

Univariate Analysis of Variance

[DataSet1] C:\Documents and Settings\Roblabuser\Desktop\DIHAR-merged.sav

Between-Subjects Factors

		Value Label	N
" After you played the game in school did you go home and play it? "	1	Yes	258
	2	No	211
" What is your race? "	2	Asian	34
	3	Black or African American	42
	4	Hispanic	93
	6	White	265
	7	Mixed/Multiple	35
1,2 vs 3 vs 4,5	1.00		137
	2.00		153
	3.00		179

Descriptive Statistics

Dependent Variable:= Post_Sum Pre_Sum

" After you played the ...	" What is your race? "	1,2 vs 3 vs 4,5	Mean	Std. Deviation	N
Yes	Asian	1.00	1.7500	3.28416	8
		2.00	3.2000	2.16795	5
		3.00	1.7143	3.03942	7
		Total	2.1000	2.88189	20
	Black or African American	1.00	3.0000	1.73205	3
		2.00	1.6667	3.07679	6
		3.00	-.1818	2.48267	11
		Total	.8500	2.75824	20
	Hispanic	1.00	.3077	3.63741	13
		2.00	1.6875	3.32102	16
		3.00	3.1500	3.48342	20
		Total	1.9184	3.59303	49
	White	1.00	.6923	3.51054	39
		2.00	2.6833	3.63827	60
		3.00	2.1579	3.21708	57
		Total	1.9936	3.52410	156
	Mixed/Multiple	1.00	4.0000	.	1
		2.00	3.0000	3.46410	3
		3.00	1.2222	6.05759	9
		Total	1.8462	5.24160	13
Total		1.00	.9062	3.43520	64
		2.00	2.4778	3.44533	90
		3.00	1.9904	3.56219	104
		Total	1.8915	3.52918	258

Descriptive Statistics

Dependent Variable:= Post_Sum Pre_Sum

" After you played the ...	" What is your race? "	1,2 vs 3 vs 4,5	Mean	Std. Deviation	N
No	Asian	1.00	5.4000	6.26897	5
		2.00	1.1429	1.46385	7
		3.00	-1.0000	1.41421	2
		Total	2.3571	4.39593	14
	Black or African American	1.00	-2.7143	2.75162	7
		2.00	.5714	2.57275	7
		3.00	-.3750	1.92261	8
		Total	-.8182	2.68393	22
	Hispanic	1.00	1.4286	3.85735	14
		2.00	.8462	2.91108	13
		3.00	1.1765	2.00734	17
		Total	1.1591	2.90103	44
	White	1.00	.0238	3.27211	42
		2.00	.7500	3.43862	28
		3.00	.6154	3.71069	39
		Total	.4220	3.45954	109
	Mixed/Multiple	1.00	-1.0000	5.19615	5
		2.00	.6250	3.85218	8
		3.00	-.3333	4.92443	9
		Total	-.1364	4.44324	22
Total		1.00	.3288	4.02442	73
		2.00	.7778	3.05564	63
		3.00	.4800	3.35857	75
		Total	.5166	3.50964	211

Descriptive Statistics

Dependent Variable:= Post_Sum Pre_Sum

" After you played the ...	" What is your race? "	1,2 vs 3 vs 4,5	Mean	Std. Deviation	N
Total	Asian	1.00	3.1538	4.77574	13
		2.00	2.0000	2.00000	12
		3.00	1.1111	2.93447	9
		Total	2.2059	3.52291	34
	Black or African American	1.00	-1.0000	3.65148	10
		2.00	1.0769	2.75262	13
		3.00	-.2632	2.20711	19
		Total	-.0238	2.81536	42
	Hispanic	1.00	.8889	3.72449	27
		2.00	1.3103	3.11796	29
		3.00	2.2432	3.03137	37
		Total	1.5591	3.28853	93
	White	1.00	.3457	3.38438	81
		2.00	2.0682	3.66968	88
		3.00	1.5313	3.49120	96
		Total	1.3472	3.57605	265
	Mixed/Multiple	1.00	-.1667	5.07609	6
		2.00	1.2727	3.74409	11
		3.00	.4444	5.41482	18
		Total	.6000	4.77863	35
Total		1.00	.5985	3.75825	137
		2.00	1.7778	3.38577	153
		3.00	1.3575	3.54832	179
		Total	1.2729	3.58268	469

