

A Study of Adverse Impact

Predictive Index® Factors in Relation to Race, Sex, and Job Levels

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A Study Of Predictive Index® Factors In Relation To Race, Sex And Job Levels

This study was conducted in order to determine whether scores on the Predictive Index (PI) demonstrate any pattern of racial or gender bias. **The overall results of this study indicate clearly that Predictive Index scores are neither a function of nor influenced by racial heritage or gender. The Predictive Index, therefore, can be used without concern for adverse impact as a result of racial or gender bias.** The results also indicate that our sample was a good representation of the general work population inasmuch as it reflected distributions one would expect in job categories by gender, educational level, and race.

SUBJECTS OF THE STUDY

A sample of 521 subjects was used for this study. These subjects represented 16 separate and different kinds of companies from all geographic areas in the United States and Canada. The sample included subjects from Florida, California, Pennsylvania, New York, Kansas, Massachusetts, and Toronto, Canada. A geographic distribution this wide helps to ensure a sample representative of the general population.

The gender and minority distribution of the sample was as follows: There were 187 men and 334 women; 197 Caucasian, 127 African Americans, 172 Hispanic, and 9 Asian. The average age of the Caucasian subjects was 39 years, of the African American subjects, 36 years, of the Hispanic subjects, 37 years, and of the Asian subjects 33 years.

The job level of the subjects was coded at seven different levels from highest to lowest, with the highest being "senior management" (7), followed by "lower management/supervisory" (6); and the lowest job levels being "clerical" (2), followed by "janitorial" (1). The job levels included a wide distribution with the greatest concentration (34.6%) of subjects at job level 6, "lower management/supervisory".

The educational level of the subjects was also considered in the study, and the level of schooling was included for all subjects for whom this data was available. Although education information was not available for many subjects (178), it was available for a sufficiently large number of subjects (343) to make the findings relevant and meaningful. Nearly half of the subjects were college graduates, and almost two thirds had some college and/or study beyond college.

RESULTS

Before testing Predictive Index Factor scores on each independent variable of job level, educational level, sex, and race, it was necessary to check relationships among those variables themselves to determine if they alone account for any group differences.

Analysis of the relationship between job level and educational level shows that the more education people had, the higher the job level they attained (chi square = 183.05; $p = .0001$). This finding of a connection

between a person's educational level and the job level which the individual attains is to be expected and based on experience, thereby lending confidence to the nature of the sample used in the study.

Analysis of the relationship between job level and gender shows that men tended to be at higher job levels than women (chi square = 37.2, and $p = .0001$). Of interest is the fact that, contrary to expectation, at the two highest job levels, the gender distribution was nearly equal (50.8% of males vs. 43.7% of females); while at job level 2, "clerkal", we found the greatest discrepancy (9.8% of males vs 29.9% of females).

Analysis of the relationship between job level and racial category shows that Caucasians tended to have attained higher job levels than minorities (chi square = 59.6 and $p = .0001$). For example, Caucasians are over-represented in job levels 7 and 6 (57.4%), while Hispanics are under-represented (28.4%).

The analysis of job level in relation to gender and to race shows differences which are not surprising and which conform to the acknowledged difference in representation of women and minorities in corporations in general. The differences are probably reflective of general hiring practices as they currently exist and further confirm that the sample of subjects in this study is a good representation of the work force at large.

STATISTICAL ANALYSIS

The relationship of gender, race and job level to all Synthesis scores on the Predictive Index generated by the subjects was analyzed. It should be noted that because of the potentially confounding effect of the very small number of Asian subjects, their scores were omitted from these analyses.

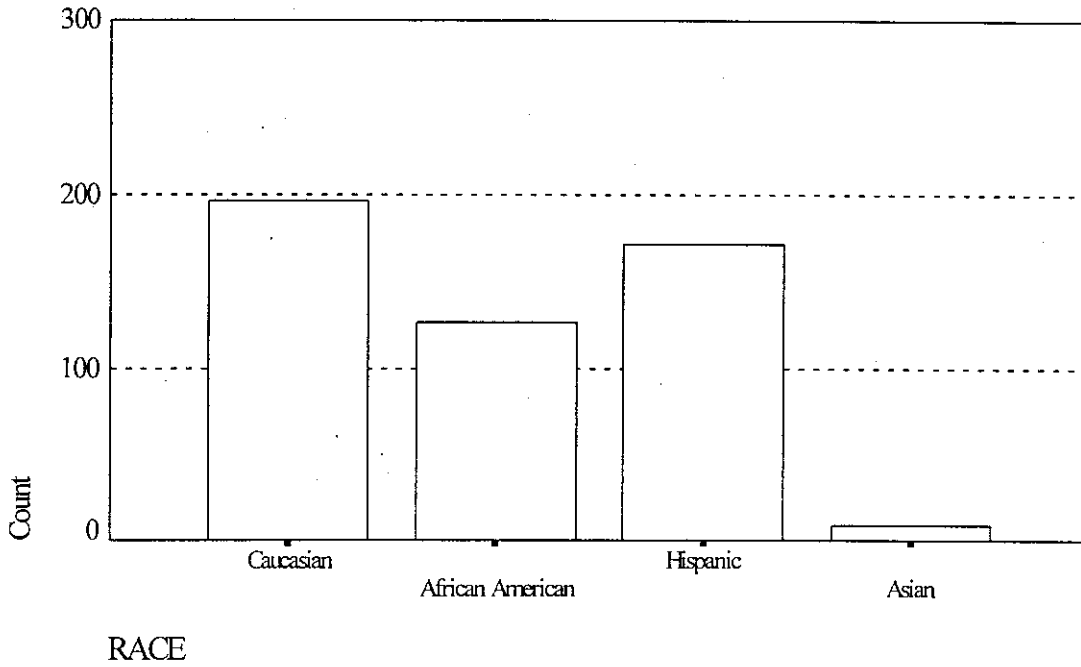
Analysis of Variance of the relationship between the variable of race and the Predictive Index scores shows no factor significantly related to race. Similarly, when race is combined with job level, or when race is combined with gender, there is **no unique contribution of racial membership to the scores on the Predictive Index**. Consequently, it can be stated that minority group status does not predict scores on the Predictive Index, and that the Predictive Index is not racially biased. The Predictive Index scores, therefore, do not constitute a test with adverse impact on hiring practices as a function of race or gender.

