DI

DRIVER INVENTORY

Training Manual

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Preface

The **Driver Inventory (DI)** is an automated (computer scored with reports printed on-site in 2 ½ minutes) driver assessment test. The DI was developed in response to evaluators that wanted to focus upon driver attitudes, temperament, and outlook.

The 1990's have introduced a new era of major advances in assessment. We now think in terms of databases, field-based research, local standardization of tests, and even annual re-standardization. The impact of this technology continues to reshape not only our attitudes toward assessment, but also the quality and comprehensiveness of obtained information.

By merging the latest psychometrics with computer technology staff can now objectively gather a vast amount of relevant information, identify client problems, and formulate specific intervention and treatment strategies.

The DI is a self-report test that is completed by the client, either individually or in group settings. There are no forms or questionnaires to be completed by the staff. DI's are scored and interpreted by the computer which generates printed DI reports on-site within three minutes of test completion. These reports eliminate the need for tedious, time consuming and error prone hand scoring. Staff report writing, substantiation of decision making and record keeping needs are met with DI reports.

Staff may not be clinicians or diagnosticians. Staff's role has often been to identify risk and related substance (alcohol and other drugs) abuse problems prior to recommending intervention. For example, intervention could include an education program, further clinical evaluation, treatment, or court-related intervention. It is recognized that staff members could obtain important information from another source, e.g., interview with the family, collateral interview, available records, etc.

The Driver Inventory (DI) was designed to be different. It is deliberately short and easy to understand. Many clients complete the DI in 15 minutes. The DI was designed to be non-introversive. It does not make respondents defensive or angry. And, the DI is comprehensive. Its five scales (Truthfulness, Aggressiveness, Driver Risk, Self-Rating and Stress Coping) represent important areas of inquiry.

Five Empirically Based Measures

The DI contains five (5) scales:

1. TRUTHFULNESS SCALE: The Truthfulness Scale is a measure of how truthful the client was while completing the DI. This scale identifies self-protective, recalcitrant, and guarded clients who minimize or even conceal information. This scale is designed to detect faking.

2. AGGRESSIVENESS SCALE: The Aggressiveness Scale is a measure of the client's risk-taking behavior, acting out potential and aggressiveness. Aggressiveness is an important trait in violent crimes. This scale helps detect the abstaining, yet irresponsibly aggressive client.

3. SELF-RATING: Reflects a person's explicit valuing and appraisal of self. It incorporates an attitude of acceptance-approval versus rejection-disapproval.

4. STRESS COPING SCALE: Measures client experienced stress in comparison to coping abilities. This scale measures how well the client copes with stress.

5. DRIVER RISK SCALE: The Driver Risk Scale is a measure of the client's driver risk, independent of their involvement with alcohol or other drugs. This scale is helpful in detecting the abstaining, yet irresponsibly aggressive driver.

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The **DI profile** summarizes the respondent's percentile scores on each of the empirically based measures (scales) numbered 1 through 5 above. The DI profile makes this information available at a glance by graphically presenting scale scores and their related risk level classification category, for each of these five scales.

Risk Level Classification

Each DI scale score is classified in terms of the risk range it represents. These risk level classifications are calculated individually for each of the five empirically based scales as follows:

PERCENTILE	RISK RANGE
0 to 39th percentile	Low Risk
40 to 69th percentile	Medium Risk
70 to 89th percentile	**Problem Risk**
90 to 100th percentile	**Severe Problem Risk**

It is recommended that staff members do not take the DI test. A staff member does not have the same mental set as a troubled client; consequently, they may invalidate or distort "their" DI profile.

Unique DI Features

This expanding database enables the DI to incorporate many unique features. Each of these unique DI features is solidly based upon extensive DI research. Perhaps of equal importance is the fact that this database research is ongoing in nature.

