SI

Shoplifting Inventory

An Inventory of Scientific Findings

Provided by:
Risk & Needs Assessment, Inc.
P.O. Box 44828
Phoenix, Arizona 85064-4828

Telephone: (800) 231-2401
Fax: (602) 266-8227
E-mail: Info@RiskAndNeeds.com

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SHOPLIFTING INVENTORY (SI)

Shoplifters come from a wide variety of backgrounds - from urban and rural settings - and are representative of different ages, gender, ethnic groups, educational backgrounds and socioeconomic status.

The reasons for shoplifting involvement are complex. For example, many shoplifters feel that shoplifting is a victimless crime, one of several attitudes used by many shoplifters to justify their shoplifting. Others have a distorted self-image in which they regard themselves as special or deserving. Some have inflated self-esteem, whereas others disapprove of themselves. Impulsiveness is another characteristic many shoplifters share. Some shoplifters believe they are entitled to the things they want and will take them whenever they can. Sometimes shoplifting involvement increases when substance (alcohol or other drugs) use or abuse is present. Shoplifting can also be influenced by peer pressure.

Due to the complexity of shoplifting motives, attitudes and behaviors several measures (or scales) are needed to establish a representative shoplifter profile. The **Shoplifting Inventory (SI)** evaluates individuals charged with or convicted of shoplifting. The Shoplifting Inventory contains seven measures (scales). The Shoplifting Inventory goes beyond the obvious - to motivation, attitude and behavior.

What are the advantages of screening shoplifters? Doing so provides information about the seriousness of the offender's shoplifting involvement and co-occurring problems, which aids in determining whether the shoplifter would benefit from further treatment, supervision or evaluation.

Shoplifting Inventory scale scores are classified as 'problematic' when they are at or above the 70^{th} percentile. This classification system is evidence-based and prevents extreme over- or under-identification of problems.

Offenders tested with the Shoplifting Inventory (SI) have committed the act(s) of shoplifting, but some will not manifest as 'problematic' in terms of their SI scale scores. Individuals who attain a 'non-problematic' Shoplifting Inventory profile (all scale scores are below the 70^{th} percentile) are better suited to probation or other correctional supervision as opposed to clinically-focused treatment. It is just as important to identify offenders that do not require treatment (but that would likely benefit from correctional supervision) as it is to identify offenders that would benefit from counseling and treatment.

The focused identification of individual risk is helpful for budgetary reasons and for conscientious allocation of available resources, as well as for matching problem severity with treatment/supervision intensity. This type of matching optimizes treatment and supervision effectiveness (Bonta & Andrews, 2007).

SEVEN SHOPLIFTING INVENTORY (SI) MEASURES

1. **Truthfulness Scale**: measures how truthful the respondent was while completing the test. This scale identifies guardedness, faking and defensiveness - as well as the reading impaired.

2. **Shoplifting Scale**: measures a person's tendency (probability) of shoplifting, including frequency, preoccupation and relevant attitudes.

3. **Peer Pressure Scale**: measures the susceptibility of a person to the pressure or influence of other people. This scale shows to what degree a person can be influenced by their peers.

4. **Self-Esteem Scale**: measures a person's perception of self. Self-Esteem incorporates an attitude of acceptance-approval versus rejection-disapproval of oneself. It describes the person one believes oneself to be.

5. **Impulsiveness Scale**: measures a person's tendency to act on sudden impulse. Characteristic of a person who responds suddenly, abruptly or spontaneously.

6. **Drugs Scale**: measures drug use or abuse-related problems. Drugs refer to marijuana, cocaine, crack, amphetamines, barbiturates, ecstasy, heroin, etc.

7. **Alcohol Scale**: measures alcohol use and abuse-related problems. Alcohol refers to beer, wine and other liquor. Alcohol is one of the items most frequently taken by shoplifters.

UNIQUE FEATURES

RISK LEVEL CLASSIFICATION

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

PERCENTILE RANGE	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

Scale scores are reported individually and concurrently classified in their appropriate risk range. Each scale score is independently calculated and classified each time an SI is scored.

SIGNIFICANT ITEMS

Significant items represent self-admissions or important self-report responses. They are provided for reference and do not determine the respondent's scale score. For example, **a person could have a high scale score and few significant items or vice versa**. Significant items augment scale scores and sometimes provide a more complete understanding of the client. **Significant items permit comparison of the client's self-perception and attitude with their objective scale scores.**

EXPANDING DATABASE

Copyrighted SI 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 SI research or annual program summary reports. **The expanding SI database is statistically analyzed each year**. This feature represents a unique advantage of the SI. The database ensures ongoing research at no additional cost to the SI user. As the SI database continues to grow, new research discoveries and innovative software updates are anticipated. Gender differences have already been identified (and remedies developed) by this procedure.