There is a significant relationship between job level and Predictive Index scores, and between gender and Predictive Index scores, particularly on Factor A. Subjects who have attained higher job levels tend to have higher Factor A scores, as do males. The actual difference made by adding the gender of subjects to this analysis, however, was 1%, demonstrating that the main consideration for the correlation was the job level of the subject.*



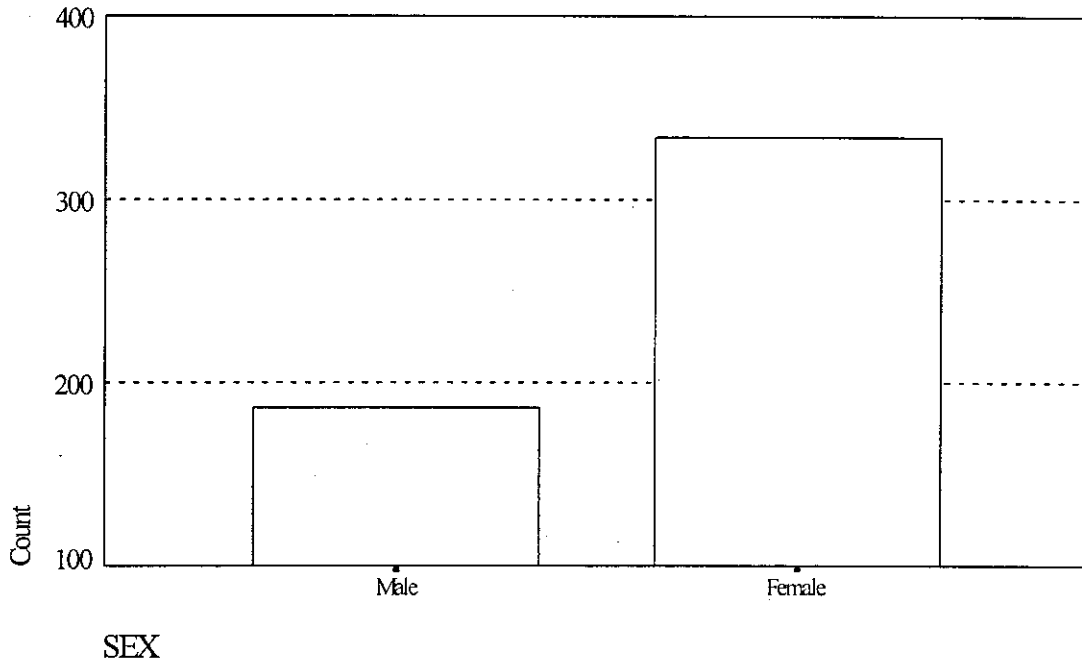
*This finding is consistent with the findings of the Praendex "Reliability and Validity Study", conducted by Perry and Lavori (1983), in which job level is the primary variable in accounting for gender differences on Factor-A.

BAR CHART OF MINORITY MEMBERSHIP



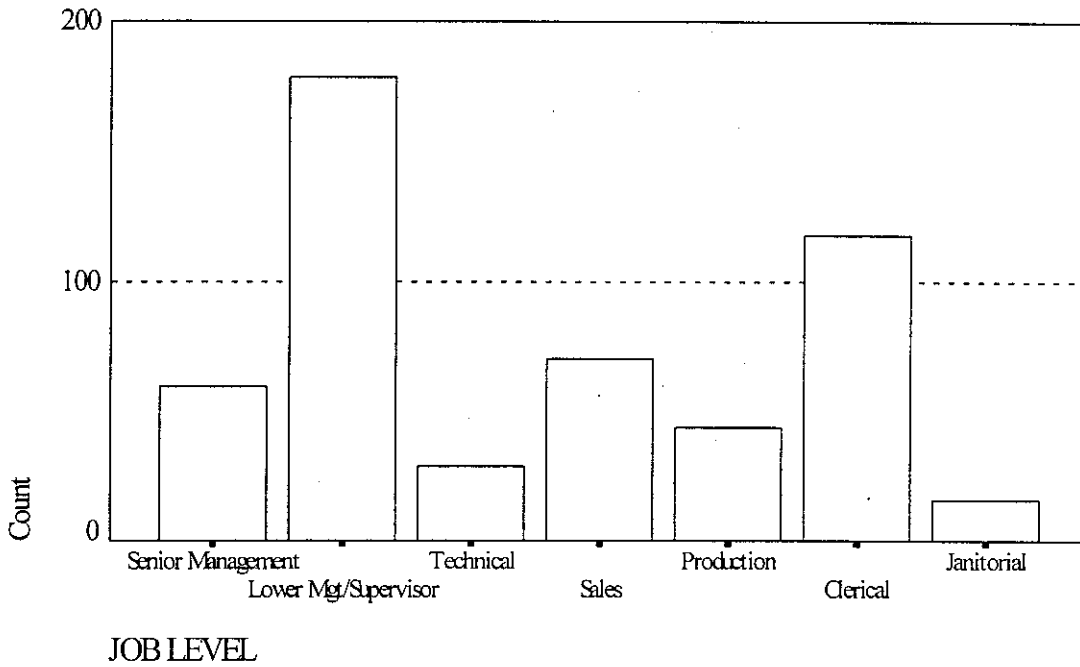
Frequency Table of Minority Membership			
Race Category	Code	Count	Percent
Caucasian	1	197	39.01%
African American	2	127	25.15%
Hispanic	3	172	34.06%
Asian	4	9	1.78%

