Influence of Job Characteristics on the Acceptability of Employee Drug Testing

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Measures of the acceptability of employee drug testing were obtained from a sample of college students (N = 371) and a second sample of nontraditional, older college students (N = 112) and were correlated with job-analysis data from the Position Analysis Questionnaire (PAQ) and Dictionary of Occupational Titles (DOT) databases, and with measures of perceived danger from impaired performance in each job. Both PAQ and DOT data accounted for variance in ratings of acceptability. Perceptions of danger were the best single predictor of acceptability and appeared to mediate the relationships between job characteristics and the acceptability of employee drug testing.

Drug testing in the workplace has become an increasingly common phenomenon. One continuing controversy involves the scope of drug testing, or more specifically, whether testing should be carried out in all or in only some jobs. For example, drug testing has been supported by the courts for transportation (e.g., airline pilot) and security-related jobs, but not for other nonsensitive jobs (e.g., clerical and some professional jobs). (See Greenfield, 1989, and Greenfield, Karren, & Giacobbe, 1989, for reviews of legal issues in employee drug testing.) Research on attitudes toward drug testing suggests that the acceptability of various drug testing programs and practices varies substantially, depending in part on the job or jobs in question (Murphy, Thornton, & Reynolds, 1990; Stone & Katch, 1988). Little is known, however, about why drug testing is seen as acceptable in some jobs but not in others.

It is important to distinguish between an individual's general attitude toward drug testing in various contexts and his or her reaction when confronted with an actual drug test. It is possible that a person will support the concept of drug testing in jobs similar to his or hers and nevertheless react negatively to the drug testing program in his or her organization. The present research was concerned with general attitudes toward drug testing in various jobs. Although these abstract attitudes may not completely account for individual reactions toward specific testing programs, a better understanding of these attitudes may help to pinpoint circumstances in which drug testing is likely to be accepted as reasonable versus those in which it is likely to be viewed in a negative light.

Job Content and Attitudes Toward Testing

We tested the hypothesis that the acceptability of employee drug testing in different jobs is related to the actual content, duties, and so forth, of those jobs. If this hypothesis is correct, it should be possible to predict the acceptability of employee drug testing on the basis of information obtained from job analyses. The justification for this hypothesis is that drug testing is likely to be viewed as acceptable when it appears to be job-related.

Role of Apparent Job-Relatedness

Safety concerns have been an important determinant of several rulings concerning the legality of drug testing (Sanders, 1989; Sitomer, 1989). For example, the Supreme Court upheld drug testing for railroad crews, citing the obvious potential for hazards to the public if drug use remained unchecked (Murphy et al., 1990). There has been less public attention to job-related factors other than safety, such as the perceived effects of drugs on efficiency or other aspects of job performance. However, research on individuals' reactions to organizations' personnel practices suggests that the apparent job-relatedness of drug testing may be an important issue in the acceptance or rejection of testing. There is evidence that people object to testing practices that are not obviously related to their ability to perform the job (Lumsden, 1967; Thorson & Thomas, 1968). That is, people react very differently to procedures that lack face validity than to procedures that appear reasonable (Thornton & Byham, 1982).

Research on job search and job choice supports the hypothesis that the face validity of personnel practices has an important role. Job applicants do not object to employment testing per se (Schmidt, Greenthal, Hunter, Berner, & Seaton, 1977) but do object to testing procedures that are seen as unrelated to the job (Lumsden, 1967). A similar phenomenon exists in research on employment interviews. Applicants react positively to interviews that cover relevant qualifications and negatively to interviews that deal with issues that are perceived to be tangential to the job (Downs, 1969; Matarrazo, Wiens, Jackson, & Manaugh, 1970; Thorson & Thomas, 1968).

A second line of research that suggests that the apparent job-relatedness of testing will affect attitudes and behaviors comes from research on perceptions of justice in organizations. There is evidence from research on procedural justice that objectionable procedures provoke less negative reactions if there...
is some reasonable explanation of why those procedures are carried out (Bies, 1987; Folger & Greenberg, 1985; Folger, Rosenfield, & Robinson, 1983). Thus, the absence of any compelling reason or explanation for employee drug testing may lead to negative reactions, which may in turn have behavioral consequences.

