

# **New Jersey Council of Problem Gambling**

## **Gambler Addiction Index (GAI) November 2005 – May 2007 Report**

May 2007

This report summarizes Gambler Addiction Index (GAI) test data for **112** problem gamblers from New Jersey. The GAI test data was gathered between November 2005 and May 2007. The GAI is described on the Behavior Data Systems, Ltd. website at **[www.bdsltd.com](http://www.bdsltd.com)**. This report is provided by Behavior Data Systems, Ltd., P.O. Box 44828, Phoenix, AZ 85064-4828. Additional information is provided on [www.gambler-assessments.com](http://www.gambler-assessments.com).

## Introduction

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The Gambler Addiction Index (GAI) is designed for gambler screening and assessment. The GAI quantifies attitudes and behaviors important for understanding gamblers and their problems.

This report summarizes Gambler Addition Index (GAI) test data obtained from the www.online-testing.com database of tests administered by the New Jersey Council of Problem Gambling in August 2006 and May 2007. This report includes data from problem gamblers that took the GAI between November 2005 and May 2007.

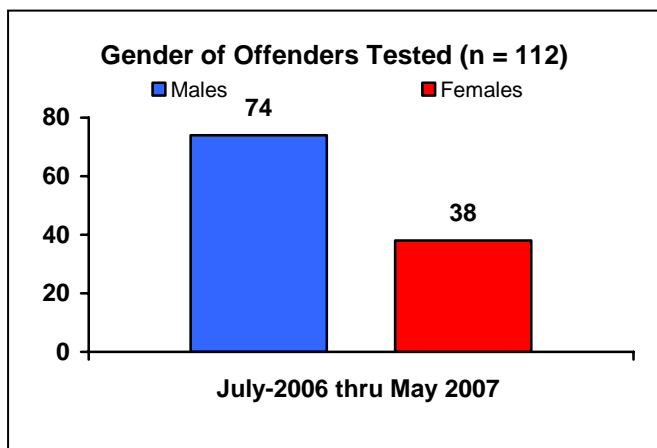
The report analyzes problem gambler demographic and self-reported court history statistics. The report also presents validity, reliability and accuracy analyses of the Gambler Addiction Index

## Demographic Information

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### Gender of Problem Gamblers Tested

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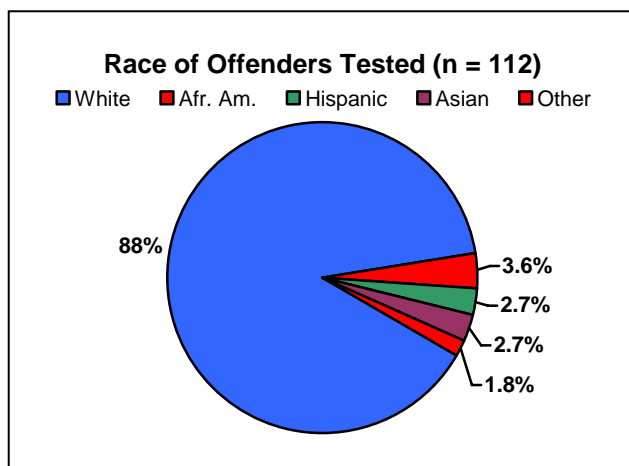


Based on the GAI database, as of May 2007, a total of 112 problem gamblers took the Gambler Addiction Index (GAI) from November 2005 through May 2007.

- 66.1% (74) were male
- 33.9% (38) were female

### Race of Problem Gamblers Tested

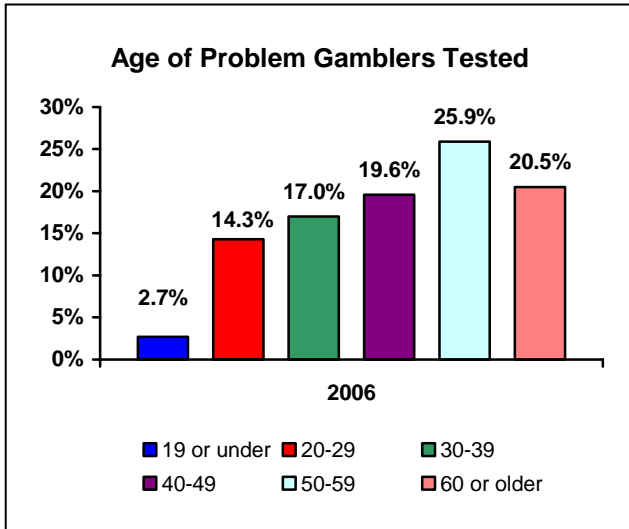
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Overall, of the problem gamblers tested with the Gambler Addiction Index (GAI) from November 2005 through May 2007:

