



Supervisory Skills Inventory

S.S.I.

HR•Assessments®

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Administrator's Manual



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To ensure that you are obtaining the full benefits available to you from the use of HR•Assessments® products, please read all information contained in this manual carefully. By using this assessment product, you are acknowledging that you have read and understand the general guidelines provided in this manual, and that if you have any specific questions, you have referred them to a competent testing and/or legal expert for advice. The test developer and publisher do not assume liability for any unlawful use of this product.

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Assessment Products: An Investment in Your Company's Future

The decision to use assessment products in the employment process is one that can be very beneficial to your company in many ways. A well-designed, properly validated assessment, when used in conjunction with other employment screening tools, can save your company from investing training resources in an applicant who is not suited to perform the job for which he or she was hired, and, as a consequence, can help protect your company from negligent-hiring lawsuits.

Each assessment product has been researched and developed by our in-house staff of testing professionals, which includes experienced industrial psychologists.

Use of Testing Products as “Tools”

Validity studies of the assessment products we offer have shown them to be predictive of job performance and therefore quite useful during the selection process. It is important to remember that assessments should be used in conjunction with other, equally important employment screening tools – such as criminal background checks, work histories and employer references – to present a balanced picture of the particular job candidate. Only when used in coordination with one another will you be able to truly determine a “fit” between the candidate and the particular job for which he or she is applying.

Employment assessments, as defined in this manual, can be of several varieties, including trustworthiness or integrity assessments, skills-oriented assessments and personality assessments. Each assessment can center on one of these elements, or may include several different components, assessing a variety of factors. Choosing the proper assessment product for your needs is a key factor in making your selection process more effective.

Legal Aspects of Assessment Use and Administration

Although employment assessments have been in use for more than 40 years, their use became more prevalent after the passage of the Employee Polygraph Protection Act (EPPA) of 1988, which made it illegal for most private employers to use polygraph examinations as a routine pre-employment screening tool. Employment assessments that are not prohibited by the EPPA are designed to give the employer a legal way to gauge an employee's job-related skills and personality traits as an alternative to the polygraph test. Whereas the polygraph test is designed to monitor an applicant's physiological reactions to certain questions, employment assessments seek to gain information on the job candidate through a series of questions designed to measure job-related attributes.

Today, the use of employment assessments continues to increase. Many of the country's largest corporations use such screening devices on a regular basis, and have found great success in using them to hire and promote the best candidates.



Testing Products and “Adverse Impact”

A common misperception of these assessments is that they all tend to discriminate against certain classes of applicants, in violation of state and federal laws against discrimination in employment decisions. In fact, this is not the case. Although there is evidence of poorer performance by some members of protected classes on some skills tests that include language and mathematical components, the use of such tests is still justified, so long as the skills assessed by the test are essential for the successful performance of one or more of the job’s key functions. In addition, researchers have found no evidence that well-constructed personality assessments discriminate on any unlawful basis.

However, it is incumbent upon employers who use assessment products to continually monitor selection procedures to ensure that no “adverse impact” is occurring in the overall selection process. Adverse impact is defined as a situation in which there is a substantially different rate of selection in hiring, promoting or other employment decisions that works to the disadvantage of members of a race, sex or ethnic group. If adverse impact does occur, the employer needs to be able to demonstrate the job-relatedness of the selection process. For further guidance in this area, read the *Assessment Selection and Follow-Up Procedures* section of this manual.

Federal Laws

There are federal laws and regulations governing the use of “selection” tools, such as employment assessments, insofar as they have any “adverse impact” on the employment opportunities of protected classes of individuals. Some of the more subtle aspects of these laws as they apply to the selection process are discussed in the section of this manual titled, *Using Job Analysis to Justify Use of Assessment and Its Sections (Legal Implications)*.

Title VII

Title VII of the Civil Rights Act of 1964 (Title VII), covering employers with 15 or more employees, prohibits discrimination in employment decisions on the basis of race, sex, color, religion and national origin. Title VII authorizes the use of “any professionally developed ability test, provided that such test, its administration or action upon the results is not designed, intended or used to discriminate” on any unlawful basis. In 1971, the U.S. Supreme Court, in *Griggs v. Duke Power Co.* (401 U.S. 424), adopted the standard that employer practices that had an adverse impact on minorities and were not justified by a business necessity violated Title VII. Congress amended Title VII in 1972, adopting this legal standard.

As a result of these developments, the government sought to produce a unified governmental standard on the regulation of employee selection procedures because the separate government agencies had enforcement powers over private employers, and each used different standards. This resulted in the adoption of the Uniform Guidelines on Employee Selection Procedures (Guidelines), codified at 29 CFR Part 1607, which established a uniform federal position in prohibiting discrimination in employment practices on the grounds of race, color, religion, sex or national origin, and applies to all public and private employers covered by Title VII, Executive Order 11246, the State and Local Fiscal Assistance Act of 1972, the Omnibus Crime Control and Safe Streets Act of 1968, and the Intergovernmental Personnel Act of 1970.



Highlights of the Guidelines include:

Provision of a uniform set of principles governing use of the employee selection procedures that is consistent with applicable legal standards.

Setting out validation standards for employee selection procedures that are generally accepted by the psychological profession.

The Guidelines do not require a validation of the selection device unless evidence of adverse impact exists. It is important to note also that compliance with the Guidelines does not remove the affirmative action obligations for assessment users, including federal contractors and subcontractors.