Expanding Database

Copyrighted DI software was designed with the capability of "saving" the data from each test in a confidential (no names) manner for ongoing research and analysis. No client names appear in DI research or annual program summary reports. Data is downloaded into the DI database for subsequent analysis and client names are removed. The expanding DI database is statistically analyzed each year. This feature represents a unique advantage of the DI. The database ensures ongoing research at no additional cost to the DI user. As the DI database continues to grow, new and exciting research discoveries and innovative software remedies are anticipated.

Gender Specific Norms

Significant gender differences were not observed on the Truthfulness Scale, Aggressiveness Scale, Self-Rating Scale, Driver Risk Scale, or the Stress Coping Scale. It is important to note that these gender differences may vary according to geographical area. Thus, it is very important that gender specific research continues. This is an example of the importance of annual database research.

Validity

Definition: Within the context of assessment, validity is a general term for accuracy of measurement. Valid test results are essentially free from error. They are accurate. In contrast, invalidity refers to distortion of test results due to errors in measurement. Invalidity may be due to guardedness, denial, faking, reading things into questions, emotional instability, reading impairments, etc. **An invalid test means test results are distorted and not accurate.**

When reviewing a DI report, staff should check the Truthfulness Scale score. If the Truthfulness Scale score is below the 70th percentile--test results are valid and accurate. Truthfulness Scale scores between the

70th and 89th percentile are likely valid, but should be interpreted cautiously. Truthfulness Scale scores above the 90th percentile indicate that test results are invalid or inaccurate.

Truthfulness Scale

Self-report tests and interviews are subject to the danger of clients not telling the truth. An important advance in testing is the Truthfulness Scale, which measures how honest the client is while completing the test. It would be naive to believe that all people taking tests always answer questions truthfully. Truthfulness Scales identify self-protective and guarded people who attempt to deny, minimize, or even conceal information. These scales can also detect functionally illiterate and visually impaired individuals. This feature is of special importance in school, treatment or court-related settings, since the outcome of a client's test results could affect their level of supervision, nature of treatment and life situation. **The Truthfulness Scale identifies attempts to fake or under report problems and concerns.**

Truth-Corrected Scores

Another sophisticated psychometric technique involves "truth-corrected" scores which are individually calculated for each of the DI scales every time a test is scored. The Truthfulness Scale establishes how truthful the client was while completing the DI. Correlations between the Truthfulness Scale and all other scales have been statistically determined. This procedure enables the DI to identify and add back into each scale score the amount of error variance associated with a person's untruthfulness, resulting in "truth-corrected" scores. Raw scores may only reflect what the client wants you to know. Truth-Corrected scores reveal what the client is trying to hide. **Truth-Corrected scale scores are more accurate than raw scores because they account for the measured amount of untruthfulness of the client while completing the DI.**

Professionals across the country have endorsed the benefits of truth-corrected scores, calling it a "high tech solution to a very common, down-to-earth need." This methodology is easy to use because the computer does all the work, actually calculating these truth-corrected scores every time a test is given. In the past, many evaluators were "turned off" on self-report tests because they were too easy to fake. Truthfulness Scales and Truth-Corrected scores have addressed and largely resolved this problem. They are considered by many as essential in any self-report test.

Aggressiveness Scale

The Aggressiveness Scale is a measure of the client's risk-taking behavior, acting out potential and aggressiveness. Aggressiveness is an important trait in violent crimes. This scale helps detect the abstaining, yet irresponsibly aggressive client.

Driver Risk Scale

As noted by the National Highway Traffic Safety Administration (NHTSA, DOT HS 807 475), "One of the scales (Driver Risk Scale) is designed to detect irresponsible driving and provides an assessment for driver risk, a particularly useful feature for evaluating the driver offender that does not exist in any other instrument we reviewed." Discriminant validity is demonstrated by the fact that no other DI scale correlates significantly with the number of traffic violations or the number of at-fault accidents. Only the Driver Risk Scale correlates significantly with traffic violations and at-fault accidents.