- 89.3% (100) were Caucasian.
- 3.6% (4) was African-American.
- 2.7% (3) were Hispanic
- 2.7% (3) were Asian
- 1.8% (2) were Other

## Age of Problem Gamblers Tested

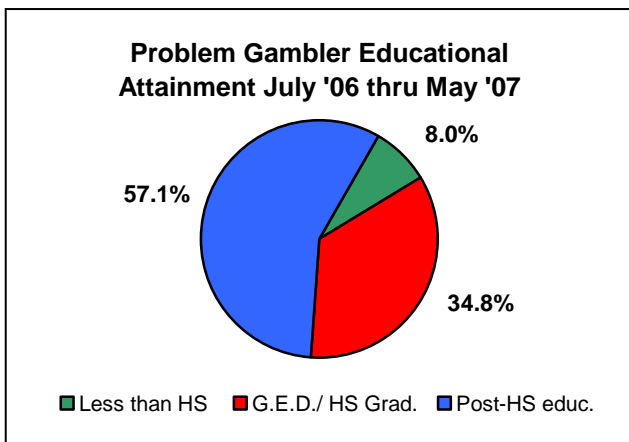


The average age of the problem gamblers tested was 46 years. Other age statistics of interest include:

- There were no significant differences in age based on race, education, or current gambling frequency.
- Females were significantly older than males (52 vs. 43, respectively;  $t = -3.03, p = .003$ )
- Individuals who were single were significantly younger ( $M = 37.1$ ) than individuals who reported being married ( $M = 50.7; p < .001$ ), divorced or separated ( $M = 48.9; p < .01$ ), or widowed ( $M = 70.3; p < .001$ ).

- Widowed individuals were significantly older than individuals who reported being married or, divorced/separated ( $p < .05$  for both comparisons).

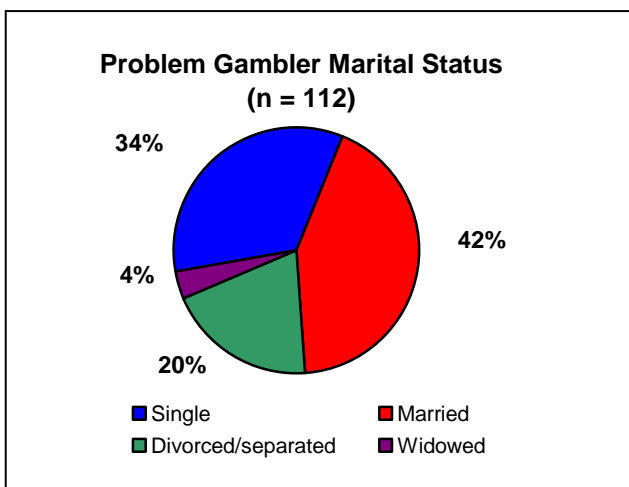
## Problem Gambler Educational Attainment



Over half (57.1%) of the problem gamblers had some post-secondary education (college, technical school, etc). 34.8% had a high school diploma/GED; and 8.0% had less than a high school education.

- There were no significant differences in education based on gender, race, marital status, or number of drug- or alcohol-related offenses.

## Problem Gambler Marital Status



Over forty percent (42.9%) of the problem gamblers tested were married. Single problem gamblers made up 33.9% of the sample, while 19.6% were divorced or separated. Four problem gamblers (3.6%) were widowed.

