

```

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  /DELIMITERS=","
  /QUALIFIER=' '
  /ARRANGEMENT=DELIMITED
  /FIRSTCASE=2
  /IMPORTCASE=ALL
  /VARIABLES=
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    wcc F4.1
    hc F4.1
    hg F4.1
    ferr F3.0
    bmi F5.2
    ssf F5.1
    pcBfat F5.2
    lbm F5.2
    ht F5.1
    wt F5.1
    sex A1
    sport A7.
CACHE.
EXECUTE.
DATASET NAME DataSet1 WINDOW=FRONT.
GET
  FILE="/Users/jeromy/teaching/org-research-methods/2013/content/03-group-differences/exercises/data/ais.sav"
DATASET NAME DataSet2 WINDOW=FRONT.
DATASET ACTIVATE DataSet2.
DATASET CLOSE DataSet1.
freq all.

```

Frequencies

Notes

Output Created		12-AUG-2013 14:37:41
Comments		
Input	Data	/Users/jeromy/teaching/org-research-methods/2013/content/03-group-differences/exercises/data/ais.sav
	Active Dataset	DataSet2
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data ...	202
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics are based on all cases with valid data.
Syntax		freq all.
Resources	Processor Time	00:00:00.12
	Elapsed Time	00:00:00.00

