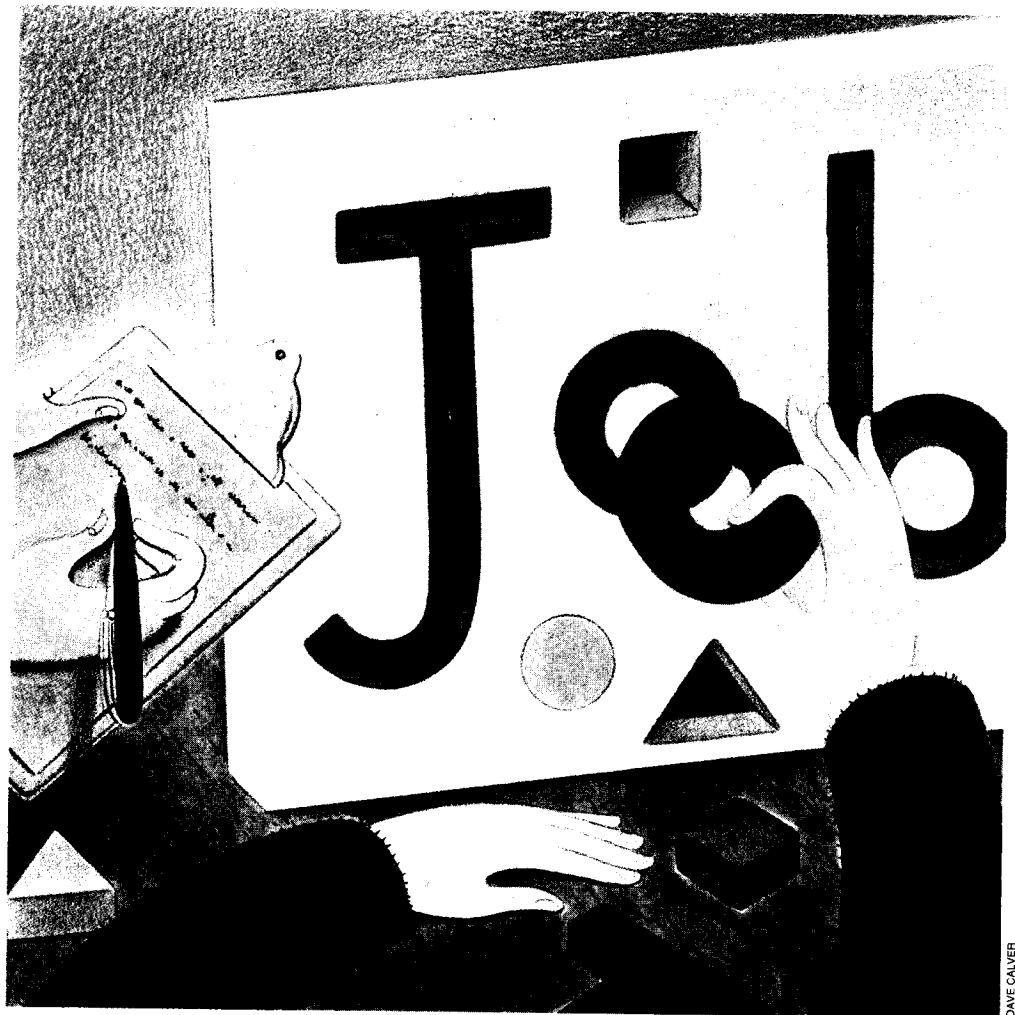


# PRE-EMPLOYMENT PSYCHOLOGICAL SCREENING

**I**N THEIR EFFORTS TO REDUCE THE number of work-related injuries and illnesses, companies have used a wide range of techniques that include improvements in engineering, employee education, hazard identification and elimination, and ergonomic analysis. However, no matter what steps a company takes to encourage and mandate safe work practices, accidents and injuries are still bound to occur. Additionally, the costs associated with workplace accidents and injuries are significant for companies of all sizes, and have risen progressively over the years; the *1990 Cost of Risk Survey*, for example, reported that from 1984 to 1989, unreimbursed workers' compensation losses increased by 5.9 percent.