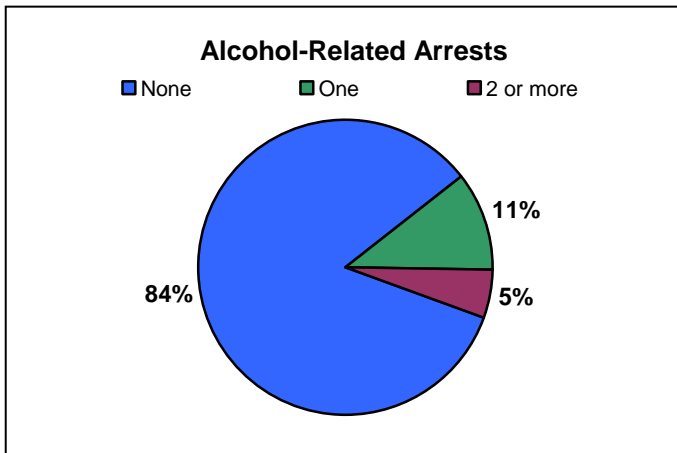
- No significant differences were found in terms of the proportion of males and females who reported a given marital status.

## Self-Reported Court History

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### Alcohol-Related Arrests

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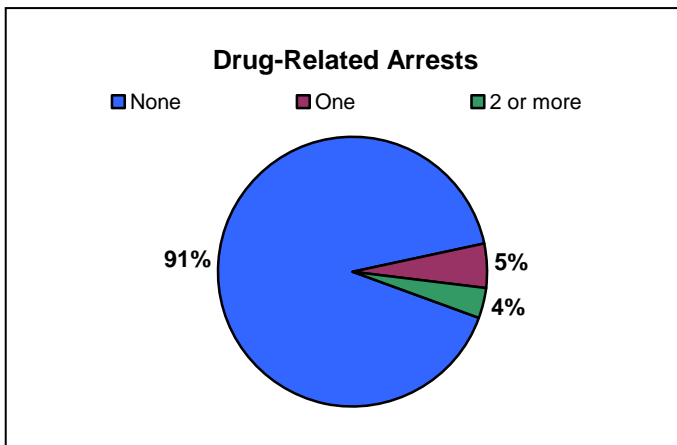
The majority (94 problem gamblers or 83.9%) of the problem gamblers tested reported having no prior alcohol-related arrests.

Among the 18 problem gamblers with alcohol-related arrests, 12 (10.7%) had 1 prior alcohol-related arrest, 2 (5.4%) had two or more alcohol-related arrests.

It is not unusual for gamblers to attempt to minimize their problems. More specifically, several gamblers denied prior alcohol-related arrests.

### Drug-Related Arrests

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A majority (102 problem gamblers or 91.1%) of the problem gamblers tested reported no previous drug-related arrests.

Of the 10 problem gamblers who had had a previous drug-related arrest, 6 (5.4%) had one previous arrest, 4 (3.6%) had two or more drug-related arrests.

A larger gambler sample will provide more information on drug-related arrests and convictions.

### Gambler Addiction Index (GAI)

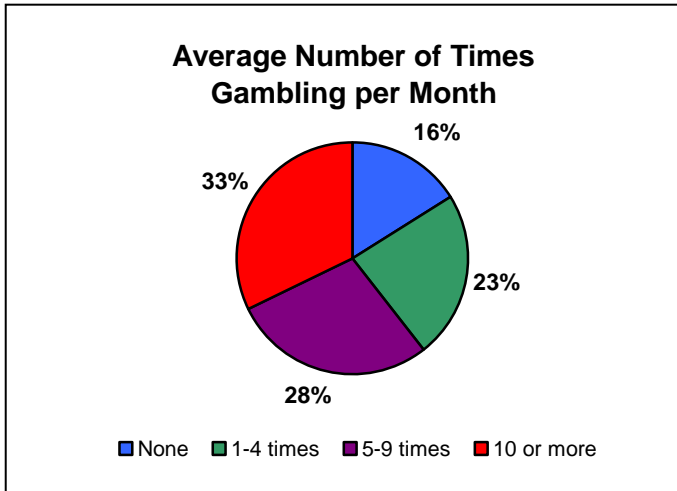
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This report summarizes the **Gambler Addiction Index (GAI)** test data for **112** New Jersey problem gamblers. Although the relatively small sample (112 gamblers) sets some statistical limits, it does enable us to develop a problematic gambler profile. In addition, it serves as a foundation upon which we can begin to explore problem severity-treatment intensity relationships along with recidivism prediction. Towards this goal, interested readers are encouraged to contact Behavior Data Systems, Ltd. to participate in subsequent research. Interested parties should call **1(800) 231-2401**.