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[DataSet2] /Users/jeromy/teaching/org-research-methods/2013/content/03-group-differences/exercises/data/ais.sav

```

Statistics

		rcc red blood cell count, in	wcc while blood cell count, in per liter	hc hematocrit, percent	hg hemaglobin concentratio n, in g per decaliter	ferr plasma ferritins, ng	bmi Body mass index, kg
N	Valid	202	202	202	202	202	202
	Missing	0	0	0	0	0	0

Statistics

		ssf sum of skin folds	pcBfat percent Body fat	lbm lean body mass, kg	ht height, cm	wt weight, kg	sex Sex	sport Sport
N	Valid	202	202	202	202	202	202	202
	Missing	0	0	0	0	0	0	0

Statistics

		sex_numeric Sex	sport_numer ic Sport	sport_abbrev iated
N	Valid	202	202	76
	Missing	0	0	126

Frequency Table

rcc red blood cell count, in

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	3.80	1	.5	.5	.5
	3.90	2	1.0	1.0	1.5
	3.91	1	.5	.5	2.0
	3.95	2	1.0	1.0	3.0
	3.96	2	1.0	1.0	4.0
	4.00	1	.5	.5	4.5
	4.02	1	.5	.5	5.0
	4.03	1	.5	.5	5.4
	4.06	1	.5	.5	5.9
	4.07	1	.5	.5	6.4
	4.08	1	.5	.5	6.9
	4.09	2	1.0	1.0	7.9
	4.10	1	.5	.5	8.4
	4.11	2	1.0	1.0	9.4
	4.12	1	.5	.5	9.9
	4.13	2	1.0	1.0	10.9
	4.14	1	.5	.5	11.4
	4.15	1	.5	.5	11.9
	4.16	2	1.0	1.0	12.9
	4.17	2	1.0	1.0	13.9
	4.19	1	.5	.5	14.4
	4.20	2	1.0	1.0	15.3
	4.21	1	.5	.5	15.8
	4.23	2	1.0	1.0	16.8
	4.24	2	1.0	1.0	17.8
	4.25	1	.5	.5	18.3
	4.26	2	1.0	1.0	19.3

rcc red blood cell count, in

	Frequency	Percent	Valid Percent	Cumulative Percent
4.27	2	1.0	1.0	20.3
4.30	1	.5	.5	20.8
4.31	2	1.0	1.0	21.8
4.32	3	1.5	1.5	23.3
4.35	1	.5	.5	23.8
4.36	2	1.0	1.0	24.8
4.37	1	.5	.5	25.2
4.38	2	1.0	1.0	26.2
4.39	1	.5	.5	26.7
4.40	3	1.5	1.5	28.2
4.41	3	1.5	1.5	29.7
4.42	2	1.0	1.0	30.7
4.44	3	1.5	1.5	32.2
4.45	2	1.0	1.0	33.2
4.46	5	2.5	2.5	35.6
4.48	1	.5	.5	36.1
4.49	1	.5	.5	36.6
4.50	2	1.0	1.0	37.6
4.51	4	2.0	2.0	39.6
4.52	1	.5	.5	40.1
4.53	1	.5	.5	40.6
4.54	1	.5	.5	41.1
4.55	1	.5	.5	41.6
4.56	1	.5	.5	42.1
4.57	1	.5	.5	42.6
4.58	1	.5	.5	43.1
4.62	1	.5	.5	43.6
4.63	3	1.5	1.5	45.0
4.64	1	.5	.5	45.5
4.66	1	.5	.5	46.0
4.68	1	.5	.5	46.5
4.71	4	2.0	2.0	48.5
4.73	1	.5	.5	49.0
4.75	2	1.0	1.0	50.0
4.76	1	.5	.5	50.5
4.77	2	1.0	1.0	51.5
4.78	1	.5	.5	52.0
4.81	2	1.0	1.0	53.0
4.82	2	1.0	1.0	54.0
4.83	4	2.0	2.0	55.9
4.84	1	.5	.5	56.4
4.86	2	1.0	1.0	57.4
4.87	6	3.0	3.0	60.4
4.88	1	.5	.5	60.9
4.89	2	1.0	1.0	61.9
4.90	2	1.0	1.0	62.9
4.91	2	1.0	1.0	63.9
4.92	1	.5	.5	64.4
4.93	2	1.0	1.0	65.3
4.94	1	.5	.5	65.8
4.95	2	1.0	1.0	66.8
4.96	1	.5	.5	67.3
4.97	2	1.0	1.0	68.3

rcc red blood cell count, in

	Frequency	Percent	Valid Percent	Cumulative Percent
4.98	1	.5	.5	68.8
4.99	1	.5	.5	69.3
5.00	3	1.5	1.5	70.8
5.01	3	1.5	1.5	72.3
5.02	2	1.0	1.0	73.3
5.03	4	2.0	2.0	75.2
5.04	2	1.0	1.0	76.2
5.08	1	.5	.5	76.7
5.09	3	1.5	1.5	78.2
5.10	1	.5	.5	78.7
5.11	5	2.5	2.5	81.2
5.13	4	2.0	2.0	83.2
5.16	4	2.0	2.0	85.1
5.17	2	1.0	1.0	86.1
5.18	1	.5	.5	86.6
5.21	2	1.0	1.0	87.6
5.22	2	1.0	1.0	88.6
5.24	2	1.0	1.0	89.6
5.25	1	.5	.5	90.1
5.29	1	.5	.5	90.6
5.31	1	.5	.5	91.1
5.32	1	.5	.5	91.6
5.33	2	1.0	1.0	92.6
5.34	4	2.0	2.0	94.6
5.38	1	.5	.5	95.0
5.40	1	.5	.5	95.5
5.48	2	1.0	1.0	96.5
5.49	1	.5	.5	97.0
5.50	1	.5	.5	97.5
5.59	1	.5	.5	98.0
5.66	1	.5	.5	98.5
5.69	1	.5	.5	99.0
5.93	1	.5	.5	99.5
6.72	1	.5	.5	100.0
Total	202	100.0	100.0	

wcc while blood cell count, in per liter

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	3.3	1	.5	.5	.5
	3.9	1	.5	.5	1.0
	4.0	2	1.0	1.0	2.0
	4.1	1	.5	.5	2.5
	4.2	1	.5	.5	3.0
	4.3	2	1.0	1.0	4.0
	4.4	2	1.0	1.0	5.0
	4.5	2	1.0	1.0	5.9
	4.6	2	1.0	1.0	6.9
	4.7	1	.5	.5	7.4
	4.8	2	1.0	1.0	8.4
	4.9	2	1.0	1.0	9.4
	5.0	4	2.0	2.0	11.4
	5.1	2	1.0	1.0	12.4
	5.2	2	1.0	1.0	13.4
	5.3	5	2.5	2.5	15.8
	5.4	1	.5	.5	16.3
	5.5	2	1.0	1.0	17.3
	5.6	2	1.0	1.0	18.3
	5.7	2	1.0	1.0	19.3
	5.8	8	4.0	4.0	23.3
	5.9	5	2.5	2.5	25.7
	6.0	6	3.0	3.0	28.7
	6.1	5	2.5	2.5	31.2
	6.2	4	2.0	2.0	33.2
	6.3	4	2.0	2.0	35.1
	6.4	11	5.4	5.4	40.6
	6.5	2	1.0	1.0	41.6
	6.6	9	4.5	4.5	46.0
	6.7	3	1.5	1.5	47.5
	6.8	5	2.5	2.5	50.0
	6.9	4	2.0	2.0	52.0
	7.0	2	1.0	1.0	53.0
	7.1	5	2.5	2.5	55.4
	7.2	5	2.5	2.5	57.9
	7.3	6	3.0	3.0	60.9
	7.4	2	1.0	1.0	61.9
	7.5	8	4.0	4.0	65.8
	7.6	7	3.5	3.5	69.3
	7.8	2	1.0	1.0	70.3
	7.9	2	1.0	1.0	71.3
	8.0	2	1.0	1.0	72.3
	8.1	2	1.0	1.0	73.3
	8.2	3	1.5	1.5	74.8
	8.3	6	3.0	3.0	77.7
	8.4	4	2.0	2.0	79.7
	8.5	2	1.0	1.0	80.7
	8.6	1	.5	.5	81.2
	8.7	1	.5	.5	81.7
	8.8	1	.5	.5	82.2
	8.9	6	3.0	3.0	85.1
	9.0	4	2.0	2.0	87.1
	9.1	2	1.0	1.0	88.1

wcc while blood cell count, in per liter

	Frequency	Percent	Valid Percent	Cumulative Percent
9.2	1	.5	.5	88.6
9.3	4	2.0	2.0	90.6
9.5	3	1.5	1.5	92.1
9.6	2	1.0	1.0	93.1
9.7	1	.5	.5	93.6
9.8	1	.5	.5	94.1
10.0	1	.5	.5	94.6
10.1	2	1.0	1.0	95.5
10.2	1	.5	.5	96.0
10.6	1	.5	.5	96.5
10.7	1	.5	.5	97.0
10.8	1	.5	.5	97.5
10.9	1	.5	.5	98.0
12.7	1	.5	.5	98.5
12.9	1	.5	.5	99.0
13.3	1	.5	.5	99.5
14.3	1	.5	.5	100.0
Total	202	100.0	100.0	

hc hematocrit, percent

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 35.9	1	.5	.5	.5
36.0	1	.5	.5	1.0
36.3	1	.5	.5	1.5
36.4	1	.5	.5	2.0
36.5	2	1.0	1.0	3.0
36.6	2	1.0	1.0	4.0
36.9	1	.5	.5	4.5
37.3	1	.5	.5	5.0
37.4	2	1.0	1.0	5.9
37.5	2	1.0	1.0	6.9
37.6	2	1.0	1.0	7.9
37.7	4	2.0	2.0	9.9
37.8	1	.5	.5	10.4
38.0	1	.5	.5	10.9
38.2	3	1.5	1.5	12.4
38.3	2	1.0	1.0	13.4
38.4	2	1.0	1.0	14.4
38.7	2	1.0	1.0	15.3
38.8	1	.5	.5	15.8
38.9	2	1.0	1.0	16.8
39.0	1	.5	.5	17.3
39.1	1	.5	.5	17.8
39.2	1	.5	.5	18.3
39.5	2	1.0	1.0	19.3
39.6	1	.5	.5	19.8
39.7	3	1.5	1.5	21.3
39.8	2	1.0	1.0	22.3
39.9	1	.5	.5	22.8
40.1	1	.5	.5	23.3
40.3	2	1.0	1.0	24.3
40.4	1	.5	.5	24.8

hc hematocrit, percent

	Frequency	Percent	Valid Percent	Cumulative Percent
40.6	2	1.0	1.0	25.7
40.7	2	1.0	1.0	26.7
40.8	1	.5	.5	27.2
40.9	2	1.0	1.0	28.2
41.0	1	.5	.5	28.7
41.1	4	2.0	2.0	30.7
41.2	2	1.0	1.0	31.7
41.4	5	2.5	2.5	34.2
41.5	2	1.0	1.0	35.1
41.6	3	1.5	1.5	36.6
41.8	3	1.5	1.5	38.1
42.0	1	.5	.5	38.6
42.1	2	1.0	1.0	39.6
42.2	3	1.5	1.5	41.1
42.5	1	.5	.5	41.6
42.6	3	1.5	1.5	43.1
42.7	3	1.5	1.5	44.6
42.8	3	1.5	1.5	46.0
42.9	2	1.0	1.0	47.0
43.0	3	1.5	1.5	48.5
43.2	1	.5	.5	49.0
43.3	1	.5	.5	49.5
43.5	2	1.0	1.0	50.5
43.6	3	1.5	1.5	52.0
43.7	2	1.0	1.0	53.0
43.8	5	2.5	2.5	55.4
44.0	2	1.0	1.0	56.4
44.1	3	1.5	1.5	57.9
44.2	1	.5	.5	58.4
44.3	2	1.0	1.0	59.4
44.4	2	1.0	1.0	60.4
44.5	2	1.0	1.0	61.4
44.7	2	1.0	1.0	62.4
44.8	4	2.0	2.0	64.4
44.9	4	2.0	2.0	66.3
45.0	1	.5	.5	66.8
45.1	2	1.0	1.0	67.8
45.2	3	1.5	1.5	69.3
45.3	5	2.5	2.5	71.8
45.4	3	1.5	1.5	73.3
45.5	3	1.5	1.5	74.8
45.6	2	1.0	1.0	75.7
45.7	1	.5	.5	76.2
45.8	1	.5	.5	76.7
45.9	1	.5	.5	77.2
46.0	3	1.5	1.5	78.7
46.1	2	1.0	1.0	79.7
46.2	2	1.0	1.0	80.7
46.3	4	2.0	2.0	82.7
46.5	3	1.5	1.5	84.2
46.6	3	1.5	1.5	85.6
46.8	3	1.5	1.5	87.1
46.9	1	.5	.5	87.6

hc hematocrit, percent

	Frequency	Percent	Valid Percent	Cumulative Percent
47.0	1	.5	.5	88.1
47.1	1	.5	.5	88.6
47.3	1	.5	.5	89.1
47.5	3	1.5	1.5	90.6
47.6	1	.5	.5	91.1
47.7	2	1.0	1.0	92.1
47.8	1	.5	.5	92.6
47.9	1	.5	.5	93.1
48.0	1	.5	.5	93.6
48.1	1	.5	.5	94.1
48.2	2	1.0	1.0	95.0
48.3	1	.5	.5	95.5
48.6	1	.5	.5	96.0
49.1	1	.5	.5	96.5
49.4	1	.5	.5	97.0
49.5	1	.5	.5	97.5
49.7	1	.5	.5	98.0
49.8	1	.5	.5	98.5
50.2	1	.5	.5	99.0
50.5	1	.5	.5	99.5
59.7	1	.5	.5	100.0
Total	202	100.0	100.0	

hg hemaglobin concentration, in g per decaliter

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 11.6	1	.5	.5	.5
11.8	1	.5	.5	1.0
12.0	1	.5	.5	1.5
12.1	2	1.0	1.0	2.5
12.3	3	1.5	1.5	4.0
12.4	3	1.5	1.5	5.4
12.5	6	3.0	3.0	8.4
12.6	3	1.5	1.5	9.9
12.7	6	3.0	3.0	12.9
12.8	3	1.5	1.5	14.4
12.9	2	1.0	1.0	15.3
13.0	3	1.5	1.5	16.8
13.1	2	1.0	1.0	17.8
13.2	4	2.0	2.0	19.8
13.3	4	2.0	2.0	21.8
13.4	3	1.5	1.5	23.3
13.5	5	2.5	2.5	25.7
13.6	2	1.0	1.0	26.7
13.7	3	1.5	1.5	28.2
13.8	2	1.0	1.0	29.2
13.9	5	2.5	2.5	31.7
14.0	8	4.0	4.0	35.6
14.1	4	2.0	2.0	37.6
14.2	1	.5	.5	38.1
14.3	6	3.0	3.0	41.1
14.4	7	3.5	3.5	44.6
14.5	6	3.0	3.0	47.5

hg hemaglobin concentration, in g per decaliter

	Frequency	Percent	Valid Percent	Cumulative Percent
14.6	1	.5	.5	48.0
14.7	9	4.5	4.5	52.5
14.8	8	4.0	4.0	56.4
14.9	6	3.0	3.0	59.4
15.0	9	4.5	4.5	63.9
15.1	3	1.5	1.5	65.3
15.2	7	3.5	3.5	68.8
15.3	2	1.0	1.0	69.8
15.4	5	2.5	2.5	72.3
15.5	5	2.5	2.5	74.8
15.6	6	3.0	3.0	77.7
15.7	4	2.0	2.0	79.7
15.8	7	3.5	3.5	83.2
15.9	10	5.0	5.0	88.1
16.0	1	.5	.5	88.6
16.1	3	1.5	1.5	90.1
16.2	4	2.0	2.0	92.1
16.3	3	1.5	1.5	93.6
16.4	1	.5	.5	94.1
16.5	3	1.5	1.5	95.5
16.7	1	.5	.5	96.0
16.8	1	.5	.5	96.5
17.2	2	1.0	1.0	97.5
17.3	1	.5	.5	98.0
17.7	1	.5	.5	98.5
18.0	1	.5	.5	99.0
18.5	1	.5	.5	99.5
19.2	1	.5	.5	100.0
Total	202	100.0	100.0	

ferr plasma ferritins, ng

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	8	1	.5	.5	.5
	12	1	.5	.5	1.0
	13	1	.5	.5	1.5
	16	1	.5	.5	2.0
	19	1	.5	.5	2.5
	20	2	1.0	1.0	3.5
	21	2	1.0	1.0	4.5
	22	3	1.5	1.5	5.9
	25	1	.5	.5	6.4
	26	2	1.0	1.0	7.4
	27	1	.5	.5	7.9
	29	3	1.5	1.5	9.4
	30	4	2.0	2.0	11.4
	32	2	1.0	1.0	12.4
	33	1	.5	.5	12.9
	34	3	1.5	1.5	14.4
	35	2	1.0	1.0	15.3
	36	4	2.0	2.0	17.3
	37	1	.5	.5	17.8
	38	2	1.0	1.0	18.8
	39	3	1.5	1.5	20.3
	40	4	2.0	2.0	22.3
	41	6	3.0	3.0	25.2
	42	1	.5	.5	25.7
	43	5	2.5	2.5	28.2
	44	5	2.5	2.5	30.7
	45	1	.5	.5	31.2
	46	2	1.0	1.0	32.2
	48	2	1.0	1.0	33.2
	49	1	.5	.5	33.7
	50	4	2.0	2.0	35.6
	51	2	1.0	1.0	36.6
	52	1	.5	.5	37.1
	53	4	2.0	2.0	39.1
	54	1	.5	.5	39.6
	55	2	1.0	1.0	40.6
	56	1	.5	.5	41.1
	57	1	.5	.5	41.6
	58	5	2.5	2.5	44.1
	59	2	1.0	1.0	45.0
	60	2	1.0	1.0	46.0
	61	2	1.0	1.0	47.0
	62	1	.5	.5	47.5
	63	1	.5	.5	48.0
	64	3	1.5	1.5	49.5
	65	1	.5	.5	50.0
	66	2	1.0	1.0	51.0
	67	1	.5	.5	51.5
	68	2	1.0	1.0	52.5
	69	2	1.0	1.0	53.5
	70	1	.5	.5	54.0
	71	3	1.5	1.5	55.4
	72	3	1.5	1.5	56.9

ferr plasma ferritins, ng

	Frequency	Percent	Valid Percent	Cumulative Percent
73	4	2.0	2.0	58.9
74	1	.5	.5	59.4
76	2	1.0	1.0	60.4
77	1	.5	.5	60.9
78	2	1.0	1.0	61.9
80	2	1.0	1.0	62.9
82	2	1.0	1.0	63.9
84	1	.5	.5	64.4
85	1	.5	.5	64.9
86	2	1.0	1.0	65.8
87	3	1.5	1.5	67.3
88	2	1.0	1.0	68.3
89	1	.5	.5	68.8
90	2	1.0	1.0	69.8
91	2	1.0	1.0	70.8
92	1	.5	.5	71.3
93	2	1.0	1.0	72.3
94	2	1.0	1.0	73.3
97	4	2.0	2.0	75.2
99	1	.5	.5	75.7
101	2	1.0	1.0	76.7
102	3	1.5	1.5	78.2
103	1	.5	.5	78.7
106	1	.5	.5	79.2
107	2	1.0	1.0	80.2
109	3	1.5	1.5	81.7
110	1	.5	.5	82.2
115	2	1.0	1.0	83.2
117	1	.5	.5	83.7
118	1	.5	.5	84.2
122	2	1.0	1.0	85.1
124	3	1.5	1.5	86.6
125	1	.5	.5	87.1
126	1	.5	.5	87.6
127	1	.5	.5	88.1
130	1	.5	.5	88.6
132	1	.5	.5	89.1
133	1	.5	.5	89.6
139	1	.5	.5	90.1
141	1	.5	.5	90.6
143	1	.5	.5	91.1
150	1	.5	.5	91.6
155	1	.5	.5	92.1
156	1	.5	.5	92.6
164	1	.5	.5	93.1
176	1	.5	.5	93.6
177	1	.5	.5	94.1
182	1	.5	.5	94.6
183	1	.5	.5	95.0
184	1	.5	.5	95.5
189	1	.5	.5	96.0
191	1	.5	.5	96.5
212	2	1.0	1.0	97.5

ferr plasma ferritins, ng

	Frequency	Percent	Valid Percent	Cumulative Percent
213	1	.5	.5	98.0
214	1	.5	.5	98.5
220	1	.5	.5	99.0
233	1	.5	.5	99.5
234	1	.5	.5	100.0
Total	202	100.0	100.0	

bmi Body mass index, kg

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 16.75	1	.5	.5	.5
17.05	1	.5	.5	1.0
17.06	1	.5	.5	1.5
17.54	1	.5	.5	2.0
17.79	1	.5	.5	2.5
18.26	1	.5	.5	3.0
18.29	1	.5	.5	3.5
18.37	1	.5	.5	4.0
18.93	1	.5	.5	4.5
18.96	1	.5	.5	5.0
19.00	1	.5	.5	5.4
19.06	1	.5	.5	5.9
19.16	2	1.0	1.0	6.9
19.37	1	.5	.5	7.4
19.44	1	.5	.5	7.9
19.54	1	.5	.5	8.4
19.63	1	.5	.5	8.9
19.69	1	.5	.5	9.4
19.76	1	.5	.5	9.9
19.81	1	.5	.5	10.4
19.85	1	.5	.5	10.9
19.87	1	.5	.5	11.4
20.04	1	.5	.5	11.9
20.06	1	.5	.5	12.4
20.07	1	.5	.5	12.9
20.12	2	1.0	1.0	13.9
20.15	2	1.0	1.0	14.9
20.17	1	.5	.5	15.3
20.30	1	.5	.5	15.8
20.31	1	.5	.5	16.3
20.39	1	.5	.5	16.8
20.42	2	1.0	1.0	17.8
20.46	1	.5	.5	18.3
20.53	1	.5	.5	18.8
20.56	1	.5	.5	19.3
20.62	1	.5	.5	19.8
20.67	1	.5	.5	20.3
20.69	1	.5	.5	20.8
20.76	1	.5	.5	21.3
20.77	1	.5	.5	21.8
20.81	1	.5	.5	22.3
20.87	1	.5	.5	22.8
20.89	1	.5	.5	23.3

bmi Body mass index, kg

	Frequency	Percent	Valid Percent	Cumulative Percent
21.03	1	.5	.5	23.8
21.04	2	1.0	1.0	24.8
21.07	1	.5	.5	25.2
21.12	1	.5	.5	25.7
21.15	1	.5	.5	26.2
21.19	1	.5	.5	26.7
21.20	1	.5	.5	27.2
21.24	1	.5	.5	27.7
21.25	1	.5	.5	28.2
21.26	1	.5	.5	28.7
21.27	1	.5	.5	29.2
21.28	1	.5	.5	29.7
21.35	1	.5	.5	30.2
21.38	2	1.0	1.0	31.2
21.40	1	.5	.5	31.7
21.47	1	.5	.5	32.2
21.65	1	.5	.5	32.7
21.68	1	.5	.5	33.2
21.69	1	.5	.5	33.7
21.75	1	.5	.5	34.2
21.77	1	.5	.5	34.7
21.86	3	1.5	1.5	36.1
21.88	1	.5	.5	36.6
21.89	1	.5	.5	37.1
21.93	1	.5	.5	37.6
22.01	1	.5	.5	38.1
22.02	1	.5	.5	38.6
22.03	1	.5	.5	39.1
22.04	1	.5	.5	39.6
22.12	1	.5	.5	40.1
22.13	1	.5	.5	40.6
22.27	1	.5	.5	41.1
22.28	1	.5	.5	41.6
22.32	1	.5	.5	42.1
22.34	1	.5	.5	42.6
22.35	2	1.0	1.0	43.6
22.37	1	.5	.5	44.1
22.42	1	.5	.5	44.6
22.44	1	.5	.5	45.0
22.46	1	.5	.5	45.5
22.52	1	.5	.5	46.0
22.57	1	.5	.5	46.5
22.59	1	.5	.5	47.0
22.62	1	.5	.5	47.5
22.63	2	1.0	1.0	48.5
22.64	1	.5	.5	49.0
22.67	1	.5	.5	49.5
22.68	1	.5	.5	50.0
22.76	1	.5	.5	50.5
22.80	1	.5	.5	51.0
22.81	1	.5	.5	51.5
22.83	1	.5	.5	52.0
22.93	1	.5	.5	52.5

bmi Body mass index, kg

	Frequency	Percent	Valid Percent	Cumulative Percent
22.96	2	1.0	1.0	53.5
23.01	1	.5	.5	54.0
23.06	1	.5	.5	54.5
23.07	1	.5	.5	55.0
23.11	1	.5	.5	55.4
23.12	1	.5	.5	55.9
23.13	1	.5	.5	56.4
23.15	1	.5	.5	56.9
23.17	1	.5	.5	57.4
23.19	1	.5	.5	57.9
23.25	2	1.0	1.0	58.9
23.29	1	.5	.5	59.4
23.31	1	.5	.5	59.9
23.35	1	.5	.5	60.4
23.36	2	1.0	1.0	61.4
23.38	1	.5	.5	61.9
23.47	1	.5	.5	62.4
23.55	1	.5	.5	62.9
23.57	1	.5	.5	63.4
23.58	3	1.5	1.5	64.9
23.67	1	.5	.5	65.3
23.68	1	.5	.5	65.8
23.69	2	1.0	1.0	66.8
23.72	1	.5	.5	67.3
23.76	1	.5	.5	67.8
23.84	1	.5	.5	68.3
23.85	1	.5	.5	68.8
23.88	1	.5	.5	69.3
23.97	2	1.0	1.0	70.3
23.99	2	1.0	1.0	71.3
24.02	1	.5	.5	71.8
24.06	1	.5	.5	72.3
24.21	1	.5	.5	72.8
24.24	1	.5	.5	73.3
24.28	1	.5	.5	73.8
24.40	1	.5	.5	74.3
24.45	1	.5	.5	74.8
24.47	1	.5	.5	75.2
24.51	1	.5	.5	75.7
24.54	2	1.0	1.0	76.7
24.64	2	1.0	1.0	77.7
24.78	1	.5	.5	78.2
24.81	1	.5	.5	78.7
24.93	1	.5	.5	79.2
25.06	1	.5	.5	79.7
25.09	1	.5	.5	80.2
25.11	1	.5	.5	80.7
25.17	2	1.0	1.0	81.7
25.21	1	.5	.5	82.2
25.27	1	.5	.5	82.7
25.31	1	.5	.5	83.2
25.36	1	.5	.5	83.7
25.37	1	.5	.5	84.2

bmi Body mass index, kg

	Frequency	Percent	Valid Percent	Cumulative Percent
25.38	1	.5	.5	84.7
25.43	1	.5	.5	85.1
25.44	1	.5	.5	85.6
25.50	1	.5	.5	86.1
25.61	1	.5	.5	86.6
25.64	1	.5	.5	87.1
25.72	1	.5	.5	87.6
25.75	1	.5	.5	88.1
25.82	1	.5	.5	88.6
25.84	1	.5	.5	89.1
25.93	1	.5	.5	89.6
26.07	1	.5	.5	90.1
26.24	1	.5	.5	90.6
26.25	1	.5	.5	91.1
26.51	1	.5	.5	91.6
26.73	1	.5	.5	92.1
26.79	1	.5	.5	92.6
26.85	1	.5	.5	93.1
26.86	1	.5	.5	93.6
26.95	1	.5	.5	94.1
27.39	1	.5	.5	94.6
27.56	1	.5	.5	95.0
27.79	1	.5	.5	95.5
28.13	1	.5	.5	96.0
28.57	1	.5	.5	96.5
29.97	1	.5	.5	97.0
30.18	2	1.0	1.0	98.0
31.93	1	.5	.5	98.5
32.52	1	.5	.5	99.0
33.73	1	.5	.5	99.5
34.42	1	.5	.5	100.0
Total	202	100.0	100.0	

ssf sum of skin folds

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	28.0	1	.5	.5	.5
	29.7	1	.5	.5	1.0
	30.3	1	.5	.5	1.5
	30.5	1	.5	.5	2.0
	30.9	2	1.0	1.0	3.0
	31.0	2	1.0	1.0	4.0
	31.5	1	.5	.5	4.5
	31.7	1	.5	.5	5.0
	31.8	1	.5	.5	5.4
	32.6	2	1.0	1.0	6.4
	33.7	2	1.0	1.0	7.4
	33.8	1	.5	.5	7.9
	34.0	1	.5	.5	8.4
	34.1	1	.5	.5	8.9
	34.3	1	.5	.5	9.4
	34.5	1	.5	.5	9.9
	34.6	1	.5	.5	10.4
	34.8	1	.5	.5	10.9
	34.9	1	.5	.5	11.4
	35.2	1	.5	.5	11.9
	36.6	1	.5	.5	12.4
	36.8	1	.5	.5	12.9
	37.5	2	1.0	1.0	13.9
	37.6	1	.5	.5	14.4
	38.0	1	.5	.5	14.9
	38.2	1	.5	.5	15.3
	38.9	1	.5	.5	15.8
	40.5	1	.5	.5	16.3
	40.8	1	.5	.5	16.8
	41.1	1	.5	.5	17.3
	41.5	1	.5	.5	17.8
	41.6	1	.5	.5	18.3
	41.8	2	1.0	1.0	19.3
	41.9	1	.5	.5	19.8
	42.3	2	1.0	1.0	20.8
	42.7	1	.5	.5	21.3
	43.0	1	.5	.5	21.8
	43.1	1	.5	.5	22.3
	43.2	1	.5	.5	22.8
	43.3	1	.5	.5	23.3
	43.5	2	1.0	1.0	24.3
	43.8	2	1.0	1.0	25.2
	44.0	1	.5	.5	25.7
	44.5	2	1.0	1.0	26.7
	44.7	1	.5	.5	27.2
	44.8	1	.5	.5	27.7
	46.1	1	.5	.5	28.2
	46.2	1	.5	.5	28.7
	46.3	1	.5	.5	29.2
	46.5	1	.5	.5	29.7
	46.7	1	.5	.5	30.2
	47.5	1	.5	.5	30.7
	47.6	2	1.0	1.0	31.7

ssf sum of skin folds

	Frequency	Percent	Valid Percent	Cumulative Percent
47.8	1	.5	.5	32.2
48.0	1	.5	.5	32.7
48.1	1	.5	.5	33.2
48.3	1	.5	.5	33.7
48.4	1	.5	.5	34.2
49.0	1	.5	.5	34.7
49.2	1	.5	.5	35.1
49.3	1	.5	.5	35.6
49.5	1	.5	.5	36.1
49.6	1	.5	.5	36.6
49.9	1	.5	.5	37.1
50.0	1	.5	.5	37.6
50.9	2	1.0	1.0	38.6
51.2	1	.5	.5	39.1
52.0	1	.5	.5	39.6
52.3	1	.5	.5	40.1
52.5	1	.5	.5	40.6
52.6	1	.5	.5	41.1
52.8	3	1.5	1.5	42.6
54.0	1	.5	.5	43.1
54.2	1	.5	.5	43.6
54.4	1	.5	.5	44.1
54.6	2	1.0	1.0	45.0
55.6	1	.5	.5	45.5
55.7	1	.5	.5	46.0
56.5	2	1.0	1.0	47.0
56.8	2	1.0	1.0	48.0
57.0	1	.5	.5	48.5
57.7	1	.5	.5	49.0
57.9	1	.5	.5	49.5
58.3	1	.5	.5	50.0
58.9	1	.5	.5	50.5
59.4	1	.5	.5	51.0
60.2	1	.5	.5	51.5
60.4	1	.5	.5	52.0
61.1	1	.5	.5	52.5
61.2	1	.5	.5	53.0
61.8	2	1.0	1.0	54.0
61.9	1	.5	.5	54.5
62.6	1	.5	.5	55.0
62.9	1	.5	.5	55.4
64.9	1	.5	.5	55.9
65.1	1	.5	.5	56.4
65.3	1	.5	.5	56.9
65.9	1	.5	.5	57.4
67.0	1	.5	.5	57.9
67.2	1	.5	.5	58.4
68.3	1	.5	.5	58.9
68.9	1	.5	.5	59.4
69.9	1	.5	.5	59.9
70.0	2	1.0	1.0	60.9
71.1	1	.5	.5	61.4
71.3	1	.5	.5	61.9

ssf sum of skin folds

	Frequency	Percent	Valid Percent	Cumulative Percent
71.6	1	.5	.5	62.4
73.9	1	.5	.5	62.9
74.7	1	.5	.5	63.4
74.9	1	.5	.5	63.9
75.1	1	.5	.5	64.4
75.2	1	.5	.5	64.9
75.6	1	.5	.5	65.3
75.7	1	.5	.5	65.8
75.9	1	.5	.5	66.3
76.0	1	.5	.5	66.8
76.2	1	.5	.5	67.3
76.8	1	.5	.5	67.8
77.0	1	.5	.5	68.3
78.0	1	.5	.5	68.8
80.1	1	.5	.5	69.3
80.3	3	1.5	1.5	70.8
80.6	1	.5	.5	71.3
82.7	1	.5	.5	71.8
83.0	1	.5	.5	72.3
87.2	1	.5	.5	72.8
88.2	1	.5	.5	73.3
88.9	1	.5	.5	73.8
89.0	1	.5	.5	74.3
90.2	1	.5	.5	74.8
90.4	1	.5	.5	75.2
91.0	1	.5	.5	75.7
91.2	1	.5	.5	76.2
95.4	1	.5	.5	76.7
96.3	1	.5	.5	77.2
96.8	1	.5	.5	77.7
96.9	1	.5	.5	78.2
97.2	1	.5	.5	78.7
97.9	1	.5	.5	79.2
98.0	1	.5	.5	79.7
98.1	1	.5	.5	80.2
98.3	1	.5	.5	80.7
98.5	1	.5	.5	81.2
99.8	1	.5	.5	81.7
99.9	1	.5	.5	82.2
100.7	1	.5	.5	82.7
101.1	1	.5	.5	83.2
102.8	2	1.0	1.0	84.2
103.6	2	1.0	1.0	85.1
104.6	1	.5	.5	85.6
105.7	1	.5	.5	86.1
106.9	1	.5	.5	86.6
109.0	1	.5	.5	87.1
109.1	1	.5	.5	87.6
109.5	1	.5	.5	88.1
109.6	1	.5	.5	88.6
110.2	1	.5	.5	89.1
110.7	1	.5	.5	89.6
111.1	1	.5	.5	90.1

ssf sum of skin folds

	Frequency	Percent	Valid Percent	Cumulative Percent
112.5	1	.5	.5	90.6
113.5	2	1.0	1.0	91.6
114.0	1	.5	.5	92.1
115.9	1	.5	.5	92.6
117.8	1	.5	.5	93.1
122.1	1	.5	.5	93.6
123.6	1	.5	.5	94.1
125.9	1	.5	.5	94.6
126.4	2	1.0	1.0	95.5
131.9	1	.5	.5	96.0
136.3	1	.5	.5	96.5
143.5	1	.5	.5	97.0
148.9	1	.5	.5	97.5
156.6	2	1.0	1.0	98.5
171.1	1	.5	.5	99.0
181.7	1	.5	.5	99.5
200.8	1	.5	.5	100.0
Total	202	100.0	100.0	

pcBfat percent Body fat

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 5.63	1	.5	.5	.5
5.80	1	.5	.5	1.0
5.90	1	.5	.5	1.5
5.93	1	.5	.5	2.0
6.00	2	1.0	1.0	3.0
6.03	1	.5	.5	3.5
6.06	2	1.0	1.0	4.5
6.10	1	.5	.5	5.0
6.16	1	.5	.5	5.4
6.20	1	.5	.5	5.9
6.26	1	.5	.5	6.4
6.33	2	1.0	1.0	7.4
6.43	1	.5	.5	7.9
6.46	1	.5	.5	8.4
6.53	1	.5	.5	8.9
6.56	2	1.0	1.0	9.9
6.59	1	.5	.5	10.4
6.76	1	.5	.5	10.9
6.82	1	.5	.5	11.4
6.86	1	.5	.5	11.9
6.92	1	.5	.5	12.4
6.96	1	.5	.5	12.9
6.99	1	.5	.5	13.4
7.06	1	.5	.5	13.9
7.16	1	.5	.5	14.4
7.19	2	1.0	1.0	15.3
7.22	1	.5	.5	15.8
7.29	1	.5	.5	16.3
7.35	2	1.0	1.0	17.3
7.42	1	.5	.5	17.8
7.49	1	.5	.5	18.3

pcBfat percent Body fat

	Frequency	Percent	Valid Percent	Cumulative Percent
7.52	1	.5	.5	18.8
7.68	1	.5	.5	19.3
7.72	1	.5	.5	19.8
7.82	1	.5	.5	20.3
7.88	1	.5	.5	20.8
8.07	1	.5	.5	21.3
8.18	1	.5	.5	21.8
8.44	1	.5	.5	22.3
8.45	1	.5	.5	22.8
8.47	1	.5	.5	23.3
8.51	3	1.5	1.5	24.8
8.54	1	.5	.5	25.2
8.56	1	.5	.5	25.7
8.61	1	.5	.5	26.2
8.64	1	.5	.5	26.7
8.77	1	.5	.5	27.2
8.84	2	1.0	1.0	28.2
8.87	2	1.0	1.0	29.2
8.94	1	.5	.5	29.7
8.97	2	1.0	1.0	30.7
9.00	1	.5	.5	31.2
9.02	1	.5	.5	31.7
9.03	1	.5	.5	32.2
9.10	1	.5	.5	32.7
9.17	1	.5	.5	33.2
9.20	2	1.0	1.0	34.2
9.36	1	.5	.5	34.7
9.40	2	1.0	1.0	35.6
9.50	1	.5	.5	36.1
9.53	1	.5	.5	36.6
9.56	3	1.5	1.5	38.1
9.79	1	.5	.5	38.6
9.86	1	.5	.5	39.1
9.89	1	.5	.5	39.6
9.91	1	.5	.5	40.1
10.05	2	1.0	1.0	41.1
10.12	1	.5	.5	41.6
10.15	1	.5	.5	42.1
10.16	1	.5	.5	42.6
10.25	1	.5	.5	43.1
10.48	1	.5	.5	43.6
10.53	1	.5	.5	44.1
10.64	1	.5	.5	44.6
10.74	1	.5	.5	45.0
10.81	1	.5	.5	45.5
11.05	1	.5	.5	46.0
11.07	2	1.0	1.0	47.0
11.22	1	.5	.5	47.5
11.29	1	.5	.5	48.0
11.47	1	.5	.5	48.5
11.50	1	.5	.5	49.0
11.63	1	.5	.5	49.5
11.64	1	.5	.5	50.0

pcBfat percent Body fat

	Frequency	Percent	Valid Percent	Cumulative Percent
11.66	1	.5	.5	50.5
11.72	1	.5	.5	51.0
11.77	1	.5	.5	51.5
11.79	1	.5	.5	52.0
11.85	1	.5	.5	52.5
11.95	1	.5	.5	53.0
12.16	1	.5	.5	53.5
12.20	1	.5	.5	54.0
12.39	1	.5	.5	54.5
12.55	1	.5	.5	55.0
12.61	1	.5	.5	55.4
12.78	1	.5	.5	55.9
12.92	1	.5	.5	56.4
13.06	1	.5	.5	56.9
13.35	1	.5	.5	57.4
13.46	1	.5	.5	57.9
13.49	1	.5	.5	58.4
13.61	1	.5	.5	58.9
13.91	1	.5	.5	59.4
13.93	1	.5	.5	59.9
13.97	1	.5	.5	60.4
14.26	1	.5	.5	60.9
14.52	1	.5	.5	61.4
14.53	1	.5	.5	61.9
14.69	1	.5	.5	62.4
14.98	1	.5	.5	62.9
15.01	1	.5	.5	63.4
15.07	1	.5	.5	63.9
15.31	1	.5	.5	64.4
15.58	1	.5	.5	64.9
15.59	1	.5	.5	65.3
15.95	1	.5	.5	65.8
16.20	1	.5	.5	66.3
16.25	1	.5	.5	66.8
16.38	1	.5	.5	67.3
16.58	1	.5	.5	67.8
16.86	1	.5	.5	68.3
17.07	1	.5	.5	68.8
17.22	1	.5	.5	69.3
17.24	1	.5	.5	69.8
17.41	1	.5	.5	70.3
17.51	1	.5	.5	70.8
17.64	1	.5	.5	71.3
17.71	2	1.0	1.0	72.3
17.89	1	.5	.5	72.8
17.93	1	.5	.5	73.3
17.95	1	.5	.5	73.8
18.04	1	.5	.5	74.3
18.08	2	1.0	1.0	75.2
18.14	1	.5	.5	75.7
18.48	1	.5	.5	76.2
18.72	1	.5	.5	76.7
18.77	1	.5	.5	77.2

pcBfat percent Body fat

	Frequency	Percent	Valid Percent	Cumulative Percent
19.17	1	.5	.5	77.7
19.20	1	.5	.5	78.2
19.26	1	.5	.5	78.7
19.35	1	.5	.5	79.2
19.39	1	.5	.5	79.7
19.51	1	.5	.5	80.2
19.61	1	.5	.5	80.7
19.63	1	.5	.5	81.2
19.64	1	.5	.5	81.7
19.75	1	.5	.5	82.2
19.83	1	.5	.5	82.7
19.88	1	.5	.5	83.2
19.94	1	.5	.5	83.7
19.99	1	.5	.5	84.2
20.10	1	.5	.5	84.7
20.12	1	.5	.5	85.1
20.43	1	.5	.5	85.6
20.86	1	.5	.5	86.1
21.30	2	1.0	1.0	87.1
21.32	1	.5	.5	87.6
21.47	1	.5	.5	88.1
21.79	1	.5	.5	88.6
22.25	1	.5	.5	89.1
22.39	1	.5	.5	89.6
22.43	1	.5	.5	90.1
22.62	1	.5	.5	90.6
23.01	2	1.0	1.0	91.6
23.11	1	.5	.5	92.1
23.30	1	.5	.5	92.6
23.66	1	.5	.5	93.1
23.70	2	1.0	1.0	94.1
24.69	1	.5	.5	94.6
24.88	1	.5	.5	95.0
24.97	1	.5	.5	95.5
25.16	1	.5	.5	96.0
25.26	1	.5	.5	96.5
26.50	1	.5	.5	97.0
26.57	1	.5	.5	97.5
26.65	1	.5	.5	98.0
26.78	1	.5	.5	98.5
28.83	1	.5	.5	99.0
30.10	1	.5	.5	99.5
35.52	1	.5	.5	100.0
Total	202	100.0	100.0	

lbm lean body mass, kg

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	34.36	1	.5	.5	.5
	38.30	1	.5	.5	1.0
	39.03	1	.5	.5	1.5
	41.54	1	.5	.5	2.0
	41.93	1	.5	.5	2.5
	42.15	1	.5	.5	3.0
	42.95	1	.5	.5	3.5
	42.96	1	.5	.5	4.0
	45.23	1	.5	.5	4.5