BAR CHART OF GENDER MEMBERSHIP



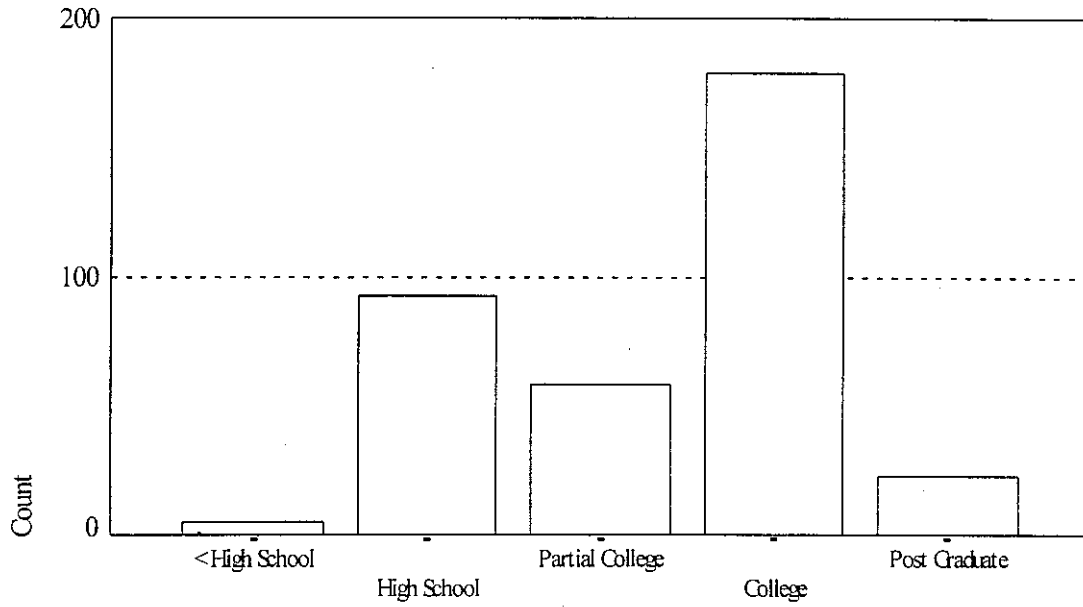
Frequency Table of Gender			
Gender	Code	Count	Percent
Male	1	187	35.89%
Female	2	334	64.11%

BAR CHART OF JOB LEVEL



Frequency Table of Job Level			
Job Level	Code	Count	Percent
Senior Management	7	60	11.61%
Lower Management/Supervisory	6	179	34.62%
Technical	5	29	5.61%
Sales	4	71	13.73%
Production	3	44	8.51%
Clerical	2	118	22.82%
Janitorial/Unknown	1	16	3.10%

BAR CHART OF EDUCATION LEVEL



EDUCATION

Frequency Table of Education Level			
Education Level	Code	Count	Percent
Less than High School	1	5	1.39%
High School	2	93	25.91%
Partial College	3	59	16.44%
College	4	179	49.86%
Post Graduate	5	23	6.41%

OBSERVED FREQUENCIES OF JOB LEVEL BY EDUCATION LEVEL

	<i>Less than High School</i>	<i>High School</i>	<i>Partial College</i>	<i>College</i>	<i>Post Graduate</i>	<i>Totals</i>
Senior Management	0	2	1	34	14	51 (14.2%)
Lower Management/Supervisory	2	21	11	91	7	132 (36.8%)
Technical	0	5	5	11	0	21 (5.8%)
Sales	1	14	18	11	2	46 (12.8%)
Production	0	24	8	5	0	37 (10.3%)
Clerical	0	27	15	21	0	63 (17.5%)
Janitorial/Unknown	2	0	1	6	0	9 (2.5%)
Totals	5 (1.4%)	93 (25.9%)	59 (16.4%)	179 (49.9%)	23 (6.4%)	359 (100%)

Pearson χ^2 (df=24)=183.05; $p \leq .0001$
 Contingency Coefficient=.581; $p \leq .0001$
 Cramer's V=.357; $p \leq .0001$

This table shows the relationship between education level and job level. The statistic shows that generally the people with more education are in the higher job levels and the people with less education are in the lower job levels, and that the probability of this relationship occurring by chance alone is one in ten thousand ($p \leq .0001$).

