

PRE-POST INVENTORY

SUMMARY REPORT

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PREFACE

This report summarizes assessment results for the Pre-Post Inventory (PPI). Tests that were administered during the period January 1, 1998 through December 31, 1998 are summarized for 668 clients.

The Pre-Post Inventory (PPI) is designed for objective pretest-posttest outcome comparison. It is a counseling or treatment outcome measure. The PPI has 7 scales: 1. Truthfulness Scale, 2. Self-Esteem Scale, 3. Resistance Scale, 4. Distress, 5. Alcohol Scale, 6. Drug Scale and 7. Stress Coping Abilities Scale. This report is organized to discuss the accuracy, reliability and validity of the PPI. In addition, the percentages of offender responses to selected test items are presented. Client demographics are summarized at the end of the report.

PPI scoring methodology classifies client 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** (90 to 100th percentile). Test data show the percentage of clients classified in these four risk ranges very closely approximates (most are within 1% or less) these predicted percentages. These findings attest to the accuracy of the PPI.

Test accuracy can also be measured by determining how well the test differentiates between clients who have been in treatment and clients who have not had treatment, and how accurately the test identifies clients with “known problems.” Analyses show that both of these accuracy criteria are impressively met by the PPI. These analyses demonstrate that the PPI measures what it purports to measure.

In summary, the research reported herein demonstrates that the PPI is reliable, valid and accurate. This PPI summary includes: risk analyses, reliability statistics and validity studies.

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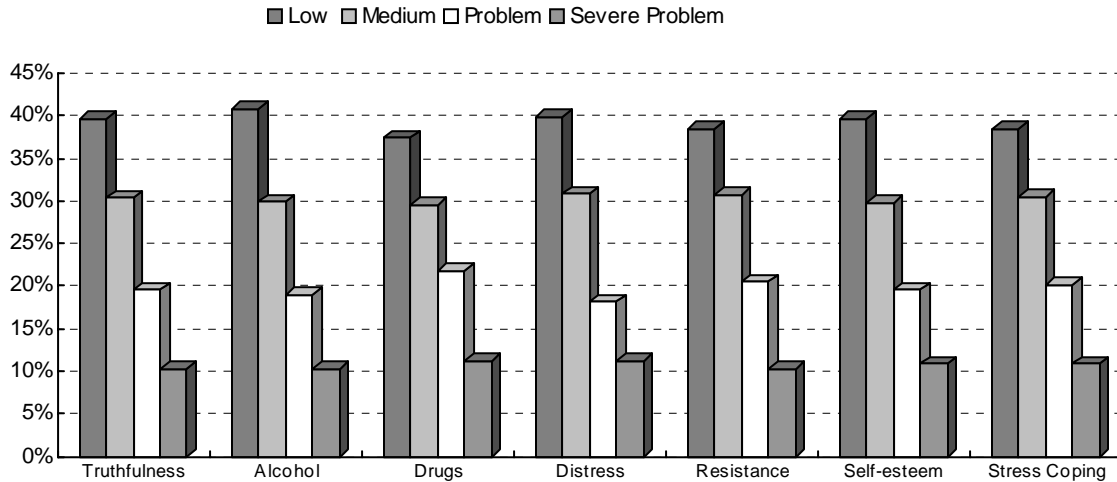
PRE-POST INVENTORY

This report summarizes Pre-Post Inventory (PPI) findings. There are **668 PPI results** reported for the period **January 1, 1998 through December 31, 1998**. The PPI is a unique counseling or treatment outcome measure.

Client PPI Risk Assessment

Client PPI scale scores are classified according to the risk (degree of severity) they represent. Four categories of risk are assigned: Low risk (zero to 39th percentile), Medium risk (40 to 69th percentile), Problem risk (70 to 89th percentile), and Severe Problem (90 to 100th percentile). By definition the predicted percentage of clients assigned to each risk category is, 39% in Low risk, 30% in Medium risk, 20% in Problem risk and 11% in Severe Problem. The actual percentages of clients placed in the four risk categories based on their scale scores are compared to these predicted percentages. The following table presents these comparisons. The differences between obtained and predicted are shown in parentheses. There were **668** clients included in this analysis.

PPI Scale Risk Ranges, (N = 668).



