Middle-Aged Men in a Health Fitness Club with weights

The CANCORR Procedure

Physiological Measurements	3
Exercises	3
Observations	20
Sum of Weights	3572

Means and Standard Deviations

Variable	Mean	Standard Deviation
Weight	181.842665	346.468012
Waist	35.765957	46.699679
Pulse	55.753639	95.326365
Chins	9.179451	70.698757
Situps	141.498320	836.290839
Jumps	68.776036	654.865307

Middle-Aged Men in a Health Fitness Club with weights

The CANCORR Procedure

Correlations Among the Original Variables

Correlations Among the Physiological Measurements

	Weight	Waist	Pulse
Weight	1.0000	0.8894	-0.3572
Waist	0.8894	1.0000	-0.3591
Pulse	-0.3572	-0.3591	1.0000

Correlations Among the Exercises

	Chins	Situps	Jumps
Chins	1.0000	0.7034	0.4882
Situps	0.7034	1.0000	0.6611
Jumps	0.4882	0.6611	1.0000

Correlations Between the Physiological Measurements and the Exercises

	Chins	Situps	Jumps
Weight	-0.4520	-0.5270	-0.2276
Waist	-0.5912	-0.6597	-0.1888
Pulse	0.2129	0.2749	0.0679

Middle-Aged Men in a Health Fitness Club with weights

The CANCORR Procedure

Canonical Correlation Analysis

	Canonical Correlation	Adjusted Canonical Correlation	Approximate Standard Error	Squared Canonical Correlation	Eigenvalues of Inv(E)*H = CanRsq/(1-CanRsq)				Test of H0: The canonical correlations in the current row and all that			
					Eigenvalue	Difference	Proportion	Cumulative	Likelihood Ratio	Approximate F Value	Num DF	Den
1	0.813267	0.776212	0.077679	0.661404	1.9534	1.9144	0.9791	0.9791	0.32501779	2.23	9	34.2
2	0.193757	-.076636	0.220803	0.037542	0.0390	0.0363	0.0196	0.9987	0.95989828	0.16	4	
3	0.051574	.	0.228806	0.002660	0.0027		0.0013	1.0000	0.99734011	0.04	1	

Multivariate Statistics and F Approximations

S=3 M=-0.5 N=6

Statistic	Value	F Value	Num DF	Den DF	Pr > F
Wilks' Lambda	0.32501779	2.23	9	34.223	0.0440
Pillai's Trace	0.70160550	1.63	9	48	0.1341
Hotelling-Lawley Trace	1.99504454	2.97	9	19.053	0.0218
Roy's Greatest Root	1.95337152	10.42	3	16	0.0005

NOTE: F Statistic for Roy's Greatest Root is an upper bound.

Middle-Aged Men in a Health Fitness Club with weights

The CANCORR Procedure

Canonical Correlation Analysis

Raw Canonical Coefficients for the Physiological Measurements			
	Physiological1	Physiological2	Physiological3
Weight	-0.002248398	-0.005925952	-0.000115632
Waist	0.0341481637	0.030811303	0.0099958818
Pulse	-0.000927309	-0.000937002	0.0112070695

Raw Canonical Coefficients for the Exercises			
	Exercises1	Exercises2	Exercises3
Chins	-0.005312751	-0.003278863	-0.018915215
Situps	-0.001211024	-7.410992E-7	0.001539346
Jumps	0.0010588576	0.0016688011	-0.00049344

Middle-Aged Men in a Health Fitness Club with weights

The CANCORR Procedure

Canonical Correlation Analysis

Standardized Canonical Coefficients for the Physiological Measurements			
	Physiological1	Physiological2	Physiological3
Weight	-0.7790	-2.0532	-0.0401
Waist	1.5947	1.4389	0.4668
Pulse	-0.0884	-0.0893	1.0683

Standardized Canonical Coefficients for the Exercises			
	Exercises1	Exercises2	Exercises3
Chins	-0.3756	-0.2318	-1.3373
Situps	-1.0128	-0.0006	1.2873
Jumps	0.6934	1.0928	-0.3231

