work
Punctuality	Interpersonal Work Interactions	Quantity of Work
Personal Hygiene & Grooming	Interpersonal Social Interactions	Speed of Learning New Tasks
Travel	Changes in Routines	Performance on Previously
Verbal Communication	Honesty	Learned Tasks
Non-verbal Communication	Reaction to Criticism	Multiple Task Performance
Money	Work Initiative	Organization of Work Tasks
Reading	Work Endurance	Safety Procedures
Math		Cleanliness of Work
Self Identification		Environment
Work Schedule		Employee Motivation
Personal Schedule		
Work Facilities		

items) represents the interpersonal and social skills needed for employment. *Work-Required Job Duties* (JD) (9 items) characterize the actual job task functions common to entry level jobs. Cumulatively, the 30 JOBS items represent the most critical patterns of behavior needed for obtaining, maintaining and developing employment opportunities.

JOBS items were developed using a two-step process. First, the vocational and rehabilitation literature was reviewed for the work adjustment indicators that appeared most frequently, or were found to be most important, in employability studies. Next, job coaches, employers, supervisors, rehabilitation counselors, special education teachers, vocational education teachers, and support coordinators reviewed these indicators for their appropriateness as test items, and added or deleted items based on their professional judgment. This process resulted in a pool of 30 items that was submitted to a Q-sort technique. The resulting three subscales represented the clusters perceived as most closely related to one another. Table 1 summarizes the subscales and their corresponding items.

Administration of JOBS

Each item in JOBS is scored by evaluating two separate indicators of productivity: the *Quality of Job Performance* and the *Type of Support* that is provided to a worker. Notation also is made if

adaptive or prosthetic materials are used by the employee. In addition, Guiding Questions are provided for evaluators' qualitative assessment.

The scoring protocol for the *Quality of Job Performance* is based on a 5 point scale ranging from "Superior Performance" to "Not Acceptable" for competitive employment. Evaluators use this scale by comparing the employee to other workers who do not receive supports. The scoring protocol for the *Type of Support* also is based on a 5 point scale ranging from "No Unique Supervision or Support" to "Continuous Supervision From the Job Coach or Supervisor."

Once an evaluator scores all items on a recording form, a profile is established for each worker's *Quality of Job Performance* and *Type of Support*. Scores are interpreted through both a quantitative and qualitative analysis. The *quantitative analysis* involves comparing a worker's JOBS ratings (i.e., mean scores, standard deviations) to workers' ratings from the standardization studies. In addition, individual item analyses are conducted allowing evaluators to interpret strengths and problem areas that could interfere with an employee's continued employment. This includes "red flag" areas that might result in interventions or supports to assist a worker improve his or her performance.

A *qualitative analysis* of JOBS scores includes answering Guiding Questions at the end of

each subscale. A summary of the Guiding Questions includes:

1. Is the quality of performance adequate for the employee to maintain employment?
2. Is the quality of performance adequate for the employee to receive a salary increase and/or job promotion?
3. Would a decrease in the type of support adversely affect the quality of performance?
4. Would a change in the type of support (e.g., increase in supervision; addition of an adaptation or prosthesis) enhance the quality of performance?

Next, an examination of the Adaptive or Prosthetic (AP) materials used (or not used) and their real or potential impact is needed to establish whether an AP might assist an individual to improve the quality of his or her work performance. For example, an employee who uses a pictorial template representing food items at a salad bar to establish which food bin needs to be replenished would be scored as using an "AP."

Finally, an evaluator should interpret JOBS scores in the context of a worker's life circumstances. This includes the presence of medical, social, familial, or other variables that impact the quality of a person's life, and thus the quality of an employee's work performance. To assist evaluators, case studies are provided in the JOBS Examiner's Manual as a prototype for interpretation. The case studies provide three scenarios including:

1. Two profiles of employees with similar quality of work but who receive different levels of support;
2. A profile of an employee poised to leave sheltered employment for supported or competitive employment; and
3. A profile of a high school student successful in work experience who transitions into supported employment.

Establishing the Technical Characteristics of JOBS

Prior to the publication of JOBS, a series of reliability, validity, and standardization studies were conducted to establish the statistical properties of the instrument. While a detailed description of the methodology and results are presented in Rosenberg and Brady (2001), a summary of these data is included here.

Participants. Evaluators involved in the standardization studies held professional titles of job coach, employer, special education teacher, vocational education teacher, rehabilitation counselor, case manager, and support coordinator. The evaluators collected JOBS data on three categories of workers. The *first category* included high school students enrolled in various types of special needs programs including special education, vocational education, dropout prevention, ESL, and alternative education who participated in supported employment and/or work experience programs as part of their high school curriculum. The *second category* included adults with special employment needs including people with disabilities, welfare to work participants, people with histories of substance abuse, in full- or part-time supported employment or in sheltered work. The *third category* included general entry level, full- or part-time employees who did not receive work supports. For the reliability and validity studies, 225 workers ranging in age from 15 to 59 years old from two regions of the country (Florida and Connecticut) were included.