Scale	Low Risk (39%)	Medium Risk (30%)	Problem Risk (20%)	Severe Problem (11%)
Truthfulness Scale	39.7 (0.7)	28.4 (1.6)	20.7 (0.7)	11.2 (0.2)
Alcohol Scale	39.8 (0.8)	29.7 (0.3)	19.3 (0.7)	11.2 (0.2)
Drugs Scale	39.5 (0.5)	28.9 (1.1)	20.1 (0.1)	11.5 (0.5)
Distress Scale	37.7 (1.3)	31.3 (1.3)	19.8 (0.2)	11.2 (0.2)
Resistance Scale	39.5 (0.5)	29.7 (0.3)	18.8 (1.2)	12.0 (1.0)
Self-esteem Scale	38.8 (0.2)	29.9 (0.1)	20.8 (0.8)	10.5 (0.5)
Stress Coping Abilities	38.2 (0.8)	29.9 (0.1)	20.8 (0.8)	11.1 (0.1)

As shown in the graph and table above, the PPI-Pretest scale scores are very accurate. The objectively obtained percentages of clients falling in each risk range are very close to the

predicted percentages for each risk category. All of the obtained risk range percentages were within 1.6 percentage points of the predicted percentages and most (22 of 28 possible) were within 1 percentage point. Only six obtained percentages were more than 1% from the predicted percentage.

For those clients who are identified as having problems (Problem and Severe Problem risk ranges or 31% of the clients), the obtained percentages were very accurate. The differences between obtained and predicted percentages are as follows: Truthfulness Scale (0.9), Alcohol Scale (0.5), Drugs Scale (0.6), Distress Scale (0), Resistance Scale (0.2), Self-esteem Scale (0.3) and Stress Coping Abilities (0.9). These results demonstrate that the PPI scale scores accurately identify client risk.

Reliability of the Pre-Post Inventory

Within-test reliability, or inter-item reliability coefficient alphas for the Pre-Post Inventory are presented in the table below. The higher the Alpha level the more reliable the scale is. Generally, Alphas of .80 are the professionally acceptable standard for reliability in tests. Alpha coefficients are or above .80 are considered to be very reliable.

**Reliability of the Pre-Post Inventory (N = 668).
All coefficient alphas are significant at p<.001.**

PPI Scales	Coefficient Alphas
Truthfulness Scale	.92
Alcohol Scale	.89
Drug Scale	.90
Distress Scale	.88
Resistance Scale	.83
Self-Esteem Scale	.94
Stress Coping Abilities	.93

As demonstrated above, Alpha coefficients for the PPI sales are well above the professionally accepted standard of .80. Indeed, most of the PPI scales are at or near .90. These high reliability statistics are very impressive for an assessment test. These results show that the PPI is a very reliable risk assessment instrument.

Validity of the Pre-Post Inventory

Pre-Post Inventory scales measure the severity of client problems. It is expected that clients who have had prior treatment would have higher scale scores than clients who have not previously had treatment. **Discriminant validity** of the PPI is shown by the presence of significant scale score differences between “treatment” and “no treatment” clients in predicted directions. PPI Alcohol Scale scores are compared between clients on the basis of alcohol treatment and Drug Scale scores are compared on the basis of drug treatment. Treatment information was obtained from clients’ answers to PPI test items #142 regarding alcohol treatment, and #143 regarding drug treatment.

Because “risk” is often defined in terms of severity of problem behavior it is expected that “treatment” clients would score significantly higher on PPI scales than “no treatment” clients. T-test comparison of Alcohol Scale scores between the treatment clients and no treatment clients shows that treatment clients scored significantly higher on the Alcohol Scale than no treatment clients, $t=10.62$, $p<.001$. The mean Alcohol Scale score for the treatment group was 27.18 and the mean score for the no treatment group was 17.06. This t-test result supports the discriminant validity of the Alcohol Scale. The PPI Alcohol Scale accurately identifies clients who alcohol problems.

T-test comparison of Drug Scale scores between treatment and no treatment clients indicates that treatment clients scored significantly higher than no treatment clients, $t=15.46$, $p<.001$. The mean Drug Scale score for the treatment clients was 22.8 and the mean score for the no treatment clients was 10.07. These results strongly support the validity of the PPI Drugs Scale.

It was predicted that clients who had alcohol treatment would score in the problem risk range on the PPI Alcohol Scale. Similarly, clients who have had drug treatment would score in the problem risk range on the Drug Scale.