## Self-Reported Gambling & Employment Information \_\_\_\_\_

The two questions that follow examined the frequency of gambling and employment during the last year.

### Gambling Frequency \_\_\_\_\_



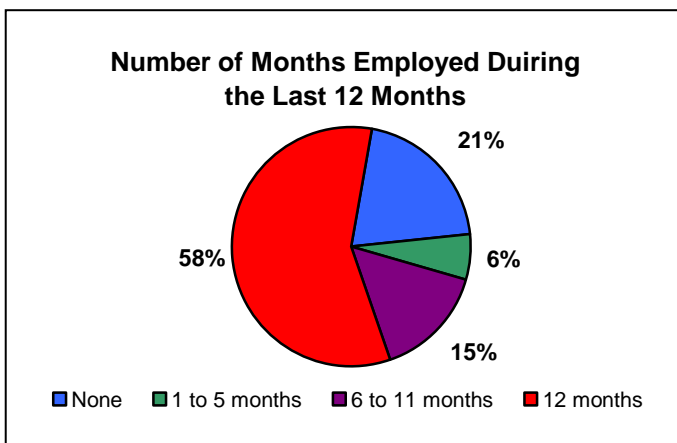
Approximately one-sixth (16.1%) of the problem gamblers tested reported that they gambled less than once per month.

While the veracity of these statements is called into question by the very fact that these people are in a position to take the test, the Truthfulness Scale scores do not differ materially from those of their peers.

This is an area for further inquiry once we have a stable sample population upon which we will be able to perform more rigorous statistical analysis.

Among the 94 individuals (83.9%) that reported gambling at least once per month, 26 (23.2%) reported gambling 1 to 4 times per month, 31 (27.7%) reported gambling 5 to 9 times per month and 36 (32.1%) reported gambling an average of 10 or more times per month. One participant did not report frequency of gambling per month.

### Employment \_\_\_\_\_



More than half of the problem gamblers (65 or 58%) said they had been employed for all of the last 12 months.

Of the 47 remaining problem gamblers, 23 (20.5%) had not been employed over the last 12 months, 7 (6.3%) had been employed between 1 and 5 months, and 17 (15.2%) reported 6 to 11 months of employment.

### Gambler Addiction Index (GAI) Test Statistics \_\_\_\_\_

The following pages present Gambler Addiction Inventory (GAI) test statistics. This analysis supports the GAI as a highly reliable, valid and accurate problem gambler assessment instrument.

## Validity

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Predictive validity measures how well scale scores distinguish between problem gamblers with known problems in a given area and those that had no known problems in that area. For instance, problem gamblers who had been treated for alcohol abuse would be predicted to have higher scores on the Alcohol Scale than problem gamblers that had not been treated for alcohol abuse.

Only thirty-five percent (**35.1%**) of problem gamblers that had been treated for a gambling problem had scores placing them in the High Risk (70<sup>th</sup> percentile and above) range on the Gambling Scale. In contrast, almost ninety percent (**86.7% and 88.8%**) of problem gamblers that had been treated for alcohol and drug problems were in the High Risk range on the Alcohol and Drugs Scales, respectively. Over three quarters (**77.7%**) of problem gamblers who admitted being suicidal scored in the High Risk range on the Suicide Scale. It is important to note that respondents were only asked if they had participated in gamblers-/alcohol-/narcotics-Anonymous. Respondents may have received treatment elsewhere, thus the actual percent of problem gamblers who have received treatment may be higher than reported. Second, the extent to which respondents falsely reported their treatment history is unknown. A large sample of New Jersey gamblers GAI test data should help us understand the extent of problem minimization. Also Truthfulness Scale score analysis will be relevant. Finally, frequency differences within small samples are magnified when reporting percentages. Validity should improve with further scale refinement on a larger sample population.