OBSERVED FREQUENCIES OF JOB LEVEL BY SEX

	Male	Female	Totals
Senior Management	29	31	60 (11.6%)
Lower Management/Supervisory	64	115	179 (34.6%)
Technical	11	18	29 (5.6%)
Sales	28	43	71 (13.7%)
Production	26	18	44 (8.5%)
Clerical	18	100	118 (22.8%)
Janitorial/Unknown	7	9	16 (3.1%)
Totals	183 (35.4%)	334 (64.6%)	517 (100%)

Pearson χ^2 (df=6)=37.22; $p \leq .0001$
 Contingency Coefficient=.259; $p \leq .0001$
 Cramer's V=.268; $p \leq .0001$

This table shows the relationship between sex and job level. The statistic shows that there are consistently more males in the higher job levels and more females in the lower job levels, and that the probability of this relationship occurring by chance alone is one in ten thousand ($p \leq .0001$).

OBSERVED FREQUENCIES OF JOB LEVEL BY RACE

	<i>Caucasian</i>	<i>African American</i>	<i>Hispanic</i>	<i>Asian</i>	<i>Totals</i>
Senior Management	32	16	11	0	59 (11.8%)
Lower Management/Supervisory	81	51	37	2	171 (34.1%)
Technical	8	6	9	2	25 (5.0%)
Sales	32	7	30	2	71 (14.2%)
Production	12	16	16	0	44 (8.8%)
Clerical	27	27	58	3	115 (23.0%)
Janitorial/Unknown	5	3	8	0	16 (3.2%)
Totals	197 (39.3%)	126 (25.1%)	169 (33.7%)	9 (1.8%)	501 (100%)

Pearson χ^2 (df=18)=59.62; $p \leq .0001$
 Contingency Coefficient=.326; $p \leq .0001$
 Cramer's V=.199; $p \leq .0001$

This table shows the relationship between race and job level. The statistic shows that there are consistently more members of certain races over-represented in certain job categories than would be expected by chance alone. For example, there are more Caucasians in the highest job levels, and more Hispanics in the lowest job levels than expected. The probability of this relationship occurring by chance alone is one in ten thousand ($p \leq .0001$).

ANOVA: SEX ON SYA

Source	df	Sum of Squares	Mean Squares	F statistic	P value
Between	1	444.299	444.299	10.23	p≤.0015
Within	518	22496.345	43.429		
Total	519	22940.644			

Descriptives:

Group	Frequency	Average (Mean)	Standard Dev.	Standard Error
Males	187	11.551	7.072	.517
Females	333	9.625	6.304	.345

Post-hoc Tests:

Comparison	Mean Difference	Fisher's LSD	Sheffé's F	Dunnett's t
Males vs. Females	1.926	1.183*	10.23*	3.199

The tables presented above show a one-factor Analysis of Variance (ANOVA) which compared the scores for males and females on the Predictive Index Synthesis Factor A to determine if there is a statistically significant difference in the way that males and females score on the PI. The average number of words checked by men that load on the Synthesis A factor was higher (by almost two words) than the average number of words checked by women. The probability that this difference would occur by chance alone is 1.5 in a thousand, a highly significant finding.

ANOVA: SEX ON SYB

Source	df	Sum of Squares	Mean Squares	F statistic	P value
Between	1	242.644	242.644	3.026	p≤.0825
Within	518	41530.125	80.174		
Total	519	41772.769			

Descriptives:

Group	Frequency	Average (Mean)	Standard Dev.	Standard Error
Males	187	16.219	10.096	.738
Females	333	14.796	8.245	.452

The tables presented above show a one-factor Analysis of Variance (ANOVA) which compared the scores for males and females on the Predictive Index Synthesis Factor B to determine if there is a statistically significant difference in the way that males and females score on the PI. There is not a significant difference.

* Significant at the 95% level

ANOVA: SEX ON SYC

Source	df	Sum of Squares	Mean Squares	F statistic	P value
Between	1	1.993	1.993	.061	p≤.805
Within	518	16922.159	32.668		
Total	519	16924.152			

Descriptives:

Group	Frequency	Average (Mean)	Standard Dev.	Standard Error
Males	187	12.877	6.022	.44
Females	333	13.006	5.536	.303

The tables presented above show a one-factor Analysis of Variance (ANOVA) which compared the scores for males and females on the Predictive Index Synthesis Factor C to determine if there is a statistically significant difference in the way that males and females score on the PI. There is not a significant difference.

ANOVA: SEX ON SYD

Source	df	Sum of Squares	Mean Squares	F statistic	P value
Between	1	53.082	53.082	.579	p≤.447
Within	518	47474.901	91.65		
Total	519	47527.983			

Descriptives:

Group	Frequency	Average (Mean)	Standard Dev.	Standard Error
Males	187	27.471	10.591	.774
Females	333	26.805	8.953	.491

The tables presented above show a one-factor Analysis of Variance (ANOVA) which compared the scores for males and females on the Predictive Index Synthesis Factor D to determine if there is a statistically significant difference in the way that males and females score on the PI. There is not a significant difference.

ANOVA: SEX ON SYE

Source	df	Sum of Squares	Mean Squares	F statistic	P value
Between	1	20.784	20.784	.638	p≤.4247
Within	517	16837.228	32.567		
Total	518	16858.012			

Descriptives:

Group	Frequency	Average (Mean)	Standard Dev.	Standard Error
Males	186	12.129	6.552	.48
Females	333	11.712	5.177	.284

The tables presented above show a one-factor Analysis of Variance (ANOVA) which compared the scores for males and females on the Predictive Index Synthesis Factor E to determine if there is a statistically significant difference in the way that males and females score on the PI. There is not a significant difference.