Middle-Aged Men in a Health Fitness Club with weights

The CANCORR Procedure

Canonical Structure

Correlations Between the Physiological Measurements and Their Canonical Variables			
	Physiological1	Physiological2	Physiological3
Weight	0.6709	-0.7415	-0.0065
Waist	0.9336	-0.3551	0.0476
Pulse	-0.3828	0.1274	0.9150

Correlations Between the Exercises and Their Canonical Variables			
	Exercises1	Exercises2	Exercises3
Chins	-0.7495	0.3013	-0.5895
Situps	-0.8186	0.5587	0.1331
Jumps	-0.1594	0.9793	-0.1250

Correlations Between the Physiological Measurements and the Canonical Variables of the Exercises			
	Exercises1	Exercises2	Exercises3
Weight	0.5456	-0.1437	-0.0003
Waist	0.7593	-0.0688	0.0025
Pulse	-0.3113	0.0247	0.0472

Correlations Between the Exercises and the Canonical Variables of the Physiological Measurements			
	Physiological1	Physiological2	Physiological3
Chins	-0.6095	0.0584	-0.0304
Situps	-0.6657	0.1083	0.0069
Jumps	-0.1297	0.1897	-0.0064

Middle-Aged Men in a Health Fitness Club with weights

The CANCORR Procedure

Canonical Redundancy Analysis

Raw Variance of the Physiological Measurements Explained by					
	Their Own Canonical Variables			The Opposite Canonical Variables	
Canonical Variable Number	Proportion	Cumulative Proportion	Canonical R-Square	Proportion	Cumulative Proportion
1	0.4361	0.4361	0.6614	0.2885	0.2885
2	0.5058	0.9420	0.0375	0.0190	0.3075
3	0.0580	1.0000	0.0027	0.0002	0.3076

Raw Variance of the Exercises Explained by					
	Their Own Canonical Variables			The Opposite Canonical Variables	
Canonical Variable Number	Proportion	Cumulative Proportion	Canonical R-Square	Proportion	Cumulative Proportion
1	0.4257	0.4257	0.6614	0.2815	0.2815
2	0.5560	0.9816	0.0375	0.0209	0.3024
3	0.0184	1.0000	0.0027	0.0000	0.3025

Middle-Aged Men in a Health Fitness Club with weights

The CANCORR Procedure

Canonical Redundancy Analysis

Standardized Variance of the Physiological Measurements Explained by					
	Their Own Canonical Variables			The Opposite Canonical Variables	
Canonical Variable Number	Proportion	Cumulative Proportion	Canonical R-Square	Proportion	Cumulative Proportion
1	0.4894	0.4894	0.6614	0.3237	0.3237
2	0.2307	0.7201	0.0375	0.0087	0.3324
3	0.2799	1.0000	0.0027	0.0007	0.3331

Standardized Variance of the Exercises Explained by					
	Their Own Canonical Variables			The Opposite Canonical Variables	
Canonical Variable Number	Proportion	Cumulative Proportion	Canonical R-Square	Proportion	Cumulative Proportion
1	0.4191	0.4191	0.6614	0.2772	0.2772
2	0.4540	0.8731	0.0375	0.0170	0.2942
3	0.1269	1.0000	0.0027	0.0003	0.2946

Middle-Aged Men in a Health Fitness Club with weights

The CANCORR Procedure

Canonical Redundancy Analysis

Squared Multiple Correlations Between the Physiological Measurements and the First M Canonical Variables of the Exercises			
M	1	2	3
Weight	0.2977	0.3184	0.3184
Waist	0.5765	0.5812	0.5812
Pulse	0.0969	0.0975	0.0997

Squared Multiple Correlations Between the Exercises and the First M Canonical Variables of the Physiological Measurements			
M	1	2	3
Chins	0.3715	0.3749	0.3759
Situps	0.4432	0.4549	0.4550
Jumps	0.0168	0.0528	0.0529