In the past, companies have tended to pay less attention to the role that psychological factors play in workplace accidents and illnesses. However, the situation has begun to change as more companies learn how psychological factors can directly contribute to these work-related problems. Since a worker's personality and behavior patterns can play a role in engendering work-related accidents and illnesses, risk managers may wonder whether screening job applicants for personality traits is an effective means of ensuring a safe work environment. As it turns out, a large body of evidence demonstrates that pre-employment psychological screening can be an effective tool in helping companies select employees who are best suited for particular jobs. However, in order to achieve successful results through psychological

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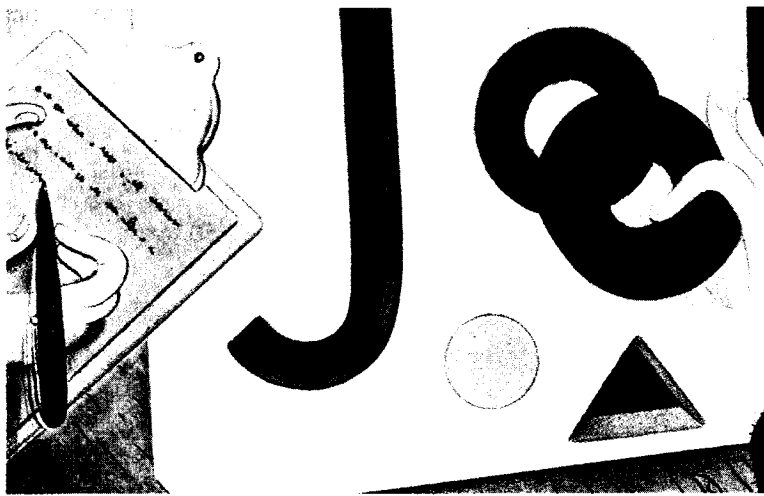
DAVE GALVER

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screening, risk managers must ensure that the tests meet established criteria and are appropriate for the firm's human resource needs.

#### APPLICANTS AND BEHAVIORAL TRAITS

Actually, whether they realize it or not, all organizations use at least one form of pre-employ-



**“Risk managers may wonder whether screening job applicants for personality traits is an effective means of ensuring a safe workplace.”**

ment test – the job interview. Generally, the job interview seeks to identify applicants who are well-suited for a particular position and are therefore likely to perform the job in a safe and reliable manner; the interview also aims to isolate those applicants who are poorly suited for the position. However, instead of merely relying on personal judgment during the interview process, interviewers can utilize psychological tests as a means of identifying suitable applicants.

But why are psychological tests necessary? First, it is important to realize that the personality and behavioral traits of job applicants can vary widely. For example, one applicant may have a personality that would make him or her alert and attentive on the job, while another may be easily distracted and inattentive to details. Furthermore, whereas one applicant may be mature, responsible, and have good judgment, frustration tolerance and impulse control, another may have significant shortcomings with respect to one or more of these key personality traits. And, when under pressure, whereas one individual may be able to maintain an acceptable level of attention and concentra-

tion on the work at hand, another may become self-absorbed and preoccupied with inner worries, and therefore susceptible to accidents.

Additionally, some people react immediately to the appearance of a potentially dangerous situation, and become more attentive and alert. However, others in a similar situation may fail to notice that a potential danger exists, or if they do realize that something is amiss, either ignore the problem or become anxious and distracted. As can be seen from these examples, variations in personality traits may well be associated with corresponding variations in the occurrence of workplace accidents and injuries.

#### NECESSARY TESTING CRITERIA

Psychological tests have a number of characteristics that make them a potentially useful tool in the pre-employment selection process. For example, these tests are simple to administer and score, can be made scientifically accurate, and are generally cost-effective. But do these tests really do what experts claim?

In answering this question, it is not possible to generalize, because each test must be evaluated individually in terms of certain standard criteria that have been developed

by psychologists expressly for testing purposes. Keep in mind that no assessment procedure is perfect, including tests, interviews, and reference checks. However, to the extent that a test or scale meets these standard criteria, it can be a useful tool for making employment decisions. In fact, tests that are responsive to these criteria often have greater accuracy in predicting workplace behavior than other commonly used aspects of the selection process such as interviews and reference checks. However, to the extent that a test or scale does not meet these standard criteria, it should not be used as part of an organization's selection process.

There are a number of criteria relevant to the development, selection and use of psychological tests and other assessment procedures. These have been compiled and published in the American Psychological Association's Standards for Educational and Psychological Testing. These standards are also relevant for evaluating other types of assessment procedures, such as interviews, background investigation techniques and reference checking.

The first criterion to apply when choosing a

specific assessment procedure is to ensure that all procedures are valid, or scientifically accurate. Validity is a technical term used to describe how accurate a procedure is in assessing what it claims to assess. Consequently, when screening job applicants for the likelihood of reliable and productive behavior, it is essential to choose only procedures that have been validated and that are criterion-related — that is, validated using specific behavioral criteria. An example would be a scale that was validated by comparing individuals having a documented history of workplace accidents with those who have been documented to have a safe work history.

