

Shoplifting Inventory: Standardization Study

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Abstract

The Shoplifting Inventory (SI) is an adult shoplifting offender assessment test that accurately measures offender risk of shoplifting, impulsiveness, substance (alcohol and drugs) abuse, emotional and mental health problems. There were 1,554 adult shoplifters included in this study. Reliability analyses showed that all nine SI scales had very high reliability coefficient alphas of between .85 and .94. SI scales were validated in several tests of validity. Discriminant validity was shown by significant differences on SI Alcohol and Drugs scale between first and multiple offenders. The Shoplifting Scale correctly identified 100% of offenders who admitted they were problem shoplifters. The Alcohol and Drugs Scales correctly identified 100% of the respondents who had alcohol and drug problems. The Impulsiveness Scale identified nearly all of the offenders who admitted problem impulsiveness. SI classification of offender risk was shown to be very accurate. All SI scale scores were within 2.8% of predicted risk range percentile scores. This study demonstrated that the SI is a reliable, valid and accurate adult shoplifting offender assessment test.

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Introduction

An important step in dealing with shoplifting is screening and assessment. Shoplifters can be screened for shoplifting problems and directed to appropriate agencies for help, treatment and rehabilitation. The Shoplifting Inventory is an adult shoplifter assessment or screening test. Screening shoplifters to identify problems facilitates placement of clients into appropriate supervision levels, intervention programs and treatment. Accurate and reliable shoplifter risk and needs assessment is essential for placement of shoplifters in programs to help them resolve shoplifting problems.

The Shoplifting Inventory (SI) is a multidimensional test that was developed to meet the needs of adult shoplifter screening and assessment. SI scales measure problem shoplifting tendencies (Shoplifting Scale), alcohol and drug abuse severity (Alcohol & Drugs Scales), impulsiveness potential (Impulsiveness Scale), antisocial, entitlement and peer pressure attitudes (Antisocial, Entitlement and Peer Pressure Scales) and emotional or mental health problems (Self-Esteem Scale). In addition, the Truthfulness Scale measures respondent truthfulness while completing the test. Clients who deny or minimize their problems are detected by the Truthfulness Scale. Truthfulness Scale scores are used to truth-correct other scale scores. The present study investigated the reliability, validity and accuracy of the Shoplifting Inventory.

Antisocial attitudes, impulsiveness and self-esteem are personality factors that are relevant to shoplifter risk. These factors are measured by the SI. Personality, attitude and behavioral factors, often referred to as “dynamic variables,” are capable of change and are amenable to intervention and treatment. Positively changing clients’ personality, attitudes and behavior can lead to behavioral change. Identification of problem prone clients is the first step in directing shoplifters to appropriate programs aimed at helping them to positively change their behavior.

For ease in interpreting shoplifter risk, the SI scoring methodology classifies respondent scale scores into one of four risk ranges: low risk (zero to 39th percentile), medium risk (40 to 69th percentile), problem risk (70 to 89th percentile), and severe problem risk (90 to 100th percentile). By definition the expected percentages of respondents scoring in each risk range (for each scale) is: low risk (39%), medium risk (30%), problem risk (20%), and severe problem risk (11%). Clients who score at or above the 70th percentile are identified as having problems. Clients scale scores at or above the 90th percentile identify severe problems. The accuracy of the SI in terms of risk range percentages was examined in this study.

This study validates the SI in a sample of adult shoplifters who were tested at court referral programs. Two methods for validating the SI were used in this study. The first method (discriminant validity) compared first and multiple offenders’ scale scores. Offender status was defined in terms of number of shoplifting arrests. Multiple offenders were offenders with two or more arrests and first offenders had one or no arrest. It was hypothesized that statistically significant differences between multiple and first offenders would exist and SI scales would differentiate between first and multiple offenders. Multiple offenders would be expected to score higher on these scales because having a second arrest is indicative of serious problems.

The second validation method (predictive validity) examined the accuracy at which the SI identified “problem shoplifters,” i.e., clients with shoplifting problems, impulsive clients, problem drinkers and problem drug abusers. Tests that measure severity of problems should be able to predict if clients have problems by the magnitude (severity) of their scores. Accurate tests

differentiate between problem and non-problem clients. An inaccurate test, for example, may too often call non-problem drinkers problem drinkers or vice versa. Responses to test items obtained from the clients' served as criterion measures.

Having been in alcohol treatment identifies clients as having an alcohol problem. It is acknowledged that there are some clients who have alcohol problems but have not been in treatment. Nevertheless, clients who have been in alcohol treatment would be expected to score in the Alcohol Scale's problem range. Similarly, having been in drug treatment identifies clients who have drug problems. In regards to shoplifting and impulsiveness, clients direct admissions of problems were used as the criteria.