**Predicting Acceptability on the Basis of Job Content**

To date, the determination of whether drug testing is reasonable, appropriate, or acceptable in different jobs has been done on a strictly ad hoc basis. Some legal principles have been articulated (e.g., testing is more acceptable in settings in which impaired performance can endanger others), but there has been little empirical research linking job characteristics to the acceptability of employee drug testing. The purpose of the present study was to determine whether job characteristics were linked to attitudes toward drug testing in those jobs. In addition, given the recognized importance of danger to co-workers and to the public in acceptance of employee drug testing, we examined the relationship between job characteristics, perceptions of danger resulting from impaired performance, and attitudes toward drug testing in a number of jobs.

**Study 1**

In this study, we examined the relationships between the characteristics of 35 jobs and ratings of the acceptability of drug testing in each job. Measures of the degree to which employee drug testing was viewed as acceptable and reasonable were obtained from Murphy et al. (1990), who measured attitudes toward drug testing in three separate samples of college students (total \( N = 371 \)).

We used data from the Dictionary of Occupational Titles (DOT) and from the Position Analysis Questionnaire (PAQ) database to measure the characteristics and attribute requirements of the 35 jobs. Perceptions of the extent to which impaired performance in specific jobs would involve danger to the public or to co-workers or both were measured in a separate sample of undergraduates (\( N = 75 \)).

**Method**

**Attitudes Toward Drug Testing**

Murphy et al. (1990) asked 371 undergraduates to indicate on a 7-point Likert-type scale the degree to which testing for illicit drugs was viewed as justified in each of several jobs. Questionnaires presented job titles without any job description or job-analysis information because of the possibility that the information provided would lead to spurious relationships (i.e., the possibility that this information could promote demand characteristics) between the job characteristics and judgments about drug testing in each job. Mean acceptability ratings (1 = low acceptance of testing, 7 = high acceptance of testing) for each job are shown in Table 1.

Subjects in a separate sample (\( N = 75 \)), taken from a psychological testing course, provided ratings (using a 7-point Likert-type scale) of the extent to which impaired performance in each of 59 jobs was likely to involve danger to the public or to co-workers or both; this set of jobs included all 35 of the jobs shown in Table 1. Additional information regarding the measurement of acceptability and danger is presented in Murphy et al. (1990).

**Job Characteristics**

We identified DOT codes for each of the 35 jobs and obtained attribute-required data for each job from the Supplement to the Dictionary of Occupational Titles (Field & Field, 1977), which lists the extent to which each of the 11 aptitudes measured by the General Aptitude Test Battery is required by each job in the DOT. This supplement also indicates (a) the extent to which each of 10 interests (e.g., preference for abstract or creative activities) and 10 temperament variables (e.g., adaptability to accepting responsibility) are likely to be related to job performance and (b) the presence or absence of six types of physical demands (e.g., climbing and balancing) and seven types of working conditions (e.g., noise and vibration).

All 35 jobs were present in the database maintained by PAQ Services. We obtained profiles for these jobs on the 13 general dimensions

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1 Murphy et al. (1990) reported mean acceptability ratings for 33 of these jobs. They also collected data for a small number of additional jobs, 2 of which were included in this study because of the availability of job-analysis data.
that underlie the PAQ (e.g., operating machines/equipment). These profiles indicate the extent to which each of the dimensions measured by the PAQ represents an important or frequently encountered component of the job.

All PAQ and DOT scores were rescaled so that high scores indicated that the job included or required a large amount of the dimension or characteristic.

Results

Predicting Acceptability and Danger Ratings

We used job-analysis data (obtained from the PAQ and DOT databases) to predict the mean acceptability and danger rating for each of the 35 jobs. Because the number of predictors (i.e., 44 DOT and 13 PAQ dimensions) was large relative to the number of jobs, we did not attempt to use all job-descriptive variables in a single regression equation. Rather, we used each set of job-descriptive variables (e.g., DOT aptitude requirements and PAQ general dimensions) as predictors in separate regression equations.