Self-Rating Scale

The Self-Rating Scale consists of antonyms (opposite terms) which are rated on a five-point scale for self-description. This provides a rapid and accurate self-rating. Guilford (1954) and Garner (1960) noted that reliability of rating scales tends to be proportional to the number of scale points. Derogatis (1977) noted that self-perceptions of symptoms and personal problems are typically finite and established a 5-point scale in the SCL-90R. The DI employs a 5-point scale in the Self-Rating Scale.

Self-Rating refers to a person's perception of his or her driving. It reflects an explicit valuing and appraisal of oneself. The Self-Rating Scale is descriptive of the driver one believes oneself to be.

One of the earliest systematic applications of the antonym checklist methodology was that of Hartshorne and May (1930), who established 80 pairs of antonyms representing four types of conduct: honesty, service, persistence, and inhibition. In 1936, Allport and Odbert published their monograph on trait names. R.B. Cattell (1943, 1946) in his early factorial studies of personality structure identified "12 primary source traits of personality." By the end of 1952, the Adjective Checklist was in its current 300 item format.

Stress Coping Scale

This scale measures the client's ability to cope with stress. How effectively one copes with stress determines whether or not stress affects one's overall adjustment. Stress exacerbates other symptoms of emotional, substance abuse and adjustment problems. Markedly impaired stress coping abilities are frequently correlated with identifiable mental health problems. Thus, the Stress Coping Scale facilitates evaluation of this important area of inquiry in a non-offensive and non-intrusive manner. A Stress Coping Scale score at or above the 90th percentile warrants consideration of a more comprehensive psychological evaluation.

The Stress Coping Scale is much more than just a measure of stress. It measures how well the client copes with stress. Two people can be in the same stressful situation, however, one person is overwhelmed, and the other person handles it well. The Stress Coping Scale accounts for these different reactions to stress.

The Stress Coping Scale correlates significantly (.001 level of significance) in predicted directions with the following MMPI scales: Psychopathic Deviate (Pd), Psychasthenia (Pt), Anxiety (A), Manifest Anxiety (MAS), Ego Strength (ES), Social Responsibility (RE), Social Alienation (PD 4A), Social Alienation (SCIA), Social Maladjustment (SOC), Authority Conflict (AUT), Manifest Hostility (HOS), Suspiciousness/Mistrust (TSC-III), Resentment/Aggression (TSC-V), and Tension/Worry (TSC-VII).   Stress exacerbates other symptoms of emotional problems. A high risk (90 to 100th percentile) Stress Coping score is indicative of markedly impaired stress coping abilities and very likely reflects identifiable emotional and mental health problems.

Oral Instructions

It is now clear that clients minimize their problems by substantially under-reporting them and "fake good." This means the oral instructions to the client before he or she begins the DI are important. A straightforward approach is recommended. For example:

"This inventory contains a truthfulness measure to determine how cooperative and truthful you are while completing it. Please answer all of the questions honestly. It is also important that you do not read anything into the questions that is not there. There are no trick questions. Your available records may be checked to verify the accuracy of your answers. Just answer each question truthfully."

Giving the client an example often helps them understand. The example that you use will be influenced by your client population, experience, and intent. It should be individualized to your situation and needs. Although not recommended for use with clients, the following example is presented for clarification as to how an example might be included in your oral instructions to the client:

AN EXAMPLE

"*Last week a client told me while taking the MMPI that he could not answer this true-false question, 'I am attracted to members of the opposite sex.' When asked why, the client replied, 'If I answer True, you will think I am a sex maniac. If I answer False, you will think I am a homosexual.' I told the client that this test item does not ask you about being a sex maniac or a homosexual. It simply asked if you are attracted to members of the*

*opposite sex. When you interpreted it to refer to sex maniacs or homosexuals, you were answering a different question. Do not read anything into these questions that isn't there, because if you do, you will invalidate the test and may have to take it over. Simply answer the questions True or False. **There are no trick questions or hidden meanings.** If you misinterpret or change the questions in the test, you will invalidate the test."*

A few minutes of oral instructions can put the client at ease while providing structure and clarifying expectations. Such procedures can greatly reduce the number of invalid tests while making the assessment procedure more acceptable to the client. Some agencies type out oral instructions for the staff so that they can have them as a ready reference.