Additionally, there should be evidence that the procedure has been cross-validated. Cross-validation involves conducting additional studies using different individuals from those who were originally used to validate the procedure. In essence, cross-validation increases the likelihood that the selection procedure will be accurate when covering a wide variety of individuals and situations.

The second criterion is to ensure that all procedures are reliable or consistent. In this context, reliability is a technical term used to describe how consistent a procedure is in assessing what it claims to assess. For example, a test would be deemed reliable if it usually gives the same results each time a particular person takes the test, assuming the person has not undergone a major personality change in the interim.

Another important criterion to apply when choosing a specific assessment procedure is to make sure that the procedure is responsive to the legal requirements contained in the Americans with Disabilities Act and the Civil Rights Acts of 1964 (Title VII) and 1991. These pieces of legislation make employment discrimination illegal, so employers should choose only assessment procedures that meet the requirements contained in those acts.

After having chosen a particular test, it is important to make sure that the questions asked of applicants are job-related. A number of legal decisions have affirmed this notion. For example, an applicant should not be assessed for his or her math abilities if this specific skill is not required to satisfactorily carry out the requirements of the job.

In addition, questions asked in tests, interviews and reference checks should be non-intrusive and respectful of the applicant's right

to privacy. Additionally, prior to the start of the pre-employment assessment, applicants should be informed of the details of the assessment procedures to be used. Finally, all procedures should be administered in a manner and environment that maximizes the applicant's comfort and personal dignity.

Tests and other assessment procedures should also minimize the possibility of inaccurate results due to illiteracy, education level or disability; this entails that all procedures, whether they are application forms, personal interviews or psychological tests, should be readily understandable by individuals with a grade school education. In addition, when the procedure is administered to an individual who is not fluent in English, the employee should consider administering the procedure in the applicant's native language. Alternatively, the procedure should be administered so that the applicant understands the questions; one way to do this is to have the applicant ask for clarification of the meaning of any unclear words. If this is not possible, the procedure should not be used with that applicant. And in cases where an applicant has a disability that impairs sensory, manual or speaking skills, the employer should administer the assessment procedure in a format that does not require the use of the impaired skill.

Objective and statistically derived rules should always be used when scoring, interpreting and reaching conclusions about the results of an individual applicant's test. The employer should establish explicit rules in regard to evaluating an individual applicant's performance on the test. These rules should not be subjective and should be applied consistently to all applicants being evaluated by that test.

While there is a need to hire employees who will perform safely and reliably on the job, it is also important to maximize the protection of a job applicant's legal rights by adhering to appropriate standards. Recent court decisions have supported the employer's right to assess applicants, but only if the resultant queries are relevant to the job the applicant is applying for; generally, the courts have most strongly supported such testing when employers have adhered to the appropriate criteria for test selection and use.

#### **EVALUATING TEST RESULTS**

The decision regarding whether to hire an applicant should never be based solely on the re-

sults of a single assessment procedure. Hiring decisions should always be based on a review of all information gathered during the selection process. And, when negative findings are obtained during the course of the selection process, additional, second-opinion procedures should be used to clarify and ensure the accuracy of these negative findings; this step is necessary because no assessment procedure, no matter how valid, is perfect. However, if tests and other assessment procedures are selected and used in a manner consistent with these criteria, they are likely to make an important contribution to the effectiveness of an organization's pre-employment screening program.

For best results with a psychological test, job applicants should complete the test prior to being interviewed. When used in this manner, the test results can serve as an objective aid for identifying issues and questions related to safe and reliable job performance, which can then be explored further during interviews and reference verification. However, these inquiries should be non-discriminatory and should not be used to disclose the existence, nature or extent of an applicant's disability.

By coordinating the use of test results with particular inquiries during other parts of the selection process, the employer can cross-check, clarify, confirm or call into question all obtained information. For example, test results may suggest that an applicant is unlikely to perform safely on the job due to the presence of personality traits such as poor impulse control and poor judgment. With this information in mind, the employer could then question past employers in greater detail than usual about the applicant's on-the-job performance, looking for a record of disrupted productivity due to these specific personality traits. The employer can then fashion questions that address this issue; however, keep in mind that under the provisions of the Americans with Disabilities Act, an employer may not make pre-offer inquiries about an applicant's workers' compensation history.

Generally, psychological tests are most effective when used in tandem with other methods aimed at helping make an appropriate employment decision. Those who, in a misguided search for an easy answer, give test results too much emphasis in the decision-making process invariably become disenchanted with their results. Nonetheless, psychological tests can be an effective hiring tool when used correctly. ■■

#### A BRIEF CASE STUDY

**F**aced with unacceptable levels of accidents, turnover and unauthorized absences, a mid-sized manufacturing company with approximately 500 employees added a psychological test to its employee selection process in the hopes of reducing the rates of these problems. The program was started at the end of August 1987.