The Americans with Disabilities Act

The Americans with Disabilities Act (ADA) provides that an employer “shall not conduct a medical examination or make inquiries of a job applicant as to whether such applicant is an individual with a disability or as to the nature or severity of such disability.” (42 USC Sec. 12112(d)(2)(A); see also 29 CFR Sec. 1630.13.) Inquiries into a person’s disabilities are prohibited at the pre-offer employment stage, except in a very narrowly defined situation when the applicant has *voluntarily* disclosed a medical condition requiring accommodation. The ADA protects disabilities, not a characteristic an employer may consider to be a personal flaw or undesirable aspect of an applicant’s personality. The ADA does not prohibit inquiries into such personality attributes as propensity for honesty, ability to get along with others, organizational skills or management skills, to cite a few examples. No question or series of questions designed to elicit information about a person’s mental impairment (as defined by the ADA), or questions that even would tend to elicit such information, should appear on an assessment product. Each HR•Assessments product has been carefully reviewed under this standard to avoid any conflict with ADA guidelines.

Recordkeeping Requirements

Various federal laws require employers to retain tests and test results for at least one year from the date the test is administered or from the date of any personnel action relating to the testing, whichever is later.

State and Local Laws

Due to the wide variety, complexity and ever-changing nature of state laws, it is impossible to summarize each state’s requirements in this brief overview. If you are unfamiliar with the state and local laws governing the use of screening devices applicable in your locale, consult a qualified labor law attorney or testing specialist who may provide competent guidance on this topic.



Assessment Selection and Follow-Up Procedures

Selection

Generally, when selecting an assessment or any other selection tool, you should choose one that has been designed specifically to measure the skills or traits necessary for the position in question. It is recommended that a thorough job analysis be performed to determine the connections between job functions and the attributes the assessment product is designed to measure.

Monitoring

Monitor your selection process to ensure compliance with all applicable federal, state and local laws, checking your selection process for evidence of adverse impact. This should be conducted on a continual basis. HR•Assessments products include testing logs that can be used to record each assessment taker's scores, as well as other important data that can be used to compute your own norms and adverse-impact statistics.

Validation

Should your monitoring results indicate that adverse impact is occurring in the selection procedures, you should determine in which component of the selection process it is happening. If the use of a certain assessment product is found to be the cause, you will need to conduct a validation study of the assessment. Qualified testing professionals may be contacted to help in conducting a validity study. These professionals will be able to help determine whether the assessment is the cause of the adverse impact and whether the assessment is emphasizing a bona-fide occupational qualification for the job. In some instances, assessments that in some context may be considered discriminatory may be lawful to use in others, so long as the assessment is centered on a bona-fide occupational qualification.

Scoring

Cutoffs and suggested “pass” or “fail” scores are not provided with these assessments. Instead, norms and, in some instances, average assessment scores for various levels of job performance are provided. This information is provided for the elements the assessment is designed to measure. This information is a result of the testing universe used in the validation studies performed by HR•Assessments, and is for demonstrative purposes only. Assessment results always should be interpreted, along with other information gathered through your selection process, to ensure that you get a complete picture of the job candidate or employee. It is recommended that you administer the assessment to your current employees so you can develop your own company-specific norms for assessment performance. These norms then can be used as benchmarks during your assessing and selection process.



The Supervisory Skills Inventory

Effective supervisors need to have excellent employee relation skills. They must be able to motivate their staffs and have team-building abilities. They also must have excellent problem-solving skills and must be able to plan and organize effectively. Without these essential characteristics among its leadership staff, an organization is likely to run into serious problems with respect to company morale, dedication, productivity and overall performance.

The HR•Assessments® Supervisory Skills Inventory (S.S.I.) is designed to help your business succeed by identifying those individuals with strong supervisory skills, as well as identifying potential areas for development among your management staff.

Based on the two-factor leadership theory that originated with the ground-breaking research of the “Ohio State Leadership Studies,” the S.S.I. provides a self-report measure of two important dimensions of supervision and leadership:

Consideration: The extent to which the individual has a rapport with his/her staff, is able to motivate staff and is able to build a team environment.

Structure: The extent to which the individual solves problems, initiates ideas and has effective planning and organizing skills.

The information gathered from this inventory can be used in two beneficial ways:

To select **applicants** who have excellent supervisory skills.

To identify **current employees’** profiles so their strengths can be maximized in their current jobs or during their career development.

Selecting Top Performers

Once you have determined that effective supervisory skills are necessary to perform the job of interest, the S.S.I. can help you compare an applicant’s qualifications to those of other applicants and to current employees. Doing this should significantly increase your chances of matching the right person to the job.

The S.S.I. also can be used as a powerful interviewing tool. An applicant’s responses to specific test questions can be used to generate follow-up interview questions that further assess the applicant’s supervisory behaviors, helping you uncover hidden behavioral tendencies.

Determining Current Employee Strengths

In addition to achieving a good match between applicants and open positions, the S.S.I. also can be used to evaluate current employees. Using the inventory, managers have a better understanding of how to maximize strengths and minimize weaknesses for those in supervisory roles.



Description of the S.S.I.

The S.S.I. provides a reliable measurement of two behavioral traits associated with effective supervision and leadership (i.e., consideration and initiating structure). The S.S.I. consists of 31 questions with a strongly agree/strongly disagree answer format and some situational questions with various behavioral choices. Although the test is untimed, most people complete it in less than 20 minutes.

The questions that assess each behavioral tendency were developed based on information gathered from an extensive review of the psychological literature on supervisory and leadership behavior. Supervisors and managers in various organizations also were interviewed to determine what behaviors were most indicative of excellent supervisory performance. Each question was written specifically with the employment environment in mind, unlike most other “clinically based” personality assessment instruments. Applicants view tests designed specifically for the employment setting as more job-relevant (face valid) than those developed for clinical assessment and therefore are less likely to be questioned in terms of their relevance to the position in question.