Test Data Input Verification

You may enter client test data and print reports continuously, or, if you wish, you may check to verify that data entries from the answer sheet were accurate. You have the option of verifying any data that you enter, whether you wish to verify all tests or randomly pick one or a few tests that were entered. The choice is yours! There are two ways in which you may perform the test data input verification procedure: 1) after a new test has been entered, or 2) by choosing the option from the Supervisor Data Entry task menu. The verification procedure compares test items entered the first time with entries made the second time. If the test data entry is the same the first and second (verification) times, then the test data was accurately entered. However, if there is a discrepancy between the first and second (verification) data entries--then there is a data error or input discrepancy that should be checked. Keep in mind that <u>an input error could be made either time</u>, i.e., the first or second time data was entered. To know which is the correct data you will need to refer to the answer sheet.

When you enter a new test you may choose to perform the test data input verification procedure after all of the response (test) data has been entered. A message is displayed asking if you want to "verify data input." Type "y" if you want to perform the test data input verification procedure or type "n" to return to the Main Menu.

The client information screens will be displayed for you to simply visually review the information that was entered. If there are any entries that need to be corrected press the F1 key and edit the entries as explained in the section Editing Previously Entered Tests, otherwise press ENTER to go on to the next screen.

The procedure will cycle through all of the test items and you simply re-enter the data from the answer sheet. Use the "Last entry" display to check your input. You may cycle the data input backwards by pressing the F1 key. You may quit by pressing the ESC key. After all items have been entered, the procedure will compare what was entered the first time with what was entered the second time.

The number of items where the inputs did not match will be displayed. If that number is zero, the test input data is accurate and the program will return to the Main Menu. If any items were mismatched, the data for those mismatched items are deleted and you will have to re- enter them on the data entry screen that follows. When those items are entered the data is saved and you are returned to the Main Menu. If you do not re-enter the data but press F1 to skip instead, the data will remain as entered the first time.

When you choose the Test Data Input Verification option from the Supervisor Data Entry task menu, you first choose which test (client's name) you wish to verify. The client information screens will be displayed as explained above. Press the F1 key to edit entries or press ENTER to go on to the next screen. For the test item data input, you re-enter the response data as explained above. Any corrections made to test item data will then be saved. Sounds complex, but after you have done it once you will agree it is a convenient way to check the accuracy of test data entry.

Delete Client Names

You have the option to delete client names. This is optional. If you want to use this option, remember that once you delete the client names -- they are gone and can not be retrieved. We recommend you use this option.

Deleting client names does not delete demographic information or test data. It only deletes the client names when you use this option. This optional procedure is discussed in the Computer Operating Guide.

In the supervisor task menu is the option that allows you to delete the client names. This option is provided for you to protect client confidentiality. Please be advised that once the names have been deleted, there is no way for you to retrieve them.

Control of DI Reports

The standard DI report is designed for staff use. It is not recommended that DI reports be given to the client. It is not recommended that the client take any DI materials, including the report, out of the office. The client being evaluated should **not** be given the DI reports, nor allowed to take any DI materials (including the test booklet) out of the office.

Check Answer Sheet for Completeness

Check the client's answer sheet for completeness when it is turned in and before the client leaves. No items should be skipped and both true and false should not be answered for the same question. In these instances the client should be informed that each question must be answered in accordance with the instructions, and be given the opportunity to correct or complete their answer sheet. **Skipped answers are scored by the computer in the deviant direction, since it is assumed that these items were omitted to avoid admitting a "negative" response.**

Extra Validity Explanation Page

When the Truthfulness Scale score is at or above the 95th percentile, an extra (one page) explanation of invalidity is printed out in addition to the usual DI report. This "explanation" is designed to assist the staff member. It should be noted that even with an invalid report, the "significant items" and "multiple choice items" can still provide some important information.

