

Frequently Asked Questions: Functional Capacity Evaluations in the Employment Testing Process

General Issues

Have FCEs been shown to reduce injuries and decrease medical costs?

This is unknown, as no reports demonstrating this claim have been published in the peer-reviewed literature. Job-related physical ability tests *have* shown this result (Harbin & Olson, 2005; Keyserling, et al, 1980a & b; Biering-Sorensen, 1984; Arnold, et al 1982; Reimer, et al., 1994; Chaffin, 1974; Randolph, 2000; Rayson, 2000; Toeppen-Sprigg, 2000), but these are job-specific physical ability tests and not FCEs.

Are FCEs an efficient form of employment testing?

It is unlikely. Several proprietary FCEs are based on the 20 factors from the Dictionary of Occupational Titles. Few jobs require all of these factors in significant degrees. Yet many FCEs test for all of these factors in large test batteries. Tests can be as long as two days in length and be very expensive.

Research suggests that a more focused approach directed at the specific job is more effective (Gaudino, et al, 1999, 2001; Matheson, 2001).

We use a physical therapy clinic to conduct Functional Capacity Examinations for our company. Are they qualified to validate and perform these tests?

It depends. If they have additional education and experience in exercise science, industrial psychology, and tests and measurement they could be. Warren (2004) has questioned the credentials and experience of the therapists who provide proprietary FCE services. He noted that they lack the education, experience, or training to access testing equipment and that employment testing is not closely related to the therapeutic arts, but rather to biomechanics, kinesiology, physics, physiology, industrial psychology and exercise science.

Warren also questioned whether therapist training and education acquainted them with the professional testing standards and the Civil Rights Act (as amended) and the Americans with Disabilities Act of 1990. Warren is likely correct. The author conducted a review of a sample (10) of undergraduate and graduate physical therapy course catalogs which showed no courses in job analysis methods, psychometrics, tests and measurement or legal issues in employment testing.

Validity & Reliability Issues

Isn't there a great deal of published information that shows that FCEs are reliable and valid tests?

The major comprehensive reviews of all proprietary FCEs have concluded that both reliability and validity in the vast majority of FCEs is unproven (Pransky, et al. 2004; King, et al. 1998; Innes, et al. 1999a & 1999b).

What is a reliable FCE?

Reliability research with FCEs typically means that two independent observers will rate the performance of an individual subject in a similar fashion. Correlation coefficients are typically used to make this assessment. For example, the following pairs of ratings (2,3; 3,4; and 5,6) have a perfect correlation of 1.0 but the ratings are not the same. This type of reliability assesses how the observations vary, but little about the test itself.

The most reliable tests are those that do not use subjective ratings at all. For example, one could compute the test-retest reliability of two consecutive scores by the same subject on a Jamar Grip Strength device. The two scores will be very similar. Likewise, in a test of anaerobic power a person running the 100-yard dash on two consecutive days would be expected to have very similar scores on each trial. These are examples of test reliability and not observer reliability.

Brouwer, et al, (2003) found observer/rater estimates to vary ± 19.8 kg in a group of patients with a mean performances 31-29.3 kg. These are remarkably high error rates. Brouwer attributed this variance to differences in interpretations by the evaluator and measurement error and random error of the testing procedure itself.

Are there good examples of validation studies using FCEs?

Validation studies must be consistent with the principles and requirements of the professional standards (APA, SIOP) and the UGESP. Literature reviews of FCE practices (Gibson, et al, 1997; Newton, et al, 1993; Strong, et al, 1996; Velozo, 1993), and reviews of commercial systems (Innes & Straker, 1999a; 1999b; King, et al, 1998; Pranksy, et al, 2004) are unanimous in their conclusions: there is no empirical evidence to support one assessment approach or one system over another and no research to establish the predictive validity of these assessment practices.

The evaluation of assessment approaches articulated in training manuals (Blankenship, 1994; Isernhagen, 1992; Key, 1986; Lechner, Roth, & Straaton, 1991; Matheson, 1990) or professional programs is limited to reliability studies of selected instruments or measures.

Even those studies that are published have significant design limitations and/or are limited in scope and focus (Beaton, et al, 1995; Cooke, et al, 1994; Dusik, Menard & Cooke, 1993; Matheson, et al, 1995; Menard, et al, 1994; Newton, et al, 1993). Existing studies have evaluated components of the assessment procedures rather than the overall assessment and a person's ability to perform a job at work.

To date, no FCE has been validated for any job and published in the peer-reviewed literature.