Here are the test instructions and an example of a test item:

Directions

The purpose of this questionnaire is to see how you handle different work-related situations. Each individual has a unique work style. Therefore, there are no right or wrong answers to the questions. Your response to each question will depend upon your individual style. You are to place a **checkmark** in front of the response that best describes you or what you would do if confronted with that situation. A sample question similar to those found in the questionnaire is presented below.

A supervisor’s relationship with his/her staff has little to do with the staff’s level of productivity.

☐ Strongly Agree ☐ Agree ☐ Neutral ☐ Disagree ☐ Strongly Disagree

Do you have any questions?

This questionnaire contains 31 questions similar to the one presented above. There is no set time limit for completing this questionnaire, so please take your time and answer each question carefully and honestly. You should use a ballpoint pen when completing the questionnaire. If you make a mistake, **Do Not Erase** your mark. Draw a circle around the ✓ like this: Ⓢ. Then place a checkmark in front of the desired response. Please make sure you answer every question.

The examiner will not answer any questions once you have started.



Using Job Analysis to Justify the Use of Assessment and Its Sections (Legal Implications)

From a legal standpoint, it is important that users of this test take the necessary steps to establish a clear linkage between the job tasks and the job behaviors measured by the S.S.I. This relevancy should exist to meet the principles outlined in the Uniform Guidelines on Employee Selection Procedures (1978) and other federal government employment-related legislation, such as Title VII of the Civil Rights Act of 1964, the Civil Rights Act of 1991, and the American with Disabilities Act of 1990.

The tasks that are crucial or essential to the job in question should be identified first. Then, the behaviors underlying each task can be determined. This process should reveal the behaviors that are relevant to the job in question and should be documented carefully to justify the appropriateness of the S.S.I. in the employee selection process. The following are examples that indicate the relationship between job tasks and the S.S.I. scales.

Task	S.S.I. Scale
Motivates employees through the use of effective team-building strategies.	Consideration
Develops positive relationships with employees through timely and proper communication.	Consideration
Through planning and organization, consistently meets set objectives.	Initiating Structure
When employee or departmental problems arise, uses problem-solving skills effectively to mediate and resolve the situation.	Initiating Structure



As a general guideline for compliance with federal discrimination and disability laws, test users should not subject test takers to any adverse employment decision based on a test result, unless the test result and other factors considered in the decision-making process reveal that the person does not possess qualifications that are crucial or essential to the job in question. To illustrate, if a test taker performs poorly on a test section designed to measure inspection skills, and inspection skills are not crucial or essential to the position for which the test taker is being considered, the test result should not serve as a basis for excluding the test taker from the position. Similarly, if a test result indicates that a test taker is unable to perform certain physical tasks that are not crucial or essential to the job position at issue, the test taker should not be excluded from that position on the basis of the test result.¹

Test sections measuring proficiency in the English language should also be administered in accordance with these principles. Thus, if spelling, grammar, vocabulary, or reading comprehension skills are not essential to a job position, a test taker should not be subjected to an adverse employment decision based on poor test results in those areas. Requiring employees or applicants to be fluent in English may constitute national origin discrimination in violation of Title VII of the Civil Rights Act if the requirement is not justified by business necessity or directly related to job performance. There are some limited exceptions to this rule for jobs involving dangerous work requiring a heightened understanding of written or verbal safety instructions in English, or service positions that require significant communications in English with the public. Test users should consult with an attorney before subjecting any test taker to an adverse employment decision on the basis of English language deficiencies.

¹ If the test taker's ability to perform a particular physical task is essential to the job position at issue, the Americans with Disabilities Act may require the test user to provide certain accommodations to facilitate the test taker's performance of the task at issue. Test users should consult an attorney before making any adverse employment decision based upon a test taker's physical inability to perform a task measured by a test result.



Administration Instructions for Paper Tests

Please read these instructions before administering the S.S.I.

1. Before administering, you should be familiar with the assessment and its instructions. Be prepared to answer any questions that may be raised.
2. The assessment should be administered in a quiet room, free from distractions and interruptions.
3. Provide to each applicant/employee a ballpoint pen to ensure clear markings on the answer sheets.
4. Distribute the assessment and have the applicant/employee complete the information on the front page (i.e., name, Social Security number and date).
5. Introduce the assessment to the applicant/employee. Say, "This questionnaire is designed to assess your opinion of different work-related behaviors and attitudes. There are no right or wrong answers. Responses will vary depending on each individual's personal beliefs."
6. Have the applicant/employee read the directions. You should say, "Read the directions on the front cover. Remember there are no right or wrong answers, so please be as honest as possible. Your unique style of thinking about or handling various work-related situations may be exactly what the job requires. Remember, your first response is often your most candid and honest one."
7. After the applicant/employee has read the assessment directions, ask, "Are there any questions?" If there are no questions, state, "There is no time limit, so please take your time and make sure you answer every question. Remember to think about the questions as they relate to your day-to-day working situations and not to situations outside of the working environment.
You may begin."

Test users who are subject to the Americans with Disabilities Act of 1990 may be required to provide accommodations to disabled test takers who need assistance during the testing process. This may include, for example, relaxing the time limitations of timed tests, offering visual or audio assistance, or providing special lighting or seating arrangements. Test users who are uncertain of their obligations under the Americans with Disabilities Act should consult an attorney if an accommodation is requested in the testing process.

8. Once the applicant/employee completes the assessment, ask him/her to make sure he/she has answered every question. When the assessment is turned in, say, "Thank you. We appreciate your taking the time to complete this questionnaire."