ANOVA: SEX ON SYM

Source	df	Sum of Squares	Mean Squares	F statistic	P value
Between	1	2288.92	2288.92	3.044	p≤.0816
Within	518	389449.032	751.832		
Total	519	391737.952			

Descriptives:

Group	Frequency	Average (Mean)	Standard Dev.	Standard Error
Males	187	72.54	31.145	2.278
Females	333	68.168	25.092	1.375

The tables presented above show a one-factor Analysis of Variance (ANOVA) which compared the scores for males and females on the Predictive Index Synthesis Factor M to determine if there is a statistically significant difference in the way that males and females score on the PI. There is not a significant difference.

ANOVA: RACE ON SYA

Source	df	Sum of Squares	Mean Squares	F statistic	P value
Between	2	258.971	129.486	2.96	p≤.0527
Within	492	21523.554	43.747		
Total	494	21782.525			

Descriptives:

Group	Frequency	Average (Mean)	Standard Dev.	Standard Error
Caucasian	197	10.736	5.991	.427
African American	126	10.944	7.092	.632
Hispanic	172	9.308	6.926	.528

The tables presented above show a one-factor Analysis of Variance (ANOVA) which compared the scores of Caucasians, African Americans, and Hispanics on the Predictive Index Synthesis Factor A to determine if race membership can affect scores on the PI. There were no significant differences.

ANOVA: RACE ON SYB

Source	df	Sum of Squares	Mean Squares	F statistic	P value
Between	2	373.522	186.761	2.336	p≤.0978
Within	492	39331.824	79.943		
Total	494	39705.345			

Descriptives:

Group	Frequency	Average (Mean)	Standard Dev.	Standard Error
Caucasian	197	15.036	8.095	.577
African American	126	16.738	9.887	.881
Hispanic	172	14.541	9.135	.697

The tables presented above show a one-factor Analysis of Variance (ANOVA) which compared the scores of Caucasians, African Americans, and Hispanics on the Predictive Index Synthesis Factor B to determine if race membership can affect scores on the PI. There were no significant differences.

ANOVA: RACE ON SYC

Source	df	Sum of Squares	Mean Squares	F statistic	P value
Between	2	10.298	5.149	.158	p≤.8536
Within	492	15998.228	32.517		
Total	494	16008.525			

Descriptives:

Group	Frequency	Average (Mean)	Standard Dev.	Standard Error
Caucasian	197	13.02	5.547	.395
African American	126	13.056	5.83	.519
Hispanic	172	12.733	5.783	.441

The tables presented above show a one-factor Analysis of Variance (ANOVA) which compared the scores of Caucasians, African Americans, and Hispanics on the Predictive Index Synthesis Factor C to determine if race membership can affect scores on the PI. There were no significant differences.

ANOVA: RACE ON SYD

Source	df	Sum of Squares	Mean Squares	F statistic	P value
Between	2	19.322	9.661	.107	p≤.8984
Within	492	44351.761	90.146		
Total	494	44371.083			

Descriptives:

Group	Frequency	Average (Mean)	Standard Dev.	Standard Error
Caucasian	197	26.838	8.827	.629
African American	126	27.183	10.245	.913
Hispanic	172	27.273	9.661	.737

The tables presented above show a one-factor Analysis of Variance (ANOVA) which compared the scores of Caucasians, African Americans, and Hispanics on the Predictive Index Synthesis Factor D to determine if race membership can affect scores on the PI. There were no significant differences.

ANOVA: RACE ON SYE

Source	df	Sum of Squares	Mean Squares	F statistic	P value
Between	2	107.124	53.562	1.656	p≤.192
Within	491	15883.095	32.348		
Total	493	15990.219			

Descriptives:

Group	Frequency	Average (Mean)	Standard Dev.	Standard Error
Caucasian	197	12.442	4.991	.356
African American	126	11.587	6.227	.555
Hispanic	171	11.433	6.017	.460

The tables presented above show a one-factor Analysis of Variance (ANOVA) which compared the scores of Caucasians, African Americans, and Hispanics on the Predictive Index Synthesis Factor E to determine if race membership can affect scores on the PI. There were no significant differences.

ANOVA: RACE ON SYM

Source	df	Sum of Squares	Mean Squares	F statistic	P value
Between	2	1433.686	716.843	.956	p≤.385
Within	492	368816.064	749.626		
Total	494	370249.749			

Descriptives:

Group	Frequency	Average (Mean)	Standard Dev.	Standard Error
Caucasian	197	69.629	24.127	1.719
African American	126	72.31	30.792	2.743
Hispanic	172	67.872	28.223	2.152

The tables presented above show a one-factor Analysis of Variance (ANOVA) which compared the scores of Caucasians, African Americans, and Hispanics on the Predictive Index Synthesis Factor M to determine if race membership can affect scores on the PI. There were no significant differences.

ANOVA: RACE BY JOB LEVEL ON SYA

Source	df	Sum of Squares	Mean Squares	F statistic	P value
Race	2	54.746	27.373	.704	p≤.4952
Job Level	6	2490.223	415.037	10.673	p≤.0001
Race x Job	12	555.187	46.266	1.19	p≤.2873
Error	470	18276.748	38.887		

Descriptives:

For each cell below, the bolded number is the average (mean) SYA score for that group, and the number in parentheses is the count (frequency) for that group.

