The Center for Hospitality Research
Hospitality Leadership Through Learning

Cornell Hospitality Report

The Truth About Integrity Tests: The Validity and Utility of Integrity Testing for the Hospitality Industry

by Michael C. Sturman, Ph.D., and David Sherwyn, J.D.

Vol. 7, No. 15, October 2007

Cornell University
School of Hotel Administration

The Robert A. and Jan M. Beck Center at Cornell University
Back cover photo by permission of *The Cornellian* and Jeff Wang.

Cornell Hospitality Report,
Volume 7, No. 15 (October 2007)
Single copy price US$50

Cornell Hospitality Report is produced for the benefit of the hospitality industry by The Center for Hospitality Research at Cornell University

David Sherwyn, *Academic Director*
Glenn Withiam, *Director of Publications*
Jennifer Macera, *Manager of Operations*

Center for Hospitality Research
Cornell University
School of Hotel Administration
537 Statler Hall
Ithaca, NY 14853

Phone: 607-255-9780
Fax: 607-254-2292
www.chr.cornell.edu

The Center for Hospitality Research

Hospitality Leadership Through Learning

Thank you to our generous Corporate Members

Senior Partners

American Airlines Admirals Club
Southern Wine and Spirits of New York
Taj Hotels Resorts Palaces
TIG Global LLC, a division of
The Thayer Group of Companies

Partners

AIG Global Real Estate Investment
Davis & Gilbert LLP
Deloitte & Touche USA LLP
Denihan Hospitality Group
Expedia, Inc.
Four Seasons Hotels and Resorts
HVS International
JohnsonDiversey
LRP Publications
Marriott International, Inc.
Marsh's Hospitality Practice
Mobil Travel Guide
Nestlé
PricewaterhouseCoopers
Proskauer Rose LLP
Smith Travel Research
SynXis, a Sabre Holdings Company
Travelport
WhiteSand Consulting
WATG

Friends

American Tescor, LLP • Caribbean Hotel Restaurant Buyer's Guide • Cody Kramer Imports • Cruise Industry News • DK Shifflet & Associates • ehotelier.com • Estrela Marketing Solutions • EyeforTravel • Fireman's Fund • 4Hoteliers.com • Gerencia de Hoteles & Restaurantes • Global Hospitality Resources • Hospitality Financial and Technological Professionals • hospitalityInside.com • hospitalitynet.org • Hotel Asia Pacific • Hotel China • HotelExecutive.com • Hotel Interactive • Hotel Resource • International CHRIE • International Hotel and Restaurant Association • International Hotel Conference • International Society of Hospitality Consultants • iPerceptions • KPMG Japan/ Global Management Directions • Lodging Hospitality • Lodging Magazine • Milestone Internet Marketing • MindFolio • PKF Hospitality Research • RealShare Hotel Investment & Finance Summit • Resort+Recreation Magazine • The Resort Trades • RestaurantEdge.com • Shibata Publishing Co. • Synovate • The Lodging Conference • TravelCLICK • UniFocus • WageWatch, Inc. • WIWIH.COM

The Truth About Integrity Tests:

The Validity and Utility of Integrity Testing for the Hospitality Industry

by Michael C. Sturman and David Sherwyn

EXECUTIVE SUMMARY

Although not commonly used for selecting hospitality employees, integrity tests can help employers determine which of their prospective hires are likely to engage in unproductive, dangerous, or otherwise risky actions on the job. Candidates are surprisingly candid in answering test questions about their workplace theft or drug abuse, but the tests also have control questions intended to indicate when an applicant is attempting to game the test. Moreover, the tests do not violate U.S. employment laws since they neither create adverse impact on protected groups nor violate provisions of the Americans with Disabilities Act. Although tests represent an additional expense in the hiring process, a study of a large hotel chain found that the savings in screening out potentially expensive employees more than made up for the costs of conducting the tests. Not only could the chain count on employees who were reasonably honest and drug-free, but it found a substantial reduction in costly workers' compensation claims among the new hires. In the course of a year, the hotel chain administered an integrity test to just over 29,000 would-be employees, and hired just under 6,100 of those applicants. These data, which were made available by American Tescor, creator of the test, set up the opportunity to compare the workers' compensation claims from the new hires with the claims of already incumbent employees. The screened hires experienced a markedly lower incidence of claims compared to the unscreened, existing employees. The average cost per claim for the unscreened employees was $3,446, as compared to $2,119 for the screened group. The annual average cost per employee for workers' compensation claims was $97.77 for the unscreened group, but only $31.02 for the screened group.