Scoring Instructions for Paper Tests


1. Open the test and tear off the perforated tab on the right side of the test. Carefully separate the test cover from the answer key.
2. Notice that the key is separated into three sections. The two larger sections correspond to the two S.S.I. Scales (i.e., Consideration and Initiating Structure). The smaller section corresponds to the Deception Scale.

Items 1–13 measure Consideration.

Items 14–15 and 26–28 make up the Deception Scale

Items 16–25 and 29–31 measure Initiating Structure.

The applicant's or employee's answers should appear as checkmarks on the carbonless key. There are no "correct" or "incorrect" answers. The Scale scores are determined by adding up all the point values for the items that correspond to each Scale.

For example, to determine an individual's score on the Consideration Scale, add the values next to the checked responses to items 1–13. Write this number in the box along the right side of the key titled Consideration Score. Use the same procedure to obtain the scores for Initiating Structure Scale. To obtain the Total S.S.I. Score, add these two scale scores together and write this sum in the S.S.I. Total Score box. If an applicant/employee circles two answers for the same question, count the answer with the lower value. If an answer choice is marked with a , this indicates that the applicant/employee made a mistake and it should not be counted.

For the five Deception Scale items, count the number of rectangles that have checkmarks inside them. Write this number in the box titled Deception Score on the right side of the answer sheet. This is the Deception Scale score. See the section in this manual titled *Deception Scale Score* for instructions on how to interpret this score.



Administration Instructions for Web-based Tests

Please read the following instructions before administering this test.

To access the Online Testing website:

Make sure to be using Internet Explorer to access the site

1. Open your web browser and go to <http://www.mytests.hrdirect.com>
2. Click **Administrator Login**
3. Enter the user name and password we've provided you via e-mail.

Step 1 – Create applicant(s)

It is important that you complete this step first as most of the other screens will not be functional until applicant names have been entered into the system.

In the Applicant Setup tab, fill out the form with the applicants information and click the **Save** button at the bottom left of the page. You should receive the message “You have successfully created a new applicant.” If you wish to create more applicants, click on the **Create New Applicant** button at the bottom of the page for a blank form and don't forget to click the **Save** button after entering each applicant.

Step 2 – Assign a test to an applicant

Click the “Assign Test” tab and select the applicant you would like to assign a test to from the drop-down list. Below you will see a list of tests that are available to the selected applicant. To the right of each test is a link to view his/her respective Administrator's Manuals. Click the checkbox next to the test you wish to assign, then click the **Assign Test** button at the bottom of the page.

Step 3 – Administer a test

Please inform your applicants:

1. Take the test using **only** Internet Explorer.
2. Make sure pop-up blockers are inactivated as the system will open a new screen.
3. Do not use the back button on the task bar during the test, as this will kick the applicant out of the test.

Click the “Administer Test” tab. Select an applicant, with previously assigned tests, from the drop-down list. Select the test that you want to administer. You may administer the test in one of three formats:

The **Begin Test Now** button will start the test immediately.

The **Send Email** button will e-mail an applicant the URL to our testing site along with a unique Session ID for them to enter to take the test.

The **Print Access Info** button will print out the URL to our testing site along with a unique Session ID, for the applicant, to enter to take the test.



Scoring Instructions for Web-based Tests

All web-based tests are scored automatically. Please read the following instructions to view the scores of a test.

View Test Results

Once a test has been completed, log in as an administrator and click the “Test Results” tab. You may view test results in one of two ways:

1. Select the applicant’s name from the “Applicant Name:” drop-down list and click the **Show Tests for Applicant** button. This presents all tests taken by the selected applicant. Click on one of the tests to present its results.

-or-

2. Select the test from the “Test Name:” drop-down list and click the **Show Applicants for Test** button. This presents all applicants who have taken the selected test. Click on the applicant’s name to present test results.

At any time in the future you may go back and view past applicants’ test results. They are saved in our system indefinitely.

Interpreting the Test Results

There are five tabs on a test’s results page:

Test Scores: Presents raw score, corresponding percentile with interpretive text and the average score for each test scale.

Test Score Graphs: Presents the same information as Test Scores along with the graphical view of the corresponding percentile score.

Interview Questions: Presents suggested follow-up questions to help you further evaluate the candidate’s responses to particular test items. If the test does not include this feature, clicking on this tab will result in the following message: “There are no follow-up interview questions for this test.”

Candidate Responses: Lists each test question along with the applicant’s response. If a test includes multiple scales, the test questions and applicants’ responses are separated by Scale.

Utilities: Allows you to change your online testing password and print the various test result sections.