	46.12	1	.5	.5	5.0
	46.31	1	.5	.5	5.4
	46.52	1	.5	.5	5.9
	46.96	1	.5	.5	6.4
	47.09	1	.5	.5	6.9
	47.57	1	.5	.5	7.4
	48.00	1	.5	.5	7.9
	48.32	1	.5	.5	8.4
	48.33	1	.5	.5	8.9
	48.57	1	.5	.5	9.4
	48.76	1	.5	.5	9.9
	48.78	1	.5	.5	10.4
	49.13	1	.5	.5	10.9
	51.17	1	.5	.5	11.4
	51.48	1	.5	.5	11.9
	51.62	1	.5	.5	12.4
	51.75	1	.5	.5	12.9
	51.99	1	.5	.5	13.4
	52.23	1	.5	.5	13.9
	52.72	1	.5	.5	14.4
	52.78	1	.5	.5	14.9
	53.11	2	1.0	1.0	15.8
	53.14	1	.5	.5	16.3
	53.20	2	1.0	1.0	17.3
	53.41	1	.5	.5	17.8
	53.42	1	.5	.5	18.3
	53.44	1	.5	.5	18.8
	53.46	1	.5	.5	19.3
	53.54	1	.5	.5	19.8
	53.65	1	.5	.5	20.3
	53.71	1	.5	.5	20.8
	53.77	1	.5	.5	21.3
	54.00	1	.5	.5	21.8
	54.11	1	.5	.5	22.3
	54.18	1	.5	.5	22.8
	54.38	1	.5	.5	23.3
	54.41	1	.5	.5	23.8
	54.46	1	.5	.5	24.3
	54.57	1	.5	.5	24.8
	54.63	1	.5	.5	25.2
	54.78	1	.5	.5	25.7
	55.06	1	.5	.5	26.2
	55.35	1	.5	.5	26.7
	55.36	1	.5	.5	27.2

lbm lean body mass, kg

	Frequency	Percent	Valid Percent	Cumulative Percent
55.39	1	.5	.5	27.7
55.73	1	.5	.5	28.2
55.97	1	.5	.5	28.7
56.01	1	.5	.5	29.2
56.05	2	1.0	1.0	30.2
56.31	1	.5	.5	30.7
56.45	1	.5	.5	31.2
56.48	1	.5	.5	31.7
56.52	1	.5	.5	32.2
56.58	1	.5	.5	32.7
56.68	1	.5	.5	33.2
57.00	2	1.0	1.0	34.2
57.18	1	.5	.5	34.7
57.20	1	.5	.5	35.1
57.28	1	.5	.5	35.6
57.30	1	.5	.5	36.1
57.54	1	.5	.5	36.6
57.58	1	.5	.5	37.1
57.92	1	.5	.5	37.6
58.00	1	.5	.5	38.1
58.27	1	.5	.5	38.6
58.55	1	.5	.5	39.1
59.00	1	.5	.5	39.6
59.33	1	.5	.5	40.1
59.59	1	.5	.5	40.6
59.89	1	.5	.5	41.1
60.05	1	.5	.5	41.6
60.17	1	.5	.5	42.1
60.22	1	.5	.5	42.6
61.00	1	.5	.5	43.1
61.29	1	.5	.5	43.6
61.46	1	.5	.5	44.1
61.63	1	.5	.5	44.6
61.70	1	.5	.5	45.0
61.85	1	.5	.5	45.5
62.00	3	1.5	1.5	47.0
62.39	1	.5	.5	47.5
62.46	1	.5	.5	48.0
62.96	1	.5	.5	48.5
63.00	2	1.0	1.0	49.5
63.03	1	.5	.5	50.0
63.04	1	.5	.5	50.5
63.05	1	.5	.5	51.0
63.32	1	.5	.5	51.5
63.39	1	.5	.5	52.0
64.00	1	.5	.5	52.5
64.62	1	.5	.5	53.0
65.00	2	1.0	1.0	54.0
65.45	1	.5	.5	54.5
66.00	4	2.0	2.0	56.4
66.24	1	.5	.5	56.9
66.85	1	.5	.5	57.4
67.00	5	2.5	2.5	59.9

lbm lean body mass, kg

	Frequency	Percent	Valid Percent	Cumulative Percent
68.00	6	3.0	3.0	62.9
68.53	1	.5	.5	63.4
68.86	1	.5	.5	63.9
69.00	4	2.0	2.0	65.8
70.00	3	1.5	1.5	67.3
71.00	3	1.5	1.5	68.8
72.00	4	2.0	2.0	70.8
72.98	1	.5	.5	71.3
73.00	2	1.0	1.0	72.3
74.00	5	2.5	2.5	74.8
75.00	3	1.5	1.5	76.2
76.00	1	.5	.5	76.7
77.00	5	2.5	2.5	79.2
78.00	9	4.5	4.5	83.7
79.00	4	2.0	2.0	85.6
80.00	3	1.5	1.5	87.1
81.00	1	.5	.5	87.6
82.00	7	3.5	3.5	91.1
83.00	3	1.5	1.5	92.6
85.00	2	1.0	1.0	93.6
86.00	2	1.0	1.0	94.6
87.00	2	1.0	1.0	95.5
88.00	2	1.0	1.0	96.5
89.00	1	.5	.5	97.0
90.00	2	1.0	1.0	98.0
91.00	1	.5	.5	98.5
97.00	1	.5	.5	99.0
102.00	1	.5	.5	99.5
106.00	1	.5	.5	100.0
Total	202	100.0	100.0	

ht height, cm

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	148.9	1	.5	.5	.5
	149.0	1	.5	.5	1.0
	156.0	1	.5	.5	1.5
	156.9	1	.5	.5	2.0
	157.9	1	.5	.5	2.5
	158.9	1	.5	.5	3.0
	162.0	2	1.0	1.0	4.0
	162.5	1	.5	.5	4.5
	163.0	1	.5	.5	5.0
	163.9	1	.5	.5	5.4
	165.0	1	.5	.5	5.9
	165.3	1	.5	.5	6.4
	166.1	1	.5	.5	6.9
	166.7	1	.5	.5	7.4
	167.3	1	.5	.5	7.9
	167.9	1	.5	.5	8.4
	168.0	1	.5	.5	8.9
	168.6	1	.5	.5	9.4
	169.1	2	1.0	1.0	10.4
	169.8	1	.5	.5	10.9
	169.9	1	.5	.5	11.4
	170.0	2	1.0	1.0	12.4
	170.3	1	.5	.5	12.9
	170.8	1	.5	.5	13.4
	171.0	1	.5	.5	13.9
	171.1	1	.5	.5	14.4
	171.3	1	.5	.5	14.9
	171.4	2	1.0	1.0	15.8
	171.6	1	.5	.5	16.3
	171.7	1	.5	.5	16.8
	172.0	1	.5	.5	17.3
	172.2	1	.5	.5	17.8
	172.3	1	.5	.5	18.3
	172.5	1	.5	.5	18.8
	172.6	1	.5	.5	19.3
	172.7	2	1.0	1.0	20.3
	173.0	2	1.0	1.0	21.3
	173.3	2	1.0	1.0	22.3
	173.5	1	.5	.5	22.8
	173.6	1	.5	.5	23.3
	173.7	1	.5	.5	23.8
	173.8	1	.5	.5	24.3
	174.0	5	2.5	2.5	26.7
	174.1	2	1.0	1.0	27.7
	174.4	1	.5	.5	28.2
	174.6	1	.5	.5	28.7
	174.7	1	.5	.5	29.2
	174.9	1	.5	.5	29.7
	175.0	4	2.0	2.0	31.7
	175.3	1	.5	.5	32.2
	175.6	1	.5	.5	32.7
	176.0	5	2.5	2.5	35.1
	176.2	1	.5	.5	35.6

ht height, cm

	Frequency	Percent	Valid Percent	Cumulative Percent
176.5	1	.5	.5	36.1
176.8	1	.5	.5	36.6
177.0	1	.5	.5	37.1
177.3	2	1.0	1.0	38.1
177.5	2	1.0	1.0	39.1
177.8	1	.5	.5	39.6
177.9	1	.5	.5	40.1
178.0	3	1.5	1.5	41.6
178.2	1	.5	.5	42.1
178.4	1	.5	.5	42.6
178.5	2	1.0	1.0	43.6
178.6	1	.5	.5	44.1
178.7	1	.5	.5	44.6
178.9	1	.5	.5	45.0
179.1	1	.5	.5	45.5
179.3	2	1.0	1.0	46.5
179.5	1	.5	.5	47.0
179.6	4	2.0	2.0	49.0
179.7	3	1.5	1.5	50.5
179.8	1	.5	.5	51.0
179.9	2	1.0	1.0	52.0
180.1	2	1.0	1.0	53.0
180.2	4	2.0	2.0	55.0
180.5	2	1.0	1.0	55.9
180.6	1	.5	.5	56.4
180.9	1	.5	.5	56.9
181.0	2	1.0	1.0	57.9
181.3	1	.5	.5	58.4
181.8	1	.5	.5	58.9
182.1	1	.5	.5	59.4
182.6	1	.5	.5	59.9
182.7	2	1.0	1.0	60.9
183.0	3	1.5	1.5	62.4
183.1	1	.5	.5	62.9
183.3	2	1.0	1.0	63.9
183.5	1	.5	.5	64.4
183.9	2	1.0	1.0	65.3
184.0	1	.5	.5	65.8
184.4	1	.5	.5	66.3
184.6	2	1.0	1.0	67.3
184.7	1	.5	.5	67.8
184.9	1	.5	.5	68.3
185.0	2	1.0	1.0	69.3
185.1	1	.5	.5	69.8
185.2	1	.5	.5	70.3
185.3	1	.5	.5	70.8
185.4	1	.5	.5	71.3
185.5	1	.5	.5	71.8
185.6	3	1.5	1.5	73.3
186.0	2	1.0	1.0	74.3
186.1	1	.5	.5	74.8
186.2	1	.5	.5	75.2
186.3	1	.5	.5	75.7

ht height, cm

	Frequency	Percent	Valid Percent	Cumulative Percent
186.6	1	.5	.5	76.2
187.1	1	.5	.5	76.7
187.2	1	.5	.5	77.2
187.3	1	.5	.5	77.7
187.7	1	.5	.5	78.2
187.9	1	.5	.5	78.7
188.1	1	.5	.5	79.2
188.3	1	.5	.5	79.7
188.7	1	.5	.5	80.2
189.0	3	1.5	1.5	81.7
189.1	1	.5	.5	82.2
189.2	1	.5	.5	82.7
189.7	1	.5	.5	83.2
190.3	1	.5	.5	83.7
190.4	1	.5	.5	84.2
190.5	1	.5	.5	84.7
190.7	1	.5	.5	85.1
190.8	1	.5	.5	85.6
191.0	2	1.0	1.0	86.6
191.5	1	.5	.5	87.1
192.0	2	1.0	1.0	88.1
192.6	1	.5	.5	88.6
192.7	2	1.0	1.0	89.6
192.8	1	.5	.5	90.1
193.0	1	.5	.5	90.6
193.4	3	1.5	1.5	92.1
193.9	1	.5	.5	92.6
194.1	2	1.0	1.0	93.6
194.4	1	.5	.5	94.1
194.6	1	.5	.5	94.6
195.2	1	.5	.5	95.0
195.3	1	.5	.5	95.5
195.4	1	.5	.5	96.0
195.9	1	.5	.5	96.5
196.6	1	.5	.5	97.0
197.5	1	.5	.5	97.5
198.0	1	.5	.5	98.0
198.7	1	.5	.5	98.5
200.4	1	.5	.5	99.0
203.4	1	.5	.5	99.5
209.4	1	.5	.5	100.0
Total	202	100.0	100.0	

wt weight, kg

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	37.8	1	.5	.5	.5
	43.8	1	.5	.5	1.0
	45.1	1	.5	.5	1.5
	45.8	1	.5	.5	2.0
	47.4	1	.5	.5	2.5
	47.8	1	.5	.5	3.0
	49.2	1	.5	.5	3.5
	49.8	1	.5	.5	4.0
	50.9	1	.5	.5	4.5
	51.9	1	.5	.5	5.0
	52.5	1	.5	.5	5.4
	52.8	1	.5	.5	5.9
	53.6	1	.5	.5	6.4
	53.8	1	.5	.5	6.9
	55.1	1	.5	.5	7.4
	56.0	1	.5	.5	7.9
	56.1	1	.5	.5	8.4
	57.3	2	1.0	1.0	9.4
	57.4	1	.5	.5	9.9
	58.0	1	.5	.5	10.4
	59.0	1	.5	.5	10.9
	59.6	1	.5	.5	11.4
	59.7	1	.5	.5	11.9
	59.9	1	.5	.5	12.4
	60.0	2	1.0	1.0	13.4
	60.1	1	.5	.5	13.9
	60.6	1	.5	.5	14.4
	60.7	1	.5	.5	14.9
	61.0	1	.5	.5	15.3
	61.1	1	.5	.5	15.8
	61.9	1	.5	.5	16.3
	62.3	2	1.0	1.0	17.3
	62.9	2	1.0	1.0	18.3
	63.0	2	1.0	1.0	19.3
	63.7	2	1.0	1.0	20.3
	63.9	1	.5	.5	20.8
	64.1	1	.5	.5	21.3
	64.6	1	.5	.5	21.8
	64.7	1	.5	.5	22.3
	64.8	1	.5	.5	22.8
	65.2	1	.5	.5	23.3
	66.0	1	.5	.5	23.8
	66.3	1	.5	.5	24.3
	66.4	1	.5	.5	24.8
	66.5	1	.5	.5	25.2
	66.6	1	.5	.5	25.7
	66.9	1	.5	.5	26.2
	67.0	1	.5	.5	26.7
	67.1	2	1.0	1.0	27.7
	67.2	1	.5	.5	28.2
	67.4	1	.5	.5	28.7
	67.5	1	.5	.5	29.2
	67.9	1	.5	.5	29.7

wt weight, kg

	Frequency	Percent	Valid Percent	Cumulative Percent
68.2	2	1.0	1.0	30.7
68.7	1	.5	.5	31.2
68.8	2	1.0	1.0	32.2
69.1	2	1.0	1.0	33.2
69.2	1	.5	.5	33.7
69.5	1	.5	.5	34.2
69.7	2	1.0	1.0	35.1
70.0	1	.5	.5	35.6
70.3	1	.5	.5	36.1
70.5	2	1.0	1.0	37.1
70.7	1	.5	.5	37.6
70.8	1	.5	.5	38.1
71.0	2	1.0	1.0	39.1
71.1	1	.5	.5	39.6
71.3	1	.5	.5	40.1
71.4	2	1.0	1.0	41.1
71.5	1	.5	.5	41.6
71.8	2	1.0	1.0	42.6
72.1	1	.5	.5	43.1
72.3	1	.5	.5	43.6
72.9	3	1.5	1.5	45.0
73.2	1	.5	.5	45.5
73.6	1	.5	.5	46.0
73.8	1	.5	.5	46.5
74.0	1	.5	.5	47.0
74.1	2	1.0	1.0	48.0
74.3	2	1.0	1.0	49.0
74.4	4	2.0	2.0	51.0
74.5	1	.5	.5	51.5
74.8	2	1.0	1.0	52.5
74.9	2	1.0	1.0	53.5
75.0	1	.5	.5	54.0
75.2	2	1.0	1.0	55.0
75.3	1	.5	.5	55.4
75.4	1	.5	.5	55.9
75.5	2	1.0	1.0	56.9
75.6	1	.5	.5	57.4
75.9	1	.5	.5	57.9
76.1	1	.5	.5	58.4
76.3	1	.5	.5	58.9
76.7	1	.5	.5	59.4
76.8	1	.5	.5	59.9
77.5	1	.5	.5	60.4
77.7	1	.5	.5	60.9
77.8	1	.5	.5	61.4
78.0	2	1.0	1.0	62.4
78.1	1	.5	.5	62.9
78.5	1	.5	.5	63.4
78.7	1	.5	.5	63.9
78.9	3	1.5	1.5	65.3
79.0	1	.5	.5	65.8
79.3	1	.5	.5	66.3
79.4	1	.5	.5	66.8

wt weight, kg

	Frequency	Percent	Valid Percent	Cumulative Percent
79.5	1	.5	.5	67.3
79.6	1	.5	.5	67.8
79.7	1	.5	.5	68.3
80.0	1	.5	.5	68.8
80.2	1	.5	.5	69.3
80.5	2	1.0	1.0	70.3
80.7	1	.5	.5	70.8
82.8	1	.5	.5	71.3
82.9	1	.5	.5	71.8
83.0	2	1.0	1.0	72.8
83.5	1	.5	.5	73.3
83.8	1	.5	.5	73.8
83.9	2	1.0	1.0	74.8
84.2	1	.5	.5	75.2
84.7	1	.5	.5	75.7
85.0	1	.5	.5	76.2
85.3	2	1.0	1.0	77.2
85.4	2	1.0	1.0	78.2
85.7	1	.5	.5	78.7
86.2	1	.5	.5	79.2
86.8	1	.5	.5	79.7
87.0	1	.5	.5	80.2
87.2	1	.5	.5	80.7
87.3	1	.5	.5	81.2
87.5	2	1.0	1.0	82.2
87.6	1	.5	.5	82.7
87.9	1	.5	.5	83.2
88.2	1	.5	.5	83.7
88.6	1	.5	.5	84.2
89.5	1	.5	.5	84.7
89.8	1	.5	.5	85.1
90.0	1	.5	.5	85.6
90.3	2	1.0	1.0	86.6
91.1	1	.5	.5	87.1
92.0	1	.5	.5	87.6
92.2	1	.5	.5	88.1
92.3	1	.5	.5	88.6
93.2	1	.5	.5	89.1
93.5	2	1.0	1.0	90.1
94.2	2	1.0	1.0	91.1
94.6	1	.5	.5	91.6
94.7	2	1.0	1.0	92.6
94.8	2	1.0	1.0	93.6
96.3	1	.5	.5	94.1
96.9	1	.5	.5	94.6
97.0	1	.5	.5	95.0
97.9	2	1.0	1.0	96.0
98.0	1	.5	.5	96.5
100.2	1	.5	.5	97.0
101.0	1	.5	.5	97.5
102.7	1	.5	.5	98.0
108.2	1	.5	.5	98.5
111.3	1	.5	.5	99.0

wt weight, kg

	Frequency	Percent	Valid Percent	Cumulative Percent
113.7	1	.5	.5	99.5
123.2	1	.5	.5	100.0
Total	202	100.0	100.0	

sex Sex

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid f	100	49.5	49.5	49.5
m	102	50.5	50.5	100.0
Total	202	100.0	100.0	

sport Sport

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid B_Ball	25	12.4	12.4	12.4
Field	19	9.4	9.4	21.8
Gym	4	2.0	2.0	23.8
Netball	23	11.4	11.4	35.1
Row	37	18.3	18.3	53.5
Swim	22	10.9	10.9	64.4
T_400m	29	14.4	14.4	78.7
T_Sprnt	15	7.4	7.4	86.1
Tennis	11	5.4	5.4	91.6
W_Polo	17	8.4	8.4	100.0
Total	202	100.0	100.0	

sex_numeric Sex

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 1 f	100	49.5	49.5	49.5
2 m	102	50.5	50.5	100.0
Total	202	100.0	100.0	

sport_numeric Sport

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 1 B_Ball	25	12.4	12.4	12.4
2 Field	19	9.4	9.4	21.8
3 Gym	4	2.0	2.0	23.8
4 Netball	23	11.4	11.4	35.1
5 Row	37	18.3	18.3	53.5
6 Swim	22	10.9	10.9	64.4
7 T_400m	29	14.4	14.4	78.7
8 T_Sprnt	15	7.4	7.4	86.1
9 Tennis	11	5.4	5.4	91.6
10 W_Polo	17	8.4	8.4	100.0
Total	202	100.0	100.0	

sport_abbreviated

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.00 Swim	22	10.9	28.9	28.9
	2.00 Track > 400m	29	14.4	38.2	67.1
	3.00 Basketball	25	12.4	32.9	100.0
	Total	76	37.6	100.0	
Missing	System	126	62.4		
Total		202	100.0		

freq all /histogram.

Frequencies

Notes

Output Created		12-AUG-2013 14:37:52
Comments		
Input	Data	/Users/jeromy/teaching/org-research-methods/2013/content/03-group-differences/exercises/data/ais.sav
	Active Dataset	DataSet2
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data ...	202
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics are based on all cases with valid data.
Syntax		freq all /histogram.
Resources	Processor Time	00:00:02.94
	Elapsed Time	00:00:02.00

[DataSet2] /Users/jeromy/teaching/org-research-methods/2013/content/03-group-differences/exercises/data/ais.sav

Warnings

sex Sex is a string so a histogram cannot be produced.
sport Sport is a string so a histogram cannot be produced.

Statistics

		rcc red blood cell count, in	wcc while blood cell count, in per liter	hc hematocrit, percent	hg hemaglobin concentration, in g per decaliter	ferr plasma ferritins, ng	bmi Body mass index, kg
N	Valid	202	202	202	202	202	202
	Missing	0	0	0	0	0	0

Statistics

		ssf sum of skin folds	pcBfat percent Body fat	lbn lean body mass, kg	ht height, cm	wt weight, kg	sex Sex	sport Sport
N	Valid	202	202	202	202	202	202	202
	Missing	0	0	0	0	0	0	0

Statistics

		sex_numeric Sex	sport_numer ic Sport	sport_abbrev iated
N	Valid	202	202	76
	Missing	0	0	126

Frequency Table

rcc red blood cell count, in

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	3.80	1	.5	.5	.5
	3.90	2	1.0	1.0	1.5
	3.91	1	.5	.5	2.0
	3.95	2	1.0	1.0	3.0
	3.96	2	1.0	1.0	4.0
	4.00	1	.5	.5	4.5
	4.02	1	.5	.5	5.0
	4.03	1	.5	.5	5.4
	4.06	1	.5	.5	5.9
	4.07	1	.5	.5	6.4
	4.08	1	.5	.5	6.9
	4.09	2	1.0	1.0	7.9
	4.10	1	.5	.5	8.4
	4.11	2	1.0	1.0	9.4
	4.12	1	.5	.5	9.9
	4.13	2	1.0	1.0	10.9
	4.14	1	.5	.5	11.4
	4.15	1	.5	.5	11.9
	4.16	2	1.0	1.0	12.9
	4.17	2	1.0	1.0	13.9
	4.19	1	.5	.5	14.4
	4.20	2	1.0	1.0	15.3
	4.21	1	.5	.5	15.8
	4.23	2	1.0	1.0	16.8
	4.24	2	1.0	1.0	17.8
	4.25	1	.5	.5	18.3
	4.26	2	1.0	1.0	19.3
	4.27	2	1.0	1.0	20.3
	4.30	1	.5	.5	20.8
	4.31	2	1.0	1.0	21.8
	4.32	3	1.5	1.5	23.3
	4.35	1	.5	.5	23.8
	4.36	2	1.0	1.0	24.8
	4.37	1	.5	.5	25.2
	4.38	2	1.0	1.0	26.2

rcc red blood cell count, in

	Frequency	Percent	Valid Percent	Cumulative Percent
4.39	1	.5	.5	26.7
4.40	3	1.5	1.5	28.2
4.41	3	1.5	1.5	29.7
4.42	2	1.0	1.0	30.7
4.44	3	1.5	1.5	32.2
4.45	2	1.0	1.0	33.2
4.46	5	2.5	2.5	35.6
4.48	1	.5	.5	36.1
4.49	1	.5	.5	36.6
4.50	2	1.0	1.0	37.6
4.51	4	2.0	2.0	39.6
4.52	1	.5	.5	40.1
4.53	1	.5	.5	40.6
4.54	1	.5	.5	41.1
4.55	1	.5	.5	41.6
4.56	1	.5	.5	42.1
4.57	1	.5	.5	42.6
4.58	1	.5	.5	43.1
4.62	1	.5	.5	43.6
4.63	3	1.5	1.5	45.0
4.64	1	.5	.5	45.5
4.66	1	.5	.5	46.0
4.68	1	.5	.5	46.5
4.71	4	2.0	2.0	48.5
4.73	1	.5	.5	49.0
4.75	2	1.0	1.0	50.0
4.76	1	.5	.5	50.5
4.77	2	1.0	1.0	51.5
4.78	1	.5	.5	52.0
4.81	2	1.0	1.0	53.0
4.82	2	1.0	1.0	54.0
4.83	4	2.0	2.0	55.9
4.84	1	.5	.5	56.4
4.86	2	1.0	1.0	57.4
4.87	6	3.0	3.0	60.4
4.88	1	.5	.5	60.9
4.89	2	1.0	1.0	61.9
4.90	2	1.0	1.0	62.9
4.91	2	1.0	1.0	63.9
4.92	1	.5	.5	64.4
4.93	2	1.0	1.0	65.3
4.94	1	.5	.5	65.8
4.95	2	1.0	1.0	66.8
4.96	1	.5	.5	67.3
4.97	2	1.0	1.0	68.3
4.98	1	.5	.5	68.8
4.99	1	.5	.5	69.3
5.00	3	1.5	1.5	70.8
5.01	3	1.5	1.5	72.3
5.02	2	1.0	1.0	73.3
5.03	4	2.0	2.0	75.2
5.04	2	1.0	1.0	76.2
5.08	1	.5	.5	76.7

rcc red blood cell count, in

	Frequency	Percent	Valid Percent	Cumulative Percent
5.09	3	1.5	1.5	78.2
5.10	1	.5	.5	78.7
5.11	5	2.5	2.5	81.2
5.13	4	2.0	2.0	83.2
5.16	4	2.0	2.0	85.1
5.17	2	1.0	1.0	86.1
5.18	1	.5	.5	86.6
5.21	2	1.0	1.0	87.6
5.22	2	1.0	1.0	88.6
5.24	2	1.0	1.0	89.6
5.25	1	.5	.5	90.1
5.29	1	.5	.5	90.6
5.31	1	.5	.5	91.1
5.32	1	.5	.5	91.6
5.33	2	1.0	1.0	92.6
5.34	4	2.0	2.0	94.6
5.38	1	.5	.5	95.0
5.40	1	.5	.5	95.5
5.48	2	1.0	1.0	96.5
5.49	1	.5	.5	97.0
5.50	1	.5	.5	97.5
5.59	1	.5	.5	98.0
5.66	1	.5	.5	98.5
5.69	1	.5	.5	99.0
5.93	1	.5	.5	99.5
6.72	1	.5	.5	100.0
Total	202	100.0	100.0	

wcc while blood cell count, in per liter

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	3.3	1	.5	.5	.5
	3.9	1	.5	.5	1.0
	4.0	2	1.0	1.0	2.0
	4.1	1	.5	.5	2.5
	4.2	1	.5	.5	3.0
	4.3	2	1.0	1.0	4.0
	4.4	2	1.0	1.0	5.0
	4.5	2	1.0	1.0	5.9
	4.6	2	1.0	1.0	6.9
	4.7	1	.5	.5	7.4
	4.8	2	1.0	1.0	8.4
	4.9	2	1.0	1.0	9.4
	5.0	4	2.0	2.0	11.4
	5.1	2	1.0	1.0	12.4
	5.2	2	1.0	1.0	13.4
	5.3	5	2.5	2.5	15.8
	5.4	1	.5	.5	16.3
	5.5	2	1.0	1.0	17.3
	5.6	2	1.0	1.0	18.3
	5.7	2	1.0	1.0	19.3
	5.8	8	4.0	4.0	23.3
	5.9	5	2.5	2.5	25.7
	6.0	6	3.0	3.0	28.7
	6.1	5	2.5	2.5	31.2
	6.2	4	2.0	2.0	33.2
	6.3	4	2.0	2.0	35.1
	6.4	11	5.4	5.4	40.6
	6.5	2	1.0	1.0	41.6
	6.6	9	4.5	4.5	46.0
	6.7	3	1.5	1.5	47.5
	6.8	5	2.5	2.5	50.0
	6.9	4	2.0	2.0	52.0
	7.0	2	1.0	1.0	53.0
	7.1	5	2.5	2.5	55.4
	7.2	5	2.5	2.5	57.9
	7.3	6	3.0	3.0	60.9
	7.4	2	1.0	1.0	61.9
	7.5	8	4.0	4.0	65.8
	7.6	7	3.5	3.5	69.3
	7.8	2	1.0	1.0	70.3
	7.9	2	1.0	1.0	71.3
	8.0	2	1.0	1.0	72.3
	8.1	2	1.0	1.0	73.3
	8.2	3	1.5	1.5	74.8
	8.3	6	3.0	3.0	77.7
	8.4	4	2.0	2.0	79.7
	8.5	2	1.0	1.0	80.7
	8.6	1	.5	.5	81.2
	8.7	1	.5	.5	81.7
	8.8	1	.5	.5	82.2
	8.9	6	3.0	3.0	85.1
	9.0	4	2.0	2.0	87.1
	9.1	2	1.0	1.0	88.1

wcc while blood cell count, in per liter

	Frequency	Percent	Valid Percent	Cumulative Percent
9.2	1	.5	.5	88.6
9.3	4	2.0	2.0	90.6
9.5	3	1.5	1.5	92.1
9.6	2	1.0	1.0	93.1
9.7	1	.5	.5	93.6
9.8	1	.5	.5	94.1
10.0	1	.5	.5	94.6
10.1	2	1.0	1.0	95.5
10.2	1	.5	.5	96.0
10.6	1	.5	.5	96.5
10.7	1	.5	.5	97.0
10.8	1	.5	.5	97.5
10.9	1	.5	.5	98.0
12.7	1	.5	.5	98.5
12.9	1	.5	.5	99.0
13.3	1	.5	.5	99.5
14.3	1	.5	.5	100.0
Total	202	100.0	100.0	

hc hematocrit, percent

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 35.9	1	.5	.5	.5
36.0	1	.5	.5	1.0
36.3	1	.5	.5	1.5
36.4	1	.5	.5	2.0
36.5	2	1.0	1.0	3.0
36.6	2	1.0	1.0	4.0
36.9	1	.5	.5	4.5
37.3	1	.5	.5	5.0
37.4	2	1.0	1.0	5.9
37.5	2	1.0	1.0	6.9
37.6	2	1.0	1.0	7.9
37.7	4	2.0	2.0	9.9
37.8	1	.5	.5	10.4
38.0	1	.5	.5	10.9
38.2	3	1.5	1.5	12.4
38.3	2	1.0	1.0	13.4
38.4	2	1.0	1.0	14.4
38.7	2	1.0	1.0	15.3
38.8	1	.5	.5	15.8
38.9	2	1.0	1.0	16.8
39.0	1	.5	.5	17.3
39.1	1	.5	.5	17.8
39.2	1	.5	.5	18.3
39.5	2	1.0	1.0	19.3
39.6	1	.5	.5	19.8
39.7	3	1.5	1.5	21.3
39.8	2	1.0	1.0	22.3
39.9	1	.5	.5	22.8
40.1	1	.5	.5	23.3
40.3	2	1.0	1.0	24.3
40.4	1	.5	.5	24.8

hc hematocrit, percent

	Frequency	Percent	Valid Percent	Cumulative Percent
40.6	2	1.0	1.0	25.7
40.7	2	1.0	1.0	26.7
40.8	1	.5	.5	27.2
40.9	2	1.0	1.0	28.2
41.0	1	.5	.5	28.7
41.1	4	2.0	2.0	30.7
41.2	2	1.0	1.0	31.7
41.4	5	2.5	2.5	34.2
41.5	2	1.0	1.0	35.1
41.6	3	1.5	1.5	36.6
41.8	3	1.5	1.5	38.1
42.0	1	.5	.5	38.6
42.1	2	1.0	1.0	39.6
42.2	3	1.5	1.5	41.1
42.5	1	.5	.5	41.6
42.6	3	1.5	1.5	43.1
42.7	3	1.5	1.5	44.6
42.8	3	1.5	1.5	46.0
42.9	2	1.0	1.0	47.0
43.0	3	1.5	1.5	48.5
43.2	1	.5	.5	49.0
43.3	1	.5	.5	49.5
43.5	2	1.0	1.0	50.5
43.6	3	1.5	1.5	52.0
43.7	2	1.0	1.0	53.0
43.8	5	2.5	2.5	55.4
44.0	2	1.0	1.0	56.4
44.1	3	1.5	1.5	57.9
44.2	1	.5	.5	58.4
44.3	2	1.0	1.0	59.4
44.4	2	1.0	1.0	60.4
44.5	2	1.0	1.0	61.4
44.7	2	1.0	1.0	62.4
44.8	4	2.0	2.0	64.4
44.9	4	2.0	2.0	66.3
45.0	1	.5	.5	66.8
45.1	2	1.0	1.0	67.8
45.2	3	1.5	1.5	69.3
45.3	5	2.5	2.5	71.8
45.4	3	1.5	1.5	73.3
45.5	3	1.5	1.5	74.8
45.6	2	1.0	1.0	75.7
45.7	1	.5	.5	76.2
45.8	1	.5	.5	76.7
45.9	1	.5	.5	77.2
46.0	3	1.5	1.5	78.7
46.1	2	1.0	1.0	79.7
46.2	2	1.0	1.0	80.7
46.3	4	2.0	2.0	82.7
46.5	3	1.5	1.5	84.2
46.6	3	1.5	1.5	85.6
46.8	3	1.5	1.5	87.1
46.9	1	.5	.5	87.6

hc hematocrit, percent

	Frequency	Percent	Valid Percent	Cumulative Percent
47.0	1	.5	.5	88.1
47.1	1	.5	.5	88.6
47.3	1	.5	.5	89.1
47.5	3	1.5	1.5	90.6
47.6	1	.5	.5	91.1
47.7	2	1.0	1.0	92.1
47.8	1	.5	.5	92.6
47.9	1	.5	.5	93.1
48.0	1	.5	.5	93.6
48.1	1	.5	.5	94.1
48.2	2	1.0	1.0	95.0
48.3	1	.5	.5	95.5
48.6	1	.5	.5	96.0
49.1	1	.5	.5	96.5
49.4	1	.5	.5	97.0
49.5	1	.5	.5	97.5
49.7	1	.5	.5	98.0
49.8	1	.5	.5	98.5
50.2	1	.5	.5	99.0
50.5	1	.5	.5	99.5
59.7	1	.5	.5	100.0
Total	202	100.0	100.0	

hg hemaglobin concentration, in g per decaliter

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 11.6	1	.5	.5	.5
11.8	1	.5	.5	1.0
12.0	1	.5	.5	1.5
12.1	2	1.0	1.0	2.5
12.3	3	1.5	1.5	4.0
12.4	3	1.5	1.5	5.4
12.5	6	3.0	3.0	8.4
12.6	3	1.5	1.5	9.9
12.7	6	3.0	3.0	12.9
12.8	3	1.5	1.5	14.4
12.9	2	1.0	1.0	15.3
13.0	3	1.5	1.5	16.8
13.1	2	1.0	1.0	17.8
13.2	4	2.0	2.0	19.8
13.3	4	2.0	2.0	21.8
13.4	3	1.5	1.5	23.3
13.5	5	2.5	2.5	25.7
13.6	2	1.0	1.0	26.7
13.7	3	1.5	1.5	28.2
13.8	2	1.0	1.0	29.2
13.9	5	2.5	2.5	31.7
14.0	8	4.0	4.0	35.6
14.1	4	2.0	2.0	37.6
14.2	1	.5	.5	38.1
14.3	6	3.0	3.0	41.1
14.4	7	3.5	3.5	44.6
14.5	6	3.0	3.0	47.5

hg hemaglobin concentration, in g per decaliter

	Frequency	Percent	Valid Percent	Cumulative Percent
14.6	1	.5	.5	48.0
14.7	9	4.5	4.5	52.5
14.8	8	4.0	4.0	56.4
14.9	6	3.0	3.0	59.4
15.0	9	4.5	4.5	63.9
15.1	3	1.5	1.5	65.3
15.2	7	3.5	3.5	68.8
15.3	2	1.0	1.0	69.8
15.4	5	2.5	2.5	72.3
15.5	5	2.5	2.5	74.8
15.6	6	3.0	3.0	77.7
15.7	4	2.0	2.0	79.7
15.8	7	3.5	3.5	83.2
15.9	10	5.0	5.0	88.1
16.0	1	.5	.5	88.6
16.1	3	1.5	1.5	90.1
16.2	4	2.0	2.0	92.1
16.3	3	1.5	1.5	93.6
16.4	1	.5	.5	94.1
16.5	3	1.5	1.5	95.5
16.7	1	.5	.5	96.0
16.8	1	.5	.5	96.5
17.2	2	1.0	1.0	97.5
17.3	1	.5	.5	98.0
17.7	1	.5	.5	98.5
18.0	1	.5	.5	99.0
18.5	1	.5	.5	99.5
19.2	1	.5	.5	100.0
Total	202	100.0	100.0	

ferr plasma ferritins, ng

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	8	1	.5	.5	.5
	12	1	.5	.5	1.0
	13	1	.5	.5	1.5
	16	1	.5	.5	2.0
	19	1	.5	.5	2.5
	20	2	1.0	1.0	3.5
	21	2	1.0	1.0	4.5
	22	3	1.5	1.5	5.9
	25	1	.5	.5	6.4
	26	2	1.0	1.0	7.4
	27	1	.5	.5	7.9
	29	3	1.5	1.5	9.4
	30	4	2.0	2.0	11.4
	32	2	1.0	1.0	12.4
	33	1	.5	.5	12.9
	34	3	1.5	1.5	14.4
	35	2	1.0	1.0	15.3
	36	4	2.0	2.0	17.3
	37	1	.5	.5	17.8
	38	2	1.0	1.0	18.8
	39	3	1.5	1.5	20.3
	40	4	2.0	2.0	22.3
	41	6	3.0	3.0	25.2
	42	1	.5	.5	25.7
	43	5	2.5	2.5	28.2
	44	5	2.5	2.5	30.7
	45	1	.5	.5	31.2
	46	2	1.0	1.0	32.2
	48	2	1.0	1.0	33.2
	49	1	.5	.5	33.7
	50	4	2.0	2.0	35.6
	51	2	1.0	1.0	36.6
	52	1	.5	.5	37.1
	53	4	2.0	2.0	39.1
	54	1	.5	.5	39.6
	55	2	1.0	1.0	40.6
	56	1	.5	.5	41.1
	57	1	.5	.5	41.6
	58	5	2.5	2.5	44.1
	59	2	1.0	1.0	45.0
	60	2	1.0	1.0	46.0
	61	2	1.0	1.0	47.0
	62	1	.5	.5	47.5
	63	1	.5	.5	48.0
	64	3	1.5	1.5	49.5
	65	1	.5	.5	50.0
	66	2	1.0	1.0	51.0
	67	1	.5	.5	51.5
	68	2	1.0	1.0	52.5
	69	2	1.0	1.0	53.5
	70	1	.5	.5	54.0
	71	3	1.5	1.5	55.4
	72	3	1.5	1.5	56.9

ferr plasma ferritins, ng

	Frequency	Percent	Valid Percent	Cumulative Percent
73	4	2.0	2.0	58.9
74	1	.5	.5	59.4
76	2	1.0	1.0	60.4
77	1	.5	.5	60.9
78	2	1.0	1.0	61.9
80	2	1.0	1.0	62.9
82	2	1.0	1.0	63.9
84	1	.5	.5	64.4
85	1	.5	.5	64.9
86	2	1.0	1.0	65.8
87	3	1.5	1.5	67.3
88	2	1.0	1.0	68.3
89	1	.5	.5	68.8
90	2	1.0	1.0	69.8
91	2	1.0	1.0	70.8
92	1	.5	.5	71.3
93	2	1.0	1.0	72.3
94	2	1.0	1.0	73.3
97	4	2.0	2.0	75.2
99	1	.5	.5	75.7
101	2	1.0	1.0	76.7
102	3	1.5	1.5	78.2
103	1	.5	.5	78.7
106	1	.5	.5	79.2
107	2	1.0	1.0	80.2
109	3	1.5	1.5	81.7
110	1	.5	.5	82.2
115	2	1.0	1.0	83.2
117	1	.5	.5	83.7
118	1	.5	.5	84.2
122	2	1.0	1.0	85.1
124	3	1.5	1.5	86.6
125	1	.5	.5	87.1
126	1	.5	.5	87.6
127	1	.5	.5	88.1
130	1	.5	.5	88.6
132	1	.5	.5	89.1
133	1	.5	.5	89.6
139	1	.5	.5	90.1
141	1	.5	.5	90.6
143	1	.5	.5	91.1
150	1	.5	.5	91.6
155	1	.5	.5	92.1
156	1	.5	.5	92.6
164	1	.5	.5	93.1
176	1	.5	.5	93.6
177	1	.5	.5	94.1
182	1	.5	.5	94.6
183	1	.5	.5	95.0
184	1	.5	.5	95.5
189	1	.5	.5	96.0
191	1	.5	.5	96.5
212	2	1.0	1.0	97.5

ferr plasma ferritins, ng

	Frequency	Percent	Valid Percent	Cumulative Percent
213	1	.5	.5	98.0
214	1	.5	.5	98.5
220	1	.5	.5	99.0
233	1	.5	.5	99.5
234	1	.5	.5	100.0
Total	202	100.0	100.0	

bmi Body mass index, kg

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 16.75	1	.5	.5	.5
17.05	1	.5	.5	1.0
17.06	1	.5	.5	1.5
17.54	1	.5	.5	2.0
17.79	1	.5	.5	2.5
18.26	1	.5	.5	3.0
18.29	1	.5	.5	3.5
18.37	1	.5	.5	4.0
18.93	1	.5	.5	4.5
18.96	1	.5	.5	5.0
19.00	1	.5	.5	5.4
19.06	1	.5	.5	5.9
19.16	2	1.0	1.0	6.9
19.37	1	.5	.5	7.4
19.44	1	.5	.5	7.9
19.54	1	.5	.5	8.4
19.63	1	.5	.5	8.9
19.69	1	.5	.5	9.4
19.76	1	.5	.5	9.9
19.81	1	.5	.5	10.4
19.85	1	.5	.5	10.9
19.87	1	.5	.5	11.4
20.04	1	.5	.5	11.9