Each predictor and criterion value (e.g., PAQ dimension scores and mean acceptability rating) for each individual job was based on a large number of observations (up to 371 acceptability ratings and 1,196 job-analysis questionnaires per job). Because both predictors and criteria represented aggregated rather than individual observations, significance tests based solely on the number of jobs studied (i.e., tests based on N = 35) do not apply (Hannan, 1971; Robinson, 1950). Rather than relying on statistical tests of the null hypothesis, we defined a priori criteria for substantive significance. We used squared multiple correlations and adjusted squared multiple correlations of .25 and .05, respectively, as lower bounds for determining whether or not each set of predictors was related to attitudes. That is, sets of job characteristics that yielded squared multiple correlation and adjusted squared multiple correlation values of .25 and .05, respectively, were judged to be substantially related to judgments of the acceptability of drug testing. Our choice of specific values is somewhat arbitrary, but the squared multiple correlation values chosen do correspond roughly with the values recommended by Cohen (1988) for defining large and moderate correlations (i.e., correlations of .50 and .30, respectively).

General Aptitude Test Battery (GATB) aptitude requirements, temperament requirement ratings, and PAQ dimension ratings all accounted for substantial variance in danger tests and ratings of the acceptability of employee drug testing; squared multiple correlation and adjusted squared multiple correlation values are shown in Table 2.

The squared multiple correlation values for PAQ profiles were extremely high (993 and .812 for acceptability and danger ratings, respectively). Squared multiple correlations for GATB aptitude ratings and temperament requirement ratings were substantially lower (these ranged from .369 to .656) but nevertheless were sufficiently large to suggest that data from the DOT can be used to predict both the acceptability of drug testing in different jobs and the perceived danger to others associated with impaired performance in different jobs.

Specific Correlates of Acceptability and Danger

The large squared multiple correlation for PAQ dimensions indicates that an optimally weighted combination of these dimensions predicted acceptability ratings with near perfect accuracy. We examined the zero-order correlations between PAQ dimensions and acceptability ratings to determine whether the predictive power of the set of 13 PAQ dimensions was due to only a few or to many of the dimensions measured by the PAQ.

Correlations between PAQ dimensions and acceptability ratings are shown in Table 3. Once again, because these correlations are based on mean ratings and job-analysis profiles obtained from large numbers of individuals, we did not rely on traditional significance tests in interpreting these correlations. Rather, we used a correlation value of .30 as the lower bound for determining whether the correlations in Table 3 were practically significant.

The correlations in Table 3 suggest a higher level of approval for employee drug testing in jobs that (a) are routine in nature (e.g., routine activities and structured schedules), (b) require a high level of awareness of the environment, or (c) involve infrequent contact with clients or the public.

Correlations between DOT aptitude and temperament requirement ratings and acceptability of drug testing are also shown in Table 3. These correlations suggest that drug testing is seen as more acceptable in jobs that require a variety of psychomotor abilities (e.g., manual dexterity) and in jobs that may require individuals to perform under stress.

Relationship Between Acceptability and Danger Ratings

As expected, ratings of the degree to which different jobs might involve danger to the worker, to co-workers, or to the public were strongly correlated with ratings of the acceptability of employee drug testing \(r = .77\). Furthermore, ratings of danger were the best single predictor of attitudes toward employee drug testing; although the multiple correlation for PAQ factors was considerably larger than .77, none of the zero-order correlations between job characteristics and acceptability ratings exceeded .65.