For the predictive validity analyses clients were separated into two groups, those who admitted problems (problem group) on the criterion items and those who did not admit to problems (no problem group). Then, client scores on the relevant SI scales were compared. It was predicted that problem group clients would score in the problem risk range (70th percentile and above) on the relevant SI scales. Non-problem was defined in terms of low risk scores (39th percentile and below). The percentage of problem group clients who scored in the 70th percentile range and above is a measure of how accurate SI scales are. High percentages (above 90%) of problem group clients who had problem risk scores would indicate the scales are accurate. Conversely, the percentages of problem group clients who score in the low range are predicted to be very low (less than 10%). Because criterion measures were gotten from the SI database, a lack of suitable criterion measures prevented carrying out predictive validity analyses on the other SI scales. The test items used in these analyses were, "I have been treated (inpatient, outpatient or counseling) for alcoholism." "I have been treated in a chemical dependency program for drug-related problems." "Given the chance, I will probably shoplift again." "I am an impulsive person."

Method

Subjects

There were 1,554 adult shoplifting offenders tested with the SI. There were 834 males (54.7%) and 720 females (46.3%). The ages of the participants ranged from 19 through 60 as follows: 19 & under (32.0%); 20-29 (32.8%); 30-39 (18.7%); 40-49 (10.8%); 50-59 (3.5%) and 60 & over (2.1%). The demographic composition of participants was as follows. Race/Ethnicity: Caucasian (43.4%); Black (7.5%), Hispanic (45.4%), Native American (1.7%) and Other (2.0%). Education: Eighth grade or less (4.0%); Some high school (31.0%); High school graduate/GED (44.6%); Some college (16.0%) and College graduate (4.4%). Marital Status: Single (69.6%); Married (21.6%); Divorced (5.0%), Separated (2.4%) and Widowed (1.3%).

Over 15 percent of the participants were arrested for shoplifting two or more times. Over half (51.8%) of the offenders had one arrest. One-third (32.6%) of the offenders had one or more misdemeanor arrests not for shoplifting. One-fourth (26.6%) of the participants had one or more felony arrests. 42 percent of the offenders were arrested by the age of 18.

Procedure

Participants completed the SI as part of offender screening and assessment in court referral settings. The SI contains nine measures or scales. These scales are briefly described as follows. The Truthfulness Scale measures the truthfulness, denial and problem minimization of the respondent while taking the SI. The Shoplifting Scale measures a person's tendency toward stealing things from stores. This is more of a characterological scale and measures the probability of shoplifting. The Entitlement Scale measures attitudes and beliefs towards entitlement. Some people believe they are

entitled to more than others in terms of material goods. The Antisocial Scale measures antisocial thinking and behavior, which incorporate an uncaring and irresponsible attitude. Hostility, unsociableness, disloyalty and adjustment problems are common. The Peer Pressure Scale measures a person's susceptibility to peer pressure and the influence of others. The 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. The Impulsiveness Scale measures a tendency to act on sudden impulse. Some people respond suddenly or spontaneously; whereas, others are more deliberate. The Alcohol Scale measures severity of alcohol use or abuse. The Drugs Scale measures severity of drug use or abuse.

Results and Discussion

The inter-item reliability coefficient alphas for the nine SI scales are presented in Table 1. All scales were highly reliable. Reliability coefficient alphas for all SI scales were at or above 0.85. These results demonstrate that the SI is a very reliable adult shoplifting offender assessment test.

Table 1. Reliability of the SI (N=1,554)

<u>SI SCALES</u>	<u>Coefficient Alphas</u>	<u>Significance Level</u>
Truthfulness Scale	.87	p<.001
Entitlement Scale	.85	p<.001
Shoplifting Scale	.87	p<.001
Antisocial Scale	.86	p<.001
Peer Pressure Scale	.88	p<.001
Self-Esteem Scale	.94	p<.001
Impulsiveness Scale	.86	p<.001
Alcohol Scale	.91	p<.001
Drugs Scale	.89	p<.001

Discriminant validity results are presented in Table 2. In these analyses the answer sheet items “Number of times arrested for shoplifting” was used to define first offenders (one or no arrest) and multiple offenders (2 or more arrests). T-test comparisons were used to study the statistical significance between the offender groups. There were 1,330 first offenders and 224 multiple offenders (2 or more arrests).

Table 2 shows that mean (average) scale scores of first offenders were significantly lower than scores for multiple offenders on all SI scales with the exception of the Truthfulness, Entitlement and Peer Pressure Scales. As expected, multiple offenders scored significantly higher than did first offenders. Truthfulness Scale results indicate that first offenders tried to minimize their problems or fake good when tested more than did multiple offenders. First offenders may have tried to lessen their situation by faking good. Entitlement and Peer Pressure Scale results indicated that there were no significance difference between first and multiple offenders. SI severity measurement scales differentiated between first offenders and multiple offenders. The highest difference is found on the Shoplifting Scale. These results support the validity of the SI.