TRUTHFULNESS SCALE

Self-report tests and interviews are subject to respondents 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 individuals who attempt to deny, minimize or even conceal information. These scales can also detect functionally illiterate and hearing-impaired individuals. This feature is of special importance in court-related, probation, parole and treatment settings. **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 seven SI scales **every time** a test is scored. The Truthfulness Scale establishes how truthful the client was while completing the SI. Correlations between the Truthfulness Scale and all other scales have been statistically determined. This procedure enables the SI 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 SI. Yet for maximum screening effectiveness, test results and prior court-related records should be used jointly.

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 this problem. They are considered by many as essential in any self-report test.

DELETE CLIENT NAMES

Test users have the option to delete client names from the SI database. This is optional but recommended. **If you want to use this option, remember that once you delete the client name, it cannot be retrieved.** Deleting client names does not delete demographic information or test data. **This option is provided for you to protect client confidentiality.**

TEST DATA INPUT VERIFICATION

This optional procedure allows the person that is inputting the test data from the answer sheet to verify the accuracy of their data input. The test data is input twice and any inconsistencies between the first and second data entry are highlighted until corrected. When the first and second data entries match (or are the same) you may continue.

There are two ways in which a test user 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 Options 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 an error could be made either time, 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.

Judges, court staff, treatment agencies and parole department officers made Risk & Needs Assessment, Inc. psychologist aware of the need for an automated (computer scored) assessment instrument designed specifically for shoplifter evaluation. Risk & Needs psychologists then explored the types of information needed with Municipal and County Court judges, probation officers, treatment personnel and alternatives to incarceration program staff. The Shoplifter Inventory incorporates the suggestions made by these experienced professionals.

As the Shoplifter Inventory (SI) was conceptualized it became clear that Risk & Needs Assessment, Inc. could utilize some measures (scales) it had already developed for court, probation, prison and treatment evaluation. These included the Truthfulness Scale, Self-Esteem Scale, Alcohol Scale and the Drug Scale. Studies reflecting these scales statistical properties had already been completed. Some of these studies are summarized herein. However, for more comprehensive discussion of these early studies, the reader is referred to the Substance Abuse Questionnaire (and SAQ-Adult Probation), Treatment Intervention Inventory (TII) and Prison Inmate Inventory (PII) research summaries. No attempt was made to include all available research on those tests in this document. Rather, an attempt was made to incorporate representative research relating to Shoplifting Inventory reliability and validity. Then as research utilizing the Shoplifting Inventory evolved it has been included herein.

This document summarizes Shoplifting Inventory research as it occurred - chronologically - so the reader can observe the evolution of the Shoplifting Inventory (SI) into a state-of-the-art shoplifter assessment instrument or test.

It should also be kept in mind that the Shoplifting Inventory (SI) is a relatively new test. Consequently, Shoplifting Inventory (SI) research actually began in 1997. Prior research was on Shoplifting Inventory (SI) scales (or measures). The Shoplifting Inventory (SI) research -- on the complete test -- began in late 1996 and continues to the present.

RESEARCH

Initially, three psychologists met with judges, probation officers, court personnel, treatment staff and alternatives to incarceration personnel to discuss and clarify desirable areas of inquiry. A large item pool was then developed representing areas of inquiry not incorporated by selected existing scales. Consensual agreement among psychologists and experienced staff reduced the item pool considerably. Items were then tried and their statistical properties established. Final item selection was empirical - selecting scale items with the best statistical properties. Then statistically related item configurations were applied to known shoplifter groups. This developmental procedure was followed with both established and new scale configurations. And final item selection was based on the best statistical properties.

Seventy-eight Arizona State University college students (1985) enrolled in an introductory psychology class were divided into two groups. One group was instructed to complete the SAQ honestly or truthfully, whereas the other group was instructed to lie or fake good - but don't get caught. Mean scores were: honest=2.71; fakers=15.7. The Truthfulness Scale successfully measures and predicts how truthful the person is while completing the SAQ. This is shown in the highly significant (beyond chance) negative correlation (r=0.27) between these two groups.

Concurrent validity correlates the scales of the test being validated with similar scale measures from an established test. The Minnesota Multiphasic Personality Inventory (MMPI) was selected for these studies because it is the most researched, validated and widely used objective personality test in the United States. Pearson Product-Moment Correlations were calculated for MMPI scales and comparable SAQ scales. These results for the Truthfulness Scale are summarized in Table 1.

Table 1. PEARSON CORRELATIONS: SAQ - MMPI

	Chemical Dependency Inpatients		
	1985 (N=100)	1987 (N=212)	1991 (N=74)
	Truthfulness	Truthfulness	Truthfulness
MMPI L Scale:	**.72**	**.62**	**.49**

The Truthfulness Scale correlated highly significantly (0.001 level of significance) with the MMPI L (Lie Score) scale. The L-Scale detects respondents attempting to present an unusually good front (fake good). In these same SAQ - MMPI studies the Alcohol Scale and Drug Scale of the SAQ were compared to the corresponding MMPI scales. These findings are summarized in Table 2 and 3.