Testing Mediator Hypotheses

It is possible that perceptions of the danger inherent in a job mediates the relationship between job characteristics and acceptability of employee drug testing. If perceptions of danger completely mediate the relationship between job characteristics and the acceptability of drug testing, adding job characteristics to a regression equation that already contains danger ratings should not lead to a significant increase in the squared multiple correlation for predicting acceptability. If perceptions of danger serve as a partial mediator, the increase in the squared multiple correlation when job characteristics are added to the regression equation should be substantially smaller than the squared multiple correlation for job characteristics alone (Baron & Kenny, 1986; James & Brett, 1984). Our results suggest that only the PAQ dimensions and the DOT aptitude and

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2 Scores from the DOT could be grouped into nine factors (five of which substantially overlap with factors identified by Cain & Treiman, 1981) that account for 73% of the common variance in ratings assigned to each job. The use of these nine factor scores as predictors of acceptability yielded \(R^2\) values of .48 and .55 in the two studies.
temperament ratings were substantially related to the acceptability of employee drug testing. We therefore tested mediator hypotheses only for these sets of predictors.

The squared multiple correlation values used to test the mediator hypotheses are shown in Table 4. These results suggest that perceptions of danger do not completely account for the relationships between job characteristics and the acceptability of employee drug testing. Addition of PAQ dimension scores, DOT aptitude requirement ratings, and DOT temperament requirement ratings to an equation containing danger ratings led to significant increases in squared multiple correlation for PAQ dimensions and DOT temperament requirement ratings (increases of .376 and .316, \( F(13, 21) = 60.09, p < .01 \) and \( F(10, 23) = 10.51, p < .01 \), respectively. The increase for DOT aptitude ratings was nonsignificant. However, the results do support the partial mediation hypothesis. In all three cases, the increases in squared multiple correlation were substantially smaller than the squared multiple correlation values for job characteristics considered alone (squared multiple correlation increase vs. squared multiple correlation values of .376 vs. .993, .189 vs. .369, and .319 vs. .496 for PAQ dimensions, DOT aptitude ratings, and DOT temperament ratings, respectively).

Discussion

The results of this study suggest that attitudes toward employee drug testing in various jobs are strongly related to job characteristics. The 13 general factors measured by the PAQ accounted almost perfectly for the variance in ratings of the acceptability of employee drug testing. Aptitude and temperament requirements reported in the DOT were also strongly related to the acceptability of employee drug testing. The strength of these relationships is especially impressive when one considers that measures of job characteristics were obtained independently of measures of the acceptability of employee drug testing or of the perceived danger inherent in different jobs (i.e., job-characteristics data were obtained from PAQ and DOT databases). This implies that the strong correlation observed here between job characteristics and acceptability judgments is not due to such artifacts as shared method biases.

The correlations shown in Table 3 suggest that a variety of factors (including whether the job is repetitive and routine, whether it requires active monitoring of the environment, whether it involves psychomotor skills, and whether it involves contact with individuals external to the organization) affect attitudes toward employee drug testing. The negative correlations between acceptability of drug testing and extent of contact with the public and clients may appear counterintuitive; the most frequently cited examples of drug testing are for pilots or railway engineers, whose jobs involve substantial threats to public safety. However, most of the jobs in Table 1 that involve substantial contact with clients or the public (e.g., salesperson, waiter/waitress, professor, etc.) are not jobs in which that contact puts the public at risk. In other words, drug testing may not be accepted for jobs that involve simply interacting with the public, but drug testing may be more accepted for jobs involving interactions that put the public at risk.

The correlations in Table 3 suggest that evaluations of the potential danger to the worker, co-workers, and the public in different jobs are affected substantially by the work environment (e.g., ratings of the potential for danger are positively correlated with the need to be aware of the work environment and to perform under stress). Furthermore, perceptions of the danger inherent in impaired performance appear to mediate, but do not fully explain the relationships between job characteristics and the acceptability of employee drug testing.

One potential limitation of this study is the use of college students as subjects. To test the generalizability of the findings reported here, we conducted a second study involving a sample more representative of the community at large.

Study 2

A mail survey of adults (26–84 years old), with questionnaires similar to those used in Study 1 was carried out to determine whether the relationships between job characteristics and attitudes toward drug testing shown in Study 1 would generalize to a population broader than that represented by traditional college students.

Method

Names and addresses of 400 individuals classified as nontraditional students were obtained, and questionnaires were mailed to each individual. Nontraditional students were defined as individuals 23 years and older who were taking one or more undergraduate or graduate-
level courses at the university. The mean age of the individuals included in our sample was 34.5 years, with approximately equal numbers of men and women. The great majority of the individuals in the sample had substantial work experience; among those ever employed, the mean number of years of work experience was 18.5.