The physical therapist that created our company's test did not provide a written validation study. Is this a problem?

This would be a problem only to the extent to which the FCE was a central factor in the decision not to employ a person in a protected class. Since Griggs (1971), all tests must be related for the job in question and consistent with business necessity. The failure of persons with real or perceived disabilities, females, and since March 30, 2005 (Smith v. City of Jackson) persons over age 40 have legal grounds to challenge how the validity study was conducted which resulted in their exclusion from a particular job.

In one recent case, the validation study consisted of a physical therapist meeting with a supervisor in a parking lot for two hours. After the meeting, the therapist listed some physically demanding job tasks and made a set of recommendations for a FCE and suggested a local clinic for testing.

Subsequently, a long-term employee, upon his return to work after undergoing cancer treatment, failed the test. The employer was unable to document, or even explain, the relationship between the FCE and the job. In this case the employer wisely chose to pay a large settlement this before this case went to trial.

We supplement our FCE with work simulations. Isn't this a content-valid test?

Possibly. However, content valid physical ability tests are very difficult to defend. Case law suggests that the job analysis must be extremely comprehensive. The content of the test must fully reflect the content of the job. Even with a comprehensive job analysis, work samples have several problems. First, if the test measures any skill that will be subsequently trained for, the test is an illegal employment practice. Second, work samples are subject to significant learning effects. Subjects who perform the same work sample on consecutive days can increase their performance by as much as 300 percent. This learning effect is proof that the test is unstable and unreliable. Few if any, work samples are ever examined for learning effects. This is a serious problem.

Work simulations typically require more test proctors, equipment and materials from the job, and more time to administer. If a job is relatively complex involving several physical abilities, these tests can become complex and time consuming.

Job Analysis Issues

Our physical therapist uses the DOT to characterize our jobs. Isn't this the best available tool?

The most recent job analyses found in the *Revised Fourth Edition of the DOT* are dated 1990. As of 2006, 100 percent of the DOT definitions are over 15-years old. A gradual change occurs in most jobs so that after 15 years it is no longer realistic to

expect that skills and abilities acquired in a job done then continue to apply. The DOT is obsolete has been abandoned by the Department of Labor.

Twenty-six years ago the National Academy of Sciences reviewed the DOT in concluded that the worker functions, including the strength demands, SVP, and GED variables were not based in then-current vocational theory. This problem was not corrected in the last edition of the DOT.

The National Academy of Sciences wrote of these worker functions:

Rather, they are frozen in a now outmoded mold. Scales that more or less adequately reflected the state of the art of vocational trait measurement at midcentury are now outdated. This condition serves to underscore the urgency of adopting a new strategy in producing the DOT that includes as an intrinsic aspect continuous research and technical improvement of the document as a whole and of each of its components (NAS, 1980, p. 168).

Likewise, the working condition and physical demand variables are essentially useless in the modern economy. They obviously were designed with unskilled factory and physical laboring jobs mainly in mind. As a consequence, they appear not to capture adequately the full range of variability in the working conditions and physical demands of jobs, omitting, for example, distinctions between machine-paced and worker-paced jobs, routine versus non-routine jobs, etc.

One of the chief problems with the DOT and the job analysis approach it uses is that it is simply inadequate to study the physical demands and working conditions of jobs. A single strength factor is used to cover all of the different types of human strength. The duration scales (0-33%, 33-67%, 67-100% of the time) are too crude to accurately measure either working conditions or physical demands.

What does the EEOC say about the DOT job analysis approach?

In 1992, the U.S. Department of Justice warned employers about using the DOT approach to job analysis in the *Technical Assistance Manual to the Americans with Disabilities Act* when it wrote:

Some job analysis methods ask current employees and their supervisors to rate the importance of general characteristics necessary to perform a job, such as "strength," "endurance," or "intelligence," without linking these characteristics to specific job functions or specific tasks that are part of a function. Such general information may not identify, for example, whether upper body or lower body "strength" is required, or whether muscular endurance or cardiovascular "endurance" is needed to perform a particular job function. Such information, by itself, would not be sufficient to determine whether an individual who has particular limitations can perform an essential function with or without an accommodation (DOJ, 1992, p. 11-20).

In effect, DOJ recommended that a task analysis be performed that demonstrated a linkage for each task to a specific ability such as muscular strength, muscular power, muscular endurance or any other ability. A simple broad categorical rating of a job for "strength" was considered insufficient for purposes of job analysis under the ADA.

Cutoff Scores

In our test, applicants who fall below the normative data for the US population fail. Can normative data be used to set passing levels?