## Reliability

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### Reliability Coefficient Alphas for the GAI (N=112)

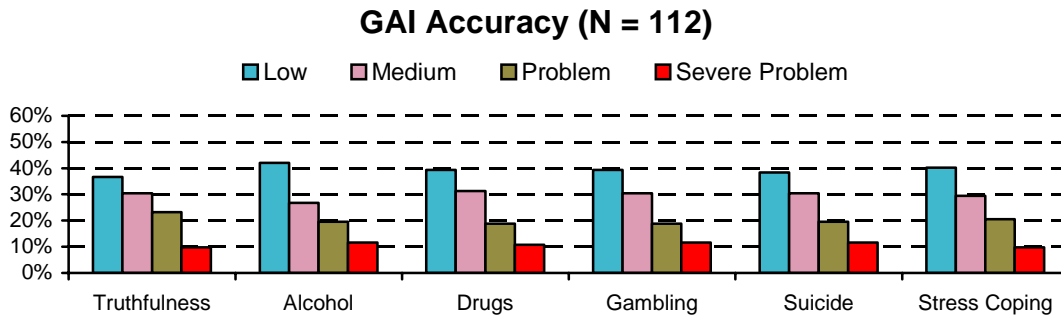
<u>Scale</u>	<u>Coefficient Alpha*</u>
Truthfulness Scale	<b>.87</b>
Alcohol Scale	<b>.94</b>
Drugs Scale	<b>.93</b>
Gambling Severity Scale	<b>.97</b>
Suicide Scale	<b>.89</b>
Stress Coping Abilities Scale	<b>.93</b>

**\*All alphas are significant at p<.001.**

Four of six Gambler Addiction Inventory (GAI) scales have reliability coefficient alphas of .90 or higher. The Gambling Scale, notably, has an alpha score of .97. The professionally accepted reliability standard is .75 and higher. All GAI scales are significantly higher than this accepted reliability standard. **All GAI scales are highly reliable.**

## Accuracy

The four Gambler Addiction Inventory (GAI) risk ranges (low, medium, problem and severe) and the predicted percentages for each risk range category are shown in parentheses in bold print in the top row of the table below. The percentages for each GAI scale and risk range category were obtained from the problem gamblers' attained scale scores. The difference between predicted and obtained percentages for each scale's risk range are presented in bold parentheses in the following table.



Scale	Low Risk (39%)	Medium Risk (30%)	Problem Risk (20%)	Severe Problem (11%)
Truthfulness Scale	36.6 (2.4)	30.4 (0.4)	23.2 (3.2)	9.8 (1.2)
Alcohol Scale	42.0 (3.0)	26.8 (3.2)	19.6 (0.4)	11.6 (0.6)
Drugs Scale	39.3 (0.3)	31.3 (1.3)	18.8 (1.2)	10.7 (0.3)
Gambling Severity Scale	39.3 (0.3)	30.4 (0.4)	18.8 (1.2)	11.6 (0.6)
Suicide Scale	37.5 (1.5)	32.1 (2.1)	18.8 (1.2)	11.6 (0.6)
Stress Coping Scale	38.4 (0.6)	30.4 (0.4)	19.6 (0.4)	11.6 (0.6)

All but one of the obtained risk range percentages (23 of 24) were within 3.0 percentage points of the predicted percentage. Accuracy of the GAI is shown by the small differences between obtained risk range percentages and predicted percentages. The GAI is capable of identifying the relative severity of problem gambling.

The GAI is an accurate gambler assessment test. The accuracy of the test will only increase as the sample population increases in size.

## Summary

The Gambler Addiction Index (GAI) was administered to **112 problem gamblers** between November 2005 and May 2007. There were 74 males (66.1%) and 38 females (33.9%). The problem New Jersey gambler population is broadly defined as Caucasian (89.3%), 31 through 61 years of age (68.2%), high school or more education (91%), and currently married or previously married (62%). These tests were computer scored over the internet at [www.online-testing.com](http://www.online-testing.com).