ABOUT THE AUTHORS

Michael C. Sturman, Ph.D., is associate professor and The Kenneth and Marjorie Blanchard Professor of Human Resources at the Cornell University School of Hotel Administration (mcs5@cornell.edu). His research focuses on the prediction of individual job performance over time, the influence of compensation systems, and the impact of human resource management on organizational performance. A Senior Professional of Human Resources as certified by the Society for Human Resource Management, he has published research articles in such journals as the *Journal of Applied Psychology, Academy of Management Journal, Personnel Psychology*, and *Journal of Management*. He has also published practitioner papers in the *Cornell Hotel and Restaurant Administration Quarterly, International Journal of Hospitality Management, Lodging Magazine, Lodging HR, A.A.H.O.A. Hospitality ,* HR.Com, *and American Compensation Association Journal*.

David Sherwyn, J.D., is associate professor and academic director of the Center for Hospitality Research (dss18@cornell.edu). A Research Fellow at the Center for Labor and Employment Law at NYU's School of Law, he is Of Counsel to the law firm of Shea Stokes. His primary research focus is labor and employment law issues relevant to the hospitality industry; specifically, mandatory arbitration of discrimination lawsuits and sexual harassment. Prior to his faculty appointment at the Hotel School, he practiced management side labor and employment law for six years. Sherwyn has published articles in the *Stanford Law Review, Berkeley Journal of Labor & Employment Law, Fordham Law Review, University of Pennsylvania's Labor and Employment Law Journal*, and the *Cornell Hotel and Restaurant Administration Quarterly*. In 2002 Sherwyn conceived of, organized, and hosted the CHR's first Hospitality Industry Roundtable, which has since expanded into a series of well-received Industry Roundtables in each of the disciplines that are represented in the school.

The Truth About Integrity Tests:

The Validity and Utility of Integrity Testing for the Hospitality Industry

by Michael C. Sturman and David Sherwyn

Designed to measure applicants' attitudes towards theft, dishonesty, drug use, and other counterproductive work behaviors, integrity tests have existed for well over three decades. Despite research demonstrating the tests' validity, however, practitioners in the hospitality industry still remain hesitant to implement them. Because we believe that employers would benefit from using such tests as an employment screen, this report (1) describes integrity tests; (2) reviews the research that provides extensive evidence indicating the value of these tests to the industry; and (3) demonstrates some of the benefits of integrity tests using an example of one such test that was implemented at a large hotel chain. In sum, the results show that integrity tests can work, can differentiate among applicants with varying attitudes towards counterproductive work behaviors, and can predict outcomes that have substantial financial implications for businesses. Ultimately, integrity tests can be a useful component of a selection system. As we will show in this report, adding integrity tests to a selection system can offer a substantial return on the investment. We want to acknowledge the support of American Tescor, for providing the integrity test data upon which this report is based. However, we want to also make clear that this report represents the independent work of the authors.

Integrity tests began as a method of detecting dishonest applicants without resorting to polygraph tests.[1] Although integrity tests are no longer seen as basic substitutes to polygraph tests, research over the past thirty years has demonstrated that integrity tests can predict the sorts of employee behavior that employers would like to screen out. For example, studies have shown integrity tests can predict theft, illegal activities, drug use, absenteeism, tardiness, violence, and even low performance ratings. Their predictive power has been demonstrated at various levels of job complexity, both for existing employees and for job applicants.

Integrity tests are generally seen as coming in two forms: overt integrity tests and personality-based tests. The subject of this paper is overt integrity tests, which are specifically designed to predict the predisposition of job applicants to engage in some form of dishonest or otherwise disruptive work behavior. The other type, personality-based tests, do not specifically try to detect theft or theft-related behavior and do not on their face appear to be job related. Rather, they use measures of personality dimensions, such as reliability, conscientiousness, trustworthiness, and sociability, to predict an employee's behavior.