Interpretation and Use of Scores

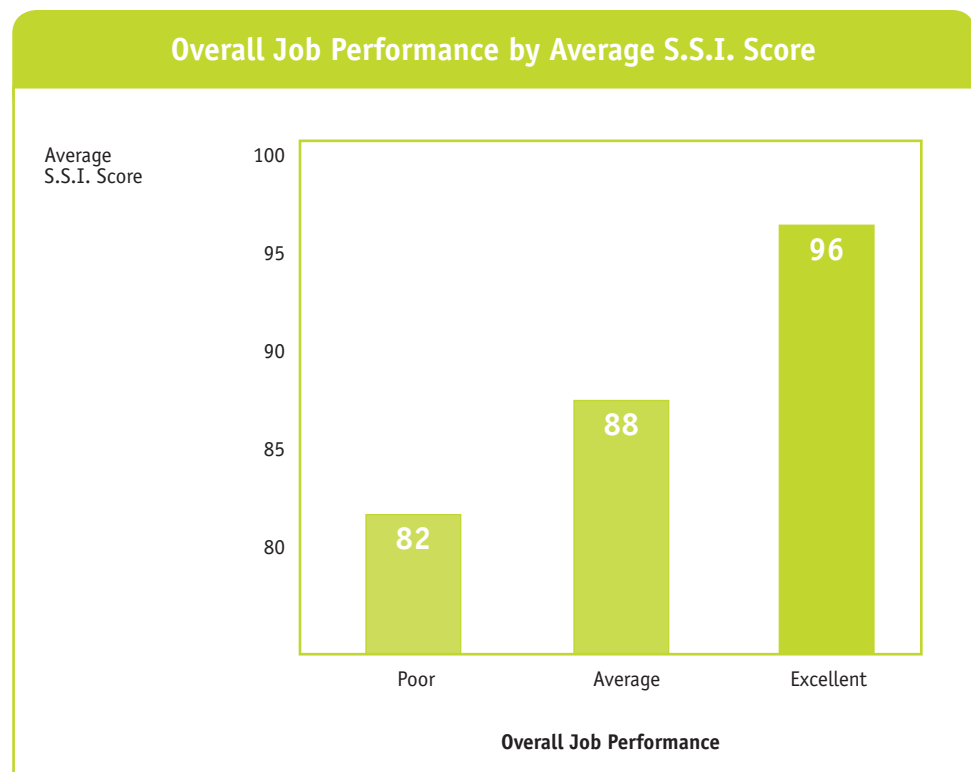
To help you hire the best individual for your organization, the S.S.I. scale scores should be used in conjunction with other applicant information (e.g., the applicant's work history, references, other skills assessments). A high scale score indicates the applicant/employee is likely to demonstrate behaviors indicative of the behaviors the scale measures. The definitions of each scale, as well as the overall S.S.I. score, are presented below.

Consideration: The extent to which the individual has rapport with his/her staff, is able to motivate staff, and is able to build a team environment.

Structure: The extent to which the individual solves problems, and initiates ideas and has effective planning and organizing skills.

Overall S.S.I. Score: The extent to which the individual, in general, possesses those characteristics indicative of an effective leader as it relates to a job that requires supervisory skills.

The graph below presents the average assessment scores by performance level for 160 validity study participants who were rated low, average or high by their supervisors with respect to demonstrating effective supervisory characteristics on the job. These results indicate that, in general, the higher the S.S.I. score, the more effective supervisory behaviors an individual is likely to demonstrate. The lower the S.S.I. score, the less likely the individual is to possess and demonstrate effective supervisory characteristics.





Deception Scale Score

Two issues that arise regarding measuring personality tendencies in applied settings such as those in the S.S.I. are 1) whether the test taker has the ability to improve his or her score, or “fake” results, and 2) whether trying to improve the outcome is an undesirable quality.

When a job candidate takes a personality inventory, a common critique is that he or she has the opportunity to answer in ways intended to enhance the score. In studies when test takers are instructed to try to enhance their scores, there is evidence that some people indeed can alter personality measures. Despite this fact, empirical evidence also shows that the base rate of faking during the actual employment screening process is rare and infrequent (Dunnette, McCartney, Carlson & Kirchner, 1962)², (Hough, Barge, Houston, McGue, & Kamp, 1985)³.

The fact that there are rare cases when some people can enhance personality scores raises the second issue: the question of whether self-enhancement tendencies are merely a function of most normal interaction. In a social context, people habitually participate in casting the best possible light on themselves, and, in fact, are judged positively when successful. Consequently, it may be viewed that the ability to improve a personality score is an index of social competence.

Although test faking is uncommon, and even when it does take place, it changes criterion-related validities only slightly (Hough, Easton, Dunnette, Kamp, & McCloy, 1990)⁴, the S.S.I. takes extra precaution against attempted test faking.

As seen in the *Validity and Reliability* section of this manual, the S.S.I. is demonstrably valid for personnel selection, regardless of any faking that may have occurred. Further, the S.S.I. includes a Deception Scale that detects test takers who attempt to present themselves in an overly favorable light, and alerts the employer to the apparent response distortion. This Deception Scale is designed to alert you about applicants who gave answers that varied from the norm. This is not a polygraph or lie detector test, and its results should not be used as such.

The Deception Scale score can range from “0” to “5.” The higher the score, the likelier the applicant was trying to present him/herself in a favorable light. This suggests that some of their responses to the inventory may indicate how they want you to perceive them and not necessarily how they truly feel. The following is a general guideline that you can use when interpreting the Deception Scale. However, as you test more applicants and follow up with more targeted interview questions that offer more insight into the applicants’ responses, you may develop your own interpretation guidelines.

A score range of 0-1 suggests that there is a Low Likelihood that the applicant was attempting to “fake” his/her responses. The applicant’s responses are likely to be an accurate representation of his/her attitudes and behaviors.

A score range of 2-3 suggests that there is a Moderate Likelihood that the applicant attempted to “fake” some of his/her responses. Some of the applicant’s responses may not accurately represent his/her true attitudes. However, as mentioned above, it is normal for some applicants to attempt to present themselves in a favorable light during the interview/testing process. This score range is not likely to invalidate the test results.

A score range of 4-5 suggests that there is a High Likelihood that the applicant attempted to “fake” some of his/her responses. Some of the applicant’s responses may not accurately represent his/her true attitudes. Follow-up interview questions asking the applicant to give job- or work-related examples of some of his/her overly positive responses is recommended.

² Dunnette, M.D., McCartney, J., Carlson, H.C., & Kirchner, W.K. (1962). A study of faking behavior on a forced-choice, self-choice, and self-description checklist. *Personnel Psychology*, 15, 13-24.

³ Hough, L.M., Eaton, N.K., Dunnette, M.D., Kamp, J.D., & McCloy, R.A. (1990). Criterion-related validities of personality constructs and the effect of response distortion on those validities. *Journal of Applied Psychology*, 75, 581-595.