Middle-Aged Men in a Health Fitness Club with NO weights

The CANCORR Procedure

Physiological Measurements	3
Exercises	3
Observations	20

Means and Standard Deviations

Variable	Mean	Standard Deviation
Weight	178.600000	24.690505
Waist	35.400000	3.201973
Pulse	56.100000	7.210373
Chins	9.450000	5.286278
Situps	145.550000	62.566575
Jumps	70.300000	51.277470

Middle-Aged Men in a Health Fitness Club with NO weights

The CANCORR Procedure

Correlations Among the Original Variables

Correlations Among the Physiological Measurements

	Weight	Waist	Pulse
Weight	1.0000	0.8702	-0.3658
Waist	0.8702	1.0000	-0.3529
Pulse	-0.3658	-0.3529	1.0000

Correlations Among the Exercises

	Chins	Situps	Jumps
Chins	1.0000	0.6957	0.4958
Situps	0.6957	1.0000	0.6692
Jumps	0.4958	0.6692	1.0000

Correlations Between the Physiological Measurements and the Exercises

	Chins	Situps	Jumps
Weight	-0.3897	-0.4931	-0.2263
Waist	-0.5522	-0.6456	-0.1915
Pulse	0.1506	0.2250	0.0349

Middle-Aged Men in a Health Fitness Club with NO weights

The CANCORR Procedure

Canonical Correlation Analysis

	Canonical Correlation	Adjusted Canonical Correlation	Approximate Standard Error	Squared Canonical Correlation	Eigenvalues of Inv(E)*H = CanRsq/(1-CanRsq)				Test of H0: The canonical correlations in the current row and all that			
					Eigenvalue	Difference	Proportion	Cumulative	Likelihood Ratio	Approximate F Value	Num DF	Den
1	0.795608	0.754056	0.084197	0.632992	1.7247	1.6828	0.9734	0.9734	0.35039053	2.05	9	34.2
2	0.200556	-.076399	0.220188	0.040223	0.0419	0.0366	0.0237	0.9970	0.95472266	0.18	4	
3	0.072570	.	0.228208	0.005266	0.0053		0.0030	1.0000	0.99473355	0.08	1	

Multivariate Statistics and F Approximations

S=3 M=-0.5 N=6

Statistic	Value	F Value	Num DF	Den DF	Pr > F
Wilks' Lambda	0.35039053	2.05	9	34.223	0.0635
Pillai's Trace	0.67848151	1.56	9	48	0.1551
Hotelling-Lawley Trace	1.77194146	2.64	9	19.053	0.0357
Roy's Greatest Root	1.72473874	9.20	3	16	0.0009

NOTE: F Statistic for Roy's Greatest Root is an upper bound.

Middle-Aged Men in a Health Fitness Club with NO weights

The CANCORR Procedure

Canonical Correlation Analysis

Raw Canonical Coefficients for the Physiological Measurements			
	Physiological1	Physiological2	Physiological3
Weight	-0.031404688	-0.076319506	-0.007735047
Waist	0.4932416756	0.3687229894	0.1580336471
Pulse	-0.008199315	-0.032051994	0.1457322421

Raw Canonical Coefficients for the Exercises			
	Exercises1	Exercises2	Exercises3
Chins	-0.066113986	-0.071041211	-0.245275347
Situps	-0.016846231	0.0019737454	0.0197676373
Jumps	0.0139715689	0.0207141063	-0.008167472

Middle-Aged Men in a Health Fitness Club with NO weights

The CANCORR Procedure

Canonical Correlation Analysis

Standardized Canonical Coefficients for the Physiological Measurements			
	Physiological1	Physiological2	Physiological3
Weight	-0.7754	-1.8844	-0.1910
Waist	1.5793	1.1806	0.5060
Pulse	-0.0591	-0.2311	1.0508

Standardized Canonical Coefficients for the Exercises			
	Exercises1	Exercises2	Exercises3
Chins	-0.3495	-0.3755	-1.2966
Situps	-1.0540	0.1235	1.2368
Jumps	0.7164	1.0622	-0.4188