The typical overt integrity test is a paper and pencil form that asks questions of applicants about their views and personal experiences with regard to topics such as stealing and taking drugs. A question will ask, for example: "What is the most you have ever stolen: (1) $0; (2) $1-$200; (3) $201-$500; or (4) more than $500?" Another question frequently asked is: "Would you fail a drug test?" While it may seem obvious that the desired answer for the first question is (1) $0, and the desired answer for the second is no, integrity tests rely on the fact that applicants will choose other answers. Contrary to what one might expect, people who engage in these types of behavior believe that most people are like themselves. That is, they think that most people steal or take drugs. Accordingly, those who engage in such risky behavior believe one of two things in connection with the integrity test. Either they think that answering that they neither steal nor take drugs would signal the employer that they are lying in their answers on the test, or they cannot see a problem in answering that they steal or take drugs. Perhaps such applicants will minimize their negative behavior by admitting to less stealing or drug use than is actually the case, but the fact remains that applicants who engage in such conduct often reveal such on a test. Certainly, the validity of this theory is subject to debate, but there are abundant data that support this perspective.

Despite the possible value of integrity tests, we see relatively few companies employing them.[2] Based on our review of research and professional literature, discussions with organizations that sell integrity tests, and anecdotal accounts, we identified the following five issues that seem to make business operators hesitant to adopt integrity tests. The concerns are:

- whether applicants are able to fake results,
- whether the tests really predict employee behavior,
- whether the test creates adverse impact,
- whether the test violates the Americans with Disabilities Act, and
- the expense of administering the test.

[1] For most employment settings, polygraph (lie detector) tests have been made illegal by federal law, the Employee Polygraph Protection Act of 1988.

[2] A survey of 959 organizations in 20 countries showed that integrity tests were rarely or never used. See: A.M. Ryan, L. McFarland, H. Baron, and R. Page, "An International Look at Selection Practices: Nation and Culture as Explanations for Variability in Practice," *Personnel Psychology*, Vol. 52 (1999), pp. 359-391.

Addressing the Five Issues

We can only touch on the high points of existing research. For those interested in greater detail, extensive reviews have been performed on the subject of integrity tests, which provide in-depth information in addition to extensive citation lists of relevant material. We encourage those interested in the specific research findings to review those sources, listed at the bottom of this page.[3]

The example we employ in this report is for a specific integrity test implemented with the goal of reducing workers' compensation claims. Although we have focused on drug use and theft in our discussion thus far, integrity tests also relate to injury claims and absenteeism.[4] At the time the test was implemented, the hotel chain had 27,266 employees. Over nearly a one-year period, the test was given to 29,043 applicants, of whom 6,079 were hired. The company specifically tracked workers' compensation claims from these new hires. In implementing the integrity test, the company hoped to reduce the number of accidents and workers' compensation claims, the size of those claims, and the duration of an employee's loss for a given claim.

The information from the company on workers' compensation claims provides a useful complement to the research on integrity tests that has focused more on job performance ratings, drug use, and theft. Moreover, although we think of drugs and theft in conjunction with workers' integrity, we argue that data on workers' compensation claims are more valuable than those regarding drug use and theft. First, and most notably, workers' compensation claims are expensive and cut directly into organizational profits. To be sure, stealing, absenteeism, tardiness, and poor performance are undesirable, but compared to workers' compensation claims these matters do not necessarily have as direct an effect on profits, except, perhaps, as drug use has an effect on compensation claims. Reducing workers' compensation claims by one dollar will increase profits (before taxes) by one dollar.

We have good reason to believe that workers' compensation claims can be affected by hiring with an integrity test. By eliminating those who take illegal drugs or are inclined to abuse drugs or alcohol while at work, the company can eliminate or reduce one of the most common causes of workplace accidents. Moreover, by eliminating those who are inclined to steal or engage in other illegal activities, one can eliminate from the employee pool those who may be willing to fake an injury or otherwise inappropriately report an injury from elsewhere as a workplace accident.