**Levene's Test of Equality of Error
Variances^a**

Dependent Variable:= Post_Sum Pre_Sum

F	df1	df2	Sig.
1.207	29	439	.215

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept + Post_Q20 + Pre_Q5_RACE + Pre_Q1_3levels + Post_Q20 * Pre_Q5_RACE + Post_Q20 * Pre_Q1_3levels + Pre_Q5_RACE * Pre_Q1_3levels + Post_Q20 * Pre_Q5_RACE * Pre_Q1_3levels

Tests of Between-Subjects Effects

Dependent Variable:= Post_Sum Pre_Sum

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power ^b
Corrected Model	711.187 ^a	29	24.524	2.033	.001	.118	58.954	.999
Intercept	292.400	1	292.400	24.238	.000	.052	24.238	.998
Post_Q20	110.696	1	110.696	9.176	.003	.020	9.176	.856
Pre_Q5_RACE	51.955	4	12.989	1.077	.367	.010	4.307	.340
Pre_Q1_3levels	25.659	2	12.830	1.064	.346	.005	2.127	.236
Post_Q20 * Pre_Q5_RACE	41.636	4	10.409	.863	.486	.008	3.451	.275
Post_Q20 * Pre_Q1_3levels	.861	2	.431	.036	.965	.000	.071	.055
Pre_Q5_RACE * Pre_Q1_3levels	125.139	8	15.642	1.297	.243	.023	10.373	.598

a. R Squared = .118 (Adjusted R Squared = .060)

b. Computed using alpha = .05

Tests of Between-Subjects Effects

Dependent Variable:= Post_Sum Pre_Sum

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power ^b
Post_Q20 * Pre_Q5_RACE * Pre_Q1_3levels	140.314	8	17.539	1.454	.172	.026	11.631	.659
Error	5295.879	439	12.064					
Total	6767.000	469						
Corrected Total	6007.066	468						

b. Computed using alpha = .05

Estimated Marginal Means

Grand Mean

Dependent Variable:= Post_Sum Pre_Sum

Mean	Std. Error	95% Confidence Interval	
		Lower Bound	Upper Bound
1.240	.252	.745	1.735

Post Hoc Tests

" What is your race? "

Multiple Comparisons

= Post_Sum Pre_Sum
Tukey HSD

(I) " What is your race? "	(J) " What is your race? "	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Asian	Black or African American	2.2297	.80127	.044	.0349	4.4245
	Hispanic	.6467	.69608	.886	-1.2599	2.5534
	White	.8587	.63272	.655	-.8744	2.5918
	Mixed/Multiple	1.6059	.83635	.308	-.6850	3.8968
Black or African American	Asian	-2.2297	.80127	.044	-4.4245	-.0349
	Hispanic	-1.5829	.64571	.104	-3.3516	.1857
	White	-1.3710	.57684	.124	-2.9510	.2091
	Mixed/Multiple	-.6238	.79492	.935	-2.8012	1.5536
Hispanic	Asian	-.6467	.69608	.886	-2.5534	1.2599
	Black or African American	1.5829	.64571	.104	-.1857	3.3516
	White	.2120	.41861	.987	-.9347	1.3586
	Mixed/Multiple	.9591	.68876	.633	-.9275	2.8457
White	Asian	-.8587	.63272	.655	-2.5918	.8744
	Black or African American	1.3710	.57684	.124	-.2091	2.9510
	Hispanic	-.2120	.41861	.987	-1.3586	.9347
	Mixed/Multiple	.7472	.62466	.754	-.9639	2.4582
Mixed/Multiple	Asian	-1.6059	.83635	.308	-3.8968	.6850
	Black or African American	.6238	.79492	.935	-1.5536	2.8012
	Hispanic	-.9591	.68876	.633	-2.8457	.9275
	White	-.7472	.62466	.754	-2.4582	.9639

Based on observed means.

The error term is Mean Square(Error) = 12.064.

*. The mean difference is significant at the .05 level.

Homogeneous Subsets

= Post_Sum Pre_Sum

Tukey HSD^{a,b,c}

" What is your race? "	N	Subset	
		1	2
Black or African American	42	-.0238	
Mixed/Multiple	35	.6000	.6000
White	265	1.3472	1.3472
Hispanic	93	1.5591	1.5591
Asian	34		2.2059
Sig.		.140	.130

Means for groups in homogeneous subsets are displayed.
Based on observed means.