Table 2. PEARSON CORRELATIONS: SAQ - MMPI

	Chemical Dependency Inpatients		
	1985 (N=100)	1987 (N=212)	1991 (N=74)
	Alcohol	Alcohol	Alcohol
MacAndrews:	**.58**	**.35**	**.30**

The Alcohol Scale correlates highly significantly (.001 level of significance) in predicted directions with the MMPI MacAndrews scale.

Table 3. PEARSON CORRELATIONS: SAQ - MMPI

Chemical Dependency Inpatients

	1985 (N=100) Drug	1987 (N=212) Drug	1991 (N=74) Drug
Psychopathic Deviate:	**.54**	**.33**	**.29**
MacAndrews:	**.62**	**.37**	**.15 (N.S.)**

The Drug Scale correlates highly significantly (.01 level of significance) in predicted directions with the MMPI Psychopathic Deviate (Pd) scale, and significantly in two of the three samples with the MacAndrews alcohol scale. There is no drug scale per se in the MMPI.

The Aggressiveness Scale was compared with corresponding MMPI scales. These finding are summarized in Table 4.

Table 4. PEARSON CORRELATIONS: SAQ - MMPI

Chemical Dependency Inpatients

	1985 (N=100) Aggressiveness	1987 (N=212) Aggressiveness	1991 (N=74) Aggressiveness
Taylor Manifest Anxiety	**.48**	**.34**	**.55**
Hypomania (MA)	**.28**	**.25**	**.35**

The Aggressiveness Scale correlates significantly (.01 level of significance) with the Taylor Manifest Anxiety Scale and the Hypomania Scale. The Taylor Manifest Anxiety Scale measures free floating anxiety. The Hypomania Scale measures hyperactivity, psychomotor excitement, etc.

Reliability refers to consistency of test results regardless of who uses the test. The Cronbach Coefficient Alpha is considered the most important measure of internal consistency or reliability. Many reliability studies are reported in the SAQ research summary. Two will be reported here for reference. A 1996 study (N=15,203) on probationers reports Cronbach Alpha coefficients for several Shoplifting Inventory (derived from the SAQ-Adult Probation II) scales. These coefficients are summarized in Table 5.

Table 5. Reliability (1996, N=15,203) Probationers

Scale	Cronbach Alpha	Significance Level
Truthfulness Scale	.89	P<.001
Alcohol Scale	.95	P<.001
Drug Scale	.92	P<.001

These results clearly support the reliability (internal consistency) of the Truthfulness Scale, Alcohol Scale and Drug Scale. Detailed information on this study is reported in the SAQ research summary document.

Another 1996 probationer study (N=9,247) independently reports Cronbach Alpha Coefficients for some Shoplifting Inventory (SI) scales. These findings are presented in Table 6.

Table 6. Internal Consistency (1996, N=9,247)
Probationers Administered the SAQ Adult Probation

Scale	Cronbach Alpha	Significance Level
Truthfulness Scale	.89	P<.001
Alcohol Scale	.96	P<.001
Drug Scale	.93	P<.001

These results support the internal consistency (reliability) of the Truthfulness Scale, Alcohol Scale and Drug Scale. As noted earlier these scales were included in the Shoplifter Inventory.

In 1986 a study involved correlating polygraph results with Truthfulness Scale scores. One hundred and eighty nine (189) job applicants were administered the Truthfulness Scale and the polygraph examination. Tests were given in counterbalance order. The intent was to determine which applicants were truthful or honest while being tested. The Truthfulness Scale significantly related to polygraph finding as shown in the significance Pearson correlation (r=0.23, P<.001). This study supports the validity of the SI Truthfulness Scale.

In 1987 (N=563) a study demonstrated the relationship between Shoplifting Inventory (SI) scale Alcohol Scale and Drugs Scale scores and substance (alcohol and other drug) abuse tests. The MAST and Court Procedures are two alcohol and drug scales. The MAST and Sandler results were compared with the Alcohol Scale and Drugs Scale in the SI and these results are summarized in Table 7.

Table 7. Correlation Coefficients (N=563) DWI Offenders

Scale	MAST	Court Procedures
Alcohol Scale	.68	.80
Drugs Scale	.38	.32

These coefficients demonstrate impressive validity between the Alcohol Scale and Drug Scale and other indices (MAST, Court Procedures) or tests. The Alcohol Scale and Court Procedure are essentially measuring the same thing. The Court Procedure involved a review of court records (DUI priors, BAC level, substance abuse convictions, MAST results, Sandler score and an interview). These findings support the validity of the Alcohol Scale and Drugs Scale.

In another study (1988, N=1,299) Pearson Product Moment Correlation coefficients were calculated between Mortimer-Filkins total scores and SI Alcohol and Drugs Scale scores. These DWI offenders' results are summarized in Table 8.

Table 8. Correlation Coefficients, (1996, N=1,299) DWI Offenders

Scale	Correlation Coefficients
Alcohol Scale	.45
Drugs Scale	.24

The Mortimer-Filkins total score correlates highly significantly (P<.001) with the Alcohol Scale and Drug Scale. The findings support the validity of the Alcohol and Drug Scales.