⁴ Hough, L.M., Barge, B.N., Houston, J.S., McGue, M.K., & Kamp, J.D. (1985, August). Problems, issues, and results in the development of temperament, biographical, and interest measures. Paper presented at the 93rd Annual Meeting of the American Psychological Association, Los Angeles.



Norms

When evaluating applicants, norms provide a point of reference regarding the relative Scale score of each applicant/employee. Norms are the average scores or distribution of scores obtained from the study sample. These score “patterns” can be compared to your own applicants’/employees’ Scale scores to better define their performance on the S.S.I.

Tables 1 through 3 on the following pages present the distribution of scores for each scale and the associated percentile rank for the employees who have participated in S.S.I. validity and norm studies. The percentile rank is the percentage of applicants/employees in the sample who obtained scores lower than the corresponding test score. For example, when reviewing Table 1, it can be said that an applicant/employee obtaining a score of 50 scored in the 75th percentile. This means the applicant/employee scored higher than 75% of the applicants/employees in the norm sample.

Table 1
Consideration Scale

Raw Score	Corresponding Percentile
58+	100
56-57	99
55	98
54	97
53	93
52	88
51	82
50	75
49	70
48	61
47	57
46	51
45	42
44	30
43	23
42	16
41	11
40	7
39	5
37-38	4
36	3
35	2
34 or less	1

Average Score	47
Standard Deviation	4.64
Number of Participants	178



Table 2
Initiating Structure

Raw Score	Corresponding Percentile
56+	100
55	99
53-54	98
52	97
51	96
50	92
49	88
48	82
47	73
46	64
45	54
44	44
43	34
42	27
41	19
40	13
39	9
38	6
37	3
36	2
35 or less	1

Average Score	45
Standard Deviation	4.04
Number of Participants	181



Table 3
S.S.I. Total Score

Raw Score	Corresponding Percentile
111 +	100
109-110	99
107-108	98
104-106	95
103	94
102	92
101	90
100	89
99	87
98	83
97	80
96	74
95	70
94	64
93	56
92	53
91	48
90	42
89	35
88	31
87	28
86	24
85	21
84	18
83	14
82	13
81	9
80	7
79	5
78	3
77 or less	2

Average Score	92
Standard Deviation	7.38
Number of Participants	174



Developing Company-Specific Norms

You can use the information in Tables 1 through 3 and the performance bar graph as a guide when evaluating job candidates; however, we strongly recommend that you collect and validate your own assessment data. The applicant/employee pool in your organization may differ from the study sample presented in this manual. Factors such as geographic location, business category and job responsibilities may have a significant effect on test scores.

One way to develop your own norms and benchmarks is to administer the S.S.I. to your current supervisors or managers. This will allow you to compare the scores of your top performers with those of your less-productive employees. The information then can serve as a guide during your applicant evaluation process.

In addition, if you can establish and document that, in general, high scorers on the S.S.I. scales are also your better-performing supervisors, this can serve as an initial step in establishing the validity of the S.S.I. within your organization.

If you do administer the S.S.I. to your supervisors for establishing company-specific norms, make sure your supervisors understand that the results of your study will be used for norm development only and that their employment status will in no way be affected by their scores.

The EEOC and the Uniform Guidelines on Employee Selection Procedures recommend that job analyses be performed in conjunction with validation studies to determine the job-relatedness of each assessment and other selection tools used throughout the hiring process. It is the employer's responsibility to periodically monitor its employment screening process to ensure that it is fair and valid.



Interviewing with the S.S.I.

In addition to providing an objective measure of an applicant's/employee's supervisory ability, this assessment also can serve as a useful tool during the interviewing process. Responses to the assessment questions can be addressed during the interview, and the applicant may have the opportunity to explain his or her answers. This approach may reveal some interesting insights into the applicant's unique style or tendencies.

Appropriate Responses

Before you interview the job applicant, carefully review his/her answers to the S.S.I. questions. Select several questions that were answered appropriately. Follow up during the interview with reinforcing/positive questions to “break the ice” and establish a rapport with the applicant.

Here are two examples of follow-up questions to appropriate responses:

“You strongly agreed with the statement that said, ‘In general, employees are honest and can be trusted.’ (Question #4). I feel the same way. Can you tell me specifically why you feel this way?”

“You stated that all employees can be motivated to work to their potential. (Question #6). I tend to agree with you. Can you tell me why you feel this way?”

Asking follow-up questions to positive responses helps ease some of the tension inherent in the interviewing process. Positive feedback encourages the applicant to open up and share more potentially critical information.

Inappropriate Responses

Questions answered inappropriately should also be analyzed. Inappropriate responses should be followed up with questions to clarify the reasons for the response. Clarification is important in helping to understand the applicant's thoughts and potential behaviors as they pertain to the “negative” answer.

Here are two examples of follow-up questions to inappropriate responses:

“You agreed with the statement, ‘Employers should not expect all employees to be hard working.’ (Question #18). Can you tell me why you feel this way?”

“You strongly disagreed with the statement, ‘I do things according to plan.’ (Question #20). Can you elaborate on this? Can you give some examples?”

Follow-up questions to inappropriate responses can be used to better understand the opinions or thoughts of the applicant that may be contrary to those of the ideal employee. This information is extremely valuable in determining an individual's fit into the organization.



Discussing Results of the S.S.I.

Your company should develop a procedure so that the applicant can be told what the next step in the hiring process is, regardless of his/her score on the S.S.I. or any other assessment tool. Emphasize that the S.S.I. is only one of the criteria used to determine whether the applicant is a good match for the position. Remind the applicant that many people are applying for the same position, and that each applicant will be considered based on how all of his/her qualifications and experience match the position's requirements.