The pre-employment screening test was a self-administered, true/false questionnaire containing 81 items. Scores were reported for six separate scales that assess job applicants on six different dimensions of reliable and productive work behavior: freedom from disruptive alcohol and substance use; emotional adjustment; conscientiousness; trustworthiness; long-term job commitment; and safe job performance.

In a carefully designed study, the behavior of two groups of employees was compared for the calendar year 1989. The study examined how the two groups compared in terms of work-related accidents, the number of scheduled hours of work lost due to accidents, the number of scheduled hours of work lost through unauthorized absences and the rate of turnover – both involuntary and voluntary – that occurred within 60 days of being hired.

The first group consisted of employees who had been hired before August 1987, and who had not taken the test before they were hired. The second group, which had been hired after August 1987, had been given the test, and its results were used as part of the selection process. For this latter group, the test was administered at an early stage in the selection process, prior to both completion of interviews and reference verification. As a result, information obtained from the six test scales was coordinated with focused inquiries during the interview and reference verification process in order to clarify, confirm or question issues raised by the results.

#### MAJOR FINDINGS

During 1989, employees from the first group who had work-related accidents comprised 5.6 percent of the total work force; workers in the second group who experienced work-

related accidents constituted only 2.8 percent of the total work force.

For the first group, the number of hours lost from work-related accidents during 1989 equalled 7.68 percent of the total annual scheduled hours. However, for those who had taken the test, the number of hours lost due to work-related accidents was only 1.75 percent of the annual scheduled total. In addition, during 1991 the company experienced 104 "OSHA recordable" injuries and illnesses. Of these, 94.23 percent involved employees who had been hired prior to August 1987, the date on which the test had been introduced into the organization's selection procedures; only 5.77 percent of the tested employees were involved in these incidents.

For those hired without having taken the test, the number of hours lost from unauthorized absence during 1989 constituted 7.37 percent of the group's annual scheduled total. But for employees who had taken the test, the number of hours lost from unauthorized absence was only 4.71 percent of their annual scheduled total.

The turnover rate declined progressively for each of the two years following the introduction of the test into the hiring process. Prior to using the test, the turnover rate was 25 percent during a 12-month "baseline" period. However, in 1988, the first full calendar year after test use began, the turnover rate dropped to 20.69 percent, while in 1989 it fell to 8.33 percent.

Because the promotion of workplace health and safety involves the use of multiple techniques, it is unlikely that all of the above findings can be attributed solely to the use of the test. The duties and work conditions for the two groups may have differed in such a way that they led to the varying accident rates; for example, those employees hired before the test was introduced might have been assigned to more dangerous duties or to tasks that contained a greater likelihood of accidents. However, an investigation of this question with the company's personnel director indicates that, if anything, newer employees, by virtue of their lower seniority, were typically assigned to positions that are relatively more dangerous and therefore have a greater accident rate. In addition, the likelihood of accidents is greater in the less-senior group because its members have less

experience operating the machinery.

With respect to turnover, one could ask whether the general employment conditions both within the workplace and in the job market at large could have changed during the period of the study, affecting at least some of the factors that are known to influence turnover rates. For example, favorable changes in company policies may have caused employees to wish to remain with the firm, or economic conditions may have made it more difficult for employees to find another position elsewhere. However, the company's personnel director reports that the company did not alter its policies during this period, and that a low rate of unemployment, combined with the competitive compensation packages being offered by other organizations operating in the same geographic area, actually created difficulties for the company's hiring efforts during this period.

Although no formal analyses were performed with respect to the benefit-cost implications of these results, they were examined in a preliminary fashion. During the comparison year of 1989, the total amount of scheduled work time lost from both work-related accidents and unauthorized absences was 9,110 hours less in the group that had taken the test. In 1989, the average wage of subjects in the study was approximately \$10 per hour. This means that during 1989, the costs for unplanned lost hours were approximately \$91,100 less for the group that took the test. Approximately 230 applicants were screened in order to hire employees during 1987 and 1988, a subset of whom were still employed at the end of 1989, and therefore were included in the study sample. The cost for the 230 questionnaires was \$2,070. Costs associated with training the staff to correctly administer, score and interpret the test were estimated at approximately \$300, and administration and scoring time for 230 questionnaires was estimated at \$575. Therefore, the total estimated costs for implementing and using the testing program are approximately \$2,945. Based upon this superficial analysis, estimated savings for the company are approximately \$88,000 annually.