Gaming the System

While it is certainly possible for test takers to provide false answers on integrity tests (e.g., saying they don't take drugs when in reality they do), we know of little research examining what percentage of people fake their answers. Instead, the research on faking on integrity tests focuses on the effect of any faking, rather than its prevalence. For example, test-takers in experimental studies who are told to fake being good or to respond as an applicant would respond tend to get better scores than those who are asked to respond honestly.[5] Thus, while there is evidence suggesting that employ-

---

[3] See, for example: C. M. Berry, P. R. Sackett, and S. Wiemann, "A Review of Recent Developments in Integrity Test Research," *Personnel Psychology*, Vol. 60 (2007), pp. 271-301; P.R. Sackett, L.R. Burris, and C. Callahan, "Integrity Testing Selection: An Update," *Personnel Psychology*, Vol. 42 (1989), pp. 491-527; P.R. Sackett and P.J. Decker, "Detection of Deception in the Employment Context: A Review and Critical Analysis," *Personnel Psychology*, Vol. 32 (1979), pp. 487-506; P.R. Sackett and M.M. Harris, "Honesty Testing for Personnel Selection: A Review and Critique," *Personnel Psychology*, Vol. 37 (1984), pp. 221-245; P.R. Sackett and J.E. Wanek, "New Developments in the Use of Measures of Honesty, Integrity, Conscientiousness, Dependability, Trustworthiness, and Reliability for Personnel Selection," *Personnel Psychology*, Vol. 49 (1996), pp. 787-829.

[4] The company employed the Tescor Survey, which is a version of an overt integrity test. Note that although American Tescor provided the data for this study, the company provided no funding for writing this report. More information on American Tescor can be found at www.americantescor.com.

[5] See, for example: G.M. Alliger and S.A. Dwight, "A Meta-analytic Investigation of the Susceptibility of Integrity Tests to Faking and Coaching," *Educational and Psychological Measurement*, Vol. 60 (2000), pp. 59-72; and A.M. Ryan and P.R. Sackett, "Pre-employment Honesty Testing: Fakability, Reactions of Test Takers, and Company Image," *Journal of Business and Psychology*, Vol. 1 (1987), pp. 248-256.

The evidence is compelling that the use of the integrity tests led to a substantial decrease in workers' compensation claims.

ees can indeed fake an integrity test, there's no indication that they actually do so.

To help mitigate the potential for faking, integrity tests often include control questions designed to detect such behavior. For example, tests will include questions such as: "Have you ever told a lie?" and "Do you ever get angry?" Since everyone has told a lie or become angry at some time, it is assumed that persons who respond negatively to these questions are probably answering other questions dishonestly. While we know of no firm data on the percentage of those who fake their answers, we believe that it's safe to say the following: if integrity tests were invalid, we'd see no research evidence that they foretell undesirable behavior. To the contrary, our examination of the hotel chain's data supports the assertion that integrity tests elicit truthful responses. Those data support the conclusion that a large percentage of applicants either answer the questions more or less honestly by reporting that they engage in risky, unethical, or illegal behavior or are caught by the control questions.

According to the chain's test results, individuals who apply for a job do, indeed, report that they engage in questionable behavior. Of the 29,043 applicants who took the integrity test, 31 percent were classified as "high risk," based on their test answers. For instance, 1,881 employees admitted to stealing from their employers in response to the test question that asks employees to report how much they have stolen. The amounts reported were not negligible: 698 (37%) employees reported stealing up to $25; 275 (15%) reported stealing between $25 and $500, and 908 (48%) reported stealing over $500! Roughly 2,400 applicants admitted that they took merchandise from previous employers, with 796 (33%) reporting the theft of over $500 in merchandise. Employees also responded positively to questions regarding whether they had shoplifted in the past year, would help a friend steal, would steal if they had low pay, or would fake time cards if those were never checked.

The chain's applicants were equally candid about their use of illegal drugs. The most common admissions were for cocaine (1,507), hashish (1,100), and hallucinogens (1,050). Additionally, 1,338 employees admitted to regular drug use at work, and 1,955 reported drinking at work. Beyond that, nearly 2,000 employees stated that they would fail a urinalysis. Finally, the chain's test did indicate potential fakers by flagging roughly 9 percent of applicants. It should be noted that there are no data to determine whether those flagged as fakers are actually undesirable employees, but it was felt that selecting those providing unrealistically positive answers constituted an unnecessary employment risk. Though the test cannot be 100-percent accurate, the implication is that they should be screened out, given that the employer would want to err on the side of caution.