20.06	1	.5	.5	12.4
20.07	1	.5	.5	12.9
20.12	2	1.0	1.0	13.9
20.15	2	1.0	1.0	14.9
20.17	1	.5	.5	15.3
20.30	1	.5	.5	15.8
20.31	1	.5	.5	16.3
20.39	1	.5	.5	16.8
20.42	2	1.0	1.0	17.8
20.46	1	.5	.5	18.3
20.53	1	.5	.5	18.8
20.56	1	.5	.5	19.3
20.62	1	.5	.5	19.8
20.67	1	.5	.5	20.3
20.69	1	.5	.5	20.8
20.76	1	.5	.5	21.3
20.77	1	.5	.5	21.8
20.81	1	.5	.5	22.3
20.87	1	.5	.5	22.8
20.89	1	.5	.5	23.3

bmi Body mass index, kg

	Frequency	Percent	Valid Percent	Cumulative Percent
21.03	1	.5	.5	23.8
21.04	2	1.0	1.0	24.8
21.07	1	.5	.5	25.2
21.12	1	.5	.5	25.7
21.15	1	.5	.5	26.2
21.19	1	.5	.5	26.7
21.20	1	.5	.5	27.2
21.24	1	.5	.5	27.7
21.25	1	.5	.5	28.2
21.26	1	.5	.5	28.7
21.27	1	.5	.5	29.2
21.28	1	.5	.5	29.7
21.35	1	.5	.5	30.2
21.38	2	1.0	1.0	31.2
21.40	1	.5	.5	31.7
21.47	1	.5	.5	32.2
21.65	1	.5	.5	32.7
21.68	1	.5	.5	33.2
21.69	1	.5	.5	33.7
21.75	1	.5	.5	34.2
21.77	1	.5	.5	34.7
21.86	3	1.5	1.5	36.1
21.88	1	.5	.5	36.6
21.89	1	.5	.5	37.1
21.93	1	.5	.5	37.6
22.01	1	.5	.5	38.1
22.02	1	.5	.5	38.6
22.03	1	.5	.5	39.1
22.04	1	.5	.5	39.6
22.12	1	.5	.5	40.1
22.13	1	.5	.5	40.6
22.27	1	.5	.5	41.1
22.28	1	.5	.5	41.6
22.32	1	.5	.5	42.1
22.34	1	.5	.5	42.6
22.35	2	1.0	1.0	43.6
22.37	1	.5	.5	44.1
22.42	1	.5	.5	44.6
22.44	1	.5	.5	45.0
22.46	1	.5	.5	45.5
22.52	1	.5	.5	46.0
22.57	1	.5	.5	46.5
22.59	1	.5	.5	47.0
22.62	1	.5	.5	47.5
22.63	2	1.0	1.0	48.5
22.64	1	.5	.5	49.0
22.67	1	.5	.5	49.5
22.68	1	.5	.5	50.0
22.76	1	.5	.5	50.5
22.80	1	.5	.5	51.0
22.81	1	.5	.5	51.5
22.83	1	.5	.5	52.0
22.93	1	.5	.5	52.5

bmi Body mass index, kg

	Frequency	Percent	Valid Percent	Cumulative Percent
22.96	2	1.0	1.0	53.5
23.01	1	.5	.5	54.0
23.06	1	.5	.5	54.5
23.07	1	.5	.5	55.0
23.11	1	.5	.5	55.4
23.12	1	.5	.5	55.9
23.13	1	.5	.5	56.4
23.15	1	.5	.5	56.9
23.17	1	.5	.5	57.4
23.19	1	.5	.5	57.9
23.25	2	1.0	1.0	58.9
23.29	1	.5	.5	59.4
23.31	1	.5	.5	59.9
23.35	1	.5	.5	60.4
23.36	2	1.0	1.0	61.4
23.38	1	.5	.5	61.9
23.47	1	.5	.5	62.4
23.55	1	.5	.5	62.9
23.57	1	.5	.5	63.4
23.58	3	1.5	1.5	64.9
23.67	1	.5	.5	65.3
23.68	1	.5	.5	65.8
23.69	2	1.0	1.0	66.8
23.72	1	.5	.5	67.3
23.76	1	.5	.5	67.8
23.84	1	.5	.5	68.3
23.85	1	.5	.5	68.8
23.88	1	.5	.5	69.3
23.97	2	1.0	1.0	70.3
23.99	2	1.0	1.0	71.3
24.02	1	.5	.5	71.8
24.06	1	.5	.5	72.3
24.21	1	.5	.5	72.8
24.24	1	.5	.5	73.3
24.28	1	.5	.5	73.8
24.40	1	.5	.5	74.3
24.45	1	.5	.5	74.8
24.47	1	.5	.5	75.2
24.51	1	.5	.5	75.7
24.54	2	1.0	1.0	76.7
24.64	2	1.0	1.0	77.7
24.78	1	.5	.5	78.2
24.81	1	.5	.5	78.7
24.93	1	.5	.5	79.2
25.06	1	.5	.5	79.7
25.09	1	.5	.5	80.2
25.11	1	.5	.5	80.7
25.17	2	1.0	1.0	81.7
25.21	1	.5	.5	82.2
25.27	1	.5	.5	82.7
25.31	1	.5	.5	83.2
25.36	1	.5	.5	83.7
25.37	1	.5	.5	84.2

bmi Body mass index, kg

	Frequency	Percent	Valid Percent	Cumulative Percent
25.38	1	.5	.5	84.7
25.43	1	.5	.5	85.1
25.44	1	.5	.5	85.6
25.50	1	.5	.5	86.1
25.61	1	.5	.5	86.6
25.64	1	.5	.5	87.1
25.72	1	.5	.5	87.6
25.75	1	.5	.5	88.1
25.82	1	.5	.5	88.6
25.84	1	.5	.5	89.1
25.93	1	.5	.5	89.6
26.07	1	.5	.5	90.1
26.24	1	.5	.5	90.6
26.25	1	.5	.5	91.1
26.51	1	.5	.5	91.6
26.73	1	.5	.5	92.1
26.79	1	.5	.5	92.6
26.85	1	.5	.5	93.1
26.86	1	.5	.5	93.6
26.95	1	.5	.5	94.1
27.39	1	.5	.5	94.6
27.56	1	.5	.5	95.0
27.79	1	.5	.5	95.5
28.13	1	.5	.5	96.0
28.57	1	.5	.5	96.5
29.97	1	.5	.5	97.0
30.18	2	1.0	1.0	98.0
31.93	1	.5	.5	98.5
32.52	1	.5	.5	99.0
33.73	1	.5	.5	99.5
34.42	1	.5	.5	100.0
Total	202	100.0	100.0	

ssf sum of skin folds

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	28.0	1	.5	.5	.5
	29.7	1	.5	.5	1.0
	30.3	1	.5	.5	1.5
	30.5	1	.5	.5	2.0
	30.9	2	1.0	1.0	3.0
	31.0	2	1.0	1.0	4.0
	31.5	1	.5	.5	4.5
	31.7	1	.5	.5	5.0
	31.8	1	.5	.5	5.4
	32.6	2	1.0	1.0	6.4
	33.7	2	1.0	1.0	7.4
	33.8	1	.5	.5	7.9
	34.0	1	.5	.5	8.4
	34.1	1	.5	.5	8.9
	34.3	1	.5	.5	9.4
	34.5	1	.5	.5	9.9
	34.6	1	.5	.5	10.4
	34.8	1	.5	.5	10.9
	34.9	1	.5	.5	11.4
	35.2	1	.5	.5	11.9
	36.6	1	.5	.5	12.4
	36.8	1	.5	.5	12.9
	37.5	2	1.0	1.0	13.9
	37.6	1	.5	.5	14.4
	38.0	1	.5	.5	14.9
	38.2	1	.5	.5	15.3
	38.9	1	.5	.5	15.8
	40.5	1	.5	.5	16.3
	40.8	1	.5	.5	16.8
	41.1	1	.5	.5	17.3
	41.5	1	.5	.5	17.8
	41.6	1	.5	.5	18.3
	41.8	2	1.0	1.0	19.3
	41.9	1	.5	.5	19.8
	42.3	2	1.0	1.0	20.8
	42.7	1	.5	.5	21.3
	43.0	1	.5	.5	21.8
	43.1	1	.5	.5	22.3
	43.2	1	.5	.5	22.8
	43.3	1	.5	.5	23.3
	43.5	2	1.0	1.0	24.3
	43.8	2	1.0	1.0	25.2
	44.0	1	.5	.5	25.7
	44.5	2	1.0	1.0	26.7
	44.7	1	.5	.5	27.2
	44.8	1	.5	.5	27.7
	46.1	1	.5	.5	28.2
	46.2	1	.5	.5	28.7
	46.3	1	.5	.5	29.2
	46.5	1	.5	.5	29.7
	46.7	1	.5	.5	30.2
	47.5	1	.5	.5	30.7
	47.6	2	1.0	1.0	31.7

ssf sum of skin folds

	Frequency	Percent	Valid Percent	Cumulative Percent
47.8	1	.5	.5	32.2
48.0	1	.5	.5	32.7
48.1	1	.5	.5	33.2
48.3	1	.5	.5	33.7
48.4	1	.5	.5	34.2
49.0	1	.5	.5	34.7
49.2	1	.5	.5	35.1
49.3	1	.5	.5	35.6
49.5	1	.5	.5	36.1
49.6	1	.5	.5	36.6
49.9	1	.5	.5	37.1
50.0	1	.5	.5	37.6
50.9	2	1.0	1.0	38.6
51.2	1	.5	.5	39.1
52.0	1	.5	.5	39.6
52.3	1	.5	.5	40.1
52.5	1	.5	.5	40.6
52.6	1	.5	.5	41.1
52.8	3	1.5	1.5	42.6
54.0	1	.5	.5	43.1
54.2	1	.5	.5	43.6
54.4	1	.5	.5	44.1
54.6	2	1.0	1.0	45.0
55.6	1	.5	.5	45.5
55.7	1	.5	.5	46.0
56.5	2	1.0	1.0	47.0
56.8	2	1.0	1.0	48.0
57.0	1	.5	.5	48.5
57.7	1	.5	.5	49.0
57.9	1	.5	.5	49.5
58.3	1	.5	.5	50.0
58.9	1	.5	.5	50.5
59.4	1	.5	.5	51.0
60.2	1	.5	.5	51.5
60.4	1	.5	.5	52.0
61.1	1	.5	.5	52.5
61.2	1	.5	.5	53.0
61.8	2	1.0	1.0	54.0
61.9	1	.5	.5	54.5
62.6	1	.5	.5	55.0
62.9	1	.5	.5	55.4
64.9	1	.5	.5	55.9
65.1	1	.5	.5	56.4
65.3	1	.5	.5	56.9
65.9	1	.5	.5	57.4
67.0	1	.5	.5	57.9
67.2	1	.5	.5	58.4
68.3	1	.5	.5	58.9
68.9	1	.5	.5	59.4
69.9	1	.5	.5	59.9
70.0	2	1.0	1.0	60.9
71.1	1	.5	.5	61.4
71.3	1	.5	.5	61.9

ssf sum of skin folds

	Frequency	Percent	Valid Percent	Cumulative Percent
71.6	1	.5	.5	62.4
73.9	1	.5	.5	62.9
74.7	1	.5	.5	63.4
74.9	1	.5	.5	63.9
75.1	1	.5	.5	64.4
75.2	1	.5	.5	64.9
75.6	1	.5	.5	65.3
75.7	1	.5	.5	65.8
75.9	1	.5	.5	66.3
76.0	1	.5	.5	66.8
76.2	1	.5	.5	67.3
76.8	1	.5	.5	67.8
77.0	1	.5	.5	68.3
78.0	1	.5	.5	68.8
80.1	1	.5	.5	69.3
80.3	3	1.5	1.5	70.8
80.6	1	.5	.5	71.3
82.7	1	.5	.5	71.8
83.0	1	.5	.5	72.3
87.2	1	.5	.5	72.8
88.2	1	.5	.5	73.3
88.9	1	.5	.5	73.8
89.0	1	.5	.5	74.3
90.2	1	.5	.5	74.8
90.4	1	.5	.5	75.2
91.0	1	.5	.5	75.7
91.2	1	.5	.5	76.2
95.4	1	.5	.5	76.7
96.3	1	.5	.5	77.2
96.8	1	.5	.5	77.7
96.9	1	.5	.5	78.2
97.2	1	.5	.5	78.7
97.9	1	.5	.5	79.2
98.0	1	.5	.5	79.7
98.1	1	.5	.5	80.2
98.3	1	.5	.5	80.7
98.5	1	.5	.5	81.2
99.8	1	.5	.5	81.7
99.9	1	.5	.5	82.2
100.7	1	.5	.5	82.7
101.1	1	.5	.5	83.2
102.8	2	1.0	1.0	84.2
103.6	2	1.0	1.0	85.1
104.6	1	.5	.5	85.6
105.7	1	.5	.5	86.1
106.9	1	.5	.5	86.6
109.0	1	.5	.5	87.1
109.1	1	.5	.5	87.6
109.5	1	.5	.5	88.1
109.6	1	.5	.5	88.6
110.2	1	.5	.5	89.1
110.7	1	.5	.5	89.6
111.1	1	.5	.5	90.1

ssf sum of skin folds

	Frequency	Percent	Valid Percent	Cumulative Percent
112.5	1	.5	.5	90.6
113.5	2	1.0	1.0	91.6
114.0	1	.5	.5	92.1
115.9	1	.5	.5	92.6
117.8	1	.5	.5	93.1
122.1	1	.5	.5	93.6
123.6	1	.5	.5	94.1
125.9	1	.5	.5	94.6
126.4	2	1.0	1.0	95.5
131.9	1	.5	.5	96.0
136.3	1	.5	.5	96.5
143.5	1	.5	.5	97.0
148.9	1	.5	.5	97.5
156.6	2	1.0	1.0	98.5
171.1	1	.5	.5	99.0
181.7	1	.5	.5	99.5
200.8	1	.5	.5	100.0
Total	202	100.0	100.0	

pcBfat percent Body fat

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 5.63	1	.5	.5	.5
5.80	1	.5	.5	1.0
5.90	1	.5	.5	1.5
5.93	1	.5	.5	2.0
6.00	2	1.0	1.0	3.0
6.03	1	.5	.5	3.5
6.06	2	1.0	1.0	4.5
6.10	1	.5	.5	5.0
6.16	1	.5	.5	5.4
6.20	1	.5	.5	5.9
6.26	1	.5	.5	6.4
6.33	2	1.0	1.0	7.4
6.43	1	.5	.5	7.9
6.46	1	.5	.5	8.4
6.53	1	.5	.5	8.9
6.56	2	1.0	1.0	9.9
6.59	1	.5	.5	10.4
6.76	1	.5	.5	10.9
6.82	1	.5	.5	11.4
6.86	1	.5	.5	11.9
6.92	1	.5	.5	12.4
6.96	1	.5	.5	12.9
6.99	1	.5	.5	13.4
7.06	1	.5	.5	13.9
7.16	1	.5	.5	14.4
7.19	2	1.0	1.0	15.3
7.22	1	.5	.5	15.8
7.29	1	.5	.5	16.3
7.35	2	1.0	1.0	17.3
7.42	1	.5	.5	17.8
7.49	1	.5	.5	18.3

pcBfat percent Body fat

	Frequency	Percent	Valid Percent	Cumulative Percent
7.52	1	.5	.5	18.8
7.68	1	.5	.5	19.3
7.72	1	.5	.5	19.8
7.82	1	.5	.5	20.3
7.88	1	.5	.5	20.8
8.07	1	.5	.5	21.3
8.18	1	.5	.5	21.8
8.44	1	.5	.5	22.3
8.45	1	.5	.5	22.8
8.47	1	.5	.5	23.3
8.51	3	1.5	1.5	24.8
8.54	1	.5	.5	25.2
8.56	1	.5	.5	25.7
8.61	1	.5	.5	26.2
8.64	1	.5	.5	26.7
8.77	1	.5	.5	27.2
8.84	2	1.0	1.0	28.2
8.87	2	1.0	1.0	29.2
8.94	1	.5	.5	29.7
8.97	2	1.0	1.0	30.7
9.00	1	.5	.5	31.2
9.02	1	.5	.5	31.7
9.03	1	.5	.5	32.2
9.10	1	.5	.5	32.7
9.17	1	.5	.5	33.2
9.20	2	1.0	1.0	34.2
9.36	1	.5	.5	34.7
9.40	2	1.0	1.0	35.6
9.50	1	.5	.5	36.1
9.53	1	.5	.5	36.6
9.56	3	1.5	1.5	38.1
9.79	1	.5	.5	38.6
9.86	1	.5	.5	39.1
9.89	1	.5	.5	39.6
9.91	1	.5	.5	40.1
10.05	2	1.0	1.0	41.1
10.12	1	.5	.5	41.6
10.15	1	.5	.5	42.1
10.16	1	.5	.5	42.6
10.25	1	.5	.5	43.1
10.48	1	.5	.5	43.6
10.53	1	.5	.5	44.1
10.64	1	.5	.5	44.6
10.74	1	.5	.5	45.0
10.81	1	.5	.5	45.5
11.05	1	.5	.5	46.0
11.07	2	1.0	1.0	47.0
11.22	1	.5	.5	47.5
11.29	1	.5	.5	48.0
11.47	1	.5	.5	48.5
11.50	1	.5	.5	49.0
11.63	1	.5	.5	49.5
11.64	1	.5	.5	50.0

pcBfat percent Body fat

	Frequency	Percent	Valid Percent	Cumulative Percent
11.66	1	.5	.5	50.5
11.72	1	.5	.5	51.0
11.77	1	.5	.5	51.5
11.79	1	.5	.5	52.0
11.85	1	.5	.5	52.5
11.95	1	.5	.5	53.0
12.16	1	.5	.5	53.5
12.20	1	.5	.5	54.0
12.39	1	.5	.5	54.5
12.55	1	.5	.5	55.0
12.61	1	.5	.5	55.4
12.78	1	.5	.5	55.9
12.92	1	.5	.5	56.4
13.06	1	.5	.5	56.9
13.35	1	.5	.5	57.4
13.46	1	.5	.5	57.9
13.49	1	.5	.5	58.4
13.61	1	.5	.5	58.9
13.91	1	.5	.5	59.4
13.93	1	.5	.5	59.9
13.97	1	.5	.5	60.4
14.26	1	.5	.5	60.9
14.52	1	.5	.5	61.4
14.53	1	.5	.5	61.9
14.69	1	.5	.5	62.4
14.98	1	.5	.5	62.9
15.01	1	.5	.5	63.4
15.07	1	.5	.5	63.9
15.31	1	.5	.5	64.4
15.58	1	.5	.5	64.9
15.59	1	.5	.5	65.3
15.95	1	.5	.5	65.8
16.20	1	.5	.5	66.3
16.25	1	.5	.5	66.8
16.38	1	.5	.5	67.3
16.58	1	.5	.5	67.8
16.86	1	.5	.5	68.3
17.07	1	.5	.5	68.8
17.22	1	.5	.5	69.3
17.24	1	.5	.5	69.8
17.41	1	.5	.5	70.3
17.51	1	.5	.5	70.8
17.64	1	.5	.5	71.3
17.71	2	1.0	1.0	72.3
17.89	1	.5	.5	72.8
17.93	1	.5	.5	73.3
17.95	1	.5	.5	73.8
18.04	1	.5	.5	74.3
18.08	2	1.0	1.0	75.2
18.14	1	.5	.5	75.7
18.48	1	.5	.5	76.2
18.72	1	.5	.5	76.7
18.77	1	.5	.5	77.2

pcBfat percent Body fat

	Frequency	Percent	Valid Percent	Cumulative Percent
19.17	1	.5	.5	77.7
19.20	1	.5	.5	78.2
19.26	1	.5	.5	78.7
19.35	1	.5	.5	79.2
19.39	1	.5	.5	79.7
19.51	1	.5	.5	80.2
19.61	1	.5	.5	80.7
19.63	1	.5	.5	81.2
19.64	1	.5	.5	81.7
19.75	1	.5	.5	82.2
19.83	1	.5	.5	82.7
19.88	1	.5	.5	83.2
19.94	1	.5	.5	83.7
19.99	1	.5	.5	84.2
20.10	1	.5	.5	84.7
20.12	1	.5	.5	85.1
20.43	1	.5	.5	85.6
20.86	1	.5	.5	86.1
21.30	2	1.0	1.0	87.1
21.32	1	.5	.5	87.6
21.47	1	.5	.5	88.1
21.79	1	.5	.5	88.6
22.25	1	.5	.5	89.1
22.39	1	.5	.5	89.6
22.43	1	.5	.5	90.1
22.62	1	.5	.5	90.6
23.01	2	1.0	1.0	91.6
23.11	1	.5	.5	92.1
23.30	1	.5	.5	92.6
23.66	1	.5	.5	93.1
23.70	2	1.0	1.0	94.1
24.69	1	.5	.5	94.6
24.88	1	.5	.5	95.0
24.97	1	.5	.5	95.5
25.16	1	.5	.5	96.0
25.26	1	.5	.5	96.5
26.50	1	.5	.5	97.0
26.57	1	.5	.5	97.5
26.65	1	.5	.5	98.0
26.78	1	.5	.5	98.5
28.83	1	.5	.5	99.0
30.10	1	.5	.5	99.5
35.52	1	.5	.5	100.0
Total	202	100.0	100.0	

lbm lean body mass, kg

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	34.36	1	.5	.5	.5
	38.30	1	.5	.5	1.0
	39.03	1	.5	.5	1.5
	41.54	1	.5	.5	2.0
	41.93	1	.5	.5	2.5
	42.15	1	.5	.5	3.0
	42.95	1	.5	.5	3.5
	42.96	1	.5	.5	4.0
	45.23	1	.5	.5	4.5
	46.12	1	.5	.5	5.0
	46.31	1	.5	.5	5.4
	46.52	1	.5	.5	5.9
	46.96	1	.5	.5	6.4
	47.09	1	.5	.5	6.9
	47.57	1	.5	.5	7.4
	48.00	1	.5	.5	7.9
	48.32	1	.5	.5	8.4
	48.33	1	.5	.5	8.9
	48.57	1	.5	.5	9.4
	48.76	1	.5	.5	9.9
	48.78	1	.5	.5	10.4
	49.13	1	.5	.5	10.9
	51.17	1	.5	.5	11.4
	51.48	1	.5	.5	11.9
	51.62	1	.5	.5	12.4
	51.75	1	.5	.5	12.9
	51.99	1	.5	.5	13.4
	52.23	1	.5	.5	13.9
	52.72	1	.5	.5	14.4
	52.78	1	.5	.5	14.9
	53.11	2	1.0	1.0	15.8
	53.14	1	.5	.5	16.3
	53.20	2	1.0	1.0	17.3
	53.41	1	.5	.5	17.8
	53.42	1	.5	.5	18.3
	53.44	1	.5	.5	18.8
	53.46	1	.5	.5	19.3
	53.54	1	.5	.5	19.8
	53.65	1	.5	.5	20.3
	53.71	1	.5	.5	20.8
	53.77	1	.5	.5	21.3
	54.00	1	.5	.5	21.8
	54.11	1	.5	.5	22.3
	54.18	1	.5	.5	22.8
	54.38	1	.5	.5	23.3
	54.41	1	.5	.5	23.8
	54.46	1	.5	.5	24.3
	54.57	1	.5	.5	24.8
	54.63	1	.5	.5	25.2
	54.78	1	.5	.5	25.7
	55.06	1	.5	.5	26.2
	55.35	1	.5	.5	26.7
	55.36	1	.5	.5	27.2

lbm lean body mass, kg

	Frequency	Percent	Valid Percent	Cumulative Percent
55.39	1	.5	.5	27.7
55.73	1	.5	.5	28.2
55.97	1	.5	.5	28.7
56.01	1	.5	.5	29.2
56.05	2	1.0	1.0	30.2
56.31	1	.5	.5	30.7
56.45	1	.5	.5	31.2
56.48	1	.5	.5	31.7
56.52	1	.5	.5	32.2
56.58	1	.5	.5	32.7
56.68	1	.5	.5	33.2
57.00	2	1.0	1.0	34.2
57.18	1	.5	.5	34.7
57.20	1	.5	.5	35.1
57.28	1	.5	.5	35.6
57.30	1	.5	.5	36.1
57.54	1	.5	.5	36.6
57.58	1	.5	.5	37.1
57.92	1	.5	.5	37.6
58.00	1	.5	.5	38.1
58.27	1	.5	.5	38.6
58.55	1	.5	.5	39.1
59.00	1	.5	.5	39.6
59.33	1	.5	.5	40.1
59.59	1	.5	.5	40.6
59.89	1	.5	.5	41.1
60.05	1	.5	.5	41.6
60.17	1	.5	.5	42.1
60.22	1	.5	.5	42.6
61.00	1	.5	.5	43.1
61.29	1	.5	.5	43.6
61.46	1	.5	.5	44.1
61.63	1	.5	.5	44.6
61.70	1	.5	.5	45.0
61.85	1	.5	.5	45.5
62.00	3	1.5	1.5	47.0
62.39	1	.5	.5	47.5
62.46	1	.5	.5	48.0
62.96	1	.5	.5	48.5
63.00	2	1.0	1.0	49.5
63.03	1	.5	.5	50.0
63.04	1	.5	.5	50.5
63.05	1	.5	.5	51.0
63.32	1	.5	.5	51.5
63.39	1	.5	.5	52.0
64.00	1	.5	.5	52.5
64.62	1	.5	.5	53.0
65.00	2	1.0	1.0	54.0
65.45	1	.5	.5	54.5
66.00	4	2.0	2.0	56.4
66.24	1	.5	.5	56.9
66.85	1	.5	.5	57.4
67.00	5	2.5	2.5	59.9

lbm lean body mass, kg

	Frequency	Percent	Valid Percent	Cumulative Percent
68.00	6	3.0	3.0	62.9
68.53	1	.5	.5	63.4
68.86	1	.5	.5	63.9
69.00	4	2.0	2.0	65.8
70.00	3	1.5	1.5	67.3
71.00	3	1.5	1.5	68.8
72.00	4	2.0	2.0	70.8
72.98	1	.5	.5	71.3
73.00	2	1.0	1.0	72.3
74.00	5	2.5	2.5	74.8
75.00	3	1.5	1.5	76.2
76.00	1	.5	.5	76.7
77.00	5	2.5	2.5	79.2
78.00	9	4.5	4.5	83.7
79.00	4	2.0	2.0	85.6
80.00	3	1.5	1.5	87.1
81.00	1	.5	.5	87.6
82.00	7	3.5	3.5	91.1
83.00	3	1.5	1.5	92.6
85.00	2	1.0	1.0	93.6
86.00	2	1.0	1.0	94.6
87.00	2	1.0	1.0	95.5
88.00	2	1.0	1.0	96.5
89.00	1	.5	.5	97.0
90.00	2	1.0	1.0	98.0
91.00	1	.5	.5	98.5
97.00	1	.5	.5	99.0
102.00	1	.5	.5	99.5
106.00	1	.5	.5	100.0
Total	202	100.0	100.0	

ht height, cm

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	148.9	1	.5	.5	.5
	149.0	1	.5	.5	1.0
	156.0	1	.5	.5	1.5
	156.9	1	.5	.5	2.0
	157.9	1	.5	.5	2.5
	158.9	1	.5	.5	3.0
	162.0	2	1.0	1.0	4.0
	162.5	1	.5	.5	4.5
	163.0	1	.5	.5	5.0
	163.9	1	.5	.5	5.4
	165.0	1	.5	.5	5.9
	165.3	1	.5	.5	6.4
	166.1	1	.5	.5	6.9
	166.7	1	.5	.5	7.4
	167.3	1	.5	.5	7.9
	167.9	1	.5	.5	8.4
	168.0	1	.5	.5	8.9
	168.6	1	.5	.5	9.4
	169.1	2	1.0	1.0	10.4
	169.8	1	.5	.5	10.9
	169.9	1	.5	.5	11.4
	170.0	2	1.0	1.0	12.4
	170.3	1	.5	.5	12.9
	170.8	1	.5	.5	13.4
	171.0	1	.5	.5	13.9
	171.1	1	.5	.5	14.4
	171.3	1	.5	.5	14.9
	171.4	2	1.0	1.0	15.8
	171.6	1	.5	.5	16.3
	171.7	1	.5	.5	16.8
	172.0	1	.5	.5	17.3
	172.2	1	.5	.5	17.8
	172.3	1	.5	.5	18.3
	172.5	1	.5	.5	18.8
	172.6	1	.5	.5	19.3
	172.7	2	1.0	1.0	20.3
	173.0	2	1.0	1.0	21.3
	173.3	2	1.0	1.0	22.3
	173.5	1	.5	.5	22.8
	173.6	1	.5	.5	23.3
	173.7	1	.5	.5	23.8
	173.8	1	.5	.5	24.3
	174.0	5	2.5	2.5	26.7
	174.1	2	1.0	1.0	27.7
	174.4	1	.5	.5	28.2
	174.6	1	.5	.5	28.7
	174.7	1	.5	.5	29.2
	174.9	1	.5	.5	29.7
	175.0	4	2.0	2.0	31.7
	175.3	1	.5	.5	32.2
	175.6	1	.5	.5	32.7
	176.0	5	2.5	2.5	35.1
	176.2	1	.5	.5	35.6

ht height, cm

	Frequency	Percent	Valid Percent	Cumulative Percent
176.5	1	.5	.5	36.1
176.8	1	.5	.5	36.6
177.0	1	.5	.5	37.1
177.3	2	1.0	1.0	38.1
177.5	2	1.0	1.0	39.1
177.8	1	.5	.5	39.6
177.9	1	.5	.5	40.1
178.0	3	1.5	1.5	41.6
178.2	1	.5	.5	42.1
178.4	1	.5	.5	42.6
178.5	2	1.0	1.0	43.6
178.6	1	.5	.5	44.1
178.7	1	.5	.5	44.6
178.9	1	.5	.5	45.0
179.1	1	.5	.5	45.5
179.3	2	1.0	1.0	46.5
179.5	1	.5	.5	47.0
179.6	4	2.0	2.0	49.0
179.7	3	1.5	1.5	50.5
179.8	1	.5	.5	51.0
179.9	2	1.0	1.0	52.0
180.1	2	1.0	1.0	53.0
180.2	4	2.0	2.0	55.0
180.5	2	1.0	1.0	55.9
180.6	1	.5	.5	56.4
180.9	1	.5	.5	56.9
181.0	2	1.0	1.0	57.9
181.3	1	.5	.5	58.4
181.8	1	.5	.5	58.9
182.1	1	.5	.5	59.4
182.6	1	.5	.5	59.9
182.7	2	1.0	1.0	60.9
183.0	3	1.5	1.5	62.4
183.1	1	.5	.5	62.9
183.3	2	1.0	1.0	63.9
183.5	1	.5	.5	64.4
183.9	2	1.0	1.0	65.3
184.0	1	.5	.5	65.8
184.4	1	.5	.5	66.3
184.6	2	1.0	1.0	67.3
184.7	1	.5	.5	67.8
184.9	1	.5	.5	68.3
185.0	2	1.0	1.0	69.3
185.1	1	.5	.5	69.8
185.2	1	.5	.5	70.3
185.3	1	.5	.5	70.8
185.4	1	.5	.5	71.3
185.5	1	.5	.5	71.8
185.6	3	1.5	1.5	73.3
186.0	2	1.0	1.0	74.3
186.1	1	.5	.5	74.8
186.2	1	.5	.5	75.2
186.3	1	.5	.5	75.7

ht height, cm

	Frequency	Percent	Valid Percent	Cumulative Percent
186.6	1	.5	.5	76.2
187.1	1	.5	.5	76.7
187.2	1	.5	.5	77.2
187.3	1	.5	.5	77.7
187.7	1	.5	.5	78.2
187.9	1	.5	.5	78.7
188.1	1	.5	.5	79.2
188.3	1	.5	.5	79.7
188.7	1	.5	.5	80.2
189.0	3	1.5	1.5	81.7
189.1	1	.5	.5	82.2
189.2	1	.5	.5	82.7
189.7	1	.5	.5	83.2
190.3	1	.5	.5	83.7
190.4	1	.5	.5	84.2
190.5	1	.5	.5	84.7
190.7	1	.5	.5	85.1
190.8	1	.5	.5	85.6
191.0	2	1.0	1.0	86.6
191.5	1	.5	.5	87.1
192.0	2	1.0	1.0	88.1
192.6	1	.5	.5	88.6
192.7	2	1.0	1.0	89.6
192.8	1	.5	.5	90.1
193.0	1	.5	.5	90.6
193.4	3	1.5	1.5	92.1
193.9	1	.5	.5	92.6
194.1	2	1.0	1.0	93.6
194.4	1	.5	.5	94.1
194.6	1	.5	.5	94.6
195.2	1	.5	.5	95.0
195.3	1	.5	.5	95.5
195.4	1	.5	.5	96.0
195.9	1	.5	.5	96.5
196.6	1	.5	.5	97.0
197.5	1	.5	.5	97.5
198.0	1	.5	.5	98.0
198.7	1	.5	.5	98.5
200.4	1	.5	.5	99.0
203.4	1	.5	.5	99.5
209.4	1	.5	.5	100.0
Total	202	100.0	100.0	

wt weight, kg

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	37.8	1	.5	.5	.5
	43.8	1	.5	.5	1.0
	45.1	1	.5	.5	1.5
	45.8	1	.5	.5	2.0
	47.4	1	.5	.5	2.5
	47.8	1	.5	.5	3.0
	49.2	1	.5	.5	3.5
	49.8	1	.5	.5	4.0
	50.9	1	.5	.5	4.5
	51.9	1	.5	.5	5.0
	52.5	1	.5	.5	5.4
	52.8	1	.5	.5	5.9
	53.6	1	.5	.5	6.4
	53.8	1	.5	.5	6.9
	55.1	1	.5	.5	7.4
	56.0	1	.5	.5	7.9
	56.1	1	.5	.5	8.4
	57.3	2	1.0	1.0	9.4
	57.4	1	.5	.5	9.9
	58.0	1	.5	.5	10.4
	59.0	1	.5	.5	10.9
	59.6	1	.5	.5	11.4
	59.7	1	.5	.5	11.9
	59.9	1	.5	.5	12.4
	60.0	2	1.0	1.0	13.4
	60.1	1	.5	.5	13.9
	60.6	1	.5	.5	14.4
	60.7	1	.5	.5	14.9
	61.0	1	.5	.5	15.3
	61.1	1	.5	.5	15.8
	61.9	1	.5	.5	16.3
	62.3	2	1.0	1.0	17.3
	62.9	2	1.0	1.0	18.3
	63.0	2	1.0	1.0	19.3
	63.7	2	1.0	1.0	20.3
	63.9	1	.5	.5	20.8
	64.1	1	.5	.5	21.3
	64.6	1	.5	.5	21.8
	64.7	1	.5	.5	22.3
	64.8	1	.5	.5	22.8
	65.2	1	.5	.5	23.3
	66.0	1	.5	.5	23.8
	66.3	1	.5	.5	24.3
	66.4	1	.5	.5	24.8
	66.5	1	.5	.5	25.2
	66.6	1	.5	.5	25.7
	66.9	1	.5	.5	26.2
	67.0	1	.5	.5	26.7
	67.1	2	1.0	1.0	27.7
	67.2	1	.5	.5	28.2
	67.4	1	.5	.5	28.7
	67.5	1	.5	.5	29.2
	67.9	1	.5	.5	29.7

wt weight, kg

	Frequency	Percent	Valid Percent	Cumulative Percent
68.2	2	1.0	1.0	30.7
68.7	1	.5	.5	31.2
68.8	2	1.0	1.0	32.2
69.1	2	1.0	1.0	33.2
69.2	1	.5	.5	33.7
69.5	1	.5	.5	34.2
69.7	2	1.0	1.0	35.1
70.0	1	.5	.5	35.6
70.3	1	.5	.5	36.1
70.5	2	1.0	1.0	37.1
70.7	1	.5	.5	37.6
70.8	1	.5	.5	38.1
71.0	2	1.0	1.0	39.1
71.1	1	.5	.5	39.6
71.3	1	.5	.5	40.1
71.4	2	1.0	1.0	41.1
71.5	1	.5	.5	41.6
71.8	2	1.0	1.0	42.6
72.1	1	.5	.5	43.1
72.3	1	.5	.5	43.6
72.9	3	1.5	1.5	45.0
73.2	1	.5	.5	45.5
73.6	1	.5	.5	46.0
73.8	1	.5	.5	46.5
74.0	1	.5	.5	47.0
74.1	2	1.0	1.0	48.0
74.3	2	1.0	1.0	49.0
74.4	4	2.0	2.0	51.0
74.5	1	.5	.5	51.5
74.8	2	1.0	1.0	52.5
74.9	2	1.0	1.0	53.5
75.0	1	.5	.5	54.0
75.2	2	1.0	1.0	55.0
75.3	1	.5	.5	55.4
75.4	1	.5	.5	55.9
75.5	2	1.0	1.0	56.9
75.6	1	.5	.5	57.4
75.9	1	.5	.5	57.9
76.1	1	.5	.5	58.4
76.3	1	.5	.5	58.9
76.7	1	.5	.5	59.4
76.8	1	.5	.5	59.9
77.5	1	.5	.5	60.4
77.7	1	.5	.5	60.9
77.8	1	.5	.5	61.4
78.0	2	1.0	1.0	62.4
78.1	1	.5	.5	62.9
78.5	1	.5	.5	63.4
78.7	1	.5	.5	63.9
78.9	3	1.5	1.5	65.3
79.0	1	.5	.5	65.8
79.3	1	.5	.5	66.3
79.4	1	.5	.5	66.8

wt weight, kg

	Frequency	Percent	Valid Percent	Cumulative Percent
79.5	1	.5	.5	67.3
79.6	1	.5	.5	67.8
79.7	1	.5	.5	68.3
80.0	1	.5	.5	68.8
80.2	1	.5	.5	69.3
80.5	2	1.0	1.0	70.3
80.7	1	.5	.5	70.8
82.8	1	.5	.5	71.3
82.9	1	.5	.5	71.8
83.0	2	1.0	1.0	72.8
83.5	1	.5	.5	73.3
83.8	1	.5	.5	73.8
83.9	2	1.0	1.0	74.8
84.2	1	.5	.5	75.2
84.7	1	.5	.5	75.7
85.0	1	.5	.5	76.2
85.3	2	1.0	1.0	77.2
85.4	2	1.0	1.0	78.2
85.7	1	.5	.5	78.7
86.2	1	.5	.5	79.2
86.8	1	.5	.5	79.7
87.0	1	.5	.5	80.2
87.2	1	.5	.5	80.7
87.3	1	.5	.5	81.2
87.5	2	1.0	1.0	82.2
87.6	1	.5	.5	82.7
87.9	1	.5	.5	83.2
88.2	1	.5	.5	83.7
88.6	1	.5	.5	84.2
89.5	1	.5	.5	84.7
89.8	1	.5	.5	85.1
90.0	1	.5	.5	85.6
90.3	2	1.0	1.0	86.6
91.1	1	.5	.5	87.1
92.0	1	.5	.5	87.6
92.2	1	.5	.5	88.1
92.3	1	.5	.5	88.6
93.2	1	.5	.5	89.1
93.5	2	1.0	1.0	90.1
94.2	2	1.0	1.0	91.1
94.6	1	.5	.5	91.6
94.7	2	1.0	1.0	92.6
94.8	2	1.0	1.0	93.6
96.3	1	.5	.5	94.1
96.9	1	.5	.5	94.6
97.0	1	.5	.5	95.0
97.9	2	1.0	1.0	96.0
98.0	1	.5	.5	96.5
100.2	1	.5	.5	97.0
101.0	1	.5	.5	97.5
102.7	1	.5	.5	98.0
108.2	1	.5	.5	98.5
111.3	1	.5	.5	99.0

wt weight, kg

	Frequency	Percent	Valid Percent	Cumulative Percent
113.7	1	.5	.5	99.5
123.2	1	.5	.5	100.0
Total	202	100.0	100.0	

sex Sex

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid f	100	49.5	49.5	49.5
m	102	50.5	50.5	100.0
Total	202	100.0	100.0	

sport Sport

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid B_Ball	25	12.4	12.4	12.4
Field	19	9.4	9.4	21.8
Gym	4	2.0	2.0	23.8
Netball	23	11.4	11.4	35.1
Row	37	18.3	18.3	53.5
Swim	22	10.9	10.9	64.4
T_400m	29	14.4	14.4	78.7
T_Sprnt	15	7.4	7.4	86.1
Tennis	11	5.4	5.4	91.6
W_Polo	17	8.4	8.4	100.0
Total	202	100.0	100.0	

sex_numeric Sex

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 1 f	100	49.5	49.5	49.5
2 m	102	50.5	50.5	100.0
Total	202	100.0	100.0	

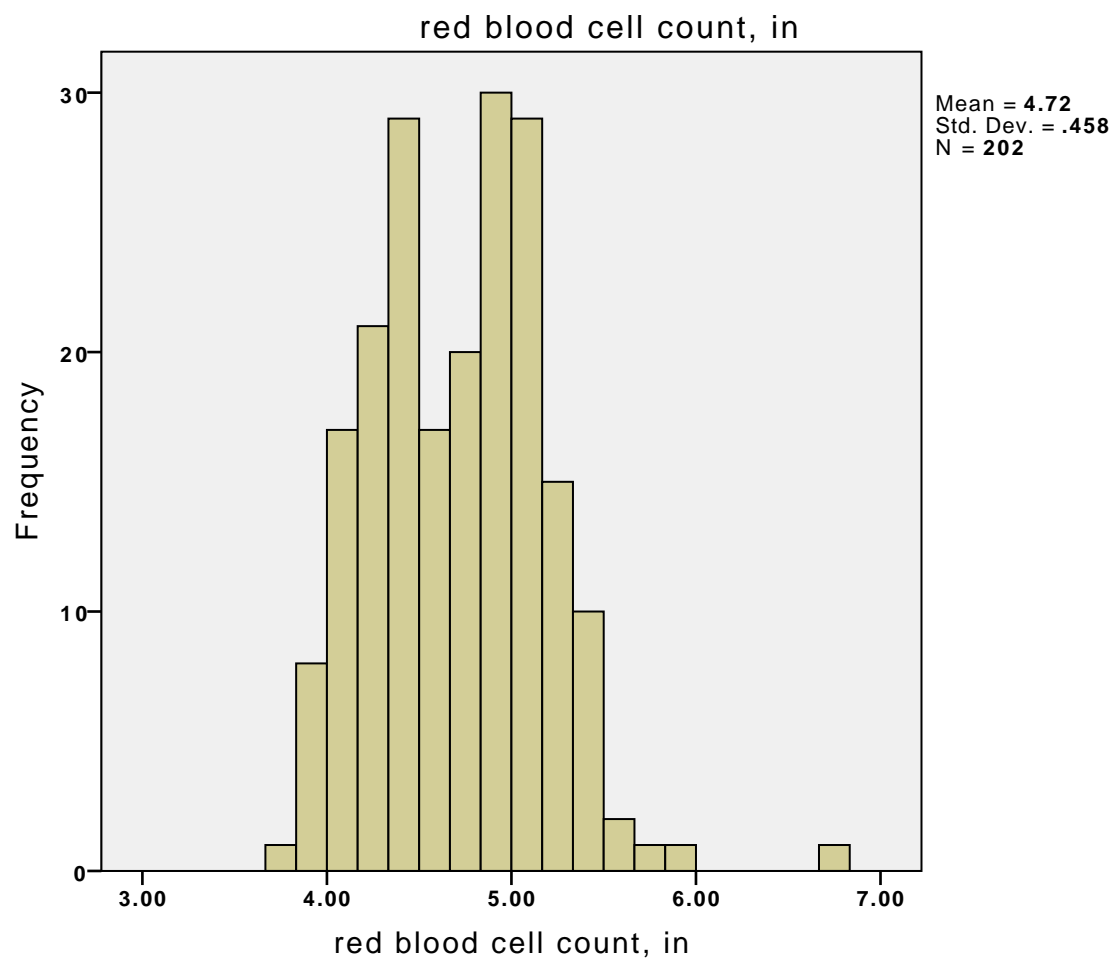
sport_numeric Sport

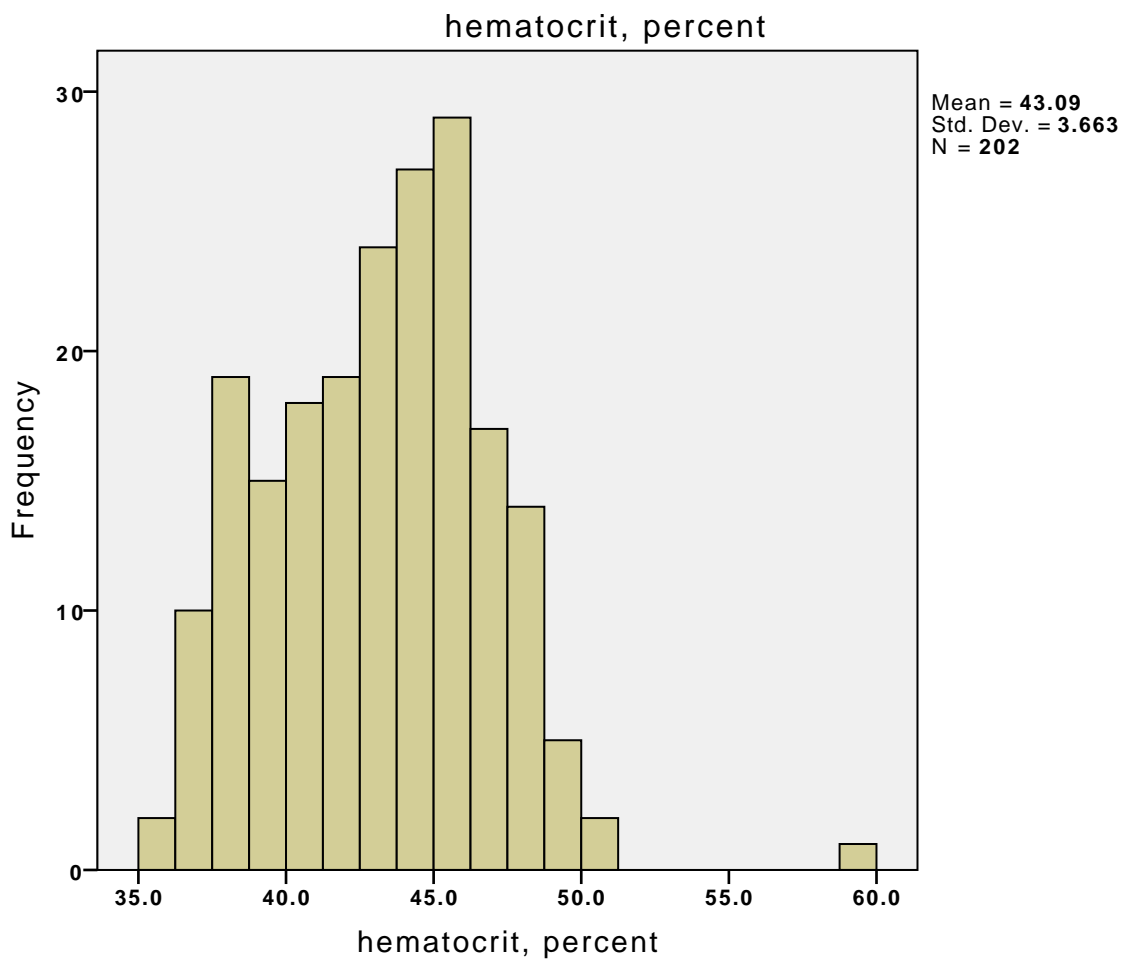
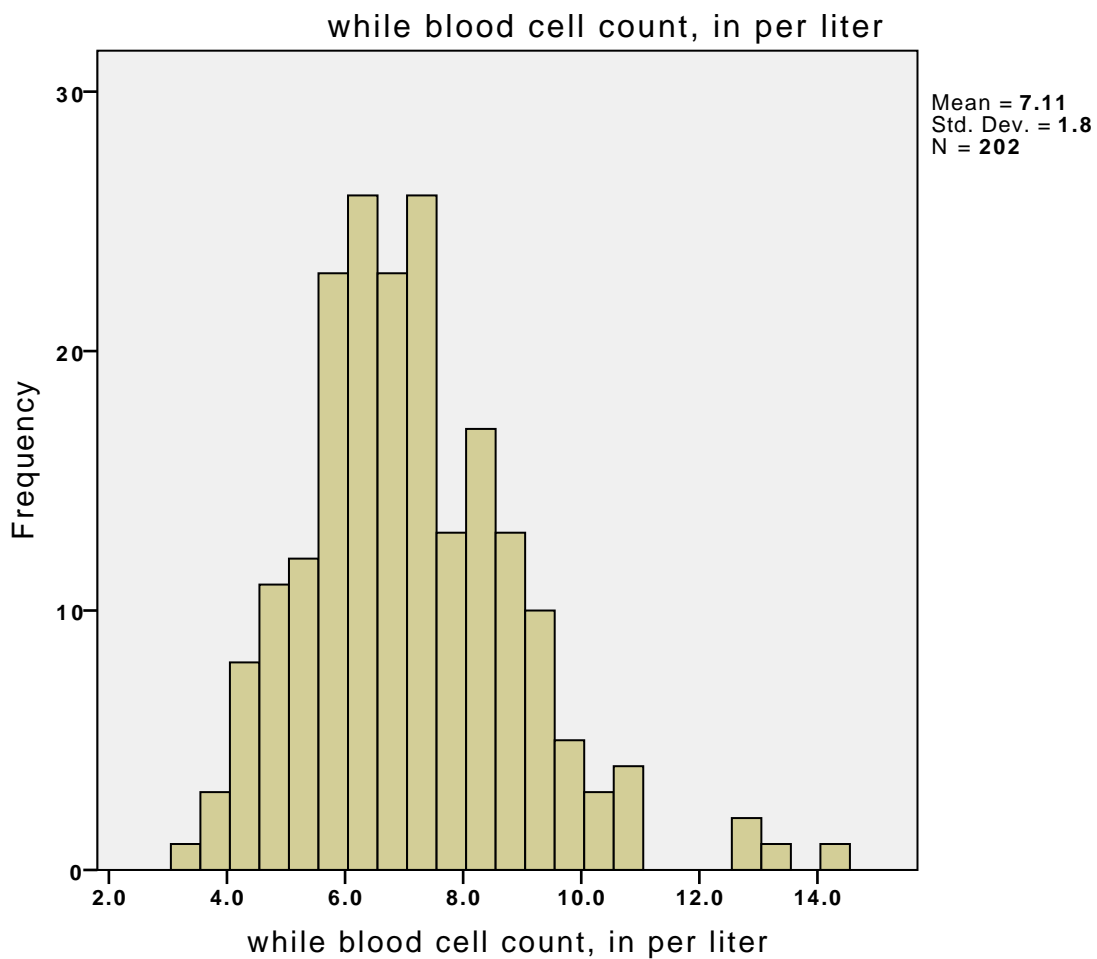
	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 1 B_Ball	25	12.4	12.4	12.4
2 Field	19	9.4	9.4	21.8
3 Gym	4	2.0	2.0	23.8
4 Netball	23	11.4	11.4	35.1
5 Row	37	18.3	18.3	53.5
6 Swim	22	10.9	10.9	64.4
7 T_400m	29	14.4	14.4	78.7
8 T_Sprnt	15	7.4	7.4	86.1
9 Tennis	11	5.4	5.4	91.6
10 W_Polo	17	8.4	8.4	100.0
Total	202	100.0	100.0	

sport_abbreviated

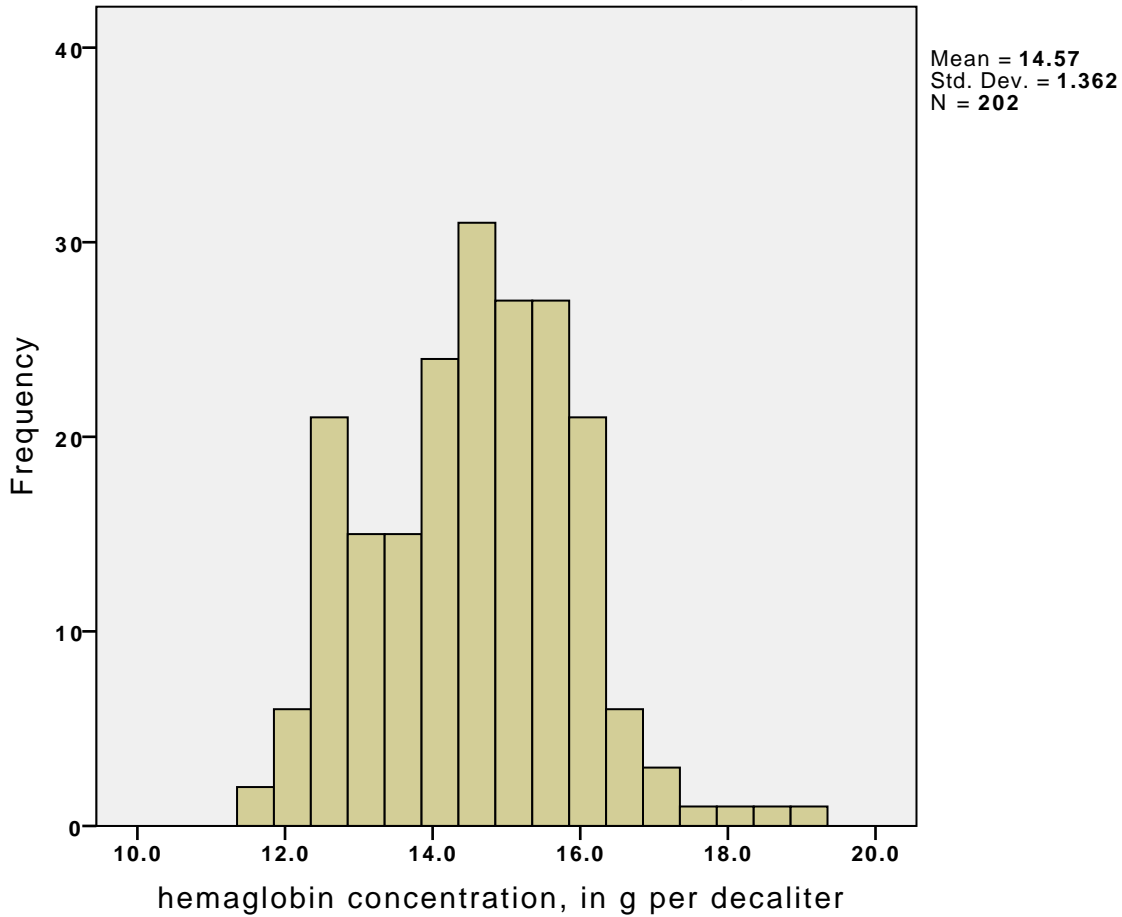
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.00 Swim	22	10.9	28.9	28.9
	2.00 Track > 400m	29	14.4	38.2	67.1
	3.00 Basketball	25	12.4	32.9	100.0
	Total	76	37.6	100.0	
Missing	System	126	62.4		
Total		202	100.0		

Histogram

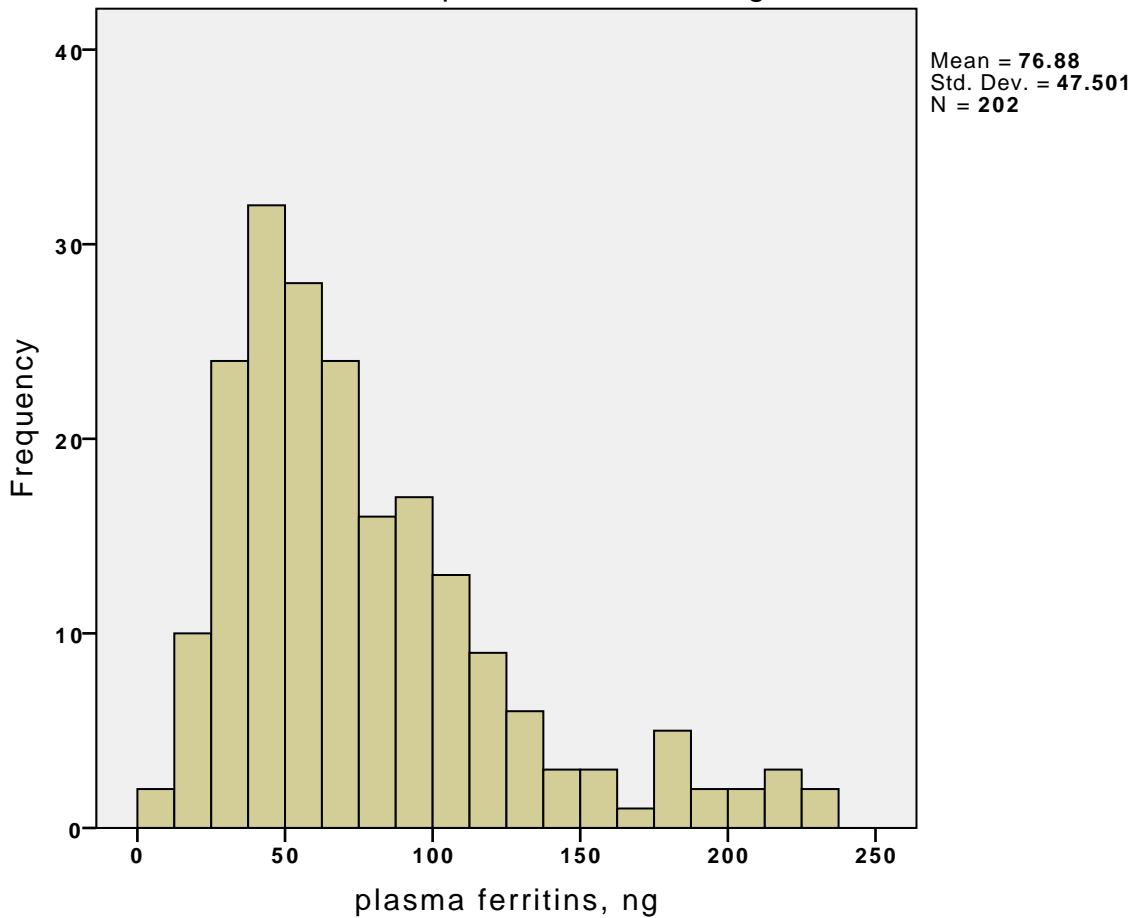


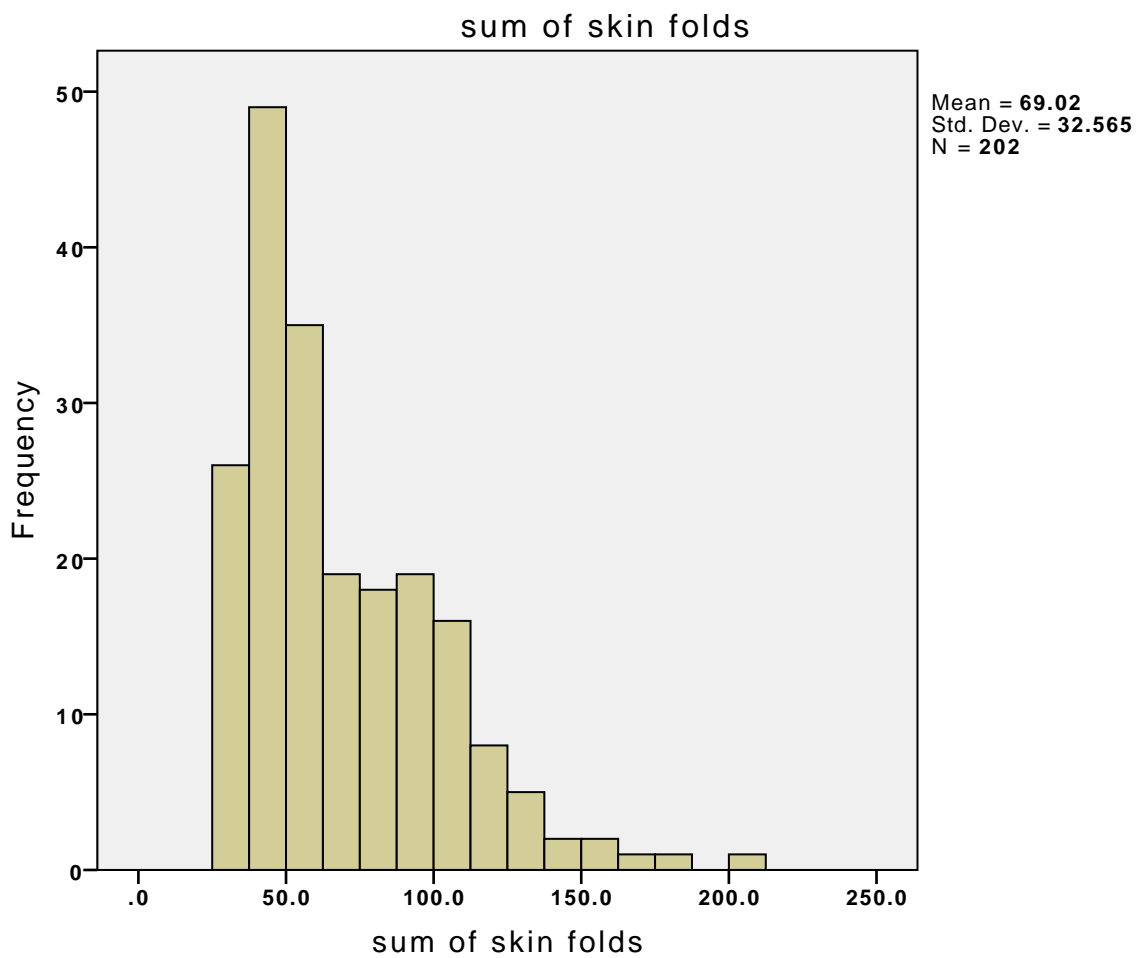
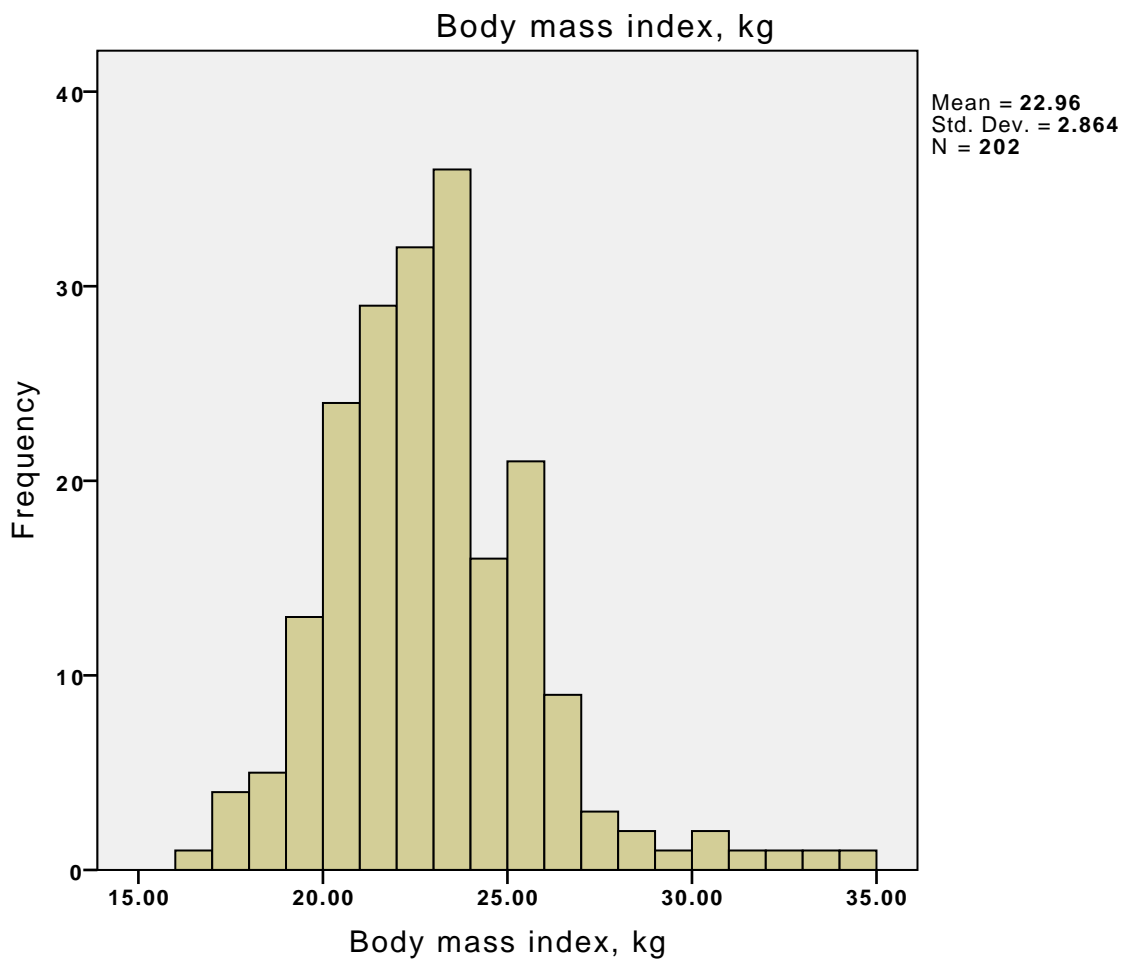


hemaglobin concentration, in g per decaliter

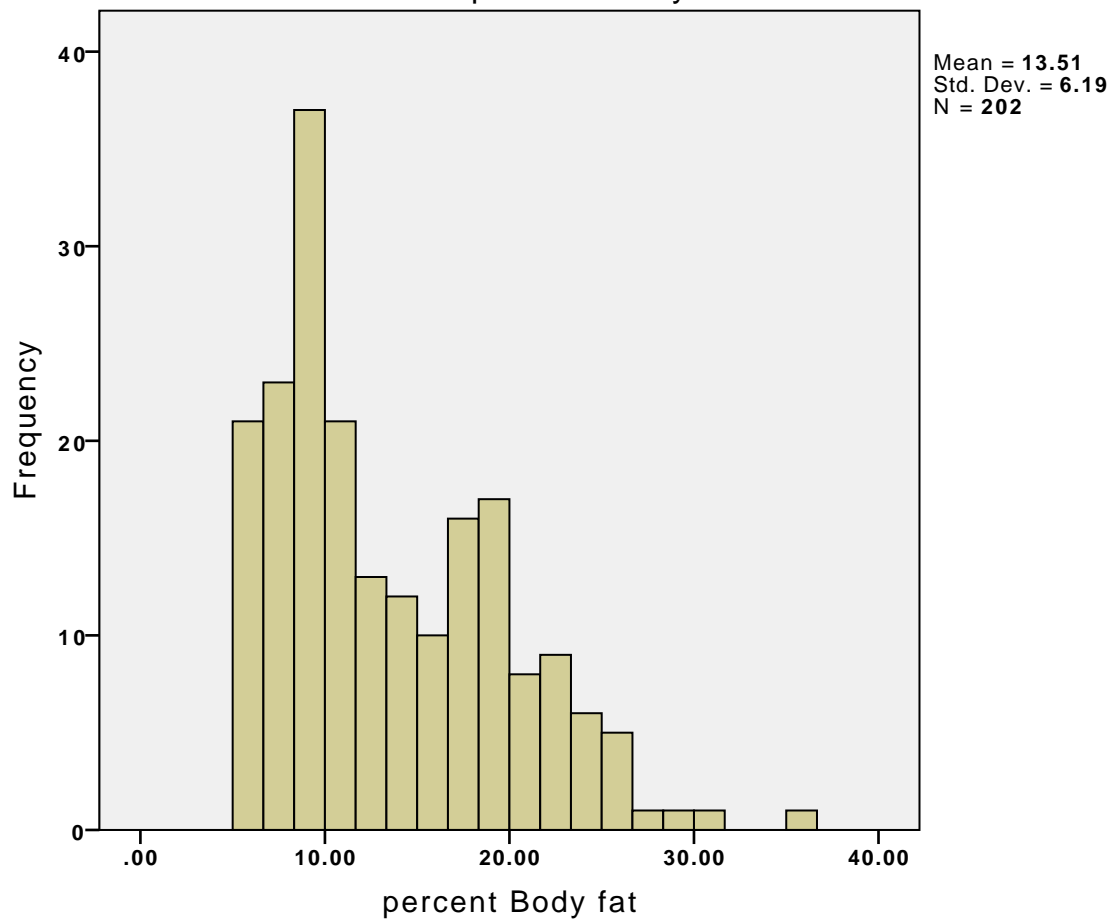


plasma ferritins, ng

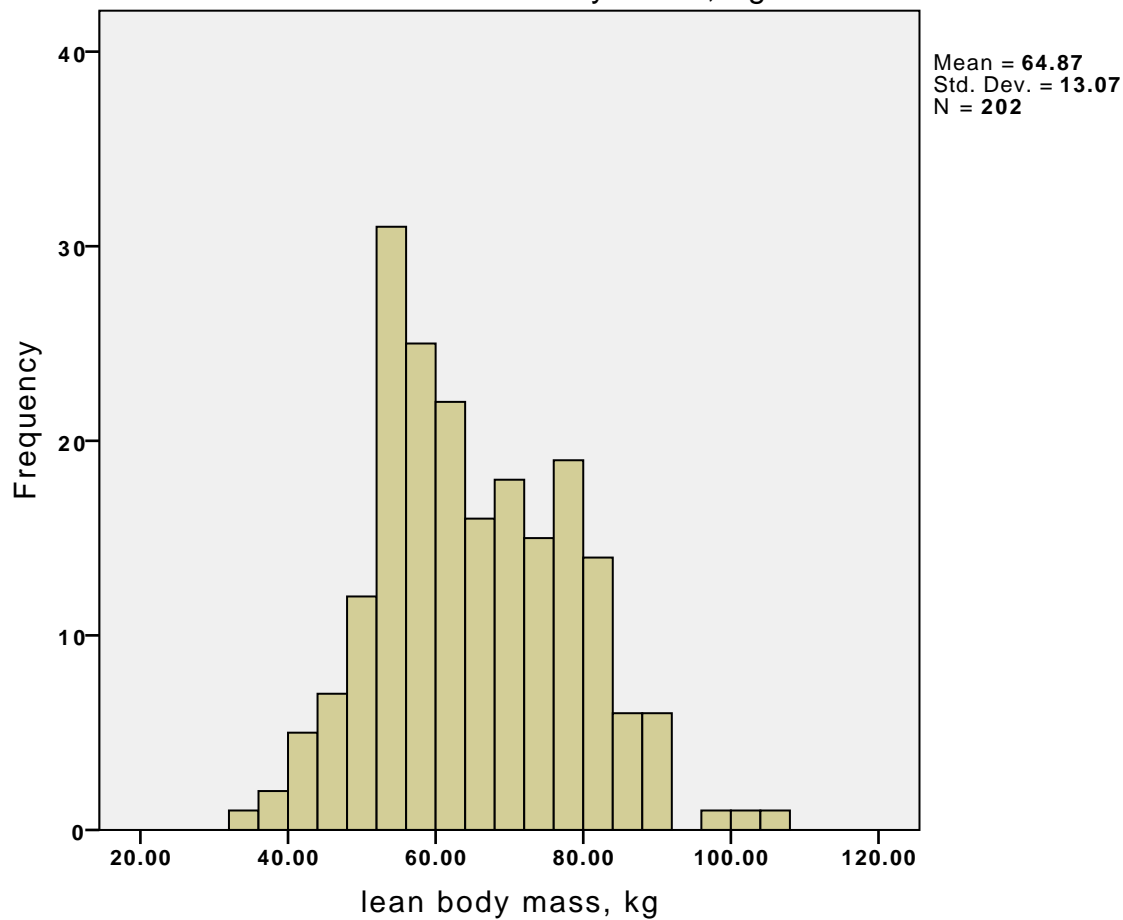


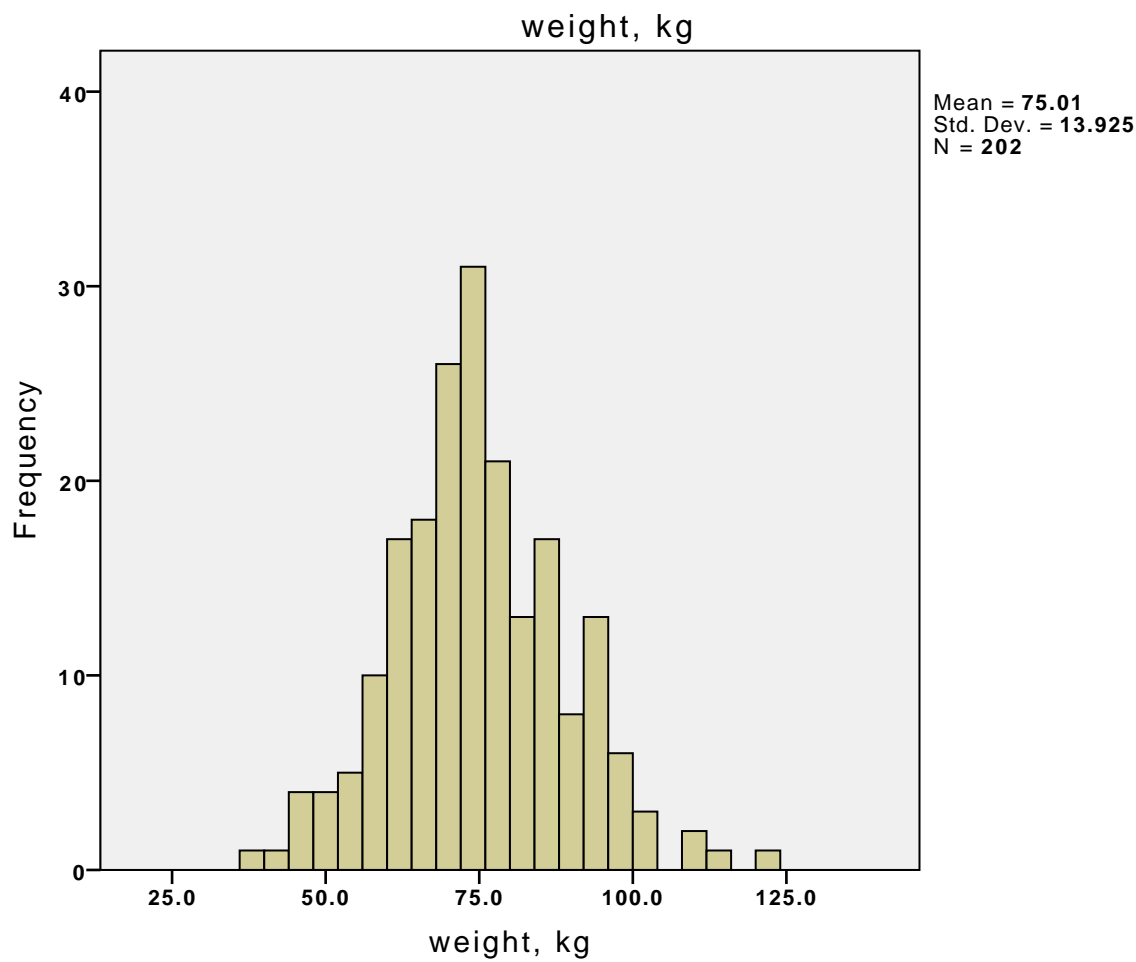
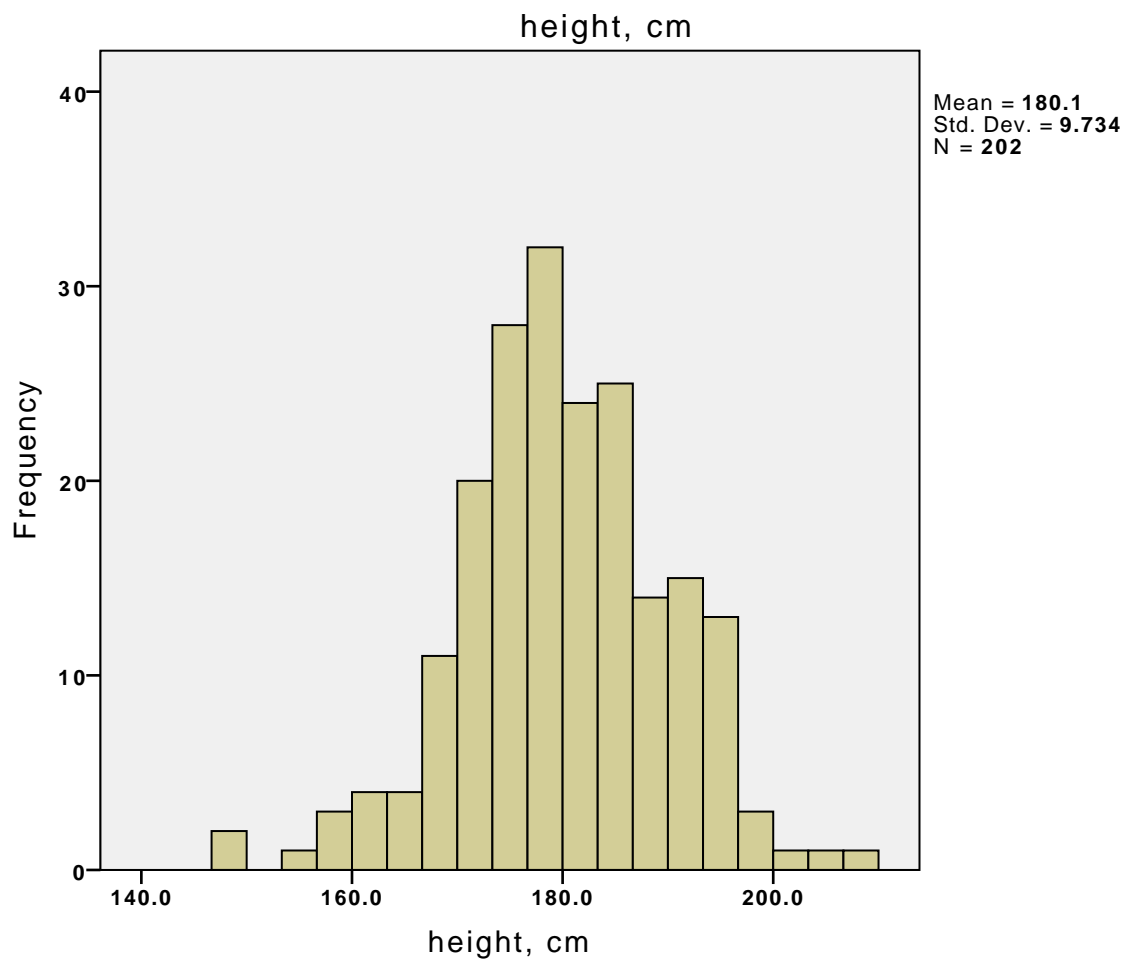


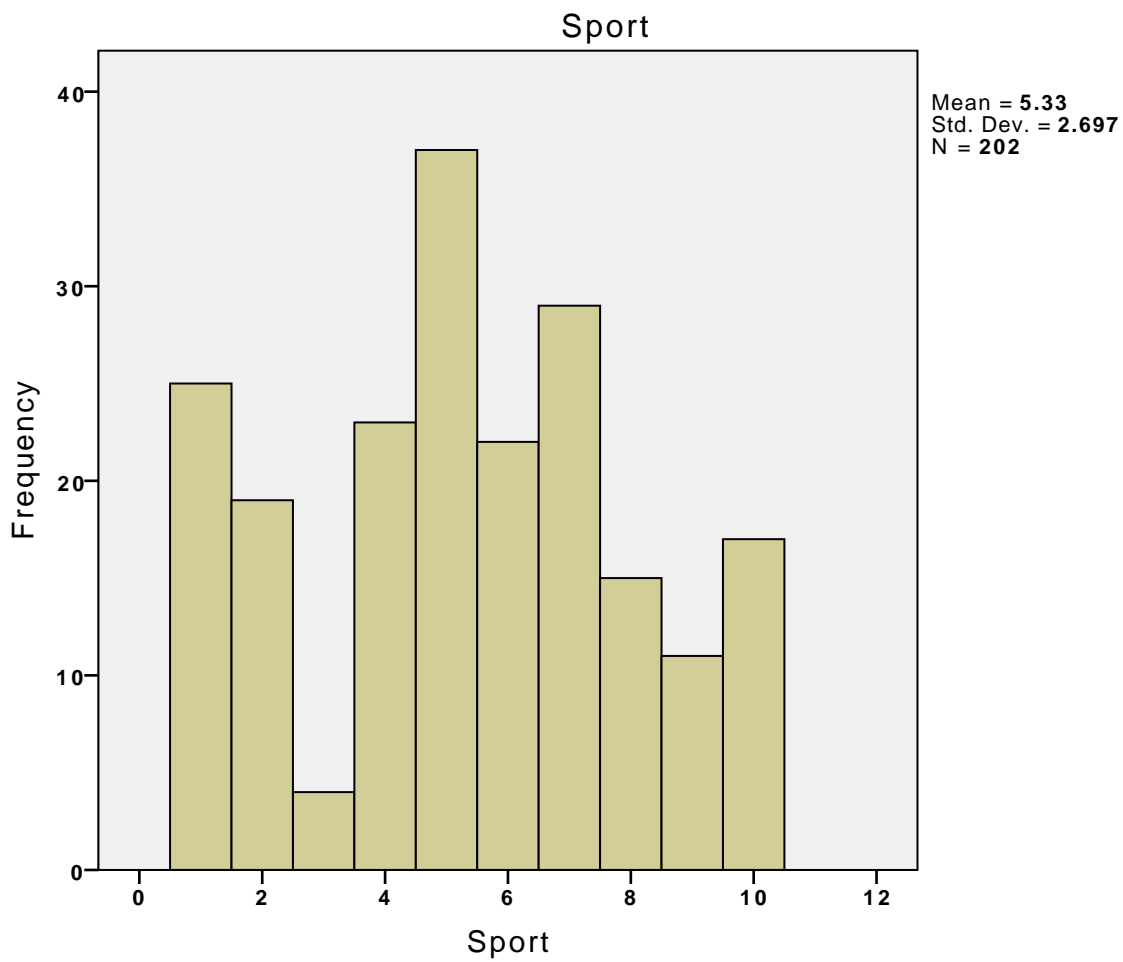
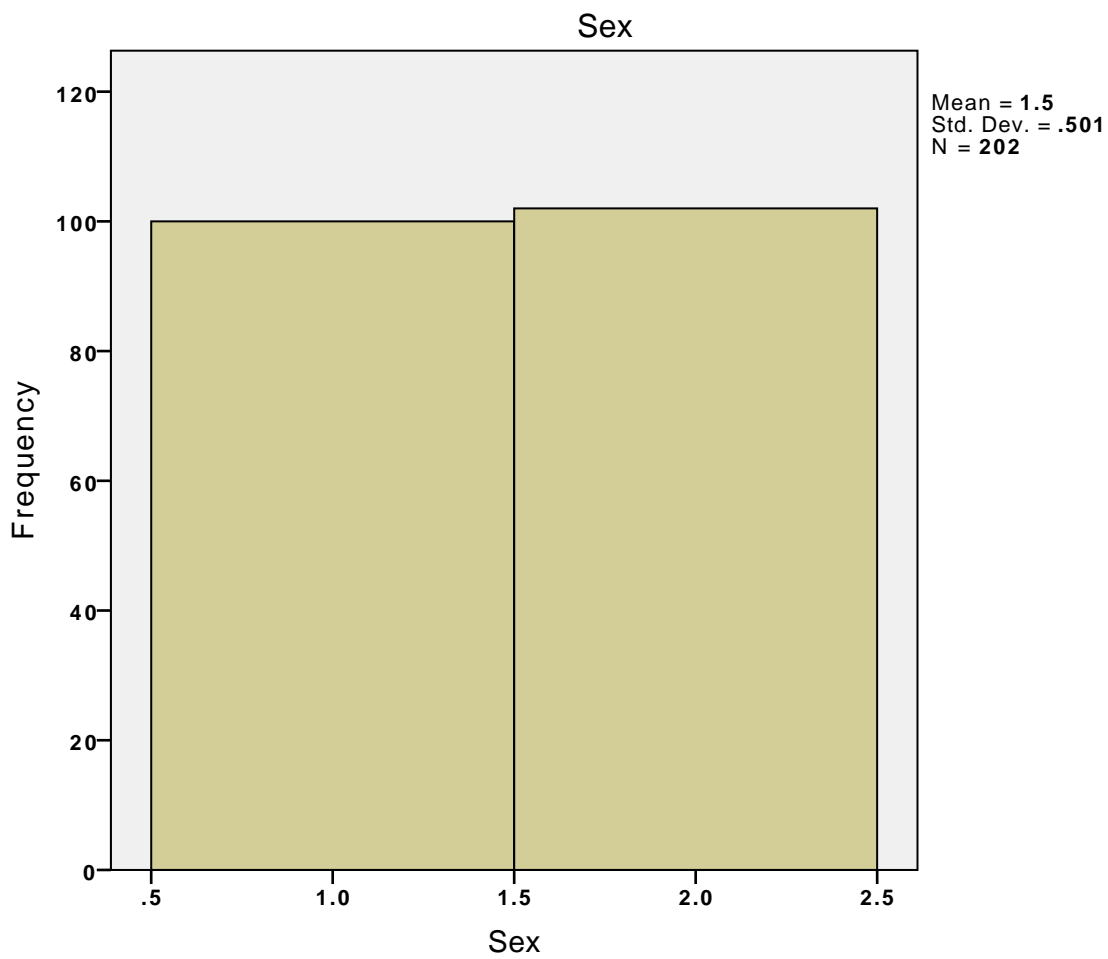
percent Body fat

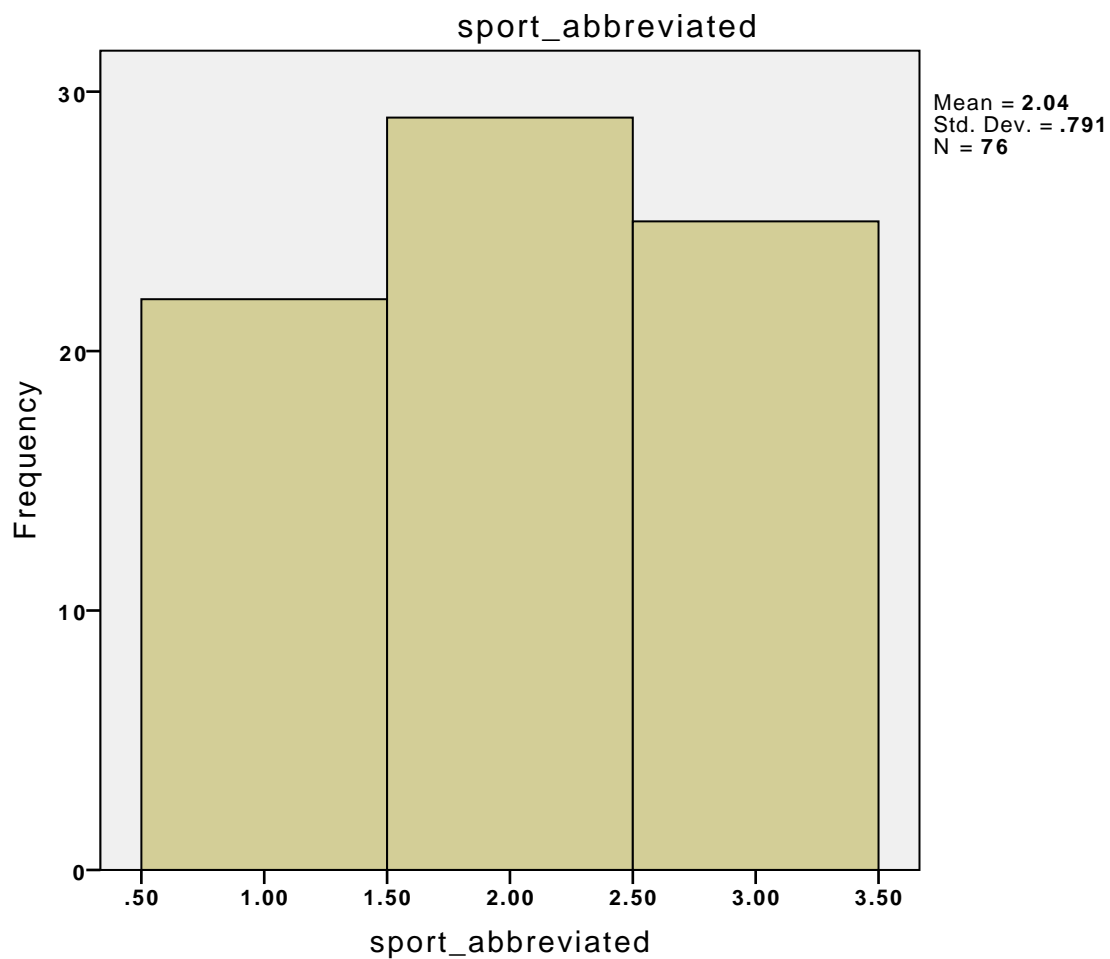


lean body mass, kg