Middle-Aged Men in a Health Fitness Club with NO weights

The CANCORR Procedure

Canonical Structure

Correlations Between the Physiological Measurements and Their Canonical Variables			
	Physiological1	Physiological2	Physiological3
Weight	0.6206	-0.7724	-0.1350
Waist	0.9254	-0.3777	-0.0310
Pulse	-0.3328	0.0415	0.9421

Correlations Between the Exercises and Their Canonical Variables			
	Exercises1	Exercises2	Exercises3
Chins	-0.7276	0.2370	-0.6438
Situps	-0.8177	0.5730	0.0544
Jumps	-0.1622	0.9586	-0.2339

Correlations Between the Physiological Measurements and the Canonical Variables of the Exercises			
	Exercises1	Exercises2	Exercises3
Weight	0.4938	-0.1549	-0.0098
Waist	0.7363	-0.0757	-0.0022
Pulse	-0.2648	0.0083	0.0684

Correlations Between the Exercises and the Canonical Variables of the Physiological Measurements			
	Physiological1	Physiological2	Physiological3
Chins	-0.5789	0.0475	-0.0467
Situps	-0.6506	0.1149	0.0040
Jumps	-0.1290	0.1923	-0.0170

Middle-Aged Men in a Health Fitness Club with NO weights

The CANCORR Procedure

Canonical Redundancy Analysis

Raw Variance of the Physiological Measurements Explained by					
	Their Own Canonical Variables			The Opposite Canonical Variables	
Canonical Variable Number	Proportion	Cumulative Proportion	Canonical R-Square	Proportion	Cumulative Proportion
1	0.3712	0.3712	0.6330	0.2349	0.2349
2	0.5436	0.9148	0.0402	0.0219	0.2568
3	0.0852	1.0000	0.0053	0.0004	0.2573

Raw Variance of the Exercises Explained by					
	Their Own Canonical Variables			The Opposite Canonical Variables	
Canonical Variable Number	Proportion	Cumulative Proportion	Canonical R-Square	Proportion	Cumulative Proportion
1	0.4111	0.4111	0.6330	0.2602	0.2602
2	0.5635	0.9746	0.0402	0.0227	0.2829
3	0.0254	1.0000	0.0053	0.0001	0.2830

Middle-Aged Men in a Health Fitness Club with NO weights

The CANCORR Procedure

Canonical Redundancy Analysis

Standardized Variance of the Physiological Measurements Explained by					
	Their Own Canonical Variables			The Opposite Canonical Variables	
Canonical Variable Number	Proportion	Cumulative Proportion	Canonical R-Square	Proportion	Cumulative Proportion
1	0.4508	0.4508	0.6330	0.2854	0.2854
2	0.2470	0.6978	0.0402	0.0099	0.2953
3	0.3022	1.0000	0.0053	0.0016	0.2969

Standardized Variance of the Exercises Explained by					
	Their Own Canonical Variables			The Opposite Canonical Variables	
Canonical Variable Number	Proportion	Cumulative Proportion	Canonical R-Square	Proportion	Cumulative Proportion
1	0.4081	0.4081	0.6330	0.2584	0.2584
2	0.4345	0.8426	0.0402	0.0175	0.2758
3	0.1574	1.0000	0.0053	0.0008	0.2767

Middle-Aged Men in a Health Fitness Club with NO weights

The CANCORR Procedure

Canonical Redundancy Analysis

Squared Multiple Correlations Between the Physiological Measurements and the First M Canonical Variables of the Exercises			
M	1	2	3
Weight	0.2438	0.2678	0.2679
Waist	0.5421	0.5478	0.5478
Pulse	0.0701	0.0702	0.0749

Squared Multiple Correlations Between the Exercises and the First M Canonical Variables of the Physiological Measurements			
M	1	2	3
Chins	0.3351	0.3374	0.3396
Situps	0.4233	0.4365	0.4365
Jumps	0.0167	0.0536	0.0539