Another study (1989, N=154) compared the SAQ with the SI. Both instruments contain a Truthfulness, Alcohol and Drug Scale. These agreement coefficients are presented in Table 9.

Table 9. Correlation Coefficients (1989, N=154)
SAQ Versus SI Scales, Outpatients

Scale	Agreement Coefficients	Significance Level
Truthfulness Scale	.64	P<.001
Alcohol Scale	.35	P<.001
Drug Scale	.34	P<.001

These results support the relationship between independent, but analogues scale scores. These concurrent validity findings support the validity of the Truthfulness, Alcohol and Drug Scales.

Another study (1990, N=89) evaluated the relationship between experienced counselors and the Shoplifting Inventory (SI) Self-Esteem Scale. These counselors had at least 8 years experience and an MA degree in counseling. Two counselors rated each client's self-esteem. They reviewed client outpatient files, court records, progress notes, diagnoses, MMPI results, incomplete sentence materials and a minimum 30 minute interview. Pearson Product Moment Correlation Coefficients were calculated for each rater and are presented in Table 10.

Table 10. Correlation Coefficients (N=89)
Staff Ratings and SI Self-Esteem Scale

Rating	First Rater	Second Rater
Self-Esteem	.11	.18

Even though this study was completed over a six month period, all comparisons were significant. This study supports the validity of the Self-Esteem Scale. Another study (1995, N=887) explored the reliability (internal consistency) of the Shoplifting Inventory (SI) scales. These results are presented in Table 11.

Table 11. Internal Consistency (1995, N=887)

Outpatients taking the SI

Scale	Cronbach Alpha	Significance Level
Truthfulness Scale	.89	P<.001
Alcohol Scale	.90	P<.001
Drug Scale	.91	P<.001
Self-Esteem Scale	.91	P<.001

Several of the Shoplifting Inventory (SI) scales have been analyzed in earlier studies. For example the Prison Inmate Inventory contains ten scales. Of these ten scales the Truthfulness Scale, , Self-Esteem Scale, Alcohol Scale and Drug Scale are analogues to Shoplifting Inventory scales.

In 1985 one hundred chemical dependency inpatients were administered the Prison Inmate Inventory and the Minnesota Multiphasic Personality Inventory (MMPI). Pearson Product Moment correlations were calculated between PII scales and comparable MMPI scales. These results are summarized in Table 12.

Table 12. Pearson Correlations (1985, N=100)

Between PII and MMPI Scale

		Minnesota Multiphasic Personality Inventory		
PII Scale	L Scale	MacAndrews	Psych. Deviate	Taylor Anxiety
Truthfulness Scale	.72	-.40	-.37	-.58
Alcohol Scale	-.38	.58	.52	.47
Drug Scale	-.41	.62	.54	.46

The Truthfulness Scale demonstrates a highly significant positive correlation with the MMPI L scale. The L scale is a lie scale and a high L scale on the MMPI invalidates other MMPI scale scores. This helps in understanding why the Truthfulness Scale is significantly but negatively correlated with other MMPI scales. The MMPI L scale and PII Truthfulness Scale correlate significantly in the predicted direction.

The Alcohol scale correlates significantly with the MMPI MacAndrews Scale (ALC, r=0.58) and the MMPI and Psychopathic Deviate scale are often indicative of substance (alcohol and other drug) abuse.

The Drug Scale correlates highly significantly with the MacAndrews MMPI scale (ALC, r=0.62) and the Psychopathic Deviate scale (Pd, r=0.54). As noted earlier, the MMPI MacAndrews and Psychopathic Deviate scales are often indicative of substance (alcohol and other drugs) abuse.

Another study (1994) involved Australian prison inmates (N=402) completing the Prison Inmate Inventory after they had been admitted to prison and processed. Most of these inmates were

incarcerated for more than six months and all participants were males. Analogous Shoplifting Inventory scales internal consistency or reliability is summarized in Table 13.

Table 13. Australian Inmates (1994, N=402)

Selected Scales Internal Consistency

Scale	Coefficient Alpha	Significance Level
Truthfulness Scale	.86	P<.01
Self-Esteem Scale	.93	P<.01
Alcohol Scale	.85	P<.01
Drug Scale	.84	P<.01

No attempt was made to adjust the PII test booklet to Australian terminology. Yet, these results still support the reliability (internal consistency) of the scales represented herein. Some cultural differences may have resulted in somewhat lower significance levels.

Another study (1994) involved administering the PII to 692 USA prison inmates. Internal consistency for this sample is presented in table 14.

Table 14. USA Inmates (1994, N=692)

Selected Scales Reliability Coefficients

Scale	Coefficient Alpha	Significance Level
Truthfulness Scale	.85	P<.01
Alcohol Scale	.89	P<.01
Drug Scale	.90	P<.01
Self-Esteem Scale	.88	P<.01

This study demonstrates the reliability (internal consistency) of the represented scales and further supports the reliability of these selected scales.