We received 122 usable responses; approximately 35 additional surveys were returned unanswered or as undeliverable.

Table 3
Correlations Between PAQ and DOT Scores and Acceptability and Danger Ratings

<table>
<thead>
<tr>
<th>PAQ and DOT scales</th>
<th>Acceptability</th>
<th>Study 1</th>
<th>Study 2</th>
<th>Danger</th>
</tr>
</thead>
<tbody>
<tr>
<td>Decision, communication, general responsibilities</td>
<td>.10</td>
<td>.02</td>
<td>.03</td>
<td></td>
</tr>
<tr>
<td>Operating machines/equipment</td>
<td>.02</td>
<td>.00</td>
<td>.50</td>
<td></td>
</tr>
<tr>
<td>Performing clerical or related activities</td>
<td>.13</td>
<td>.20</td>
<td>-.20</td>
<td></td>
</tr>
<tr>
<td>Performing technical or related activities</td>
<td>.06</td>
<td>.04</td>
<td>.29</td>
<td></td>
</tr>
<tr>
<td>Performing service or related activities</td>
<td>-.10</td>
<td>-.08</td>
<td>-.30</td>
<td></td>
</tr>
<tr>
<td>Other schedule vs. regular work schedule</td>
<td>-.52</td>
<td>-.54</td>
<td>-.10</td>
<td></td>
</tr>
<tr>
<td>Performing routine or repetitive activities</td>
<td>.47</td>
<td>.41</td>
<td>.14</td>
<td></td>
</tr>
<tr>
<td>Being aware of work environment</td>
<td>.62</td>
<td>.67</td>
<td>.54</td>
<td></td>
</tr>
<tr>
<td>Engaging in physical activities</td>
<td>-.28</td>
<td>-.24</td>
<td>-.20</td>
<td></td>
</tr>
<tr>
<td>Supervising, directing, estimating</td>
<td>-.03</td>
<td>-.08</td>
<td>-.54</td>
<td></td>
</tr>
<tr>
<td>Public or consumer contacts</td>
<td>-.56</td>
<td>-.56</td>
<td>-.27</td>
<td></td>
</tr>
<tr>
<td>Work in unpleasant, hazardous environment</td>
<td>.11</td>
<td>.16</td>
<td>.38</td>
<td></td>
</tr>
<tr>
<td>Nontypical schedule, optional apparel</td>
<td>.09</td>
<td>.09</td>
<td>-.19</td>
<td></td>
</tr>
<tr>
<td>DOT aptitude</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>General intelligence</td>
<td>.04</td>
<td>.00</td>
<td>.09</td>
<td></td>
</tr>
<tr>
<td>Verbal ability</td>
<td>.06</td>
<td>.03</td>
<td>.00</td>
<td></td>
</tr>
<tr>
<td>Numerical ability</td>
<td>.03</td>
<td>.00</td>
<td>.19</td>
<td></td>
</tr>
<tr>
<td>Spatial ability</td>
<td>.44</td>
<td>.42</td>
<td>.46</td>
<td></td>
</tr>
<tr>
<td>Form perception</td>
<td>.31</td>
<td>.26</td>
<td>.16</td>
<td></td>
</tr>
<tr>
<td>Clerical perception</td>
<td>.00</td>
<td>.08</td>
<td>-.09</td>
<td></td>
</tr>
<tr>
<td>Motor coordination</td>
<td>.29</td>
<td>.33</td>
<td>.13</td>
<td></td>
</tr>
<tr>
<td>Finger dexterity</td>
<td>.35</td>
<td>.35</td>
<td>.13</td>
<td></td>
</tr>
<tr>
<td>Manual dexterity</td>
<td>.31</td>
<td>.38</td>
<td>.23</td>
<td></td>
</tr>
<tr>
<td>Eye-hand-foot coordination</td>
<td>.40</td>
<td>.48</td>
<td>.38</td>
<td></td>
</tr>
<tr>
<td>Color discrimination</td>
<td>.23</td>
<td>.25</td>
<td>.14</td>
<td></td>
</tr>
<tr>
<td>DOT temperament</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accepting responsibility</td>
<td>.10</td>
<td>.00</td>
<td>-.06</td>
<td></td>
</tr>
<tr>
<td>Interpreting feelings, ideas, facts</td>
<td>-.27</td>
<td>-.27</td>
<td>-.26</td>
<td></td>
</tr>
<tr>
<td>Influencing peoples' opinions</td>
<td>-.26</td>
<td>-.30</td>
<td>-.13</td>
<td></td>
</tr>
<tr>
<td>Making generalizations based on judgment</td>
<td>-.08</td>
<td>-.08</td>
<td>-.03</td>
<td></td>
</tr>
<tr>
<td>Making generalizations based on facts</td>
<td>.04</td>
<td>.05</td>
<td>.38</td>
<td></td>
</tr>
<tr>
<td>Dealing with people</td>
<td>-.08</td>
<td>-.13</td>
<td>-.42</td>
<td></td>
</tr>
<tr>
<td>Performing repetitive work</td>
<td>.08</td>
<td>.05</td>
<td>-.11</td>
<td></td>
</tr>
<tr>
<td>Performing under stress</td>
<td>.54</td>
<td>.61</td>
<td>.48</td>
<td></td>
</tr>
<tr>
<td>Attaining set limits</td>
<td>-.13</td>
<td>-.08</td>
<td>.14</td>
<td></td>
</tr>
<tr>
<td>Performing a variety of duties</td>
<td>.25</td>
<td>.23</td>
<td>.24</td>
<td></td>
</tr>
</tbody>
</table>