Middle-Aged Men in a Health Fitness Club with frequencies

The CANCORR Procedure

Physiological Measurements	3
Exercises	3
Observations	3572

Means and Standard Deviations

Variable	Mean	Standard Deviation
Weight	181.842665	25.272315
Waist	35.765957	3.406401
Pulse	55.753639	6.953363
Chins	9.179451	5.156959
Situps	141.498320	61.001317
Jumps	68.776036	47.767648

Middle-Aged Men in a Health Fitness Club with frequencies

The CANCORR Procedure

Correlations Among the Original Variables

Correlations Among the Physiological Measurements

	Weight	Waist	Pulse
Weight	1.0000	0.8894	-0.3572
Waist	0.8894	1.0000	-0.3591
Pulse	-0.3572	-0.3591	1.0000

Correlations Among the Exercises

	Chins	Situps	Jumps
Chins	1.0000	0.7034	0.4882
Situps	0.7034	1.0000	0.6611
Jumps	0.4882	0.6611	1.0000

Correlations Between the Physiological Measurements and the Exercises

	Chins	Situps	Jumps
Weight	-0.4520	-0.5270	-0.2276
Waist	-0.5912	-0.6597	-0.1888
Pulse	0.2129	0.2749	0.0679

Middle-Aged Men in a Health Fitness Club with frequencies

The CANCORR Procedure

Canonical Correlation Analysis

	Canonical Correlation	Adjusted Canonical Correlation	Approximate Standard Error	Squared Canonical Correlation	Eigenvalues of Inv(E)*H = CanRsq/(1-CanRsq)				Test of H0: The canonical correlations in the current row and all that			
					Eigenvalue	Difference	Proportion	Cumulative	Likelihood Ratio	Approximate F Value	Num DF	Den
1	0.813267	0.813070	0.005666	0.661404	1.9534	1.9144	0.9791	0.9791	0.32501779	565.97	9	867
2	0.193757	0.192318	0.016106	0.037542	0.0390	0.0363	0.0196	0.9987	0.95989828	36.87	4	71
3	0.051574	.	0.016690	0.002660	0.0027		0.0013	1.0000	0.99734011	9.52	1	35

Multivariate Statistics and F Approximations

S=3 M=-0.5 N=1782

Statistic	Value	F Value	Num DF	Den DF	Pr > F
Wilks' Lambda	0.32501779	565.97	9	8678.9	<.0001
Pillai's Trace	0.70160550	363.05	9	10704	<.0001
Hotelling-Lawley Trace	1.99504454	790.32	9	5600.5	<.0001
Roy's Greatest Root	1.95337152	2323.21	3	3568	<.0001

NOTE: F Statistic for Roy's Greatest Root is an upper bound.

Middle-Aged Men in a Health Fitness Club with frequencies

The CANCORR Procedure

Canonical Correlation Analysis

Raw Canonical Coefficients for the Physiological Measurements			
	Physiological1	Physiological2	Physiological3
Weight	-0.03082416	-0.081241189	-0.001585242
Waist	0.4681504866	0.4224041632	0.1370374398
Pulse	-0.012712844	-0.012845728	0.1536420837

Raw Canonical Coefficients for the Exercises			
	Exercises1	Exercises2	Exercises3
Chins	-0.072834579	-0.044951206	-0.259316058
Situps	-0.016602402	-0.00001016	0.0211034937
Jumps	0.0145162916	0.0228782447	-0.006764759

Middle-Aged Men in a Health Fitness Club with frequencies

The CANCORR Procedure

Canonical Correlation Analysis

Standardized Canonical Coefficients for the Physiological Measurements			
	Physiological1	Physiological2	Physiological3
Weight	-0.7790	-2.0532	-0.0401
Waist	1.5947	1.4389	0.4668
Pulse	-0.0884	-0.0893	1.0683

Standardized Canonical Coefficients for the Exercises			
	Exercises1	Exercises2	Exercises3
Chins	-0.3756	-0.2318	-1.3373
Situps	-1.0128	-0.0006	1.2873
Jumps	0.6934	1.0928	-0.3231