A study (1995, N=1,454) involving prison inmates that completed the PII was completed in 1995. Reliability of analogous Shoplifting Inventory scales are reported in Table 15.

Table 15. Selected PII Scales (1995, N=1,454)

Cronbach Alpha Correlation Coefficients

Scale	Cronbach Alpha	Significance Level
Truthfulness Scale	.88	P<.001
Alcohol Scale	.95	P<.001
Drug Scale	.94	P<.001
Self-Esteem Scale	.94	P<.001

These results support the reliability (internal consistency) of the above represented scales.

Reliability reflects the degree to which measurements are free from random error. These results demonstrate impressive internal consistency. Another study (1995, N=1,782) was conducted to evaluate the reliability of PII scales. The scales represented in the following table are analogous to Shoplifting Inventory scales. Cronbach's Alpha was calculated for each scales measure of internal consistency and these results are summarized in Table 16.

Table 16. Internal Consistency (1995, N=1,782)

Cronbach Alpha Correlation Coefficients

Scale	Cronbach Alpha	Significance Level
Truthfulness Scale	.89	P<.001
Self-Esteem Scale	.94	P<.001
Alcohol Scale	.94	P<.001
Drug Scale	.95	P<.001

These results support the reliability of the scales represented. These scales have impressive internal consistency (reliability). As noted earlier, the Shoplifting Inventory (SI) scales have been studied on normals, college students, probationers, inpatients, outpatients and incarcerated inmates. The following studies involve the SI being administered to adjudicated shoplifters.

SHOPLIFTING INVENTORY (SI)

A study (1997) was done to assess the reliability of the Shoplifting Inventory (SI). This sample included 55 males (51.4%) and 52 females (48.6%). All participants were convicted of shoplifting. Demographics are as follows: Age is reported by ranges: 19 and under (42, 39.3%); 20 - 29 (29, 27.1%); 30 - 39 (20, 18.7%); 40 - 49 (11, 10.3%); 50 - 59 (4, 3.7%), and 60+ (1, 0.9%). Ethnicity: Caucasian (93, 86.9%); Black (7, 6.5%); Hispanic (6, 5.6%); and American Indian (1, 0.9%). Education: 8th grade or less (2, 1.9%); Partially Completed High School (46, 43.0%); G.E.D. (6, 5.6%); High School Graduate (41, 38.3%); Partially Completed College (11, 10.3%); and College Graduate (1, 0.9%). Marital Status: Single (69, 64.5%); Married (24, 22.4%); Divorced (12, 11.2%); Separated (1, 0.9%); and Widowed (1, 0.9%). Cronbach Alpha Coefficients are reported for each Shoplifting Inventory (SI) scale in Table 17.

Table 17. Shoplifting Inventory (N=107)

Reliability (Internal Consistency) 1997

Scale	Cronbach Alpha	Significance Level
Truthfulness Scale	.87	P<.001
Shoplifting Scale	.86	P<.001
Peer Influence Scale	.87	P<.001
Impulsiveness Scale	.88	P<.001
Alcohol Scale	.91	P<.001
Drug Scale	.87	P<.001
Self-Esteem Scale	.93	P<.001

These results support the reliability (internal consistency) of the Shoplifting Inventory (SI). Results were significant and in expected directions.

Another Shoplifting Inventory (SI) study (1997) involved 119 convicted shoplifters. This sample consisted of 63 (52.9%) males and 56 (47.1%) females. Age is summarized as follows: 19 years and younger (32, 26.9%); 20 - 29 (43, 36.1%); 30 - 39 (24, 20.2%); 40 - 49 (14, 11.8%); 50 - 59 (2, 5.0%) and 60+ (3, 2.5%). Ethnicity: Caucasian (19, 16.0%); Hispanic (87, 73.1%); American Indian (5, 4.2%); Other (8, 6.7%). Education: 8th grade or less (6, 5.0%); Partially Completed High School (35, 29.4%); G.E.D. (4, 3.4%); High School Graduate (44, 37.0%); Partially Completed College (13, 10.9%); College Graduate (6, 5.0%); Professional/Graduate School (1, 0.8%) and Missing (10, 8.4%). Marital Status: Single (68, 57.1%); Married (26, 21.8%); Divorced (7, 5.9%); Widowed (1, 0.8%) and Missing (17, 14.3%). Cronbach Alpha Coefficients are reported for each Shoplifting Inventory scale in Table 18.

Table 18. Shoplifting Inventory
Internal Consistency, N=119, 1997

Scale	Cronbach Alpha	Significance Level
Truthfulness Scale	.87	P<.001
Shoplifting Scale	.85	P<.001
Peer Influence Scale	.85	P<.001
Impulsiveness Scale	.86	P<.001
Alcohol Scale	.91	P<.001
Drug Scale	.90	P<.001
Self-Esteem Scale	.95	P<.001

This study supports the internal consistency (reliability) of the Shoplifting Inventory (SI). Reliability refers to a test producing similar results upon re-admission. Another study (1997) involved 153 convicted shoplifters. There were 82 males (53.6%) and 71 females (46.4%).