The results show that the PPI Alcohol Scale accurately identified clients who had alcohol treatment. Of the 177 clients who stated they had alcohol treatment, 130 individuals or 73.4 percent had PPI Alcohol Scale Scores in the problem risk range (70th percentile or higher). Clients who believe that after having been in alcohol treatment they no longer have an alcohol problem may temper this result. Also the time elapsed since treatment may represent a confounding variable. However, 90 percent of the clients who currently attend Alcoholics Anonymous meetings had Alcohol Scale scores in the problem risk range. Attending AA meetings is consistent with the here-and-now reference in PPI test items. The Alcohol Scale very accurately identifies clients who have alcohol problems. These results validate the PPI Alcohol Scale.

The Drugs Scale correctly identified 82 percent of the clients who had drug treatment. Of the 149 clients who had drug treatment, 122 percent scored in the problem risk range on the PPI Drugs Scale. The Drug Scale correctly identified 94 percent of the clients who attend Narcotics Anonymous or Cocaine Anonymous.

Taken together these results strongly support the reliability, validity and accuracy of the PPI. Reliability coefficient alphas were significant at $p<.001$ for all PPI scales. Validity of the Alcohol Scale and Drugs Scale was shown by the accuracy with which the scales identified problem behavior (treatment or attending self-help groups). **The Alcohol Scale accurately identified 90 percent and the Drugs Scale accurately identified 94 percent of the clients who attend alcohol and drug self-help groups.** These results support the reliability, validity and accuracy of the PPI.

CLIENT SELF-PERCEPTIONS

The PPI contains questions to obtain the client’s own opinions of his or her problems. The percentages of clients who agreed with statements indicating they are “at-risk” for alcohol and drug problems are presented. **There were 668 clients responding to each of these statements.** There were 565 males and 103 females.

Alcohol and Drug Problems	Males %	Females %
#38. I have a drinking problem.	30.5	13.6
#46. I have a drug problem.....	20.3	14.6
#137. My drinking is:		
1. A serious problem.....	14.4	6.8
2. A moderate problem	13.5	5.8
3. A mild problem	20.7	33.0
#136. My drug use is:		
1. A serious problem	11.1	8.7
2. A moderate problem	5.5	6.8
3. A mild problem	12.9	6.8
Alcohol and Drug Treatment		
#136. How would you describe your desire to get alcohol treatment or help?		
1. I want help (highly motivated).....	12.7	12.5
2. I may need help (moderately motivated)	8.5	6.6
3. Maybe, not sure (mildly motivated).....	20.2	16.9
#137. How would you describe your desire to get drug treatment or help?		
1. I want help (highly motivated).....	5.4	4.1
2. I may need help (moderately motivated)	2.4	1.5
3. Maybe, not sure (mildly motivated).....	5.8	6.1
#138. Recovering means having a substance (alcohol or drug) abuse problem, but not drinking or using drugs anymore. I am a recovering:		
1. Alcoholic	15.5	10.8
2. Drug-abuser	2.9	3.7
3. Both 1 and 2	6.1	5.3

PPI Client Demographics

Population				
Males		Females		Total
N	%	N	%	N
565	84.6	103	15.4	668

Race/Ethnicity				
Race	Males	Females	Total	
	N	N	N	%
Caucasian	448	92	540	81.2
Black	51	1	52	7.8
Hispanic	42	7	49	7.4
Native American	14	2	16	2.4
Other	7	1	8	1.2

Note: There were 3 cases with missing information.

Age Group				
Age	Males	Females	Total	
	N	N	N	%
19 & Under	102	17	119	17.8
20 – 24	103	18	121	18.1
25 – 29	72	9	81	12.1
30 – 34	85	25	110	16.5
35 – 39	63	18	81	12.1
40 – 44	67	10	77	11.5
45 – 49	34	2	36	5.4
50 – 54	23	3	26	3.9
55 – 59	4	1	5	0.7
60 & Over	12	0	12	1.8

Education				
Grade	Males	Females	Total	
	N	N	N	%
8 th grade or Less	94	11	105	15.8
Some High School	108	20	128	19.3
HS Graduate	298	67	365	55.0
Some College	61	5	66	9.9
College Grad	0	0	0	0

Note: There were 4 cases with missing information.

Marital Status				
Status	Males	Females	Total	
	N	N	N	%
Single	345	58	403	61.0
Married	120	12	132	20.0
Divorced	71	17	88	13.3
Separated	18	13	31	4.7
Widowed	4	3	7	1.1

Note: There were 7 cases with missing information.