```
CROSSTABS
  /TABLES=sport_numeric BY sex_numeric
  /FORMAT=AVALUE TABLES
  /CELLS=COUNT
  /COUNT ROUND CELL.
```

Crosstabs

Notes

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Syntax		CROSSTABS /TABLES=sport_numeric BY sex_numeric /FORMAT=AVALUE..
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Case Processing Summary

	Cases					
	Valid		Missing		Total	
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sport_numeric Sport * sex_numeric Sex Crosstabulation

Count

		sex_numeric Sex		Total
		1 f	2 m	
sport_numeric Sport	1 B_Ball	13	12	25
	2 Field	7	12	19
	3 Gym	4	0	4
	4 Netball	23	0	23
	5 Row	22	15	37
	6 Swim	9	13	22
	7 T_400m	11	18	29
	8 T_Sprnt	4	11	15
	9 Tennis	7	4	11
	10 W_Polo	0	17	17
Total		100	102	202

```
CROSSTABS
  /TABLES=sport_numeric BY sex_numeric
  /FORMAT=AVALUE TABLES
  /CELLS=COUNT
  /COUNT ROUND CELL.
```

Crosstabs

Notes

Output Created	12-AUG-2013 14:44:21	
Comments		
Input	Data	/Users/jeromy/teaching/org-research-methods/2013/content/03-group-differences/exercises/data/ais.sav
	Active Dataset	DataSet2
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data ...	202
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics for each table are based on all the cases with valid data in the specified range(s) for all variables in each table.
Syntax	CROSSTABS /TABLES=sport_numeric BY sex_numeric /FORMAT=AVALUE..	
Resources	Processor Time	00:00:00.01
	Elapsed Time	00:00:00.00
	Dimensions Requested	2
	Cells Available	131029

[DataSet2] /Users/jeromy/teaching/org-research-methods/2013/content/03-group-differences/exercises/data/ais.sav

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
sport_numeric Sport * sex_numeric Sex	202	100.0%	0	0.0%	202	100.0%

sport_numeric Sport * sex_numeric Sex Crosstabulation

Count

		sex_numeric Sex		Total
		1 Female	2 Male	
sport_numeric Sport	1 Basketball	13	12	25
	2 Field	7	12	19
	3 Gymnastics	4	0	4
	4 Netball	23	0	23
	5 Rowing	22	15	37
	6 Swimming	9	13	22
	7 Track > 400m	11	18	29
	8 Track Sprint	4	11	15
	9 Tennis	7	4	11
	10 Waterpolo	0	17	17
Total		100	102	202