Middle-Aged Men in a Health Fitness Club with frequencies

The CANCORR Procedure

Canonical Structure

Correlations Between the Physiological Measurements and Their Canonical Variables			
	Physiological1	Physiological2	Physiological3
Weight	0.6709	-0.7415	-0.0065
Waist	0.9336	-0.3551	0.0476
Pulse	-0.3828	0.1274	0.9150

Correlations Between the Exercises and Their Canonical Variables			
	Exercises1	Exercises2	Exercises3
Chins	-0.7495	0.3013	-0.5895
Situps	-0.8186	0.5587	0.1331
Jumps	-0.1594	0.9793	-0.1250

Correlations Between the Physiological Measurements and the Canonical Variables of the Exercises			
	Exercises1	Exercises2	Exercises3
Weight	0.5456	-0.1437	-0.0003
Waist	0.7593	-0.0688	0.0025
Pulse	-0.3113	0.0247	0.0472

Correlations Between the Exercises and the Canonical Variables of the Physiological Measurements			
	Physiological1	Physiological2	Physiological3
Chins	-0.6095	0.0584	-0.0304
Situps	-0.6657	0.1083	0.0069
Jumps	-0.1297	0.1897	-0.0064

Middle-Aged Men in a Health Fitness Club with frequencies

The CANCORR Procedure

Canonical Redundancy Analysis

Raw Variance of the Physiological Measurements Explained by					
	Their Own Canonical Variables			The Opposite Canonical Variables	
Canonical Variable Number	Proportion	Cumulative Proportion	Canonical R-Square	Proportion	Cumulative Proportion
1	0.4361	0.4361	0.6614	0.2885	0.2885
2	0.5058	0.9420	0.0375	0.0190	0.3075
3	0.0580	1.0000	0.0027	0.0002	0.3076

Raw Variance of the Exercises Explained by					
	Their Own Canonical Variables			The Opposite Canonical Variables	
Canonical Variable Number	Proportion	Cumulative Proportion	Canonical R-Square	Proportion	Cumulative Proportion
1	0.4257	0.4257	0.6614	0.2815	0.2815
2	0.5560	0.9816	0.0375	0.0209	0.3024
3	0.0184	1.0000	0.0027	0.0000	0.3025

Middle-Aged Men in a Health Fitness Club with frequencies

The CANCORR Procedure

Canonical Redundancy Analysis

Standardized Variance of the Physiological Measurements Explained by					
	Their Own Canonical Variables			The Opposite Canonical Variables	
Canonical Variable Number	Proportion	Cumulative Proportion	Canonical R-Square	Proportion	Cumulative Proportion
1	0.4894	0.4894	0.6614	0.3237	0.3237
2	0.2307	0.7201	0.0375	0.0087	0.3324
3	0.2799	1.0000	0.0027	0.0007	0.3331

Standardized Variance of the Exercises Explained by					
	Their Own Canonical Variables			The Opposite Canonical Variables	
Canonical Variable Number	Proportion	Cumulative Proportion	Canonical R-Square	Proportion	Cumulative Proportion
1	0.4191	0.4191	0.6614	0.2772	0.2772
2	0.4540	0.8731	0.0375	0.0170	0.2942
3	0.1269	1.0000	0.0027	0.0003	0.2946

Middle-Aged Men in a Health Fitness Club with frequencies

The CANCORR Procedure

Canonical Redundancy Analysis

Squared Multiple Correlations Between the Physiological Measurements and the First M Canonical Variables of the Exercises			
M	**1**	**2**	**3**
Weight	0.2977	0.3184	0.3184
Waist	0.5765	0.5812	0.5812
Pulse	0.0969	0.0975	0.0997

Squared Multiple Correlations Between the Exercises and the First M Canonical Variables of the Physiological Measurements			
M	**1**	**2**	**3**
Chins	0.3715	0.3749	0.3759
Situps	0.4432	0.4549	0.4550
Jumps	0.0168	0.0528	0.0529