Valid - Invalid Test Profiles

Invalidity is defined in terms of a client attaining a Truthfulness Scale score in the 90 to 100 percentile range. Yet, even with this type of a Truthfulness Scale score you can identify different valid-invalid test profiles. Five examples are given for clarification.

Example #1: An elevated (at or above the 90th percentile) Truthfulness Scale score with all other DI scale scores at or above the 90th percentile. This profile is often associated with impaired reading skills, acute emotional turmoil, or a deviant response set.

Further inquiry is needed with the client before deciding whether to retest. If impaired reading abilities are evident, you might consider interviewing the client. If emotionally upset, you might want to settle the client down before retesting. Although relatively rare, some clients do not take the testing situation seriously and might randomly respond to test questions. Regardless of the reason, this DI test profile is invalid.

Example #2: An elevated Truthfulness Scale score with at least one other scale score above the 69th percentile and at least one other scale score below the 40th percentile. This may be a valid profile where the client was either inadvertently "reading things into the questions" or attempting to be "absolutely honest." After reviewing the instructions, this client would likely be retestable. However, a "focused interview" may be all that is needed to complete this assessment.

Example #3: An elevated Truthfulness Scale score with all other scale scores at or below the 39th percentile. This client was attempting to minimize problems and "look good" but was detected by the Truthfulness Scale. This is a classically invalid profile. This client can be expected to be defensive, guarded,

and manifest denial. Faking is likely. A direct approach is recommended, e.g., "you were either attempting to minimize your problems, or you were reading things into the questions that weren't there." Retest would be contingent upon the client's attitude.

Example #4: A low risk Truthfulness Scale score with other scale scores variable is usually considered a valid profile. However, in very rare instances, this could represent a "test wise" staff member playing "beat the test." Earlier it was noted that staff members do not have the same mental set as a client offender and it was recommended that they do not take the DI. It would be unusual and rare for a client to be that "test wise." First year college students in psychology classes were asked to "lie but don't get caught" and were detected. The respondent's motivation should be established on the basis of the overall assessment.

Example #5: In very rare instances, a respondent might answer all items True or False. If all items are answered True, the Truthfulness Scale score would be very low (around the sixth percentile) and all other scale scores would be very high (around the 99th percentile). This type of a response set is so rare, and the response pattern so unusual, that we simply mention it for future reference. Similarly, if the respondent answers all items False, the Truthfulness Scale score would be very high (around the 99th percentile) and other scores would be low. The high Truthfulness Scale score would indicate that the test protocol is invalid. Each of these situations represents a very rare occurrence. Yet, should they occur, straightforward inquiry with the client is all that is usually needed to clarify the matter. Contingent upon the client's attitude, retesting might be considered after the verbal instructions are reviewed.

Time Savings
The DI is specifically designed for client risk evaluation and assessment. It provides a vast amount of relevant information quickly and accurately. The DI facilitates a "focused" interview that can result in significant savings in time with no compromise in the quality of the service being provided.

Database
A database of client information and test data is very useful. It makes possible ongoing cost-effective research and also provides the capability to summarize results for administrative, budgeting and planning purposes. **Behavior Data System's copyrighted built-in expanding database provides both a research and program summary capability**. Copyrighted software "saves" the test data from each test that is administered. This data is downloaded in a confidential (no names) manner to the DI database.

The DI database provides a cost effective approach to ongoing research. The DI database is analyzed annually. This means that on an annual basis the DI is essentially restandardized. This ensures accuracy and fairness. DI databases are established on a state as well as departmental/agency basis. Small volume test users incorporate their databases with others, while large volume agencies can maintain their own databases.

These same databases provide a cost effective means by which testing programs can be summarized-again in a confidential (no names) manner. Annual summary reports describe the population that was tested. Population statistics, demographics, emerging trends and much more can be provided in these reports on an annual basis.