The error term is Mean Square(Error) = 12.064.

a. Uses Harmonic Mean Sample Size = 51.911.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

c. Alpha = .05.

1,2 vs 3 vs 4,5

Multiple Comparisons

= Post_Sum Pre_Sum
Tukey HSD

(I) 1,2 vs 3 vs 4,5		(J) 1,2 vs 3 vs 4,5		Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
							Lower Bound	Upper Bound
1.00	2.00			-1.1792	.40854	.011	-2.1400	-.2185
	3.00			-.7590	.39427	.133	-1.6862	.1682
2.00	1.00			1.1792	.40854	.011	.2185	2.1400
	3.00			.4202	.38241	.515	-.4791	1.3196
3.00	1.00			.7590	.39427	.133	-.1682	1.6862
	2.00			-.4202	.38241	.515	-1.3196	.4791

Based on observed means.

The error term is Mean Square(Error) = 12.064.

*. The mean difference is significant at the .05 level.

Homogeneous Subsets

= Post_Sum Pre_Sum

Tukey HSD^{a,b,c}

1,2 vs 3 vs 4,5	N	Subset	
		1	2
1.00	137	.5985	
3.00	179	1.3575	1.3575
2.00	153		1.7778
Sig.		.134	.537

Means for groups in homogeneous subsets are displayed.

Based on observed means.

The error term is Mean Square(Error) = 12.064.

a. Uses Harmonic Mean Sample Size = 154.466.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

c. Alpha = .05.

REGRESSION

```

/DESCRIPTIVES MEAN STDDEV CORR SIG N
/MISSING LISTWISE
/STATISTICS COEFF OUTS R ANOVA CHANGE ZPP
/CRITERIA=PIN(.05) POUT(.10)
/NOORIGIN
/DEPENDENT Gain
/METHOD=ENTER Pre_Q1_3levels Pre_Q2_3levels Pre_Q4_GENDER Pre_Q5_RACE Post_Q20 Post_Q26.
    
```

Regression

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Descriptive Statistics

	Mean	Std. Deviation	N
= Post_Sum Pre_Sum	1.2848	3.57542	460
1,2 vs 3 vs 4,5	2.0826	.82030	460
1,2 vs 3 vs 4,5	2.0196	.77097	460
" Are you? "	1.43	.496	460
" What is your race? "	5.13	1.432	460
" After you played the game in school did you go home and play it? "	1.45	.498	460
" The game was interesting and fun. "	1.78	1.061	460

Correlations

		= Post_Sum Pre_Sum	1,2 vs 3 vs 4,5	1,2 vs 3 vs 4,5	" Are you? "	" What is your race? "
Pearson Correlation	= Post_Sum Pre_Sum	1.000	.089	.060	-.050	-.019
	1,2 vs 3 vs 4,5	.089	1.000	-.068	.260	.041
	1,2 vs 3 vs 4,5	.060	-.068	1.000	-.096	.037
	" Are you? "	-.050	.260	-.096	1.000	.012
	" What is your race? "	-.019	.041	.037	.012	1.000
	" After you played the game in school did you go home and play it? "	-.183	-.091	-.097	.048	-.006
	" The game was interesting and fun. "	-.104	-.004	-.112	-.028	-.090

Correlations

	" After you played the game in school did you go home and play it? "	" The game was interesting and fun. "
Pearson Correlation = Post_Sum Pre_Sum	-.183	-.104
1,2 vs 3 vs 4,5	-.091	-.004
1,2 vs 3 vs 4,5	-.097	-.112
" Are you? "	.048	-.028
" What is your race? "	-.006	-.090
" After you played the game in school did you go home and play it? "	1.000	.202
" The game was interesting and fun. "	.202	1.000

Correlations

	= Post_Sum Pre_Sum	1,2 vs 3 vs 4,5	1,2 vs 3 vs 4,5	" Are you? "	" What is your race? "
Sig. (1-tailed)	= Post_Sum Pre_Sum	.029	.098	.142	.343
	1,2 vs 3 vs 4,5	.029	.073	.000	.189
	1,2 vs 3 vs 4,5	.098	.073	.020	.213
	" Are you? "	.142	.000	.020	.399
	" What is your race? "	.343	.189	.213	.399
	" After you played the game in school did you go home and play it? "	.000	.025	.019	.152
	" The game was interesting and fun. "	.013	.463	.008	.275
N	= Post_Sum Pre_Sum	460	460	460	460
	1,2 vs 3 vs 4,5	460	460	460	460
	1,2 vs 3 vs 4,5	460	460	460	460
	" Are you? "	460	460	460	460
	" What is your race? "	460	460	460	460
	" After you played the game in school did you go home and play it? "	460	460	460	460
	" The game was interesting and fun. "	460	460	460	460