* Temperaments are phrased in terms of adaptability to each condition or requirement.

Comparison with Study 1

Mean acceptability ratings are shown in Table 1. On the whole, ratings of the acceptability of employee drug testing were higher than in Study 1, t(34) = 4.96, p < .01, but the overall pattern of ratings was highly similar. The correlation between the mean acceptability ratings for the 35 jobs obtained in Study 1 and in Study 2 was .95.

The acceptability of drug testing did not vary as much across jobs in Study 2 as it did in Study 1, F(34, 34) = 2.18, p < .05. This may reflect a ceiling effect; the job that received the lowest acceptability rating in this study (photographer) had a mean rating (4.33) above the scale midpoint.

Predicting Acceptability

Squared multiple correlations and adjusted squared multiple correlations for regression equations in which the PAQ and DOT dimensions were used to predict acceptability are shown in Table 2. As in Study 1, the squared multiple correlation value for PAQ profiles was extremely high (.892). Also as in Study 1, squared multiple correlation values were substantially lower for DOT ratings, although both the aptitude and temperament ratings from the DOT accounted for substantial proportions of the variance in ratings of acceptability (squared multiple correlation values of .417 and .535, respectively).

Specific correlates of acceptability. The zero-order correlations between PAQ dimensions, DOT aptitude and temperament ratings, and ratings of the acceptability of drug testing are shown in Table 3. Once again, these correlations were extremely similar to those obtained in Study 1; none of the correlations obtained in the two studies differed by more than .08, and the overall pattern of correlations was virtually identical.

Testing mediator hypotheses. As in Study 1, we used ratings of the danger associated with impaired performance on the job (obtained independently of ratings of the acceptability of drug testing) to test the hypothesis that the potential for danger mediates the relationship between job characteristics and the acceptability of drug testing. In this study, only the PAQ dimensions accounted for variance not accounted for by ratings of the potential for danger inherent in each job, F(13, 34) = 3.03, p < .01, but the overall pattern of ratings was highly similar. The difference in the results of this analysis across the two studies reflects in part the higher squared multiple correlation for danger in Study 2. Because ratings of potential for danger accounted in Study 2 for 77% of the variance in ratings of acceptability, there is relatively little additional variance that can possibly be accounted for by job characteristics.