Normative data in FCEs is used in many different ways. For example, grip strength a female applicant's score might be compared to females of the same age. A male taking the test would be compared to the normative data for other males of his age. Passing levels may be set at some level below the normative value for average for each group.

A problem arises when normative data is applied in the employment context. For example, the mean score for a 20-29 year old man on the grip strength test is 125 lbs. This means that a male who scores below 125 lbs. is below the 50% cutoff level. For a female of the same age, a score of 76 lbs. would place her in the top half of her age group. Thus, a male could fail the test with a score of 125 lbs. and a female could pass with a score of 76 lbs.

This type of scoring procedure demonstrates that the test bears no relation to the job, but only to the values on a normative data table.

While this is not only evidence of discrimination on the basis of gender and age, it is also a violation of the Civil Rights Act of 1991 which specifically states:

It shall be an unlawful employment practice for a respondent, in connection with the selection or referral of applicants or candidates for employment or promotion, to adjust the scores of, use different cutoff scores for, or otherwise alter the results of employment related tests on the basis of race, color, religion, sex, or national origin (Public Law 102-166 - Nov. 21, 1991).

Legal Issues

My physical therapist says the FCE complies with Civil Rights law.

The UGESP specifically warn employers that claims by test publishers and vendors or statements in marketing brochures or other advertising material will carry no weight in the event of a challenged employment practice.

Could my pre-offer test be illegal under the guidelines published by EEOC?

It's possible. To the extent that the answer is yes to any of the following questions, the FCE may violate the ADA as a prohibited pre-employment inquiry or medical examination.

According to the EEOC, an FCE may be a prohibited pre-employment inquiry if:

- Is it administered by a health care professional or someone trained by a health care professional?
- Are the results interpreted by a health care professional or someone trained by a health care professional?
- Is it designed to reveal impairment or physical or mental health?

- Is the employer trying to determine the applicant's physical or mental health or impairments?
- Is it invasive (for example, does it require the drawing of blood, urine or breath)?
- Does it measure an applicant's performance of a task, or does it measure the applicant's physiological responses to performing the task?
- Is it normally given in a medical setting (for example, a health care professional's office)?
- Is medical equipment used?

In many cases, a combination of factors will be relevant in figuring out whether a procedure or test is a medical examination. In some cases, one factor may be enough to determine that a procedure or test is medical.

Example: An employer requires applicants to lift a thirty-pound box and carry it twenty feet. This is not a medical examination; it is just a test of whether the applicant can perform this task. But, if the employer takes the applicant's blood pressure or heart rate after the lifting and carrying, the test would be a medical examination because it is measuring the applicant's physiological response to lifting and carrying, as opposed to the applicant's ability to lift and carry.

Below are some commonly asked questions about the ADA's restrictions on pre-offer medical examinations.

May an employer require applicants to take physical agility tests?

Yes. A physical agility test, in which an applicant demonstrates the ability to perform actual or simulated job tasks, is not a medical examination under the ADA.

Example: A police department tests police officer applicants' ability to run through an obstacle course designed to simulate a suspect chase in an urban setting. This is not a medical examination.

May an employer require applicants to take physical fitness tests?

Yes. A physical fitness test, in which an applicant's performance of physical tasks -- such as running or lifting -- is measured, is not a medical examination. However, if an employer measures an applicant's physiological or biological responses to performance, the test would be medical.

Example: A messenger service tests applicants' ability to run one mile in 15 minutes. At the end of the run, the employer takes the applicants' blood pressure and heart rate. Measuring the applicant's physiological responses makes this a medical examination.

If we give the FCE post-offer instead of pre-offer, doesn't this remove our liability should the test be found discriminatory?

Because most FCEs are given post-offer, they more typically resemble pre-placement medical examinations. Because the ADA states that medical examinations do not need to be job-related or consistent with business necessity, the use of these tests has flourished. It is the information and the use of the information derived from the FCE that must be job-related and consistent with business necessity. If the FCE is used in a qualitative manner with no cutoff scores and was one factor among many

that an employer used to make an employment decision, an FCE could likely withstand a legal challenge. If the FCE did have a cutoff score and "passing the FCE" was a job requirement, it would need to be validated like any other test.

With regard to gender and age discrimination, any practice may be challenged at any point in the selection process. Since virtually all tests of strength have adverse impact against female applicants and older persons, FCEs cannot escape review in the event of a legal challenge. Therefore, FCEs need documentation that the test is reliable, valid for the job in question, predictive of important work behaviors required on the job, and consistent with business necessity.

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