Correlations

	" After you played the game in school did you go home and play it? "	" The game was interesting and fun. "
Sig. (1-tailed)		
= Post_Sum Pre_Sum	.000	.013
1,2 vs 3 vs 4,5	.025	.463
1,2 vs 3 vs 4,5	.019	.008
" Are you? "	.152	.275
" What is your race? "	.445	.028
" After you played the game in school did you go home and play it? "	.	.000
" The game was interesting and fun. "	.000	.
N		
= Post_Sum Pre_Sum	460	460
1,2 vs 3 vs 4,5	460	460
1,2 vs 3 vs 4,5	460	460
" Are you? "	460	460
" What is your race? "	460	460
" After you played the game in school did you go home and play it? "	460	460
" The game was interesting and fun. "	460	460

Variables Entered/Removed^b

Model	Variables Entered	Variables Removed	Method
1	" The game was interesting and fun. " , 1,2 vs 3 vs 4,5, " What is your race? " , 1,2 vs 3 vs 4,5, " After you played the game in school did you go home and play it? " , " Are you? " ^a	.	Enter

a. All requested variables entered.

b. Dependent Variable: = Post_Sum Pre_Sum

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.224 ^a	.050	.038	3.50737	.050	3.997	6	453	.001

a. Predictors: (Constant), " The game was interesting and fun. " , 1,2 vs 3 vs 4,5, " What is your race? " , 1,2 vs 3 vs 4,5, " After you played the game in school did you go home and play it? " , " Are you? "

ANOVA^b

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	295.053	6	49.175	3.997	.001 ^a
	Residual	5572.641	453	12.302		
	Total	5867.693	459			

a. Predictors: (Constant), " The game was interesting and fun. ", 1,2 vs 3 vs 4,5, " What is your race? ", 1,2 vs 3 vs 4,5, " After you played the game in school did you go home and play it? ", " Are you? "

b. Dependent Variable: = Post_Sum Pre_Sum

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations		
		B	Std. Error	Beta			Zero-order	Partial	Part
1	(Constant)	3.162	1.124		2.814	.005			
	1,2 vs 3 vs 4,5	.415	.208	.095	1.989	.047	.089	.093	.091
	1,2 vs 3 vs 4,5	.180	.216	.039	.834	.405	.060	.039	.038
	" Are you? "	-.470	.344	-.065	-1.366	.172	-.050	-.064	-.063
	" What is your race? "	-.077	.115	-.031	-.674	.501	-.019	-.032	-.031
	" After you played the game in school did you go home and play it? "	-1.102	.339	-.153	-3.247	.001	-.183	-.151	-.149
	" The game was interesting and fun. "	-.245	.159	-.073	-1.537	.125	-.104	-.072	-.070

a. Dependent Variable: = Post_Sum Pre_Sum

CROSSTABS

```

/TABLES=Pre_Q1_3levels BY Pre_Q5_RACE
/FORMAT=AVALUE TABLES
/STATISTICS=CHISQ
/CELLS=COUNT
    
```

/COUNT ROUND CELL.

Crosstabs

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Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
1,2 vs 3 vs 4,5 * " What is your race? "	631	86.4%	99	13.6%	730	100.0%

1,2 vs 3 vs 4,5 * " What is your race? " Crosstabulation

Count

		" What is your race? "					Total
		Asian	Black or African American	Hispanic	White	Mixed/Multiple	
1,2 vs 3 vs 4,5	1.00	13	19	35	101	11	179
	2.00	18	30	41	107	14	210
	3.00	10	26	52	128	26	242
Total		41	75	128	336	51	631

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	9.467 ^a	8	.304
Likelihood Ratio	9.504	8	.302
Linear-by-Linear Association	1.115	1	.291
N of Valid Cases	631		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 11.63.

```
UNIANOVA Gain BY Pre_Q5_RACE
  /METHOD=SSTYPE(3)
  /INTERCEPT=INCLUDE
  /POSTHOC=Pre_Q5_RACE(TUKEY)
  /EMMEANS=TABLES(OVERALL)
  /PRINT=OPOWER ETASQ HOMOGENEITY DESCRIPTIVE
  /CRITERIA=ALPHA(.05)
  /DESIGN=Pre_Q5_RACE.
```