What the Tests Predict

Many of the studies on integrity tests have examined what is referred to as "counterproductive work behavior" or CWB. The CWB score is usually expressed as a scale that tallies a broad spectrum of disruptive activities, such as actual theft, admitted theft, dismissals for actual theft, illegal activities, absenteeism, tardiness, and violence. An extensive analysis of existing studies has shown integrity tests to be fairly strong CWB predictors.[6] That meta-analysis also showed overt integrity tests to have similarly strong validity for predicting overall supervisory performance ratings and moderate validity for predicting theft.[7]

Money saver. One way to measure the test's value to the hotel chain is to examine the frequency and size of workers' compensation claims. Despite many studies performed on integrity tests, we are unaware of any that have examined the effect of the test on workers' compensation claims. The logic

[6] A meta-analysis of 665 validity studies showed that the corrected correlation between overt tests and CWBs was 0.39 (.27 uncorrected). See: D.S. Ones, C. Viswesvaran, and F.L. Schmidt, "Comprehensive Meta-analysis of Integrity-test Validities: Findings and Implications for Personnel Selection and Theories of Job Performance, "*Journal of Applied Psychology*, Vol. 78 (1993), pp, 679-703,

[7] Integrity tests predicted overall job performance ratings with a corrected validity of .30 (.18 uncorrected). However, when looking at only predictive studies with samples of job applicants, the estimated true correlation was .41. Tests predicted theft with a correlation of .13. However, because theft has a low base rate (i.e., it is a relatively rare event), correcting the correlation for this low base rate yields an estimated validity of .33 for predicting theft. See: *Ibid*.

Exhibit 1

Comparison of workers' compensation claims

Screening Status	Number of Employees	Claim Frequency	Number of Claims	Total Claims per Group	Average Cost per Claim Filed	Average Cost per Employee in Group
Unscreened	27,265	2.82%	769	$2,665,712	$3,466	$97.77
Screened	6,079	1.46%	89	$188,589	$2,119	$31.02
Total	33,344	2.57%	858	$2,854,301	$3,327	$85.60

Note: One extreme outlier was eliminated from the total claims figure. One employee from the unscreened group was involved in an accident that incurred more than $600,000 in claims. Because this claim was so much greater than all other claims, we eliminated it on the grounds that it is an exceptional case. Thus, the results reported in Exhibit 1 and in the accompanying text do not include the outlier. We did test the analysis with this claim included, and the result was that the difference between the unscreened group and the screened group was even more pronounced.

here begins with the integrity tests' ability to capture risky activities, such as taking drugs or engaging in theft. Risky behavior may correlate with (or cause) the carelessness or ineptitude that can lead to workplace accidents. Reducing the number of risky hires should trim the number and severity of claims filed by employees, with the resulting reduced costs.

Because the integrity test was used to screen new hires, we should point out that we are examining a range restricted sample. Those candidates predicted to have risky behavior would be removed from the sample. We compared the employees hired after the test-based selection process to existing employees, who were employed before the screening test was implemented.

We found a considerable difference between the two samples. As shown in Exhibit 1, the likelihood of a workers' compensation claim for those screened was 1.46 percent, whereas the likelihood of a claim for legacy (unscreened) employees was 2.82 percent. The raw percentages are small in both groups, reflecting the modest overall probability of a person's filing a workers' compensation claim. Comparing those two percentages, however, reveals that those screened by the integrity test were about half as likely to file a workers' compensation claim as those already on staff and not screened.[8]

The two groups also showed a differential in claim sizes, with the average size of a claim from a screened applicant appearing to be less than the claim size of an unscreened incumbent. As shown in Exhibit 1, the average claim from those screened candidates who did file a claim was $2,119, whereas the average claim for an unscreened incumbent was $3,466. The difference is significant, according to statistical tests.[9] While we cannot conclusively determine that this difference is solely attributable to the use of the integrity tests, the company made no other changes to its selection system during this time period. Thus, we feel the evidence is compelling that the use of the integrity tests led to this substantial decrease in workers' compensation claims.

A different approach to the data is to examine the frequency and size of large claims. Only 20 percent of claims exceeded $2,000, but those claims accounted for over 89 percent of total claim amounts. Of that group, only 17 were from screened employees (representing 0.28 percent of the screened group), where as 158 came from unscreened employees (0.58 percent of the unscreened group). The average claim size was $9,564 for screened employees, and $15,070 for unscreened employees. Both the different probability of being in the large-claim group and the differential in the average size of the claims were statistically significant between the two groups.[10] By inference, we can conclude

[8] A statistical test showed that the probability of observing this difference due solely to chance was less than .0001.