	Caucasian	African American	Hispanic	TOTALS:
Senior Management	12.75 (32)	14.69 (16)	17.55 (11)	14.17 (59)
Lower Management/Supervisory	12.41 (81)	12.26 (50)	10.68 (37)	11.98 (168)
Technical	8.13 (8)	10.83 (6)	10.56 (9)	9.78 (23)
Sales	9.25 (32)	10.57 (7)	10.50 (30)	9.93 (69)
Production	5.58 (12)	5.44 (16)	8.25 (16)	6.50 (44)
Clerical	8.41 (27)	9.74 (27)	6.64 (58)	7.81 (112)
Janitorial/Unknown	9.40 (5)	9.00 (3)	8.50 (8)	8.88 (16)
TOTALS:	10.74 (197)	10.91 (125)	9.37 (169)	10.31 (491)

These tables show the results of a two-factor Analysis of Variance (ANOVA) which evaluated the interaction of race with job level insofar as they may, together, influence scores on the Predictive Index. The tables show that race has no significant relationship with scores on Synthesis Factor A; that job level has a very significant relationship with scores on Synthesis Factor A (which is to be expected); but that the interaction between race and job level is not significantly related to scores on Predictive Index Synthesis Factor A.

ANOVA: RACE BY JOB LEVEL ON SYB

Source	df	Sum of Squares	Mean Squares	F statistic	P value
Race	2	144.048	72.024	.914	p≤.4014
Job Level	6	1272.26	212.043	2.692	p≤.014
Race x Job	12	746.253	62.188	.79	p≤.6615
Error	470	37017.885	78.761		

Descriptives:

For each cell below, the bolded number is the average (mean) SYB score for that group, and the number in parentheses is the count (frequency) for that group.

	Caucasian	African American	Hispanic	TOTALS:
Senior Management	15.63 (32)	17.56 (16)	20.55 (11)	17.07 (59)
Lower Management/Supervisory	15.54 (81)	18.08 (50)	14.41 (37)	16.05 (168)
Technical	13.88 (8)	16.00 (6)	14.56 (9)	14.70 (23)
Sales	15.38 (32)	18.43 (7)	18.03 (30)	16.84 (69)
Production	10.67 (12)	11.19 (16)	12.69 (16)	11.59 (44)
Clerical	13.93 (27)	16.37 (27)	13.10 (58)	14.09 (112)
Janitorial/Unknown	19.20 (5)	19.00 (3)	10.88 (8)	15.00 (16)
TOTALS:	15.04 (197)	16.70 (125)	14.68 (169)	15.34 (491)

These tables show the results of a two-factor Analysis of Variance (ANOVA) which evaluated the interaction of race with job level insofar as they may, together, influence scores on the Predictive Index. The tables show that race has no significant relationship with scores on Synthesis Factor B; that job level has a significant relationship with scores on Synthesis Factor B; but that the interaction between race and job level is not significantly related to scores on Predictive Index Synthesis Factor B.

ANOVA: RACE BY JOB LEVEL ON SYC

Source	df	Sum of Squares	Mean Squares	F statistic	P value
Race	2	25.321	12.66	.397	p≤.6726
Job Level	6	548.166	91.361	2.864	p≤.0095
Race x Job	12	177.844	14.82	.465	p≤.9348
Error	470	14990.598	31.895		

Descriptives:

For each cell below, the bolded number is the average (mean) SYC score for that group, and the number in parentheses is the count (frequency) for that group.

	Caucasian	African American	Hispanic	TOTALS:
Senior Management	11.88 (32)	12.50 (16)	13.55 (11)	12.36 (59)
Lower Management/Supervisory	12.35 (81)	12.42 (50)	10.95 (37)	12.06 (168)
Technical	13.50 (8)	13.17 (6)	15.11 (9)	14.04 (23)
Sales	14.19 (32)	12.57 (7)	13.47 (30)	13.71 (69)
Production	13.75 (12)	12.94 (16)	12.81 (16)	13.11 (44)
Clerical	14.89 (27)	14.96 (27)	13.85 (58)	14.37 (112)
Janitorial/Unknown	11.20 (5)	12.67 (3)	7.38 (8)	9.56 (16)
TOTALS:	13.02 (197)	13.10 (125)	12.79 (169)	12.96 (491)

These tables show the results of a two-factor Analysis of Variance (ANOVA) which evaluated the interaction of race with job level insofar as they may, together, influence scores on the Predictive Index. The tables show that race has no significant relationship with scores on Synthesis Factor C; that job level has a significant relationship with scores on Synthesis Factor C; but that the interaction between race and job level is not significantly related to scores on Predictive Index Synthesis Factor C.

ANOVA: RACE BY JOB LEVEL ON SYD

Source	df	Sum of Squares	Mean Squares	F statistic	P value
Race	2	29.04	14.52	.161	p≤.8512
Job Level	6	756.99	126.165	1.401	p≤.2125
Race x Job	12	757.439	63.12	.701	p≤.7512
Error	470	42332.818	90.07		

Descriptives:

For each cell below, the bolded number is the average (mean) SYD score for that group, and the number in parentheses is the count (frequency) for that group.

	Caucasian	African American	Hispanic	TOTALS:
Senior Management	25.94 (32)	28.38 (16)	30.00 (11)	27.36 (59)
Lower Management/Supervisory	27.28 (81)	27.36 (50)	28.62 (37)	27.60 (168)
Technical	28.50 (8)	30.17 (6)	32.00 (9)	30.30 (23)
Sales	26.00 (32)	26.71 (7)	27.83 (30)	26.87 (69)
Production	25.08 (12)	21.50 (16)	25.69 (16)	24.00 (44)
Clerical	27.89 (27)	28.93 (27)	26.50 (58)	27.42 (112)
Janitorial/Unknown	26.60 (5)	30.00 (3)	20.75 (8)	24.31 (16)
TOTALS:	26.84 (197)	27.24 (125)	27.37 (169)	27.12 (491)

These tables show the results of a two-factor Analysis of Variance (ANOVA) which evaluated the interaction of race with job level insofar as they may, together, influence scores on the Predictive Index. The tables show that race has no significant relationship with scores on Synthesis Factor D; that job level has no significant relationship with scores on Synthesis Factor D, and that the interaction between race and job level is not significantly related to scores on Predictive Index Synthesis Factor D.