## GAI Accuracy, Reliability and Validity

- GAI scales demonstrate a **high degree of predictive validity** for alcohol, drug and suicide, accurately classifying in the High Risk category more than three quarters of problem gamblers who had been treated for alcohol, drug or suicidal tendencies.
- All GAI scales reliability coefficients were **.87 or higher**. This compares favorably with the professionally accepted reliability standard of .75 or better.
- The GAI is capable of identifying the relative severity of problem gambling based on a predicted distribution of problem gambler scores. This is accurate assessment, and accuracy can be expected to continue to improve as larger sample populations are analyzed.
- Indeed, GAI statistics (reliability, validity, accuracy, etc.) should continue to improve with further scale refinement on a larger sample of problem gamblers.
- More gambler-related research is needed. To help meet this need, Behavior Data Systems, Ltd. is inviting interested researchers to undertake GAI studies. GAI test materials can be provided free or at minimal cost. Our telephone number is 9 (800) 231-2401 and our website address is [www.bdsltd.com](http://www.bdsltd.com) or [www.online-testing.com](http://www.online-testing.com).
- [www.online-testing.com](http://www.online-testing.com) is an internet testing service that offers state-of-the-art assessment instruments or tests. Evaluators, screeners and assessors can now use the internet to administer tests at [www.online-testing.com](http://www.online-testing.com).

GAI scale risk ranges are stable and show that the Gambler Addiction Inventory (GAI) accurately assesses problem gambler risk. These statistics support the scientifically sound methodologies of the GAI. The GAI is a highly reliable, valid and accurate problem gambler assessment or test. More GAI information is presented on the [www.gambler-assessment.com](http://www.gambler-assessment.com) website.

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# Appendix

## Problem Gambler Demographics and Self-Reported Court History (N=57)

Population				
Males		Females		Total
N	%	N	%	N
74	66.1	38	33.9	112

Race/Ethnicity				
Race	Males	Females	Total	
	N	N	N	%
Caucasian	69	31	100	89.3
Black	0	4	4	3.6
Hispanic	2	1	3	2.7
Asian	1	2	3	2.7
Other	2	0	2	1.8

Education				
Grade	Males	Females	Total	
	N	N	N	%
8 <sup>th</sup> grade or Less	0	2	2	1.8
Some High School	7	0	7	6.3
HS Graduate/GED	22	17	39	34.8
Some College	19	9	28	25.0
Tech/Bus School	2	1	3	2.7
College Grad	17	6	23	20.5
Prof/Grad School	7	3	10	9.0

Age Group				
Age	Males	Females	Total	
	N	N	N	%
19 & Under	3	0	3	2.7
20 – 29	13	3	16	14.3
30 – 39	16	3	19	17.0
40 – 49	14	8	22	19.6
50 – 59	18	11	29	25.9
60+	10	13	23	20.5
Total	74	38	112	100.0
Average	43.5	51.4	46.4	---

Marital Status				
Status	Males	Females	Total	
	N	N	N	%
Single	26	12	38	33.9
Married	36	12	48	42.9
Divorced	8	8	16	14.3
Separated	4	2	6	5.4
Widowed	0	4	4	3.6

Number	Alcohol Arrests			
	Males	Females	Total	
	N	N	N	(%)
0	60	34	94	83.9
1	9	3	12	10.7
2	2	0	2	1.8
3	0	1	1	0.9
4	2	0	2	1.8
5 +	1	0	1	0.9

Number	Drug Arrests			
	Males	Females	Total	
	N	N	N	(%)
0	67	35	102	91.1
1	5	1	6	5.4
2	1	0	1	0.9
3	1	1	2	1.8
4	0	0	0	0.0
5 +	0	1	1	0.9

Times Gambled in Past Month				
Number	Males	Females	Total	
	N	N	N	(%)
0	11	12	23	20.5
1 to 4	13	13	26	23.4
5 to 9	20	11	31	27.9
10+	29	7	36	32.4

Months Employed Last Year				
Number	Males	Females	Total	
	N	N	N	(%)
0	21	15	36	63.2
1 to 5	5	2	7	6.3
6 to 11	11	6	17	15.2
12	47	18	65	58.0