[9] A t-test based on an analysis assuming unequal variances for the two groups showed that the difference between the two groups is statistically significant at $p < .05$. Note that the test for unequal variances showed that the variances of claims from the two groups were significantly different ($p < .0001$).

[10] A screened employee was statistically significantly less likely to file a "large claim" ($p < .01$). The average size of a "large claim" for screened employees was also statistically significantly smaller than for unscreened employees ($p < .01$).

Exhibit 2

Comparative test-passing rates

Population Class	Test Outcome: High Risk	Moderate Risk	Low Risk	Hirable (passed test)	Percentage of majority group
Total	31%	19%	50%	69%	—
Male	33%	19%	48%	67%	93%
Female	28%	19%	53%	72%	—
White	33%	22%	45%	67%	92%
Non-White	29%	17%	54%	71%	97%
Black	30%	19%	51%	70%	96%
Latino	27%	16%	58%	73%	—
Asian	33%	17%	50%	67%	92%
Native American	32%	16%	52%	68%	93%
Other	38%	25%	37%	62%	85%
Over 40	31%	17%	52%	69%	99%
Under 40	30%	20%	50%	70%	—

Note: The percentage in the "hirable" column sums the percentages of moderate- and low-risk candidates. The "percentage of majority group" column expresses the percentage of a particular population class that passed the test as compared to the largest class taking that test, in this instance with regard to gender, race, and age. In the case reported here, the majority groups were women, Latinos, and those under 40.

that risky employee behavior (such as drug use) is related to the probability of an employee's filing a claim and the likelihood that such a claim would be relatively large.

In sum, the 6,079 screened employees filed 89 claims, which totaled $188,589. The average size of the 89 claims was $2,119, but the overall expected cost of a screened employee was $31.02. In comparison, the 27,265 unscreened employees filed a total of 769 claims, for a total of $2,665,712 and an average of $3,466 (not including the one exceptionally large claim). The average cost of claims per unscreened employee was $97.77. That means, on average, that a screened employee would be expected to cost $66.75 less (per year) in compensation costs than would an unscreened employee. Note again, this is only in terms of workers' compensation claims. We did not examine the benefits of avoiding theft or having better performing employees.

The Matter of Adverse Impact

All employment tests invite potential legal concerns, as do other screening practices. Although tests may provide valuable information about would-be employees, they must not violate relevant employment laws. In terms of United States law, the tests should not discriminate against protected classes (either intentionally or inadvertently). Although valid job-related test results can be a defense against claims of adverse discrimination impact, the better situation is no evidence at all to suggest a *prima facie* case of adverse impact.

Under federal discrimination law, a *prima facie* case for adverse impact is met if the passing rate for a given protected class (e.g., women, persons over age 40, African Americans) is less than 80 percent of the passing rate for the majority group—whatever that group might be.[11]

Research results suggest that adverse impact is not a significant risk for integrity tests (see Exhibit 2). A study based on four large databases found no significant differences in test outcomes for African Americans, Hispanics, Asians, or American Indians compared to whites.[12] With regard to age discrimination, individuals over 40 actually scored somewhat higher than those under 40. The research did provide some evidence of adverse impact against men, as women scored 0.16 standard deviations higher than men did on the tests. Because of the large sample size, this seemingly tiny difference is statistically significant; however, the magnitude of this effect is generally interpreted as being small.[13] It is also not clear whether this effect would be large enough to violate the 80-percent rule. Nonetheless, it is a point of potential concern.

For the chain's results, we find results similar to those reported in the previous research. Women did score somewhat higher than men, with 72 percent being classified as employable, compared to 67 percent of the men. The test did not violate the 80-percent rule, though, because men were classified as employable in this instance at 93 percent of the rate of women. For race and age, all passing ratios were at least 90 percent, with the exception of those classified as "Other," whose portion of those passing the test was

[11] The 80-percent rule, also referred to as the 4/5 rule, says that the passing rate of a test for a minority group cannot be less than 80 percent (i.e., 4/5) of the passing rate of the majority group. Although this comparison is often against the mean for whites or men (as the typical majority group), it must be made against whatever group constitutes the majority. In this case, the majority group is non-white (71% considered hirable, as moderate or low risk; 54% were classified as low risk) compared to whites (67% classified as hirable, with 45% classified as low risk).

[12] See: D.S. Ones and C. Viswesvaran, "Gender, Age, and Race Differences on Overt Integrity Tests: Results across Four Large-scale Job-applicant Data Sets," *Journal of Applied Psychology*, Vol. 83 (1998), pp. 245-269.