ANOVA: RACE BY JOB LEVEL ON SYE

Source	df	Sum of Squares	Mean Squares	F statistic	P value
Race	2	.896	.448	.014	p≤.9858
Job Level	6	740.355	123.393	3.941	p≤.0007
Race x Job	12	286.914	23.91	.764	p≤.6882
Error	469	14683.507	31.308		

Descriptives:

For each cell below, the bolded number is the average (mean) SYE score for that group, and the number in parentheses is the count (frequency) for that group.

	Caucasian	African American	Hispanic	TOTALS:
Senior Management	13.88 (32)	13.69 (16)	15.60 (10)	14.12 (58)
Lower Management/Supervisory	12.56 (81)	11.76 (50)	12.68 (37)	12.35 (168)
Technical	12.63 (8)	14.33 (6)	14.00 (9)	13.61 (23)
Sales	12.09 (32)	10.29 (7)	11.97 (30)	11.86 (69)
Production	10.17 (12)	7.56 (16)	9.88 (16)	9.11 (44)
Clerical	12.30 (27)	12.04 (27)	9.97 (58)	11.03 (112)
Janitorial/Unknown	9.60 (5)	13.33 (3)	9.88 (8)	10.44 (16)
TOTALS:	12.44 (197)	11.61 (125)	11.46 (168)	11.89 (490)

These tables show the results of a two-factor Analysis of Variance (ANOVA) which evaluated the interaction of race with job level insofar as they may, together, influence scores on the Predictive Index. The tables show that race has no significant relationship with scores on Synthesis Factor E; that job level has a significant relationship with scores on Synthesis Factor E, and that the interaction between race and job level is not significantly related to scores on Predictive Index Synthesis Factor E.

ANOVA: RACE BY JOB LEVEL ON SYM

Source	df	Sum of Squares	Mean Squares	F statistic	P value
Race	2	490.15	245.075	.33	p≤.7188
Job Level	6	9844.697	1640.783	2.212	p≤.0408
Race x Job	12	6902.95	575.246	.776	p≤.6759
Error	470	348604.454	741.712		

Descriptives:

For each cell below, the bolded number is the average (mean) SYM score for that group, and the number in parentheses is the count (frequency) for that group.

	Caucasian	African American	Hispanic	TOTALS:
Senior Management	70.25 (32)	77.81 (16)	86.18 (11)	75.27 (59)
Lower Management/Supervisory	71.94 (81)	74.72 (50)	68.60 (37)	72.03 (168)
Technical	68.38 (8)	74.83 (6)	76.78 (9)	73.35 (23)
Sales	69.22 (32)	72.43 (7)	74.00 (30)	71.62 (69)
Production	58.67 (12)	54.75 (16)	63.00 (16)	58.82 (44)
Clerical	67.04 (27)	74.30 (27)	64.21 (58)	67.32 (112)
Janitorial/Unknown	73.20 (5)	74.67 (3)	50.50 (8)	62.13 (16)
TOTALS:	69.63 (197)	72.34 (125)	68.24 (169)	69.84 (491)

These tables show the results of a two-factor Analysis of Variance (ANOVA) which evaluated the interaction of race with job level insofar as they may, together, influence scores on the Predictive Index. The tables show that race has no significant relationship with scores on Synthesis Factor M; that job level has a significant relationship with scores on Synthesis Factor M, and that the interaction between race and job level is not significantly related to scores on Predictive Index Synthesis Factor M.

ANOVA: RACE BY SEX ON SYA

Source	df	Sum of Squares	Mean Squares	F statistic	P value
Race	2	277.8	138.9	3.327	p≤.0367
Sex	1	657.763	657.763	15.753	p≤.0001
Race x Sex	2	234.508	117.254	2.808	p≤.0613
Error	489	20418.313	41.755		

Descriptives:

For each cell below, the bolded number is the average (mean) SYA score for that group, and the number in parentheses is the count (frequency) for that group.

	Caucasian	African American	Hispanic	TOTALS:
Male	11.22 (23)	13.31 (65)	10.61 (94)	11.65 (182)
Female	10.67 (174)	8.43 (61)	7.74 (78)	9.51 (313)
TOTALS:	10.74 (197)	10.94 (126)	9.31 (172)	10.29 (495)

These tables show the results of a two-factor Analysis of Variance (ANOVA) which evaluated the interaction of race with sex insofar as they may, together, influence scores on the Predictive Index. The tables show that there is a significant relationship between racial membership and scores on the Predictive Index Synthesis Factor A, and a significant relationship between sex and scores on the PI Synthesis Factor A. Of importance here, however, is the fact that taken together the interactive effect of race and sex on Predictive Index Factor A is not significant.

ANOVA: RACE BY SEX ON SYB

Source	df	Sum of Squares	Mean Squares	F statistic	P value
Race	2	344.261	172.13	2.177	p≤.1145
Sex	1	226.737	226.737	2.867	p≤.091
Race x Sex	2	399.772	199.886	2.528	p≤.0809
Error	489	38666.356	79.072		

Descriptives:

For each cell below, the bolded number is the average (mean) SYB score for that group, and the number in parentheses is the count (frequency) for that group.