Cumulatively, the job categories represented by the student and adult samples included the following entry level worker roles and positions: clerical workers (filing, duplicating, telephone answering), landscaping and agriculture (lawn maintenance, gardening), assembly and light manufacturing, hotel and restaurant industry (food preparation, table bussing, housekeeping, pool maintenance), automotive (washing & waxing, automotive detailing), retail (sales, bagging, stocking, customer service), custodial, construction, and child/geriatric care.

Reliability. Two types of reliability were established for JOBS: inter-rater reliability and test/re-test reliability. Inter-rater reliability was established by evaluators who independently rated the same supported, sheltered, or entry level employees at their respective work sites. Pearson product moment correlations established the consistency between these independent ratings. Thus, the inter-rater reliability studies established the consistency of JOBS' ratings across different evaluators. These data are presented in the first results column of Table 2.

Test/re-test reliability was established when

TABLE 2

Results of JOBS Reliability and Validity Studies

Group	Inter-Rater Reliability	Test/Re-test Reliability	Concurrent Validity
Adults: Supported & Sheltered (<i>n</i> = 135)			
Quality of Performance	.85	.84	.79
Type of Support	.84	.86	NA
Adults: Entry Level Workers (<i>n</i> = 45)			
Quality of Performance	.91	.88	.81
Type of Support	.93	.97	NA
High School Students (<i>n</i> = 45)			
Quality of Performance	.74	.71	.78
Type of Support	.82	.93	NA

Note: NA indicates that a correlation coefficient is not applicable for this cell.

the evaluators were asked to re-administer JOBS to the same employees approximately 2 weeks after their first administration (initial scores were kept separate so they would not be available for review). Pearson product moment correlations were computed to compare their initial and subsequent ratings. Thus, the test/re-test reliability study established the stability of JOBS' ratings by job coaches and supervisors over a 2-week period of time. These data are presented in the second results column of Table 2.

Validity. Two types of validity were established for JOBS: content validity and concurrent validity. Content validity was established by linking the actual items in JOBS to prior research on work adjustment, employability, and supported employment as described in the first section of this manuscript. Items were selected only if they appeared in the literature (a) more than 10 times, (b) across a minimum of 10 years, and (c) in the works of at least 5 independent investigators. Thus content validity was established by linking each individual JOBS test item to the rehabilitation and employment research.

Concurrent validity was established by comparing evaluators' ratings of employees' Quality of Performance composite scores against their *global* ratings of employees' work. Thus the relation between evaluators' *best professional judgment* about employees' work performance and their composite JOBS ratings constituted concurrent validity. These findings are summarized in the third results column of Table 2.

Standardization. The initial standardization of JOBS was based on the same sample and evaluators' ratings as described in the reliability and validity studies. Mean scores, standard deviations, and ranges were computed for each of the three subscales and for the composite scores for both the Quality of Performance and Type of Support. The standardization provides a basis for comparison of an individual employee's scores to the scores representative of other employees with similar characteristics.

The *Quality of Performance* comparisons showed substantial differences across the three groups. Composite score means for the high school students, the adults in supported and sheltered employment, and the entry level employees were 80.9, 92, and 135.5 respectively (given a possible score of 30 - 150 points). The *Type of Support* comparisons also showed substantial differences, with means of 85.7, 112.4, and 138 points for the respective groups on the same 30 - 150 point scale. (Group comparison scores for individual subscales showed similar patterns for both constructs and are delineated in the original report.)

Results of the composite and individual subscale scores indicated different patterns of work performance and support needs across (a) the students in work training programs and the adult employees, and (b) the two groups of working adults. While these patterns are important in evaluating the technical adequacy of JOBS, they also assist employers, job coaches, and other employment specialists in

basing employment decisions for individual workers within the context of similar employees. Thus, JOBS assists in establishing an individual profile for each employee who participates in the evaluation, but also provides evaluators with a comparative view of the quality of an employee's work performance and support needs to other employees.

Summary

If people with employment challenges are to receive the benefits of supported employment, attention needs to be paid to the continued development and delivery of supports. While much progress has been made in the delivery of natural and personal supports in schools and the workplace (Brady, Hunter, & Campbell, 1997; Storey & Garff, 1997; Wehman & Kregel, 1995), objective systems of evaluation are needed that are sensitive to the unique arrangements of the various supported employment models. The Job Observation and Behavior Scale is one such instrument. JOBS has the potential to help educators, employment professionals, and employers to base their decisions on objective data involving the quality of a worker's performance, given the nature of support provided on the job. Future studies will determine the applicability of JOBS to wider populations of employees who need supports, and the utility of JOBS for a broad array of employment decisions.

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