[13] Effect sizes less than 0.20 are considered to be small, according to: J. Cohen, *Statistical Power Analysis for the Behavioral Sciences* (San Diego: Academic Press, 1977).

Integrity tests constitute a valuable selection tool that offers a good return on the investment.

still 85 percent of the majority group (which in this case was Latinos), and 93 percent of the pass rate of whites.

Americans with Disabilities Act Analysis

Another concern of integrity tests is that they may violate the Americans with Disabilities Act (ADA). The ADA provides than an employer "shall not conduct a medical examination or make inquiries as to whether such applicant is an individual with a disability or as to the nature or severity of such disability." According to EEOC guidelines, employers may provide psychological testing to applicants so long as the examination is not medical (such as for identifying a mental disorder). Because overt integrity tests are not designed to diagnose psychological conditions, but rather to assess characteristics such as integrity, drug habits, and proclivity for theft, integrity tests would generally not fit the definition of "medical" under the ADA.

Cost and Availability of Integrity Tests

Integrity tests often require psychometric testing, and thus are not simple tools that can be designed by non-experts. Consequently, chances are good that a business wishing to use this technique would have to purchase the test. The tests are widely available from many vendors. In addition to the test employed in this study, which was provided by American Tescor, Inc., other integrity tests include the Personnel Selection Inventory, the Reid Report, and the Stanton Survey. The cost of purchasing a test is often a function of multiple factors, including how many tests will be purchased. That said, the cost of an integrity test is relatively low. The Tescor screening test used in this report costs at most $20 per test, with discounts for volume. The hotel chain we described above spent roughly $9.30 per test, because it purchased so many copies.

We believe that the benefits of a test probably will outweigh the costs, but that is a decision which each manager must make individually. In making that decision, a company should have a clear purpose for purchasing an integrity test. Goals would include such issues as improving job performance, turnover, and absenteeism, or, as in the case of this study, workers' compensation claims. When considering the purchase and use of integrity tests, companies should seek information on both the design of the instrument and evidence of its validity. Ideally, tests should be evaluated independently using the company's own measures. Companies should also keep their own data on the results of integrity tests and validate their own results (as we did in the study presented here). Data should be collected, and relationships should be tested. Even though we found that the effect on workers' compensation claims can be substantial and other research indicates that the effects on other variables can also be sizable, companies still should collect their own data and verify these results for their own situation.

In addition to traditional paper-and-pencil methods, integrity tests can electronically scored or web based. The test described in this report can be administered in any of these three ways. Each generally takes less than 20 minutes to complete. Additionally, tests are are written at the 5th grade reading level, in many different languages.[14]

Conclusions

Overall, the results suggest that integrity tests can be a valuable selection tool. Using the example in our study, the large hotel chain spent $9.30 per test per applicant to hire an employee that, on average, cost $66.75 per year less than those who were not screened and already on staff. Given that there were 29,043 applicants screened and 6,079 employees hired, the test had an expected benefit of $405,773 at a cost of $270,100. We calculate this as an immediate profit of $135,673, and a return on investment of 50 percent. We think that our calculations in this regard are conservatively stated. If employees remain with the company for several years, the savings are multiplied but there is no additional selection cost. The monetary benefits that we calculate here are only those relating to workers' compensation, since we

[14] As an example, the Tescor Survey is available in Albanian, Bosnian, Chinese (Mandarin), Creole (Haitian), English, French, German, Hmong, Oromo, Polish, Portuguese-Brazilian, Portuguese-Continental, Romanian, Russian, Samoan, Serbo-Croatian, Somalian, Spanish, Tagalog, Tongan, and Vietnamese.

could not quantify the other benefits of integrity tests. All of this benefit occurred without any evidence of harm due to adverse impact or risk of violating the ADA.

Not to minimize the cost of the test, we underscore the point that this company benefited from purchasing the integrity test in bulk. Thus, the real return for any company will depend on the actual price paid for the test in addition to the ratio of number of hires to number of applicants. Let's use the $20 sticker price for the test and apply that to the statistics for the large hotel company. Given that 69 percent of applicants were classified as employable, at an average cost of $20 per applicant and an average annual benefit of $66.75 per hire, the average return of the integrity test per hire at the full cost would be $37.76 per hire (or an ROI of 130%) if the integrity test is the only selection device used in the hiring decision. Since most companies use at least some other selection devices, it is likely that this return will be decreased as more individuals need to be tested, because some applicants classified as employable by the integrity test will be rejected based on the results of other selection devices. (In the example we described, 21% of applicants were hired, although 69% of applicants passed the integrity test.) That is why we suggest that companies consider carefully the role that integrity tests will play in their overall selection process.