Discussion

The overall pattern of results in Study 2 was highly similar to that reported for Study 1. Although ratings of the acceptability of drug testing in this sample were generally higher and less variable (across jobs) than in Study 1, the mean ratings from the two studies were almost perfectly correlated.

Job characteristics were strongly related to judgments of the acceptability of employee drug testing. As in Study 1, inform-
tion from the PAQ data base accounted for virtually all of the variance in ratings of acceptability. Even when corrected for shrinkage (a correction that was very conservative given the use of aggregate scores as predictors and criteria), over 75% of the variance in acceptability ratings was accounted for. The correlations shown in Table 3 lead to the same conclusions as in Study 1. Employee drug testing is most likely to be seen as acceptable in jobs that require awareness of the environment, routine activities, psychomotor abilities, and performance under stress.

In this study, there was stronger evidence that perceptions of the potential for danger mediate the relationship between job characteristics and ratings of the acceptability of employee drug testing. As in Study 1, however, there was evidence that job-analysis information from the PAQ accounts for unique variance in acceptability ratings.

General Discussion

The two studies reported in this article show that judgments of the acceptability of employee drug testing are strongly related to characteristics of the job in question. This is hardly a surprising finding, but our results do suggest that attitudes toward employee drug testing have a realistic basis and are not merely the product of invalid stereotypes of jobs. If attitudes toward employee drug testing were based on arbitrary or invalid perceptions of the content and duties of various jobs, it would be unreasonable to expect strong and consistent relationships between job characteristics and attitudes toward drug testing.

Our study has both methodological and substantive implications. On the methodological side, it demonstrates a method that is applicable to studying the relationships between job characteristics and a wide range of attitudes, perceptions, and affective responses. In addition, as we note below, this study provides evidence that bears directly on the appropriateness of the one of subject populations we studied (i.e., college students).

Research involving college students is often questioned in terms of its external validity and generalizability. The studies presented here suggest that in this particular domain, research involving college students might be highly generalizable. Admittedly, nontraditional students are not necessarily representa-

tive of the general population. Nevertheless, the extremely similar patterns of responses from college students and adults with extensive work experience suggests that the relationships between job characteristics and attitudes toward drug testing reported here are not peculiar to the traditional student sample.

The principal substantive implication of this study is that a wider range of job factors than have previously been considered may be relevant in judging the acceptability of drug testing in different jobs. The potential for danger to others, which has been most widely discussed, is clearly a very important factor, but other factors that do not appear directly related to danger may also be relevant. For example, our results suggest that the aptitude and temperament requirements of jobs (e.g., psychomotor ability requirements) may be important and that such job factors as contact with the public, use of spatial abilities, and the repetitive nature of the work may also affect the acceptability of drug testing.

The results reported here suggest that it is possible to predict on a systematic basis the jobs for which drug testing will be viewed as reasonable and acceptable versus jobs for which drug testing will be the subject of intense controversy. This finding may be relevant in several ways. For example, an organization that is considering drug testing may be able to identify some potential areas of controversy before testing begins. Our findings suggest that it will be relatively easy to justify drug testing for some jobs, whereas substantial efforts may be necessary to overcome resistance to drug testing for other jobs. These findings might also be used in the legal arena (or possibly in arbitration) to support or undermine the argument that employee drug testing is reasonable in a given job. On the whole, our findings suggest that attitudes toward drug testing in different jobs are not arbitrary but rather are directly related to several characteristics of the jobs in question.

One additional aspect of our results deserves attention. The standard deviations reported in Table 1 suggest that there is extensive disagreement regarding the acceptability of employee drug testing in any particular job. Furthermore, disagreement about the acceptability of drug testing was substantially stronger in Study 2 than in Study 1 (every one of the standard deviations shown was greater in Study 2 than in Study 1). Murphy et al. (1990) suggested that this high degree of variability in responses may mean that many people will approve and
many will disapprove of virtually any drug testing policy. The present study suggests that although it is possible to predict the extent to which, on average, drug testing will meet with approval or disapproval in any given job, there may also be substantial differences in the way that individuals react to testing in that job.

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