Univariate Analysis of Variance

[DataSet1] C:\Documents and Settings\Roblabuser\Desktop\DIHAR-merged.sav

Between-Subjects Factors

	Value Label	N
" What is your race? "	2 Asian	34
	3 Black or African American	47
	4 Hispanic	100
	6 White	277
	7 Mixed/Multiple	37

Descriptive Statistics

Dependent Variable:= Post_Sum Pre_Sum

" What is your race? "	Mean	Std. Deviation	N
Asian	2.2059	3.52291	34
Black or African American	-.3191	2.87498	47
Hispanic	1.2600	3.69444	100
White	1.4043	3.64985	277
Mixed/Multiple	.8108	4.74247	37
Total	1.2222	3.70675	495

Post Hoc Tests

" What is your race? "

Multiple Comparisons

= Post_Sum Pre_Sum
Tukey HSD

(I) " What is your race? "	(J) " What is your race? "	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Asian	Black or African American	2.5250	.82800	.020	.2580	4.7921
	Hispanic	.9459	.73011	.694	-1.0531	2.9449
	White	.8016	.66830	.752	-1.0282	2.6313
	Mixed/Multiple	1.3951	.87370	.500	-.9971	3.7872
Black or African American	Asian	-2.5250	.82800	.020	-4.7921	-.2580
	Hispanic	-1.5791	.65040	.110	-3.3599	.2016
	White	-1.7235*	.58017	.026	-3.3120	-.1350
	Mixed/Multiple	-1.1300	.80828	.629	-3.3430	1.0831
Hispanic	Asian	-.9459	.73011	.694	-2.9449	1.0531
	Black or African American	1.5791	.65040	.110	-.2016	3.3599
	White	-.1443	.42905	.997	-1.3190	1.0304
	Mixed/Multiple	.4492	.70767	.969	-1.4884	2.3868
White	Asian	-.8016	.66830	.752	-2.6313	1.0282
	Black or African American	1.7235*	.58017	.026	.1350	3.3120
	Hispanic	.1443	.42905	.997	-1.0304	1.3190
	Mixed/Multiple	.5935	.64372	.888	-1.1690	2.3560
Mixed/Multiple	Asian	-1.3951	.87370	.500	-3.7872	.9971
	Black or African American	1.1300	.80828	.629	-1.0831	3.3430
	Hispanic	-.4492	.70767	.969	-2.3868	1.4884
	White	-.5935	.64372	.888	-2.3560	1.1690

Based on observed means.

The error term is Mean Square(Error) = 13.525.

*. The mean difference is significant at the .05 level.

Homogeneous Subsets

= Post_Sum Pre_Sum

Tukey HSD^{a,b,c}

" What is your race? "	N	Subset	
		1	2
Black or African American	47	-.3191	
Mixed/Multiple	37	.8108	.8108
Hispanic	100	1.2600	1.2600
White	277	1.4043	1.4043
Asian	34		2.2059
Sig.		.104	.275

Means for groups in homogeneous subsets are displayed.
Based on observed means.

The error term is Mean Square(Error) = 13.525.

- Uses Harmonic Mean Sample Size = 54.749.
- The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.
- Alpha = .05.

Levene's Test of Equality of Error Variances^a

Dependent Variable:= Post_Sum Pre_Sum

F	df1	df2	Sig.
1.383	4	490	.239

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

- Design: Intercept + Pre_Q5_RACE

Tests of Between-Subjects Effects

Dependent Variable:= Post_Sum Pre_Sum

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power ^b
Corrected Model	160.153 ^a	4	40.038	2.960	.020	.024	11.841	.792
Intercept	314.805	1	314.805	23.275	.000	.045	23.275	.998
Pre_Q5_RACE	160.153	4	40.038	2.960	.020	.024	11.841	.792
Error	6627.402	490	13.525					
Total	7527.000	495						
Corrected Total	6787.556	494						

a. R Squared = .024 (Adjusted R Squared = .016)

b. Computed using alpha = .05

Estimated Marginal Means

Grand Mean

Dependent Variable:= Post_Sum Pre_Sum

Mean	Std. Error	95% Confidence Interval	
		Lower Bound	Upper Bound
1.072	.222	.636	1.509