Demographic composition of this sample was as follows: Age: 19 and younger (32, 53.6%); 20 - 29 (46, 30.1%); 30 - 39 (36, 23.5%); 40 - 49 (25, 16.3%); 50 - 59 (4, 2.6%); 60+ (8, 5.2%) and Missing (2, 1.3%). Ethnicity: Caucasian (75, 49.0%); Black (10, 6.5%); Hispanic (60, 39.2%); American Indian (2, 1.3%); Other (2, 1.3%) and Missing (4, 2.6%). Education: 8th grade or less (5, 3.3%); Partially Completed High School (30, 19.6%); G.E.D. (10, 6.5%); High School Graduate (49, 32.0%); Partially Completed College (34, 22.2%); Technical/Business School (1, 0.7%); College Graduate (5, 3.3%); Professional/Graduate School (1, 0.7%) and Missing (18, 11.8%). Shoplifting Inventory scales reliability coefficients are reported in Table 19.

The results in Table 19 (page 13) support the internal consistency (reliability) of the Shoplifting Inventory (SI). Similar results can be expected upon retest.

Table 19. Shoplifting Inventory

Reliability (1997) N=153 Shoplifters

Scale	Cronbach Alpha	Significance Level
Truthfulness Scale	.87	P<.001
Shoplifting Scale	.85	P<.001
Peer Influence Scale	.85	P<.001
Impulsiveness Scale	.87	P<.001
Alcohol Scale	.93	P<.001
Drug Scale	.86	P<.001
Self-Esteem Scale	.94	P<.001

Another study (1997) involved convicted shoplifters being administered the Shoplifting Inventory (SI). This sample (N=378) consisted of 200 males (52.8%) and 180 females (47.2%). Age is summarized as follows: 19 and younger (105, 27.7%); 20 - 29 (118, 31.1%); 30 - 39 (80, 21.1%); 40 - 49 (50, 13.2%); 50 - 59 (11, 2.9%); 60+ (12, 3.2%) and Missing (3, 0.8%). Ethnicity: Caucasian (187, 49.3%); Black (17, 4.5%); Hispanic (153, 40.4%); American Indian (8, 2.1%); Other (5, 1.3%) and Missing (9, 2.4%). Education: 8th grade or less (13, 3.4%); Partially Completed High School (111, 29.3%); G.E.D. (20, 5.3%); High School Graduate (134, 35.4%); Partially Completed College (58, 15.3%); Technical/Business School (1, 0.3%); College Graduate (12, 3.2%); Professional/Graduate School (2, 0.5%) and Missing (28, 7.4%). Marital Status: Single (223, 58.8%); Married (86, 22.4%); Divorced (31, 8.2%); Separated (2, 0.5%); Widowed (5, 1.3%) and Missing (33, 8.7%). Reliability coefficients for the Shoplifting Inventory scales are presented in Table 20.

Table 20. Shoplifting Inventory

Internal Consistency (1997, N=378)

Scale	Cronbach Alpha	Significance Level
Truthfulness Scale	.87	P<.001
Shoplifting Scale	.85	P<.001
Peer Influence Scale	.86	P<.001
Impulsiveness Scale	.87	P<.001
Alcohol Scale	.92	P<.001
Drug Scale	.88	P<.001
Self-Esteem Scale	.94	P<.001

These results support the reliability (internal consistency) of the Shoplifting Inventory (SI). The SI is a reliable, valid and accurate self-report assessment instrument. The studies contained herein are reported chronologically, so that readers can observe the evolution of the SI into a state of the art automated (computer scored) assessment instrument. The Shoplifting Inventory (SI) is designed for shoplifter assessment.

Study of Shoplifting Inventory Scale Score and Court History Correlations

This study (2000) examined correlations between SI scale scores and court history items. There were 288 shoplifters included in this analysis. This sample (N=288) consisted of 169 males (58.7%) and 119 females (41.3%). Age is summarized as follows: 19 and younger (83, 28.8%); 20 - 29 (92, 31.9%); 30 - 39 (54, 18.8%); 40 - 49 (38, 13.2%); 50 - 59 (14, 4.9%); and 60+ (7, 2.4%) Ethnicity: Caucasian (108, 38.0%); Black (12, 4.2%); Hispanic (151, 53.2%); Native American (8, 2.8%); Other (5, 1.8%) and Missing (4, 1.4%). Education: 8th grade or less (8, 2.9%); Partially Completed High School (60, 21.4%); G.E.D. (9, 3.2%); High School Graduate (118, 42.1%); Some College (66, 23.6%); College Graduate (14, 5.0%); Professional/Graduate School (5, 1.8%) and Missing (9, 3.1%). Marital Status: Single (197, 70.6%); Married (69, 24.7%); Divorced or Separated (10, 3.6%); Widowed (3, 1.0%) and Missing (9, 3.1%). Correlation coefficients for selected Shoplifting Inventory scales and court history items (age at first arrest, number of shoplifting convictions, number of misdemeanor arrests and number of felony arrests) are presented in Table 21. Significant correlations are emphasized with asterisks.