In sum, research evidence and the example from a hotel company show that integrity tests **(1)** can predict outcomes of importance to organizations, **(2)** elicit reliable responses from applicants that allow rejection of potentially high-risk employees, **(3)** do not create adverse impact, **(4)** do not violate the ADA, and **(5)** produce substantial returns on the relatively low cost of administering the test. It thus appears that an integrity tests is a selection tool of potentially high usefulness, and one that hospitality companies should consider implementing. ■

Cornell Hospitality Reports

Index

www.chr.cornell.edu

2007 Reports

2007 Hospitality Tools

2006 Reports

The Executive Path

Hospitality Leadership Through Learning

Cornell Short Courses and Certifications for Hotel Industry Professionals:

The General Managers Program

Tackle strategic hotel management issues and find relevant, specific solutions. Work with a global network of managers and top Cornell faculty in an intensive learning experience.

Ten-day programs are held on the Cornell University campus in Ithaca, New York in January and June and at the Cornell Nanyang Institute in Singapore in July-August.

Anheuser-Busch *The* Professional Development Program

Study and share experiences with peers from around the world in these intensive hospitality management seminars led by Cornell faculty and industry experts.

Intensive three-day courses are held on the Cornell University campus in Ithaca, New York in June-July; in Brussels, Belgium in June and at the Cornell Nanyang Institute in Singapore in January and July-August.

The Online Path

Available year-round, choose individual courses or combine courses to earn one of six Cornell Certificates. Interact with an expert instructor and a cohort of your peers to develop knowledge, and to effectively apply that knowledge in your organization.

The Contract Programs

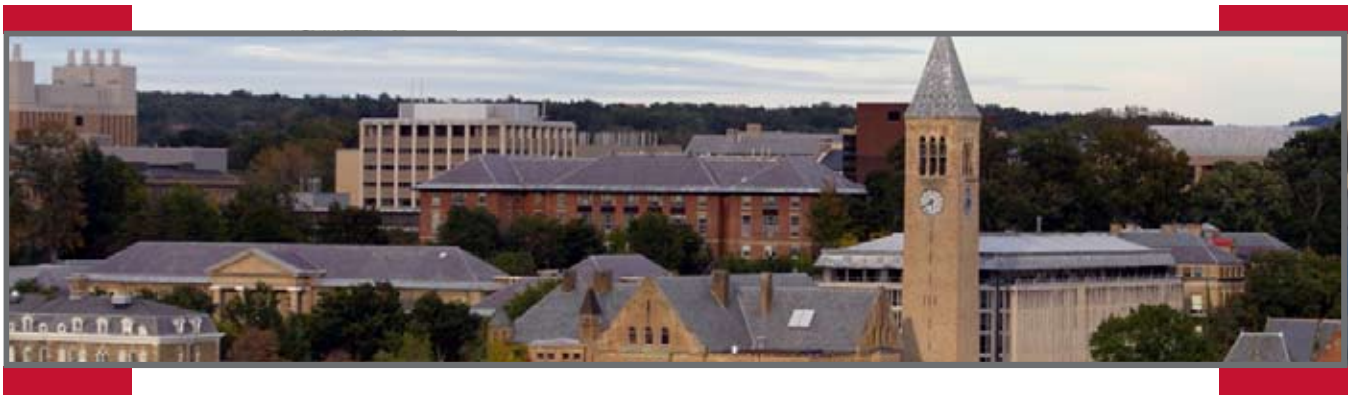
Programs delivered by Cornell faculty for your company. Many hotel and foodservice management topics available, both "off the shelf" and custom developed to your needs and delivered to your management team on the Cornell campus or anywhere in the world.

Complete program information and applications online:

www.hotelschool.cornell.edu/execed/chr

PHONE: +1 607 255 4919 EMAIL: exec_ed_hotel@cornell.edu

Cornell University
School of Hotel Administration



www.chr.cornell.edu