	Caucasian	African American	Hispanic	TOTALS:
Male	14.96 (23)	18.95 (65)	14.71 (94)	16.26 (182)
Female	15.05 (174)	14.38 (61)	14.33 (78)	14.74 (313)
TOTALS:	15.04 (197)	16.74 (126)	14.54 (172)	15.30 (495)

These tables show the results of a two-factor Analysis of Variance (ANOVA) which evaluated the interaction of race with sex insofar as they may, together, influence scores on the Predictive Index. The tables show that there is no significant relationship between racial membership and scores on the Predictive Index Synthesis Factor B, no significant relationship between sex and scores on the PI Synthesis Factor B, and no significant interactive effect of race and sex on Predictive Index Factor B.

ANOVA: RACE BY SEX ON SYC

Source	df	Sum of Squares	Mean Squares	F statistic	P value
Race	2	7.947	3.974	.122	p≤.8854
Sex	1	.984	.984	.03	p≤.8622
Race x Sex	2	40.4	20.2	.619	p≤.5389
Error	489	15957.57	32.633		

Descriptives:

For each cell below, the bolded number is the average (mean) SYC score for that group, and the number in parentheses is the count (frequency) for that group.

	Caucasian	African American	Hispanic	TOTALS:
Male	12.30 (23)	13.46 (65)	12.57 (94)	12.86 (182)
Female	13.12 (174)	12.62 (61)	12.92 (78)	12.97 (313)
TOTALS:	13.02 (197)	13.06 (126)	12.73 (172)	12.93 (495)

These tables show the results of a two-factor Analysis of Variance (ANOVA) which evaluated the interaction of race with sex insofar as they may, together, influence scores on the Predictive Index. The tables show that there is no significant relationship between racial membership and scores on the Predictive Index Synthesis Factor C, no significant relationship between sex and scores on the PI Synthesis Factor C, and no significant relationship between the interactive effect of race and sex on Predictive Index Factor C.

ANOVA: RACE BY SEX ON SYD

Source	df	Sum of Squares	Mean Squares	F statistic	P value
Race	2	82.792	41.396	.459	p≤.632
Sex	1	12.003	12.003	.133	p≤.7153
Race x Sex	2	227.144	113.572	1.26	p≤.2846
Error	489	44075.373	90.134		

Descriptives:

For each cell below, the bolded number is the average (mean) SYD score for that group, and the number in parentheses is the count (frequency) for that group.

	Caucasian	African American	Hispanic	TOTALS:
Male	25.04 (23)	28.26 (65)	27.69 (94)	27.56 (182)
Female	27.08 (174)	26.03 (61)	26.77 (78)	26.80 (313)
TOTALS:	26.84 (197)	27.18 (126)	27.27 (172)	27.08 (495)

These tables show the results of a two-factor Analysis of Variance (ANOVA) which evaluated the interaction of race with sex insofar as they may, together, influence scores on the Predictive Index. The tables show that there is no significant relationship between racial membership and scores on the Predictive Index Synthesis Factor D, no significant relationship between sex and scores on the PI Synthesis Factor D, and no significant relationship between the interactive effect of race and sex on Predictive Index Factor D.

ANOVA: RACE BY SEX ON SYE

Source	df	Sum of Squares	Mean Squares	F statistic	P value
Race	2	4.658	2.329	.073	p≤.9292
Sex	1	39.843	39.843	1.256	p≤.2629
Race x Sex	2	289.523	144.761	4.565	p≤.0109
Error	488	15475.595	31.712		

Descriptives:

For each cell below, the bolded number is the average (mean) SYE score for that group, and the number in parentheses is the count (frequency) for that group.

	Caucasian	African American	Hispanic	TOTALS:
Male	10.57 (23)	12.83 (65)	12.16 (93)	12.20 (181)
Female	12.69 (174)	10.26 (61)	10.56 (78)	11.69 (313)
TOTALS:	12.44 (197)	11.59 (126)	11.43 (171)	11.87 (494)

These tables show the results of a two-factor Analysis of Variance (ANOVA) which evaluated the interaction of race with sex insofar as they may, together, influence scores on the Predictive Index. The tables show that there is no significant relationship between racial membership and scores on the Predictive Index Synthesis Factor E, and no significant relationship between sex and scores on the PI Synthesis Factor E. There is a significant but indeterminate relationship between the interactive effect of race and sex on Predictive Index Factor E.

ANOVA: RACE BY SEX ON SYM

Source	df	Sum of Squares	Mean Squares	F statistic	P value
Race	2	1433.412	716.706	.968	p≤.3806
Sex	1	2380.332	2380.332	3.215	p≤.0736
Race x Sex	2	3402.342	1701.171	2.298	p≤.1016
Error	489	362063.216	740.416		

Descriptives:

For each cell below, the bolded number is the average (mean) SYM score for that group, and the number in parentheses is the count (frequency) for that group.

	Caucasian	African American	Hispanic	TOTALS:
Male	67.87 (23)	79.00 (65)	69.66 (94)	72.77 (182)
Female	69.86 (174)	65.18 (61)	65.72 (78)	67.92 (313)
TOTALS:	69.63 (197)	72.31 (126)	67.87 (172)	69.70 (495)

These tables show the results of a two-factor Analysis of Variance (ANOVA) which evaluated the interaction of race with sex insofar as they may, together, influence scores on the Predictive Index. The tables show that there is no significant relationship between racial membership and scores on the Predictive Index Synthesis Factor M, no significant relationship between sex and scores on the PI Synthesis Factor M, and no significant relationship between the interactive effect of race and sex on Predictive Index Factor M.