Table 21: Correlation Coefficients
Court-Related History Items and Selected SI Scale Scores (N =288, 2000)

SI Scale	Shoplift Arrests	Age @ 1st Arrest	Misdemeanors	Felonies
Shoplifting Scale	.415***	-.417***	.363***	.382***
Impulsiveness Scale	.028	-.148*	.040	.011
Peer Pressure Scale	.027	-.182*	.132*	-.074
Self-Esteem Scale	-.020	-.111*	-.059	-.049

*Small effect (r = between .10 and .24); **Medium effect (r = between .25 and .39); ***Large effect ($r \geq .40$)

As shown in Table 21, the Shoplifting Scale attained strong, significant correlations with the number of shoplifting arrests, the age at first arrest, the number of misdemeanors and the number of felonies. Higher Shoplifting Scale scores (representing more severe shoplifting involvement) are associated with a greater number of shoplifting arrests, as well as a greater number of misdemeanor and felony arrests. Conversely, the age at first arrest is inversely associated with the Shoplifting Scale score in that a younger age at the time of first arrest is associated with higher (more problematic) Shoplifting Scale scores.

Validity of the Shoplifting Inventory

This study (2003) examined scoring differences based on number of shoplifting arrests. There were 374 shoplifters included in this analysis. This sample (N=374) consisted of 199 males (53.2%) and 175 females (46.8%). Age is summarized as follows: 19 and younger (94, 25.1%); 20 - 29 (136, 36.4%); 30 - 39 (76, 20.3%); 40 - 49 (44, 11.8%); 50 - 59 (18, 4.8%); and 60+ (6, 1.6%) Ethnicity: Caucasian (96, 25.7%); Black (7, 1.9%); Hispanic (241, 64.4%); Asian (1, 0.3%); Native American (10, 2.8%); Other (4, 1.1%) and Missing (15, 4.0%). Education: 8th grade or less (8, 2.1%); Partially Completed High School (92, 24.6%); G.E.D. (14, 3.7%); High School Graduate (156, 44.8%); Some College (64, 17.1%); College Graduate (14, 3.7%); and

Missing (26, 7.0%). Marital Status: Single (223, 66.2%); Married (79, 21.1%); Divorced or Separated (29, 8.6%); Widowed (6, 1.6%) and Missing (37, 9.9%).

The present study (2003) examined Shoplifting Inventory (SI) validity. This validity analysis compared first-time shoplifting offenders' and multiple shoplifting offenders' SI scale scores. Offenders classified as first-time offenders are those having no more than one shoplifting arrest (zero or one shoplifting arrests), whereas multiple offenders are those that have been arrested for shoplifting two or more times. The number of shoplifting arrests was obtained from SI answer sheets. Because SI scales measure problem severity, it was predicted that multiple offenders would obtain higher (more severe) scale scores than first-time offenders. Table 22 presents *t*-test analysis results.

Table 22. SI Scale Score Comparisons of Shoplifter Groups (N=374, 2003)

Shoplifting Inventory Scale	First Offenders' Avg. Scores	Multiple Offenders' Avg. Scores	*T*-value	Level of Significance
Truthfulness Scale	8.61	8.57	.050	n.s.
Shoplifting Scale	5.45	9.83	-8.57	P<.001
Impulsiveness Scale	5.61	5.55	.075	n.s.
Peer Pressure Scale	1.57	1.83	-.722	n.s.
Alcohol Scale	1.40	2.26	-3.43	P<.001
Drugs Scale	3.28	6.00	-2.73	P<.001
Self-Esteem Scale*	45.42	43.15	2.27	P<.001

*Note: Self-Esteem Scale scores are reversed, meaning that higher scores are associated with better self-esteem. For all other SI scales, higher scores represent more severe problems.

Truthfulness Scale, Impulsiveness Scale and Peer Pressure Scale scores for first-time and multiple offenders in this sample were essentially the same. These scales will be examined in subsequent comparison studies. For all other SI scale scores, multiple offenders attained significantly higher (more problematic) scale scores than first-time shoplifters.

Gender Differences in Shoplifting Inventory Scale Scores

Male and female scoring differences were examined (2007) in a sample of 451 shoplifters that were administered the Shoplifting Inventory (SI). Because fairly equal numbers males and females shoplift, it is important to standardize shoplifting-related assessments on both sexes. *T*-tests were used to determine if there were significant SI scale score differences in terms of gender for selected SI scales.