```
PROXIMITIES rcc wcc hc hg ferr bmi ssf pcBfat lbm ht wt sex_numeric
/VIEW=VARIABLE
/MEASURE=CORRELATION
/STANDARDIZE=NONE.
```

Proximities

Notes

Output Created		12-AUG-2013 14:47:41
Comments		
Input	Data	/Users/jeromy/teaching/org-research-methods/2013/content/03-group-differences/exercises/data/ais.sav
	Active Dataset	DataSet2
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data ...	202
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics are based on cases with no missing values for any variable used.
Syntax		PROXIMITIES rcc wcc hc hg ferr bmi ssf pcBfat lbm ht wt sex_numeric /VIEW=VARIABLE /MEASURE=CORRELATI...
Resources	Processor Time	00:00:00.01
	Elapsed Time	00:00:00.00
	Workspace Bytes	912

```
[DataSet2] /Users/jeromy/teaching/org-research-methods/2013/content/03-group-differences/exercises/data/ais.sav
```

Case Processing Summary

Cases					
Valid		Missing		Total	
N	Percent	N	Percent	N	Percent
202	100.0%	0	0.0%	202	100.0%

Proximity Matrix

	Correlation between Vectors of Values					
	rcc red blood cell count, in	wcc while blood cell count, in per liter	hc hematocrit, percent	hg hemaglobin concentration, in g per decaliter	ferr plasma ferritins, ng	bmi Body mass index, kg
rcc red blood cell count, in	1.000	.147	.925	.889	.251	.299
wcc while blood cell count, in per liter	.147	1.000	.153	.135	.132	.177
hc hematocrit, percent	.925	.153	1.000	.951	.258	.321
hg hemaglobin concentration, in g per decaliter	.889	.135	.951	1.000	.308	.383
ferr plasma ferritins, ng	.251	.132	.258	.308	1.000	.303
bmi Body mass index, kg	.299	.177	.321	.383	.303	1.000
ssf sum of skin folds	-.403	.137	-.449	-.435	-.108	.321
pcBfat percent Body fat	-.494	.108	-.532	-.532	-.183	.188
lbm lean body mass, kg	.551	.103	.583	.611	.318	.714
ht height, cm	.359	.077	.371	.352	.123	.337
wt weight, kg	.404	.156	.424	.455	.274	.846
sex_numeric Sex	.681	.063	.707	.733	.416	.335

Proximity Matrix

	Correlation between Vectors of Values					
	ssf sum of skin folds	pcBfat percent Body fat	lbm lean body mass, kg	ht height, cm	wt weight, kg	sex_numeric Sex
rcc red blood cell count, in	-.403	-.494	.551	.359	.404	.681
wcc while blood cell count, in per liter	.137	.108	.103	.077	.156	.063
hc hematocrit, percent	-.449	-.532	.583	.371	.424	.707
hg hemaglobin concentration, in g per decaliter	-.435	-.532	.611	.352	.455	.733
ferr plasma ferritins, ng	-.108	-.183	.318	.123	.274	.416
bmi Body mass index, kg	.321	.188	.714	.337	.846	.335
ssf sum of skin folds	1.000	.963	-.208	-.071	.154	-.547
pcBfat percent Body fat	.963	1.000	-.362	-.188	.000	-.696
lbm lean body mass, kg	-.208	-.362	1.000	.802	.931	.758
ht height, cm	-.071	-.188	.802	1.000	.781	.562
wt weight, kg	.154	.000	.931	.781	1.000	.546
sex_numeric Sex	-.547	-.696	.758	.562	.546	1.000

This is a similarity matrix