Some interviewers may be tempted to look for a quick or easy reason to tell the applicant why he/she was not selected. "Blaming" an assessment may seem like a plausible reason, but it is no comfort to the rejected applicant and should not occur. The fact is, the reason to hire or not hire never should be based solely on any single assessment score. It is the interviewer's responsibility to review all of the information gathered from the various tools used during the hiring process – such as the job application, the interview, reference checks and other assessments – to form the decision on the applicant's appropriateness for the position.

The issue is, and always should be, whether there is an appropriate job fit between position and applicant. Using the S.S.I. is only a part of the information you need to make a decision. The other important part is knowing what else is required and desired in the employee filling the position, and effectively using all the sources available to you to make the best decision. This will ensure an effective selection process that offers a more comprehensive view of the applicant and results in hiring the best employee for your organization.

The employer assumes full responsibility for the proper use of the S.S.I. as mentioned in this manual. This includes establishing its job-relatedness to the position in question. If you have any questions about the use of employment assessments, contact HR•Assessments or an employment testing specialist.



Validity and Reliability

Effective applicant/employee evaluation procedures need to be valid and reliable. Validity can be defined as the extent to which the instrument measures what it is supposed to measure. In other words, validity can be conceptualized as whether there is a relationship between test scores and job performance. Reliability refers to how consistent the test is at measuring what it is supposed to measure.

The research studies described next have been conducted to demonstrate the validity and reliability of the S.S.I.

The validation method presented below is known as a concurrent, criterion-related validation study. This validation methodology is an acceptable means of test validation, as described by the federal government's Uniform Guidelines on Employee Selection Procedures. Essentially, this approach requires that the test be administered to current employees and, concurrently, data on the performance of these employees be gathered. If the test were valid, one would expect a strong, positive correlation between individual test scores and job performance. In other words, those employees scoring highly on the test would be those who also perform best on the job; those who do poorly on the test would also be those likely to receive poor performance evaluations.



Validity Study #1

The S.S.I. scales were administered to 122 supervisors employed in various organizations including a bank, a call center, two staffing companies and two manufacturing companies. The supervisors then were rated by their bosses on nine work-related behaviors. These nine rating scales are presented below:

	Very Low Level		Average Level			Very High Level	
1. Employee Relations Relates well to employees, treats employees with respect; is well liked by employees.	1	2	3	4	5	6	7
2. Employee Communication Communicates well with employees; keeps employees appropriately informed of performance and general work issues.	1	2	3	4	5	6	7
3. Planning and Organizing Manages time; effectively, plans ahead, keeps work organized.	1	2	3	4	5	6	7
4. Dependability Can be counted on to get the job done right the first time; is a reliable and conscientious employee.	1	2	3	4	5	6	7
5. Employee Satisfaction Maintains employee satisfaction. Employees enjoy working for this individual.	1	2	3	4	5	6	7
6. Employee Motivation Motivates employees to do their best through proper rewards and/or recognition efforts.	1	2	3	4	5	6	7
7. Employee Problem Solving Is effective at investigating and solving employee/departmental conflicts. Can be counted on to resolve such problem situations with little assistance.	1	2	3	4	5	6	7
8. Customer Problem Solving Is effective at resolving customer complaints/problems by gathering relevant and timely information and taking the appropriate action(s).	1	2	3	4	5	6	7
9. Team Building Creates a sense of unity among staff. Staff members work well together with little conflict.	1	2	3	4	5	6	7



A principle components factor analysis (a statistical procedure used to group the performance ratings that seem to be related to each other) of these nine dimensions resulted in two factors: **Consideration** (consisting of Employee Relations, Employee Communications, Employee Satisfaction, Employee Motivation and Team Building) and **Initiating Structure** (Planning and Organizing, Dependability, Employee Problem Solving and Customer Problem Solving). Therefore, these nine performance ratings were simplified into two “summary” ratings by adding those ratings that made up the Consideration factor together and by summing up those that made up the Initiating Structure factor. An overall performance rating was also calculated by summing up the nine performance ratings.

The study participants’ S.S.I. scale scores then were statistically compared to the supervisors’ performance ratings using correlation analysis. Tables 4 and 5 present the correlations between individual scale scores and supervisor ratings. Table 6 presents the correlations between the total S.S.I. score and the supervisor ratings.

Table 4
Consideration Scale

Work-Related Behavior	Validity Coefficient	Significance Level	N
Consideration	.40	p<.001	107
Initiating Structure	.38	p<.001	110
Overall Performance	.46	p<.001	103

Note: N equals the number of participants in the analysis.

These correlations indicate that, in general, those individuals who scored highly on the Consideration scale were rated higher on consideration, initiating structure and overall supervisory performance than those supervisors who scored poorly on this scale.

Table 5
Initiating Structure Scale – Supervisor Validation

Work-Related Behavior	Validity Coefficient	Significance Level	N
Consideration	.23	p<.017	107
Initiating Structure	.26	p<.008	109
Overall Performance	.28	p<.005	103

Note: N equals the number of participants in the analysis.

These correlations indicate that, in general, those individuals who scored highly on the Initiating Structure Scale demonstrated a superior consideration, structure initiation and overall job performance, whereas those who scored poorly on this scale received less-favorable job performance ratings.



Table 6
Total S.S.I. Score – Supervisor Validation

Work-Related Behavior	Validity Coefficient	Significance Level	N
Consideration	.36	p<.001	107
Initiating Structure	.37	p<.001	109
Overall Performance	.43	p<.001	103

Note: N equals the number of participants in the analysis.