Table 2. Comparisons between first offenders and multiple offenders (N=1,554).

SI Scale	First Offenders Mean	Multiple Offenders Mean	T-value	Level of significance
Truthfulness Scale	8.12	7.04	t = 3.18	p=.002
Entitlement Scale	7.15	7.01	t = 0.24	n.s.
Shoplifting Scale	7.41	12.59	t = 8.55	p<.001
Antisocial Scale	4.13	5.30	t = 2.01	p=.005
Peer Pressure Scale	2.64	2.64	t = 0.01	n.s.
Self-Esteem Scale	40.89	33.14	t = 4.30	p<.001
Impulsiveness Scale	7.63	10.12	t = 3.70	p<.001
Alcohol Scale	3.34	5.52	t = 3.94	p<.001
Drugs Scale	4.44	7.72	t = 5.40	p<.001

Note: Self-Esteem Scale scores are reversed in that higher scores are associated with higher self-esteem.

Correlation coefficients between respondents' criminal history and SI scales are presented in Table 3. Statistically significant correlation coefficients between SI scales and criminal history variables also validate SI scales. SI scales that measure problem-prone behavior were expected to be correlated with variables that indicate offender problems, such as the number of times they have been arrested, their age at first arrest and probation records. For example, it is expected that the Alcohol Scale correlates with number of alcohol-related arrests and the Drugs Scale correlates with drug-related arrests. Participants' criminal histories were obtained from SI answer sheets that were completed by the participants.

Table 3. Relationships between Criminal History Variables and SI Scales

	Alcohol Scale	Drugs Scale	Antisocial Scale	Shoplifting Scale	Impulsiveness Scale
Age at first arrest	.01	-.02	-.03	-.20**	-.10**
Number of shoplifting arrests	.07*	.12**	.05	.22**	.08**
Misdemeanor arrests	.15**	.18**	.09**	.23**	.06
Felony arrests	.08*	.20**	.09**	.20**	.03

Note: Significance level * p<.01, ** p<.001.

Age at first arrest was significantly correlated with the Shoplifting and Impulsiveness scales. These results suggest that shoplifting started at early age as shown by the negative coefficients. Number of shoplifting arrests is correlated best with the Shoplifting Scale as is number of misdemeanor arrests. Number of felony arrests is correlated with both the Shoplifting and Drugs scales. These results are in agreement with the discriminant validity results reported above. Significant correlations with shoplifting arrests support the validity of the Shoplifting Scale. The magnitude of the correlation coefficients are moderate and suggest that criminal history variables alone do not predict shoplifter problems. SI scales, that measure problem-prone behaviors, are needed for accurate prediction of shoplifter problems.

Predictive validity results for the correct identification of problem behavior (shoplifting, impulsiveness tendencies, drinking and drug abuse problems) are presented in Table 4. Table 4 shows the percentages of respondents who had or admitted to having problems and who scored in the problem risk range. For the Alcohol and Drugs Scales criteria, problem behavior means the client had alcohol or drug treatment. For the Shoplifting and Impulsiveness Scales the client

admitted shoplifting and impulsiveness problems, respectively. In these analyses scale scores in the Low risk range (zero to 39th percentile) represent “no problem,” whereas, scores in the Problem and Severe Problem risk ranges (70th percentile and higher) represent shoplifting, impulsiveness, alcohol and drug problems.

The Alcohol Scale is very accurate in identifying respondents who have alcohol problems. There were 172 clients who had alcohol treatment and these clients were classified as problem drinkers. All 172 clients, or 100 percent, had Alcohol Scale scores at or above the 70th percentile. The Alcohol Scale correctly identified all of the clients categorized as problem drinkers. This result validates the Alcohol Scale. It is likely that some clients have alcohol problems but have not had alcohol treatment. For these individuals scoring at or above the 70th percentile on the Alcohol Scale alcohol treatment is recommended.

The Drugs Scale was also very accurate in identifying respondents who have drug problems. There were 138 clients who had been in drug treatment, all 138 clients, or 100 percent, had Drugs Scale scores at or above the 70th percentile. This result strongly substantiates the accuracy of the Drugs Scale.

Table 4. Predictive Validity of the SI

<u>SI Scale</u>	<u>Correct Identification of Problem Behavior</u>
Alcohol	100%
Drugs	100%
Shoplifting	100%
Impulsiveness	100%

The Shoplifting Scale accurately identified clients (100%) who admitted shoplifting problems. Clients who stated they would shoplift in the future scored in the problem range. The direct admission of a shoplifting problem validates the Shoplifting Scale. The Impulsiveness Scale identified all 245 clients (100%) who admitted being impulsive. The Alcohol and Drugs Scale accurately identified clients who had alcohol and drug problems. These results strongly support the validity of the SI Shoplifting, Impulsiveness, Alcohol and Drugs Scales. The other SI scales were not included in these analyses because of a lack of direct admission or other criterion measure within the SI database.