```
T-TEST GROUPS=sex_numeric(1 2)
/MISSING=ANALYSIS
/VARIABLES=ht
/CRITERIA=CI(.95).
```

T-Test

Notes

Output Created		12-AUG-2013 14:57:41
Comments		
Input	Data	/Users/jeromy/teaching/org-research-methods/2013/content/03-group-differences/exercises/data/ais.sav
	Active Dataset	DataSet2
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data ...	202
Missing Value Handling	Definition of Missing	User defined missing values are treated as missing.
	Cases Used	Statistics for each analysis are based on the cases with no missing or out-of-range data for any variable in the analysis.
Syntax		T-TEST GROUPS=sex_numeric(1 2) /MISSING=ANALYSIS /VARIABLES=ht /CRITERIA=CI(.95).
Resources	Processor Time	00:00:00.00
	Elapsed Time	00:00:00.00

[DataSet2] /Users/jeromy/teaching/org-research-methods/2013/content/03-group-differences/exercises/data/ais.sav

Group Statistics

	sex_numeric Sex	N	Mean	Std. Deviation	Std. Error Mean
ht height, cm	1 Female	100	174.594	8.2422	.8242
	2 Male	102	185.506	7.9035	.7826

Independent Samples Test

		ht height, cm	
		Equal variances assumed	Equal variances not assumed
Levene's Test for Equality of Variances	F	.089	
	Sig.	.766	
t-test for Equality of Means	t	-9.605	-9.601
	df	200	199.239
	Sig. (2-tailed)	.000	.000
	Mean Difference	-10.9119	-10.9119
	Std. Error Difference	1.1361	1.1365
	95% Confidence Interval of the Difference		
	Lower	-13.1521	-13.1531
	Upper	-8.6717	-8.6707

```
UNIANOVA ht BY sex_numeric
/METHOD=SSTYPE(3)
/INTERCEPT=INCLUDE
```

```
/CRITERIA=ALPHA(0.05)
/DESIGN=sex_numeric.
```

Univariate Analysis of Variance

Notes

Output Created	12-AUG-2013 15:00:11	
Comments		
Input	Data	/Users/jeromy/teaching/org-research-methods/2013/content/03-group-differences/exercises/data/ais.sav
	Active Dataset	DataSet2
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data ...	202
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics are based on all cases with valid data for all variables in the model.
Syntax	UNIANOVA ht BY sex_numeric /METHOD=SSTYPE(3) /INTERCEPT=INCLUDE /CRITERIA=ALPHA(0.05)...	
Resources	Processor Time	00:00:00.01
	Elapsed Time	00:00:00.00

[DataSet2] /Users/jeromy/teaching/org-research-methods/2013/content/03-group-differences/exercises/data/ais.sav

Between-Subjects Factors

	Value Label	N
sex_numeric Sex 1	Female	100
2	Male	102

Tests of Between-Subjects Effects

Dependent Variable: ht height, cm

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	6012.404 ^a	1	6012.404	92.254	.000
Intercept	6547790.29	1	6547790.29	100469.124	.000
sex_numeric	6012.404	1	6012.404	92.254	.000
Error	13034.433	200	65.172		
Total	6571409.02	202			
Corrected Total	19046.837	201			

a. R Squared = .316 (Adjusted R Squared = .312)

REGRESSION

```
/MISSING LISTWISE
/STATISTICS COEFF OUTS R ANOVA
/CRITERIA=PIN(.05) POUT(.10)
/NOORIGIN
```

/DEPENDENT ht
/METHOD=ENTER sex_numeric.

Regression

Notes

Output Created		12-AUG-2013 15:00:25
Comments		
Input	Data	/Users/jeromy/teaching/org-research-methods/2013/content/03-group-differences/exercises/data/ais.sav
	Active Dataset	DataSet2
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data ...	202
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics are based on cases with no missing values for any variable used.
Syntax		REGRESSION /MISSING LISTWISE /STATISTICS COEFF OUTS R ANOVA /CRITERIA=PIN(.05) /POUT(.10) /NOORIGIN.
Resources	Processor Time	00:00:00.01
	Elapsed Time	00:00:00.00
	Memory Required	2960 bytes
	Additional Memory Required for Residual Plots	0 bytes

[DataSet2] /Users/jeromy/teaching/org-research-methods/2013/content/03-group-differences/exercises/data/ais.sav

Variables Entered/Removed^a

Model	Variables Entered	Variables Removed	Method
1	sex_numeric Sex ^b	.	Enter

a. Dependent Variable: ht height, cm

b. All requested variables entered.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.562 ^a	.316	.312	8.0729

a. Predictors: (Constant), sex_numeric Sex

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	6012.404	1	6012.404	92.254	.000 ^b
	Residual	13034.433	200	65.172		
	Total	19046.837	201			

a. Dependent Variable: ht height, cm

b. Predictors: (Constant), sex_numeric Sex

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	163.682	1.802		90.853	.000
	sex_numeric Sex	10.912	1.136	.562	9.605	.000

a. Dependent Variable: ht height, cm

```
UNIANOVA ht BY sex_numeric
/METHOD=SSTYPE(3)
/INTERCEPT=INCLUDE
/PRINT=HOMOGENEITY DESCRIPTIVE
/PLOT=RESIDUALS
/CRITERIA=ALPHA(.05)
/DESIGN=sex_numeric.
```

Univariate Analysis of Variance

Notes

Output Created		12-AUG-2013 15:06:51
Comments		
Input	Data	/Users/jeromy/teaching/org-research-methods/2013/content/03-group-differences/exercises/data/ais.sav
	Active Dataset	DataSet2
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data ...	202
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics are based on all cases with valid data for all variables in the model.
Syntax		UNIANOVA ht BY sex_numeric /METHOD=SSTYPE(3) /INTERCEPT=INCLUDE /PRINT=HOMOGENEITY DESCRIPTIVE /PLOT=RESIDUALS.
Resources	Processor Time	00:00:00.21
	Elapsed Time	00:00:01.00

Between-Subjects Factors

	Value Label	N
sex_numeric Sex	1	Female
	2	Male
		100
		102

Descriptive Statistics

Dependent Variable: ht height, cm

sex_numeric Sex	Mean	Std. Deviation	N
1 Female	174.594	8.2422	100
2 Male	185.506	7.9035	102
Total	180.104	9.7345	202

Levene's Test of Equality of Error Variances^a

Dependent Variable: ht height, cm

F	df1	df2	Sig.
.089	1	200	.766

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

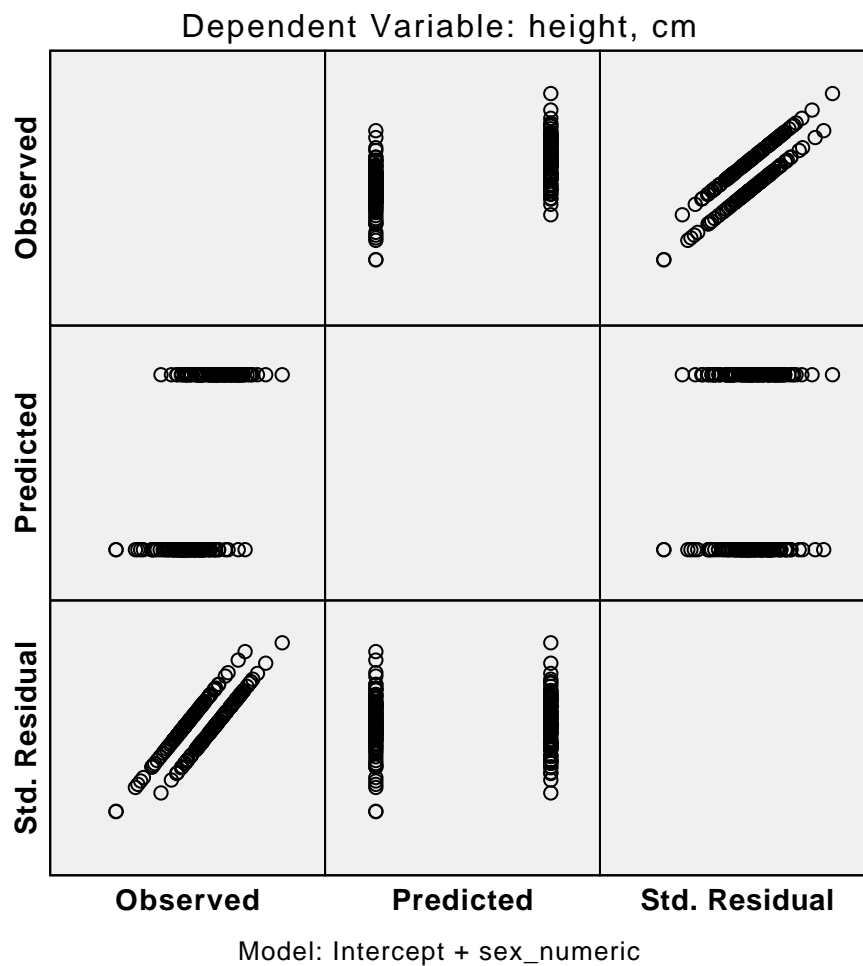
a. Design: Intercept + sex_numeric

Tests of Between-Subjects Effects

Dependent Variable: ht height, cm

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	6012.404 ^a	1	6012.404	92.254	.000
Intercept	6547790.29	1	6547790.29	100469.124	.000
sex_numeric	6012.404	1	6012.404	92.254	.000
Error	13034.433	200	65.172		
Total	6571409.02	202			
Corrected Total	19046.837	201			

a. R Squared = .316 (Adjusted R Squared = .312)



```
UNIANOVA ht BY sex_numeric
/METHOD=SSTYPE(3)
/INTERCEPT=INCLUDE
/SAVE=RESID
/PRINT=HOMOGENEITY DESCRIPTIVE
/PLOT=RESIDUALS
/CRITERIA=ALPHA(.05)
/DESIGN=sex_numeric.
```

Univariate Analysis of Variance

Notes

Output Created		12-AUG-2013 15:10:11
Comments		
Input	Data	/Users/jeromy/teaching/org-research-methods/2013/content/03-group-differences/exercises/data/ais.sav
	Active Dataset	DataSet2
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data ...	202
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics are based on all cases with valid data for all variables in the model.
Syntax		UNIANOVA ht BY sex_numeric /METHOD=SSTYPE(3) /INTERCEPT=INCLUDE /SAVE=RESID /PRINT=HOMOGENEITY DESCRIPTIVE /PLOT=RESIDUALS.
Resources	Processor Time	00:00:00.20
	Elapsed Time	00:00:01.00
Variables Created or Modified	RES_1	Residual for ht

[DataSet2] /Users/jeromy/teaching/org-research-methods/2013/content/03-group-differences/exercises/data/ais.sav

Between-Subjects Factors

	Value Label	N
sex_numeric Sex 1	Female	100
2	Male	102

Descriptive Statistics

Dependent Variable: ht height, cm

sex_numeric Sex	Mean	Std. Deviation	N
1 Female	174.594	8.2422	100
2 Male	185.506	7.9035	102
Total	180.104	9.7345	202

Levene's Test of Equality of Error Variances^a

Dependent Variable: ht height, cm

F	df1	df2	Sig.
.089	1	200	.766

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

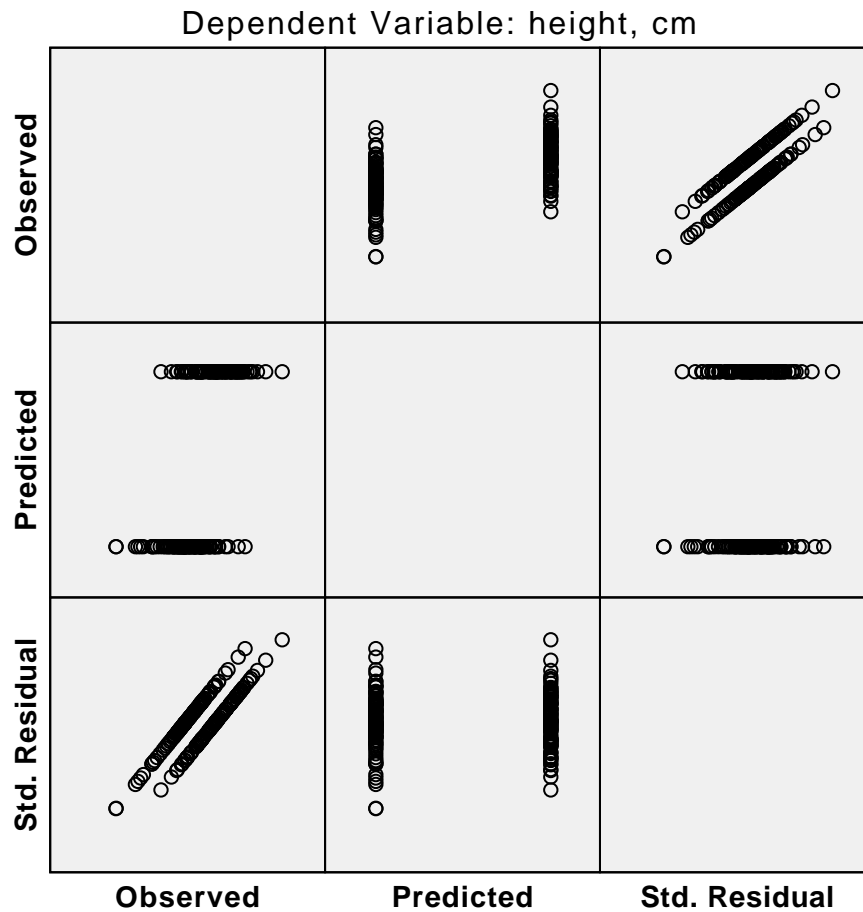
a. Design: Intercept + sex_numeric

Tests of Between-Subjects Effects

Dependent Variable: ht height, cm

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	6012.404 ^a	1	6012.404	92.254	.000
Intercept	6547790.29	1	6547790.29	100469.124	.000
sex_numeric	6012.404	1	6012.404	92.254	.000
Error	13034.433	200	65.172		
Total	6571409.02	202			
Corrected Total	19046.837	201			

a. R Squared = .316 (Adjusted R Squared = .312)



```
UNIANOVA ht BY sex_numeric
/METHOD=SSTYPE(3)
/INTERCEPT=INCLUDE
/SAVE=RESID
/PRINT=HOMOGENEITY DESCRIPTIVE
/PLOT=RESIDUALS
/CRITERIA=ALPHA(.05)
/DESIGN=sex_numeric.
```

Univariate Analysis of Variance

Notes

Output Created		12-AUG-2013 15:10:12
Comments		
Input	Data	/Users/jeromy/teaching/org-research-methods/2013/content/03-group-differences/exercises/data/ais.sav
	Active Dataset	DataSet2
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data ...	202
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics are based on all cases with valid data for all variables in the model.
Syntax		UNIANOVA ht BY sex_numeric /METHOD=SSTYPE(3) /INTERCEPT=INCLUDE /SAVE=RESID /PRINT=HOMOGENEITY DESCRIPTIVE /PLOT=RESIDUALS.
Resources	Processor Time	00:00:00.19
	Elapsed Time	00:00:00.00
Variables Created or Modified	RES_2	Residual for ht

[DataSet2] /Users/jeromy/teaching/org-research-methods/2013/content/03-group-differences/exercises/data/ais.sav

Between-Subjects Factors

	Value Label	N
sex_numeric Sex 1	Female	100
2	Male	102

Descriptive Statistics

Dependent Variable: ht height, cm

sex_numeric Sex	Mean	Std. Deviation	N
1 Female	174.594	8.2422	100
2 Male	185.506	7.9035	102
Total	180.104	9.7345	202

Levene's Test of Equality of Error Variances^a

Dependent Variable: ht height, cm

F	df1	df2	Sig.
.089	1	200	.766

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

a. Design: Intercept + sex_numeric

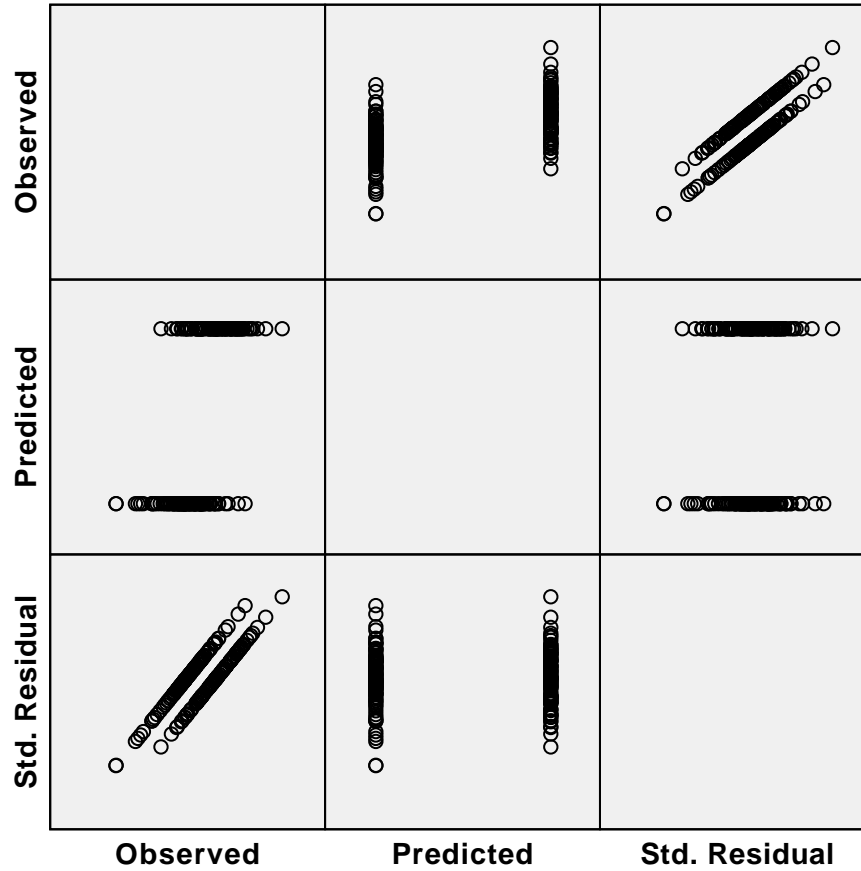
Tests of Between-Subjects Effects

Dependent Variable: ht height, cm

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	6012.404 ^a	1	6012.404	92.254	.000
Intercept	6547790.29	1	6547790.29	100469.124	.000
sex_numeric	6012.404	1	6012.404	92.254	.000
Error	13034.433	200	65.172		
Total	6571409.02	202			
Corrected Total	19046.837	201			

a. R Squared = .316 (Adjusted R Squared = .312)

Dependent Variable: height, cm



Model: Intercept + sex_numeric