Demographic composition of the sample was as follows: 199 males (53.2%) and 175 females (46.8%). Age is summarized as follows: 19 and younger (94, 25.1%); 20 - 29 (136, 36.4%); 30 - 39 (76, 20.3%); 40 - 49 (44, 11.8%); 50 - 59 (18, 4.8%); and 60+ (6, 1.6%) Ethnicity: Caucasian (96, 25.7%); Black (7, 1.9%); Hispanic (241, 64.4%); Asian (1, 0.3%); Native American (10, 2.8%); Other (4, 1.1%) and Missing (15, 4.0%). Education: 8th grade or less (8, 2.1%); Partially Completed High School (92, 24.6%); G.E.D. (14, 3.7%); High School Graduate (156, 44.8%); Some College (64, 17.1%); College Graduate (14, 3.7%); and Missing (26, 7.0%). Marital

Status: Single (223, 66.2%); Married (79, 21.1%); Divorced or Separated (29, 8.6%); Widowed (6, 1.6%) and Missing (37, 9.9%).

Table 23. SI Scale Score Comparisons of Shoplifter Groups (N=374, 2003)

Shoplifting Inventory Scale	Male Avg. Scores	Female Avg. Scores	*T*-value	Level of Significance
Truthfulness Scale	8.84	7.94	1.74	P<.001
Shoplifting Scale	8.50	7.84	.84	n.s.
Impulsiveness Scale	8.63	8.97	-.28	n.s.
Peer Pressure Scale	6.37	8.68	-1.11	P<.001
Alcohol Scale	11.41	8.77	1.24	P<.001
Drugs Scale	11.58	12.18	-.278	n.s.
Self-Esteem Scale*	36.24	34.86	.45	n.s.

As shown in Table 23, four SI scales demonstrated significant differences between average scores of males and females on the Truthfulness, Peer Pressure and Alcohol scales. Males attained significantly higher scores than females on the Truthfulness Scale and Alcohol Scale, indicating more severe problems. Males in this sample were significantly less truthful than females in terms of their SI responses. Similarly, males' higher average Alcohol Scale scores represent more pronounced alcohol-related problems than their female counterparts.

Conversely, females attained more severe (higher) scores on the Peer Pressure Scale, representing a greater susceptibility to peer influence than male shoplifters in this sample.

For all other SI scales (Shoplifting Scale, Impulsiveness Scale, Drugs Scale and Self-Esteem Scale) males' and females' average scores were comparable. Gender differences will continue to be explored in future Shoplifting Inventory (SI) research.

Shoplifting Inventory Update: Annual Database Research

This study (2011) examined projected reliability coefficients for the revised Shoplifting Inventory (SI) scales. Changes to the SI were made based on user feedback and subsequent research. The revised version of the SI replaces the previous version. The current (revised) SI consists of 141 items. In some cases individual items from a scale were revised or replaced with new items. Items included in the revised version were selected on the basis of their statistical properties.

The SI has the following seven scales: 1) **Truthfulness Scale**, 2) **Shoplifting Scale**, 3) **Peer Pressure Scale**, 4) **Impulsiveness Scale** 5) **Alcohol Scale,** 6) **Drugs Scale** and 7) **Self-Esteem Scale**. Recent (N=451, 2011) reliability coefficients are summarized for your review.

Table 24. Shoplifting Inventory
Internal Consistency (2011, N=451)

Scale	Cronbach's Alpha	Significance Level
Truthfulness Scale	.88	P<.001
Shoplifting Scale	.87	P<.001
Peer Pressure Scale	.80	P<.001
Impulsiveness Scale	.87	P<.001
Alcohol Scale	.90	P<.001
Drugs Scale	.89	P<.001
Self-Esteem Scale	.92	P<.001

Revised Shoplifting Inventory (SI) statistics meet or exceed those attained with the previous version.

Shoplifting Inventory (SI) Confirmation Reliability (2014)

The Shoplifting Inventory (SI) assessment was developed for shoplifter evaluation. This is a unique test that explores motivation, attitude and need. It assesses areas important for understanding shoplifters.

Participants: There were 217 online test takers, the majority were single, Caucasian females in their late 20s and early 30s, with a high school education or higher. Arrest history: 92% had one or more shoplifting arrests, 8% had 3 or more arrests; 11% had one or more alcohol-related arrests; 12% had one or more drug-related arrests; 11% had one more DUI.

Reliability

Test reliability refers to a scale's consistency of measurement. Cronbach's Alpha, a measure of reliability, measured the internal consistency of each scale for each instrument administered. Perfect reliability is 1.00 and the professionally accepted standard of reliability for these types of instruments is .70 - .80 or higher (Murphy & Davidshofer, 2001).

Table. SI Reliability (N = 217, 2014)

SI Scales	Coefficient Alpha
Truthfulness	.86
Alcohol	.86
Drugs	.93
Shoplifting	.82
Peer Pressure	.85
Impulsivity Scale	.90
Self-Esteem	.90

All scales exceed accepted reliability standards and are likely to improve with a larger sample.

SUMMARY

This document "Shoplifting Inventory: An Inventory of Scientific Findings" summarizes many research studies supporting the reliability, validity and accuracy of the scales used in the Shoplifting Inventory. Based on research presented herein, it is reasonable to conclude that the revised Shoplifting Inventory (SI) test will continue to provide a sound empirical basis for more effective and responsible referrals. The Shoplifting Inventory (SI) is truly an example of evidence-based assessment.