SI risk range percentile accuracy is presented in Table 5. Risk range percentile scores are derived from scoring equations based on clients’ pattern of responding to scale items and criminal history, when applicable. There are four risk range categories: Low Risk (zero to 39th percentile), Medium Risk (40 to 69th percentile), Problem Risk (70 to 89th percentile) and Severe Problem or Maximum Risk (90 to 100th percentile). Risk range percentile scores represent degree of severity. The higher the percentile score is the higher the severity of the respondent’s problems.

Analysis of the accuracy of SI risk range percentile scores involved comparing the client’s obtained risk range percentile scores to predicted risk range percentages as defined above. The percentages of clients expected to fall into each risk range are: Low Risk (**39%**), Medium Risk (**30%**), Problem Risk (**20%**) and Severe Problem or Maximum Risk (**11%**). These percentages are shown in parentheses in the top row of Table 5. The actual percentage of clients falling in each of the four risk ranges, based on their risk range percentile scores, was compared to these predicted percentages. The differences between predicted and obtained are shown in parentheses.

As shown in Table 5, SI scale scores are very accurate. The objectively obtained percentages of participants falling in each risk range are very close to the expected percentages for each risk category. All of the obtained risk range percentages were within 2.8 percentage points of the expected percentages and most (32 of the 36) were within 2.0 percentage points. These results demonstrate that the SI scale scores accurately classify shoplifter risk.

Table 5. Accuracy of SI Risk Range Percentile Scores

Scale	Low Risk (39% Predicted)	Medium Risk (30% Predicted)	Problem Risk (20% Predicted)	Severe Problem (11% Predicted)
Truthfulness	36.8 (2.2)	32.8 (2.8)	18.0 (2.0)	12.4 (1.4)
Shoplifting	41.4 (2.4)	28.9 (1.1)	19.3 (0.7)	10.4 (0.6)
Alcohol	37.9 (1.1)	32.0 (2.0)	19.6 (0.4)	10.5 (0.5)
Drugs	40.5 (1.5)	29.3 (0.7)	20.0 (0.0)	10.2 (0.8)
Antisocial	40.0 (1.0)	30.9 (0.9)	18.3 (1.7)	10.8 (0.2)
Entitlement	39.2 (0.2)	31.4 (1.4)	18.5 (1.5)	10.9 (0.1)
Peer Pressure	36.8 (2.2)	31.4 (1.4)	20.3 (0.3)	11.5 (0.5)
Self-Esteem	39.9 (0.9)	28.8 (1.2)	20.2 (0.2)	11.1 (0.1)

Conclusion

This study demonstrates that accurate shoplifter assessment is achieved with the Shoplifting Inventory (SI). Results corroborate and support the SI as an accurate assessment or screening test for adult shoplifters. The SI accurately measures shoplifter risk of problem shoplifting, impulsiveness, antisocial attitudes, substance (alcohol and drugs) abuse, emotional and mental health problems. In short, the SI provides a wealth of information concerning shoplifters' adjustment and problems that contributes to understanding the shoplifters.

Reliability results demonstrated that all nine SI scales are highly reliable. Reliability is necessary in shoplifter assessment or screening tests for accurate measurement of shoplifter risk. Tests cannot be valid or accurate without being reliable. Validity analyses confirm that the SI measures what it purports to measure, that is, shoplifter risk. Results demonstrate that repeat offenders exhibit more problem-prone behavior than first offenders. Multiple offenders (having 2 or more shoplifting arrests) scored significantly higher than first offenders (discriminant validity). The SI accurately identified shoplifters who have problems. And, obtained risk range percentages on all SI scales very closely approximated predicted percentages. These results strongly support the validity of the SI.

SI results provide important risk/needs assessment for courts to make informed decisions regarding shoplifter sentencing options. Problem-prone individuals exhibit many characteristics that are identified with the SI. Relationships between shoplifters' criminal history variables and SI scale scores demonstrate that the SI measures relevant behaviors that identify shoplifters as problem-prone. Identification of these problems and prompt intervention can reduce a shoplifter's risk of future arrests. The SI facilitates understanding of shoplifting, impulsiveness tendencies, substance abuse, antisocial behavior, and emotional and mental health problems. SI results also provide an empirical basis for recommending appropriate supervision level, intervention and treatment programs. Courts can direct shoplifters to appropriate programs to affect behavioral change.