These correlations indicate that, in general, those supervisors who scored highly on the S.S.I. total score demonstrated superior consideration and initiating structure on the job, as well as scoring highly on overall job performance. Those supervisors who scored poorly on the S.S.I. total score were rated lower on these aspects of performance.



Validity Study #2

In addition to the supervisor validation study discussed above, another concurrent, criterion-related validation study was conducted with managers as the study participants.

In this study, the S.S.I. scales were administered to 45 managers employed in various organizations including a bank, an accounting firm, a call center, two staffing companies and two manufacturing companies. The supervisors then were rated by their bosses on the same work-related behaviors as described in Validity Study #1. Correlation analyses comparing job performance ratings to S.S.I. scores following the same procedure as described for Validity Study #1 were performed. The results are presented in Tables 7, 8 and 9.

Table 7
Consideration Scale

Work-Related Behavior	Validity Coefficient	Significance Level	N
Consideration	.36	$p < .21$	39
Initiating Structure	.17	$p < .31$	39
Overall Performance	.23	$p < .17$	39

Note: N equals the number of participants in the analysis.

As with the supervisory study, these correlations indicate that, in general, those managers who scored highly on the Consideration scale were rated higher on consideration, initiating structure and overall supervisory performance than those managers with lower scores on this scale.

Table 8
Initiating Structure Scale – Manager Validation

Work-Related Behavior	Validity Coefficient	Significance Level	N
Consideration	.22	$p < .19$	39
Initiating Structure	.29	$p < .071$	39
Overall Performance	.29	$p < .075$	39

Note: N equals the number of participants in the analysis.

Again, these correlations indicate that, in general, those managers who scored highly on the Initiating Structure Scale demonstrated a higher degree of consideration, structure initiation and overall job performance than those with lower scores on this scale.



Table 9
Total S.S.I. Score – Manager Validation

Work-Related Behavior	Validity Coefficient	Significance Level	N
Consideration	.23	p<.16	39
Initiating Structure	.24	p<.15	39
Overall Performance	.27	p<.01	39

Note: N equals the number of participants in the analysis.

Consistent with Validity Study #1, these correlations indicate that, in general, those managers who scored highly on the S.S.I. total score demonstrated superior consideration and initiating structure on the job, as well as scoring highly on overall job performance. However, those managers with lower S.S.I. total scores were rated lower on these important supervisory job characteristics.

Validity Studies #1 and #2 Combined

To determine the overall relationship between the S.S.I. scores and supervisors and managers, the data for Validity Studies #1 and #2 were combined. Tables 10, 11 and 12 show the results of combining these data.

Table 10
Consideration Scale – Supervisor and Manager Data Combined

Work-Related Behavior	Validity Coefficient	Significance Level	N
Consideration	.36	p<.001	164
Initiating Structure	.34	p<.001	167
Overall Performance	.41	p<.001	160

Note: N equals the number of participants in the analysis.

Table 11
Initiating Structure Scale – Supervisor and Manager Data Combined

Work-Related Behavior	Validity Coefficient	Significance Level	N
Consideration	.24	p<.003	164
Initiating Structure	.27	p<.001	166
Overall Performance	.30	p<.001	160

Note: N equals the number of participants in the analysis.



Table 12

Total S.S.I. Score – Supervisor and Manager Data Combined

Work-Related Behavior	Validity Coefficient	Significance Level	N
Consideration	.34	p<.001	164
Initiating Structure	.35	p<.001	166
Overall Performance	.40	p<.001	160

Note: N equals the number of participants in the analysis.

The results of combining the data from Validity Studies #1 and #2 demonstrate the significant correlations between test scores and job performance and offers strong support for the validity of the S.S.I. in measuring essential supervisory characteristics.

Reliability

In addition to validity research, internal consistency analyses have been conducted to determine the reliability of the S.S.I. items – that is, to what extent do the items in the inventory measure the same thing. The reliability coefficient for the S.S.I. items is presented in Table 13.

Table 13

Reliability Coefficient for the S.S.I. Items

Reliability Coefficients	
S.S.I. Items	.67

Note: N equals the number of participants in the analysis.

The results obtained in the criterion validity (Validity Studies #1 and #2) and the reliability analysis offer strong evidence that the S.S.I. is a valid and reliable predictor of effective supervisory behaviors.

Once you have established the requirements of the job, incorporating the S.S.I. into your selection process will help you find the best person-job match. Understanding an applicant's abilities and how they relate to the job in question is critical to finding the right fit and enhancing the effectiveness of your selection process.



Adverse Impact

To determine whether the S.S.I. could have an adverse effect on members of a protected class (e.g., minorities), the average S.S.I. scores for 8 African Americans and 148 Caucasian study participants were statistically compared using t-tests.

The results of these comparisons revealed that there were no significant differences between the African Americans and Caucasian individuals. These findings are consistent with the review of the personality testing literature that concludes, “There is no evidence that well-constructed personality inventories systematically discriminate against any ethnic or national group” (Hogan, Hogan & Roberts, 1996).⁵

Even though these results suggest that the use of the S.S.I. would not be likely to have an adverse effect on the hiring rates of minorities versus nonminorities, we always recommend that you periodically monitor your selection process to ensure that it continues to be fair and valid.

Based on all of the validity, reliability and adverse-impact research presented in this manual, it appears that, in addition to providing a sound, reliable and job-related basis for making employment decisions, the S.S.I. also can enhance equal employment opportunities by increasing the objectivity, standardization and job-relatedness of the selection process.

⁵ Hogan, H., Hogan, J. & Roberts, B.W. (1996). Personality Measurement and Employment Decisions. *American Psychologist*, Vol. 51, No. 5, 469-477.

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