```
FREQUENCIES VARIABLES=RES_2
/ORDER=ANALYSIS.
```

Frequencies

Notes

Output Created		12-AUG-2013 15:11:51
Comments		
Input	Data	/Users/jeromy/teaching/org-research-methods/2013/content/03-group-differences/exercises/data/ais.sav
	Active Dataset	DataSet2
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data ...	202
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics are based on all cases with valid data.
Syntax		FREQUENCIES VARIABLES=RES_2 /ORDER=ANALYSIS.
Resources	Processor Time	00:00:00.01
	Elapsed Time	00:00:00.00

[DataSet2] /Users/jeromy/teaching/org-research-methods/2013/content/03-group-differences/exercises/data/ais.sav

Statistics

RES_2 Residual for ht

N	Valid	202
	Missing	0

RES_2 Residual for ht

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	-25.69	1	.5	.5	.5
	-25.59	1	.5	.5	1.0
	-20.21	1	.5	.5	1.5
	-18.59	1	.5	.5	2.0
	-17.69	1	.5	.5	2.5
	-16.69	1	.5	.5	3.0
	-16.41	1	.5	.5	3.5
	-15.69	1	.5	.5	4.0
	-14.51	1	.5	.5	4.5
	-14.21	1	.5	.5	5.0
	-12.81	1	.5	.5	5.4
	-12.59	2	1.0	1.0	6.4
	-12.51	1	.5	.5	6.9
	-12.09	1	.5	.5	7.4
	-11.59	1	.5	.5	7.9
	-11.51	2	1.0	1.0	8.9
	-10.91	1	.5	.5	9.4
	-10.81	1	.5	.5	9.9
	-10.69	1	.5	.5	10.4
	-10.61	1	.5	.5	10.9
	-10.51	1	.5	.5	11.4
	-9.59	1	.5	.5	11.9
	-9.51	1	.5	.5	12.4
	-9.31	1	.5	.5	12.9
	-9.01	1	.5	.5	13.4
	-8.49	1	.5	.5	13.9
	-7.89	1	.5	.5	14.4
	-7.51	2	1.0	1.0	15.3
	-7.29	1	.5	.5	15.8
	-7.11	1	.5	.5	16.3
	-7.01	2	1.0	1.0	17.3
	-6.91	1	.5	.5	17.8
	-6.69	1	.5	.5	18.3
	-6.59	1	.5	.5	18.8
	-6.41	1	.5	.5	19.3
	-6.21	1	.5	.5	19.8
	-5.99	1	.5	.5	20.3
	-5.91	2	1.0	1.0	21.3
	-5.81	1	.5	.5	21.8
	-5.61	1	.5	.5	22.3
	-5.49	1	.5	.5	22.8
	-5.41	2	1.0	1.0	23.8
	-5.31	2	1.0	1.0	24.8
	-4.91	1	.5	.5	25.2
	-4.79	1	.5	.5	25.7
	-4.69	1	.5	.5	26.2
	-4.59	2	1.0	1.0	27.2
	-4.51	1	.5	.5	27.7
	-4.29	1	.5	.5	28.2
	-3.79	1	.5	.5	28.7
	-3.71	1	.5	.5	29.2
	-3.49	1	.5	.5	29.7
	-3.19	2	1.0	1.0	30.7

RES_2 Residual for ht

	Frequency	Percent	Valid Percent	Cumulative Percent
-2.99	1	.5	.5	31.2
-2.91	1	.5	.5	31.7
-2.89	1	.5	.5	32.2
-2.81	1	.5	.5	32.7
-2.59	1	.5	.5	33.2
-2.51	2	1.0	1.0	34.2
-2.41	1	.5	.5	34.7
-2.39	1	.5	.5	35.1
-2.29	1	.5	.5	35.6
-2.09	1	.5	.5	36.1
-2.01	1	.5	.5	36.6
-1.99	1	.5	.5	37.1
-1.89	1	.5	.5	37.6
-1.61	2	1.0	1.0	38.6
-1.59	1	.5	.5	39.1
-1.51	1	.5	.5	39.6
-1.29	2	1.0	1.0	40.6
-1.11	1	.5	.5	41.1
-1.09	1	.5	.5	41.6
-.99	1	.5	.5	42.1
-.91	1	.5	.5	42.6
-.89	1	.5	.5	43.1
-.79	1	.5	.5	43.6
-.61	1	.5	.5	44.1
-.59	3	1.5	1.5	45.5
-.51	1	.5	.5	46.0
-.49	2	1.0	1.0	47.0
-.41	1	.5	.5	47.5
-.21	1	.5	.5	48.0
-.19	1	.5	.5	48.5
-.11	1	.5	.5	49.0
-.01	1	.5	.5	49.5
.09	3	1.5	1.5	51.0
.41	3	1.5	1.5	52.5
.49	2	1.0	1.0	53.5
.59	1	.5	.5	54.0
.71	1	.5	.5	54.5
1.01	1	.5	.5	55.0
1.09	1	.5	.5	55.4
1.41	4	2.0	2.0	57.4
1.59	1	.5	.5	57.9
1.69	1	.5	.5	58.4
1.79	1	.5	.5	58.9
2.19	1	.5	.5	59.4
2.21	1	.5	.5	59.9
2.39	1	.5	.5	60.4
2.41	1	.5	.5	60.9
2.59	1	.5	.5	61.4
2.71	2	1.0	1.0	62.4
2.79	1	.5	.5	62.9
2.91	2	1.0	1.0	63.9
3.21	1	.5	.5	64.4
3.31	1	.5	.5	64.9

RES_2 Residual for ht

	Frequency	Percent	Valid Percent	Cumulative Percent
3.41	1	.5	.5	65.3
3.49	3	1.5	1.5	66.8
3.59	1	.5	.5	67.3
3.61	1	.5	.5	67.8
3.69	1	.5	.5	68.3
4.11	1	.5	.5	68.8
4.31	1	.5	.5	69.3
4.71	1	.5	.5	69.8
4.79	1	.5	.5	70.3
4.89	1	.5	.5	70.8
4.91	1	.5	.5	71.3
4.99	1	.5	.5	71.8
5.01	2	1.0	1.0	72.8
5.11	2	1.0	1.0	73.8
5.19	1	.5	.5	74.3
5.21	1	.5	.5	74.8
5.29	1	.5	.5	75.2
5.31	1	.5	.5	75.7
5.49	2	1.0	1.0	76.7
5.61	2	1.0	1.0	77.7
5.91	2	1.0	1.0	78.7
5.99	1	.5	.5	79.2
6.31	1	.5	.5	79.7
6.41	1	.5	.5	80.2
6.49	2	1.0	1.0	81.2
6.71	1	.5	.5	81.7
7.09	1	.5	.5	82.2
7.19	2	1.0	1.0	83.2
7.29	1	.5	.5	83.7
7.49	1	.5	.5	84.2
7.51	1	.5	.5	84.7
7.89	2	1.0	1.0	85.6
8.11	1	.5	.5	86.1
8.39	1	.5	.5	86.6
8.41	1	.5	.5	87.1
8.59	2	1.0	1.0	88.1
8.71	2	1.0	1.0	89.1
8.89	1	.5	.5	89.6
9.09	1	.5	.5	90.1
9.69	1	.5	.5	90.6
9.79	1	.5	.5	91.1
9.89	1	.5	.5	91.6
10.01	1	.5	.5	92.1
10.11	1	.5	.5	92.6
10.41	1	.5	.5	93.1
10.61	1	.5	.5	93.6
11.09	1	.5	.5	94.1
11.61	1	.5	.5	94.6
11.71	1	.5	.5	95.0
11.99	1	.5	.5	95.5
12.49	1	.5	.5	96.0
13.19	1	.5	.5	96.5
14.11	1	.5	.5	97.0

RES_2 Residual for ht

	Frequency	Percent	Valid Percent	Cumulative Percent
14.89	1	.5	.5	97.5
15.11	1	.5	.5	98.0
17.89	1	.5	.5	98.5
18.81	1	.5	.5	99.0
21.31	1	.5	.5	99.5
23.89	1	.5	.5	100.0
Total	202	100.0	100.0	

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Frequencies

Notes

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Statistics

RES_2 Residual for ht

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RES_2 Residual for ht

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	-20.21	1	.5	.5	1.5
	-18.59	1	.5	.5	2.0
	-17.69	1	.5	.5	2.5
	-16.69	1	.5	.5	3.0
	-16.41	1	.5	.5	3.5
	-15.69	1	.5	.5	4.0
	-14.51	1	.5	.5	4.5
	-14.21	1	.5	.5	5.0
	-12.81	1	.5	.5	5.4
	-12.59	2	1.0	1.0	6.4
	-12.51	1	.5	.5	6.9
	-12.09	1	.5	.5	7.4
	-11.59	1	.5	.5	7.9
	-11.51	2	1.0	1.0	8.9
	-10.91	1	.5	.5	9.4
	-10.81	1	.5	.5	9.9
	-10.69	1	.5	.5	10.4
	-10.61	1	.5	.5	10.9
	-10.51	1	.5	.5	11.4
	-9.59	1	.5	.5	11.9
	-9.51	1	.5	.5	12.4
	-9.31	1	.5	.5	12.9
	-9.01	1	.5	.5	13.4
	-8.49	1	.5	.5	13.9
	-7.89	1	.5	.5	14.4
	-7.51	2	1.0	1.0	15.3
	-7.29	1	.5	.5	15.8
	-7.11	1	.5	.5	16.3
	-7.01	2	1.0	1.0	17.3
	-6.91	1	.5	.5	17.8
	-6.69	1	.5	.5	18.3
	-6.59	1	.5	.5	18.8
	-6.41	1	.5	.5	19.3
	-6.21	1	.5	.5	19.8
	-5.99	1	.5	.5	20.3
	-5.91	2	1.0	1.0	21.3
	-5.81	1	.5	.5	21.8
	-5.61	1	.5	.5	22.3
	-5.49	1	.5	.5	22.8
	-5.41	2	1.0	1.0	23.8
	-5.31	2	1.0	1.0	24.8
	-4.91	1	.5	.5	25.2
	-4.79	1	.5	.5	25.7
	-4.69	1	.5	.5	26.2
	-4.59	2	1.0	1.0	27.2
	-4.51	1	.5	.5	27.7
	-4.29	1	.5	.5	28.2
	-3.79	1	.5	.5	28.7
	-3.71	1	.5	.5	29.2
	-3.49	1	.5	.5	29.7
	-3.19	2	1.0	1.0	30.7

RES_2 Residual for ht

	Frequency	Percent	Valid Percent	Cumulative Percent
-2.99	1	.5	.5	31.2
-2.91	1	.5	.5	31.7
-2.89	1	.5	.5	32.2
-2.81	1	.5	.5	32.7
-2.59	1	.5	.5	33.2
-2.51	2	1.0	1.0	34.2
-2.41	1	.5	.5	34.7
-2.39	1	.5	.5	35.1
-2.29	1	.5	.5	35.6
-2.09	1	.5	.5	36.1
-2.01	1	.5	.5	36.6
-1.99	1	.5	.5	37.1
-1.89	1	.5	.5	37.6
-1.61	2	1.0	1.0	38.6
-1.59	1	.5	.5	39.1
-1.51	1	.5	.5	39.6
-1.29	2	1.0	1.0	40.6
-1.11	1	.5	.5	41.1
-1.09	1	.5	.5	41.6
-.99	1	.5	.5	42.1
-.91	1	.5	.5	42.6
-.89	1	.5	.5	43.1
-.79	1	.5	.5	43.6
-.61	1	.5	.5	44.1
-.59	3	1.5	1.5	45.5
-.51	1	.5	.5	46.0
-.49	2	1.0	1.0	47.0
-.41	1	.5	.5	47.5
-.21	1	.5	.5	48.0
-.19	1	.5	.5	48.5
-.11	1	.5	.5	49.0
-.01	1	.5	.5	49.5
.09	3	1.5	1.5	51.0
.41	3	1.5	1.5	52.5
.49	2	1.0	1.0	53.5
.59	1	.5	.5	54.0
.71	1	.5	.5	54.5
1.01	1	.5	.5	55.0
1.09	1	.5	.5	55.4
1.41	4	2.0	2.0	57.4
1.59	1	.5	.5	57.9
1.69	1	.5	.5	58.4
1.79	1	.5	.5	58.9
2.19	1	.5	.5	59.4
2.21	1	.5	.5	59.9
2.39	1	.5	.5	60.4
2.41	1	.5	.5	60.9
2.59	1	.5	.5	61.4
2.71	2	1.0	1.0	62.4
2.79	1	.5	.5	62.9
2.91	2	1.0	1.0	63.9
3.21	1	.5	.5	64.4
3.31	1	.5	.5	64.9

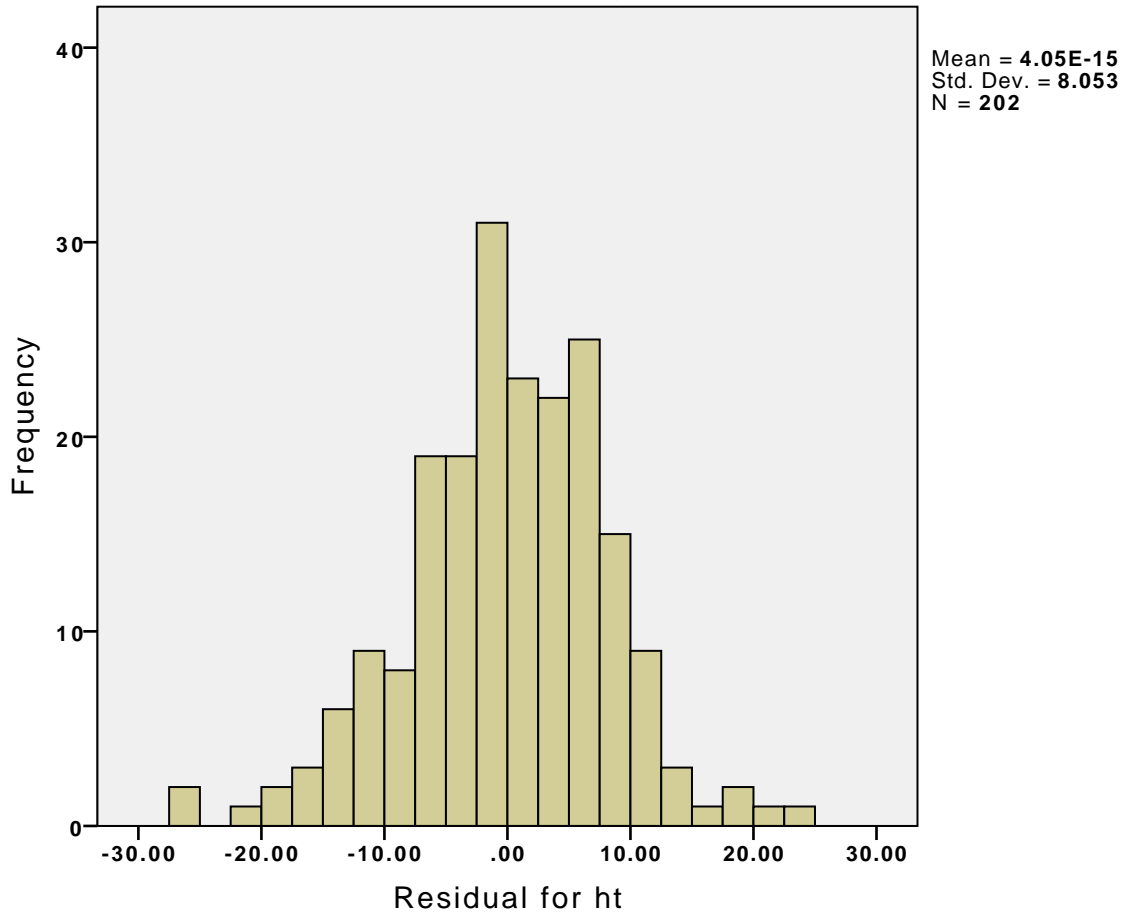
RES_2 Residual for ht

	Frequency	Percent	Valid Percent	Cumulative Percent
3.41	1	.5	.5	65.3
3.49	3	1.5	1.5	66.8
3.59	1	.5	.5	67.3
3.61	1	.5	.5	67.8
3.69	1	.5	.5	68.3
4.11	1	.5	.5	68.8
4.31	1	.5	.5	69.3
4.71	1	.5	.5	69.8
4.79	1	.5	.5	70.3
4.89	1	.5	.5	70.8
4.91	1	.5	.5	71.3
4.99	1	.5	.5	71.8
5.01	2	1.0	1.0	72.8
5.11	2	1.0	1.0	73.8
5.19	1	.5	.5	74.3
5.21	1	.5	.5	74.8
5.29	1	.5	.5	75.2
5.31	1	.5	.5	75.7
5.49	2	1.0	1.0	76.7
5.61	2	1.0	1.0	77.7
5.91	2	1.0	1.0	78.7
5.99	1	.5	.5	79.2
6.31	1	.5	.5	79.7
6.41	1	.5	.5	80.2
6.49	2	1.0	1.0	81.2
6.71	1	.5	.5	81.7
7.09	1	.5	.5	82.2
7.19	2	1.0	1.0	83.2
7.29	1	.5	.5	83.7
7.49	1	.5	.5	84.2
7.51	1	.5	.5	84.7
7.89	2	1.0	1.0	85.6
8.11	1	.5	.5	86.1
8.39	1	.5	.5	86.6
8.41	1	.5	.5	87.1
8.59	2	1.0	1.0	88.1
8.71	2	1.0	1.0	89.1
8.89	1	.5	.5	89.6
9.09	1	.5	.5	90.1
9.69	1	.5	.5	90.6
9.79	1	.5	.5	91.1
9.89	1	.5	.5	91.6
10.01	1	.5	.5	92.1
10.11	1	.5	.5	92.6
10.41	1	.5	.5	93.1
10.61	1	.5	.5	93.6
11.09	1	.5	.5	94.1
11.61	1	.5	.5	94.6
11.71	1	.5	.5	95.0
11.99	1	.5	.5	95.5
12.49	1	.5	.5	96.0
13.19	1	.5	.5	96.5
14.11	1	.5	.5	97.0

RES_2 Residual for ht

	Frequency	Percent	Valid Percent	Cumulative Percent
14.89	1	.5	.5	97.5
15.11	1	.5	.5	98.0
17.89	1	.5	.5	98.5
18.81	1	.5	.5	99.0
21.31	1	.5	.5	99.5
23.89	1	.5	.5	100.0
Total	202	100.0	100.0	

Histogram



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/POSTHOC=sport_numeric(TUKEY)
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Univariate Analysis of Variance

Notes

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[DataSet2] /Users/jeromy/teaching/org-research-methods/2013/content/03-group-differences/exercises/data/ais.sav

Between-Subjects Factors

		Value Label	N
sport_numeric Sport	1	Basketball	25
	2	Field	19
	3	Gymnastics	4
	4	Netball	23
	5	Rowing	37
	6	Swimming	22
	7	Track > 400m	29
	8	Track Sprint	15
	9	Tennis	11
	10	Waterpolo	17

Descriptive Statistics

Dependent Variable: bmi Body mass index, kg

sport_numeric Sport	Mean	Std. Deviation	N
1 Basketball	22.2584	1.90260	25
2 Field	27.5395	4.08299	19
3 Gymnastics	18.5200	1.42197	4
4 Netball	22.4396	2.20503	23
5 Rowing	23.4981	1.80537	37
6 Swimming	22.9386	1.85507	22
7 Track > 400m	20.7431	1.48577	29
8 Track Sprint	22.8980	1.98909	15
9 Tennis	21.1055	2.46268	11
10 Waterpolo	24.4665	1.86449	17
Total	22.9559	2.86393	202

Levene's Test of Equality of Error Variances^a

Dependent Variable: bmi Body mass index,

F	df1	df2	Sig.
4.919	9	192	.000

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

a. Design: Intercept + sport_numeric

Tests of Between-Subjects Effects

Dependent Variable: bmi Body mass index, kg

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	725.566 ^a	9	80.618	16.769	.000
Intercept	72251.083	1	72251.083	15028.526	.000
sport_numeric	725.566	9	80.618	16.769	.000
Error	923.058	192	4.808		
Total	108097.157	202			
Corrected Total	1648.624	201			

a. R Squared = .440 (Adjusted R Squared = .414)

Post Hoc Tests

Sport

Multiple Comparisons

Dependent Variable: bmi Body mass index, kg

Tukey HSD

(I) Sport	(J) Sport	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
1 Basketball	2 Field	-5.2811*	.66733	.000	-7.4174	-3.1447
	3 Gymnastics	3.7384	1.18076	.055	-.0416	7.5184
	4 Netball	-.1812	.63351	1.000	-2.2092	1.8469
	5 Rowing	-1.2397	.56766	.471	-3.0570	.5776
	6 Swimming	-.6802	.64096	.988	-2.7322	1.3717
	7 Track > 400m	1.5153	.59840	.258	-.4004	3.4310
	8 Track Sprint	-.6396	.71611	.997	-2.9321	1.6529
	9 Tennis	1.1529	.79332	.908	-1.3867	3.6926
	10 Waterpolo	-2.2081*	.68928	.050	-4.4147	-.0015
2 Field	1 Basketball	5.2811*	.66733	.000	3.1447	7.4174
	3 Gymnastics	9.0195*	1.20620	.000	5.1580	12.8809
	4 Netball	5.0999*	.67975	.000	2.9238	7.2760
	5 Rowing	4.0414*	.61884	.000	2.0603	6.0225
	6 Swimming	4.6008*	.68670	.000	2.4025	6.7992
	7 Track > 400m	6.7964*	.64716	.000	4.7246	8.8681
	8 Track Sprint	4.6415*	.75732	.000	2.2170	7.0659
	9 Tennis	6.4340*	.83071	.000	3.7746	9.0934
	10 Waterpolo	3.0730*	.73200	.002	.7296	5.4164
3 Gymnastics	1 Basketball	-3.7384	1.18076	.055	-7.5184	.0416
	2 Field	-9.0195*	1.20620	.000	-12.8809	-5.1580
	4 Netball	-3.9196*	1.18782	.037	-7.7222	-.1170
	5 Rowing	-4.9781*	1.15405	.001	-8.6726	-1.2836
	6 Swimming	-4.4186*	1.19182	.010	-8.2340	-.6033
	7 Track > 400m	-2.2231	1.16948	.668	-5.9670	1.5208
	8 Track Sprint	-4.3780*	1.23386	.017	-8.3280	-.4280
	9 Tennis	-2.5855	1.28022	.586	-6.6838	1.5129
	10 Waterpolo	-5.9465*	1.21848	.000	-9.8472	-2.0457
4 Netball	1 Basketball	.1812	.63351	1.000	-1.8469	2.2092
	2 Field	-5.0999*	.67975	.000	-7.2760	-2.9238
	3 Gymnastics	3.9196*	1.18782	.037	.1170	7.7222
	5 Rowing	-1.0585	.58220	.723	-2.9224	.8053
	6 Swimming	-.4991	.65388	.999	-2.5923	1.5942
	7 Track > 400m	1.6965	.61221	.154	-.2634	3.6564
	8 Track Sprint	-.4584	.72769	1.000	-2.7880	1.8711
	9 Tennis	1.3341	.80379	.816	-1.2391	3.9073
	10 Waterpolo	-2.0269	.70130	.116	-4.2720	.2182
5 Rowing	1 Basketball	1.2397	.56766	.471	-.5776	3.0570
	2 Field	-4.0414*	.61884	.000	-6.0225	-2.0603
	3 Gymnastics	4.9781*	1.15405	.001	1.2836	8.6726
	4 Netball	1.0585	.58220	.723	-.8053	2.9224
	6 Swimming	.5595	.59031	.995	-1.3303	2.4492
	7 Track > 400m	2.7550*	.54380	.000	1.0141	4.4959
	8 Track Sprint	.6001	.67115	.997	-1.5485	2.7487
	9 Tennis	2.3927	.75299	.054	-.0179	4.8032
	10 Waterpolo	-.9684	.64244	.888	-3.0250	1.0883
6 Swimming	1 Basketball	.6802	.64096	.988	-1.3717	2.7322
	2 Field	-4.6008*	.68670	.000	-6.7992	-2.4025
	3 Gymnastics	4.4186*	1.19182	.010	.6033	8.2340
	4 Netball	.4991	.65388	.999	-1.5942	2.5923
	5 Rowing	-.5595	.59031	.995	-2.4492	1.3303

Multiple Comparisons

Dependent Variable: bmi Body mass index, kg

Tukey HSD

(I) Sport	(J) Sport	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
	7 Track > 400m	2.1955*	.61992	.018	.2110	4.1801
	8 Track Sprint	.0406	.73419	1.000	-2.3097	2.3910
	9 Tennis	1.8332	.80968	.417	-.7589	4.4252
	10 Waterpolo	-1.5278	.70804	.489	-3.7945	.7388
7 Track > 400m	1 Basketball	-1.5153	.59840	.258	-3.4310	.4004
	2 Field	-6.7964*	.64716	.000	-8.8681	-4.7246
	3 Gymnastics	2.2231	1.16948	.668	-1.5208	5.9670
	4 Netball	-1.6965	.61221	.154	-3.6564	.2634
	5 Rowing	-2.7550*	.54380	.000	-4.4959	-1.0141
	6 Swimming	-2.1955*	.61992	.018	-4.1801	-.2110
	8 Track Sprint	-2.1549	.69734	.068	-4.3873	.0775
	9 Tennis	-.3624	.77642	1.000	-2.8479	2.1232
	10 Waterpolo	-3.7234*	.66976	.000	-5.8675	-1.5793
8 Track Sprint	1 Basketball	.6396	.71611	.997	-1.6529	2.9321
	2 Field	-4.6415*	.75732	.000	-7.0659	-2.2170
	3 Gymnastics	4.3780*	1.23386	.017	.4280	8.3280
	4 Netball	.4584	.72769	1.000	-1.8711	2.7880
	5 Rowing	-.6001	.67115	.997	-2.7487	1.5485
	6 Swimming	-.0406	.73419	1.000	-2.3910	2.3097
	7 Track > 400m	2.1549	.69734	.068	-.0775	4.3873
	9 Tennis	1.7925	.87038	.558	-.9938	4.5789
	10 Waterpolo	-1.5685	.77673	.587	-4.0550	.9181
9 Tennis	1 Basketball	-1.1529	.79332	.908	-3.6926	1.3867
	2 Field	-6.4340*	.83071	.000	-9.0934	-3.7746
	3 Gymnastics	2.5855	1.28022	.586	-1.5129	6.6838
	4 Netball	-1.3341	.80379	.816	-3.9073	1.2391
	5 Rowing	-2.3927	.75299	.054	-4.8032	.0179
	6 Swimming	-1.8332	.80968	.417	-4.4252	.7589
	7 Track > 400m	.3624	.77642	1.000	-2.1232	2.8479
	8 Track Sprint	-1.7925	.87038	.558	-4.5789	.9938
	10 Waterpolo	-3.3610*	.84844	.004	-6.0771	-.6449
10 Waterpolo	1 Basketball	2.2081*	.68928	.050	.0015	4.4147
	2 Field	-3.0730*	.73200	.002	-5.4164	-.7296
	3 Gymnastics	5.9465*	1.21848	.000	2.0457	9.8472
	4 Netball	2.0269	.70130	.116	-.2182	4.2720
	5 Rowing	.9684	.64244	.888	-1.0883	3.0250
	6 Swimming	1.5278	.70804	.489	-.7388	3.7945
	7 Track > 400m	3.7234*	.66976	.000	1.5793	5.8675
	8 Track Sprint	1.5685	.77673	.587	-.9181	4.0550
	9 Tennis	3.3610*	.84844	.004	.6449	6.0771

Based on observed means.

The error term is Mean Square(Error) = 4.808.

*. The mean difference is significant at the

Homogeneous Subsets

bmi Body mass index, kg

Tukey HSD^{a,b,c}

Sport	N	Subset				
		1	2	3	4	5
3 Gymnastics	4	18.5200				
7 Track > 400m	29	20.7431	20.7431			
9 Tennis	11	21.1055	21.1055	21.1055		
1 Basketball	25		22.2584	22.2584	22.2584	
4 Netball	23		22.4396	22.4396	22.4396	
8 Track Sprint	15		22.8980	22.8980	22.8980	
6 Swimming	22		22.9386	22.9386	22.9386	
5 Rowing	37			23.4981	23.4981	
10 Waterpolo	17				24.4665	
2 Field	19					27.5395
Sig.		.061	.199	.114	.192	1.000

Means for groups in homogeneous subsets are displayed.

Based on observed means.

The error term is Mean Square(Error) = 4.808.

- Uses Harmonic Mean Sample Size = 14.095.
- The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.
- Alpha =

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/SAVE=RESID
/POSTHOC=sport_numeric(TUKEY)
/PRINT=HOMOGENEITY DESCRIPTIVE
/CRITERIA=ALPHA(.05)
/DESIGN=sport_numeric.
```

Univariate Analysis of Variance

Notes

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Variables Created or Modified	RES_3	Residual for bmi

[DataSet2] /Users/jeromy/teaching/org-research-methods/2013/content/03-group-differences/exercises/data/ais.sav

Between-Subjects Factors

		Value Label	N
sport_numeric Sport	1	Basketball	25
	2	Field	19
	3	Gymnastics	4
	4	Netball	23
	5	Rowing	37
	6	Swimming	22
	7	Track > 400m	29
	8	Track Sprint	15
	9	Tennis	11
	10	Waterpolo	17

Descriptive Statistics

Dependent Variable: bmi Body mass index, kg

sport_numeric Sport	Mean	Std. Deviation	N
1 Basketball	22.2584	1.90260	25
2 Field	27.5395	4.08299	19
3 Gymnastics	18.5200	1.42197	4
4 Netball	22.4396	2.20503	23
5 Rowing	23.4981	1.80537	37
6 Swimming	22.9386	1.85507	22
7 Track > 400m	20.7431	1.48577	29
8 Track Sprint	22.8980	1.98909	15
9 Tennis	21.1055	2.46268	11
10 Waterpolo	24.4665	1.86449	17
Total	22.9559	2.86393	202

Levene's Test of Equality of Error Variances^a

Dependent Variable: bmi Body mass index,

F	df1	df2	Sig.
4.919	9	192	.000

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

a. Design: Intercept + sport_numeric

Tests of Between-Subjects Effects

Dependent Variable: bmi Body mass index, kg

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	725.566 ^a	9	80.618	16.769	.000
Intercept	72251.083	1	72251.083	15028.526	.000
sport_numeric	725.566	9	80.618	16.769	.000
Error	923.058	192	4.808		
Total	108097.157	202			
Corrected Total	1648.624	201			

a. R Squared = .440 (Adjusted R Squared = .414)

Post Hoc Tests

Sport

Multiple Comparisons

Dependent Variable: bmi Body mass index, kg

Tukey HSD

(I) Sport	(J) Sport	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
1 Basketball	2 Field	-5.2811*	.66733	.000	-7.4174	-3.1447
	3 Gymnastics	3.7384	1.18076	.055	-.0416	7.5184
	4 Netball	-.1812	.63351	1.000	-2.2092	1.8469
	5 Rowing	-1.2397	.56766	.471	-3.0570	.5776
	6 Swimming	-.6802	.64096	.988	-2.7322	1.3717
	7 Track > 400m	1.5153	.59840	.258	-.4004	3.4310
	8 Track Sprint	-.6396	.71611	.997	-2.9321	1.6529
	9 Tennis	1.1529	.79332	.908	-1.3867	3.6926
	10 Waterpolo	-2.2081*	.68928	.050	-4.4147	-.0015
2 Field	1 Basketball	5.2811*	.66733	.000	3.1447	7.4174
	3 Gymnastics	9.0195*	1.20620	.000	5.1580	12.8809
	4 Netball	5.0999*	.67975	.000	2.9238	7.2760
	5 Rowing	4.0414*	.61884	.000	2.0603	6.0225
	6 Swimming	4.6008*	.68670	.000	2.4025	6.7992
	7 Track > 400m	6.7964*	.64716	.000	4.7246	8.8681
	8 Track Sprint	4.6415*	.75732	.000	2.2170	7.0659
	9 Tennis	6.4340*	.83071	.000	3.7746	9.0934
	10 Waterpolo	3.0730*	.73200	.002	.7296	5.4164
3 Gymnastics	1 Basketball	-3.7384	1.18076	.055	-7.5184	.0416
	2 Field	-9.0195*	1.20620	.000	-12.8809	-5.1580
	4 Netball	-3.9196*	1.18782	.037	-7.7222	-.1170
	5 Rowing	-4.9781*	1.15405	.001	-8.6726	-1.2836
	6 Swimming	-4.4186*	1.19182	.010	-8.2340	-.6033
	7 Track > 400m	-2.2231	1.16948	.668	-5.9670	1.5208
	8 Track Sprint	-4.3780*	1.23386	.017	-8.3280	-.4280
	9 Tennis	-2.5855	1.28022	.586	-6.6838	1.5129
	10 Waterpolo	-5.9465*	1.21848	.000	-9.8472	-2.0457
4 Netball	1 Basketball	.1812	.63351	1.000	-1.8469	2.2092
	2 Field	-5.0999*	.67975	.000	-7.2760	-2.9238
	3 Gymnastics	3.9196*	1.18782	.037	.1170	7.7222
	5 Rowing	-1.0585	.58220	.723	-2.9224	.8053
	6 Swimming	-.4991	.65388	.999	-2.5923	1.5942
	7 Track > 400m	1.6965	.61221	.154	-.2634	3.6564
	8 Track Sprint	-.4584	.72769	1.000	-2.7880	1.8711
	9 Tennis	1.3341	.80379	.816	-1.2391	3.9073
	10 Waterpolo	-2.0269	.70130	.116	-4.2720	.2182
5 Rowing	1 Basketball	1.2397	.56766	.471	-.5776	3.0570
	2 Field	-4.0414*	.61884	.000	-6.0225	-2.0603
	3 Gymnastics	4.9781*	1.15405	.001	1.2836	8.6726
	4 Netball	1.0585	.58220	.723	-.8053	2.9224
	6 Swimming	.5595	.59031	.995	-1.3303	2.4492
	7 Track > 400m	2.7550*	.54380	.000	1.0141	4.4959
	8 Track Sprint	.6001	.67115	.997	-1.5485	2.7487
	9 Tennis	2.3927	.75299	.054	-.0179	4.8032
	10 Waterpolo	-.9684	.64244	.888	-3.0250	1.0883
6 Swimming	1 Basketball	.6802	.64096	.988	-1.3717	2.7322
	2 Field	-4.6008*	.68670	.000	-6.7992	-2.4025
	3 Gymnastics	4.4186*	1.19182	.010	.6033	8.2340
	4 Netball	.4991	.65388	.999	-1.5942	2.5923
	5 Rowing	-.5595	.59031	.995	-2.4492	1.3303

Multiple Comparisons

Dependent Variable: bmi Body mass index, kg

Tukey HSD

(I) Sport	(J) Sport	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
	7 Track > 400m	2.1955*	.61992	.018	.2110	4.1801
	8 Track Sprint	.0406	.73419	1.000	-2.3097	2.3910
	9 Tennis	1.8332	.80968	.417	-.7589	4.4252
	10 Waterpolo	-1.5278	.70804	.489	-3.7945	.7388
7 Track > 400m	1 Basketball	-1.5153	.59840	.258	-3.4310	.4004
	2 Field	-6.7964*	.64716	.000	-8.8681	-4.7246
	3 Gymnastics	2.2231	1.16948	.668	-1.5208	5.9670
	4 Netball	-1.6965	.61221	.154	-3.6564	.2634
	5 Rowing	-2.7550*	.54380	.000	-4.4959	-1.0141
	6 Swimming	-2.1955*	.61992	.018	-4.1801	-.2110
	8 Track Sprint	-2.1549	.69734	.068	-4.3873	.0775
	9 Tennis	-.3624	.77642	1.000	-2.8479	2.1232
	10 Waterpolo	-3.7234*	.66976	.000	-5.8675	-1.5793
8 Track Sprint	1 Basketball	.6396	.71611	.997	-1.6529	2.9321
	2 Field	-4.6415*	.75732	.000	-7.0659	-2.2170
	3 Gymnastics	4.3780*	1.23386	.017	.4280	8.3280
	4 Netball	.4584	.72769	1.000	-1.8711	2.7880
	5 Rowing	-.6001	.67115	.997	-2.7487	1.5485
	6 Swimming	-.0406	.73419	1.000	-2.3910	2.3097
	7 Track > 400m	2.1549	.69734	.068	-.0775	4.3873
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	10 Waterpolo	-1.5685	.77673	.587	-4.0550	.9181
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	2 Field	-3.0730*	.73200	.002	-5.4164	-.7296
	3 Gymnastics	5.9465*	1.21848	.000	2.0457	9.8472
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	5 Rowing	.9684	.64244	.888	-1.0883	3.0250
	6 Swimming	1.5278	.70804	.489	-.7388	3.7945
	7 Track > 400m	3.7234*	.66976	.000	1.5793	5.8675
	8 Track Sprint	1.5685	.77673	.587	-.9181	4.0550
	9 Tennis	3.3610*	.84844	.004	.6449	6.0771

Based on observed means.

The error term is Mean Square(Error) = 4.808.

*. The mean difference is significant at the

Homogeneous Subsets

bmi Body mass index, kg

Tukey HSD^{a,b,c}

Sport	N	Subset				
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7 Track > 400m	29	20.7431	20.7431			
9 Tennis	11	21.1055	21.1055	21.1055		
1 Basketball	25		22.2584	22.2584	22.2584	
4 Netball	23		22.4396	22.4396	22.4396	
8 Track Sprint	15		22.8980	22.8980	22.8980	
6 Swimming	22		22.9386	22.9386	22.9386	
5 Rowing	37			23.4981	23.4981	
10 Waterpolo	17				24.4665	
2 Field	19					27.5395
Sig.		.061	.199	.114	.192	1.000

Means for groups in homogeneous subsets are displayed.

Based on observed means.

The error term is Mean Square(Error) = 4.808.

- a. Uses Harmonic Mean Sample Size = 14.095.
- b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.
- c. Alpha =

FREQUENCIES VARIABLES=RES_3
/ORDER=ANALYSIS.

Frequencies

Notes

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	Cases Used	Statistics are based on all cases with valid data.
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Statistics

RES_3 Residual for bmi

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RES_3 Residual for bmi

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid -7.42	1	.5	.5	.5
-4.95	1	.5	.5	1.0
-4.43	1	.5	.5	1.5
-4.29	1	.5	.5	2.0
-4.23	1	.5	.5	2.5
-4.18	1	.5	.5	3.0
-4.05	1	.5	.5	3.5
-3.99	1	.5	.5	4.0
-3.94	1	.5	.5	4.5
-3.81	1	.5	.5	5.0
-3.74	1	.5	.5	5.4
-3.36	1	.5	.5	5.9
-3.33	1	.5	.5	6.4
-3.30	1	.5	.5	6.9
-3.28	1	.5	.5	7.4
-3.21	1	.5	.5	7.9
-3.20	1	.5	.5	8.4
-3.04	1	.5	.5	8.9
-2.82	1	.5	.5	9.4
-2.82	1	.5	.5	9.9
-2.76	1	.5	.5	10.4
-2.75	1	.5	.5	10.9
-2.74	1	.5	.5	11.4
-2.69	1	.5	.5	11.9
-2.60	1	.5	.5	12.4
-2.57	1	.5	.5	12.9
-2.54	1	.5	.5	13.4
-2.52	1	.5	.5	13.9
-2.45	1	.5	.5	14.4
-2.40	1	.5	.5	14.9
-2.38	1	.5	.5	15.3
-2.27	1	.5	.5	15.8
-2.23	1	.5	.5	16.3
-2.07	1	.5	.5	16.8
-1.70	1	.5	.5	17.3
-1.68	1	.5	.5	17.8
-1.66	1	.5	.5	18.3
-1.64	1	.5	.5	18.8
-1.64	1	.5	.5	19.3
-1.59	1	.5	.5	19.8
-1.58	1	.5	.5	20.3
-1.57	1	.5	.5	20.8
-1.56	1	.5	.5	21.3
-1.54	1	.5	.5	21.8
-1.47	1	.5	.5	22.3
-1.41	1	.5	.5	22.8
-1.40	1	.5	.5	23.3
-1.37	1	.5	.5	23.8

RES_3 Residual for bmi

	Frequency	Percent	Valid Percent	Cumulative Percent
-1.29	1	.5	.5	24.3
-1.25	1	.5	.5	24.8
-1.23	1	.5	.5	25.2
-1.22	1	.5	.5	25.7
-1.22	1	.5	.5	26.2
-1.11	1	.5	.5	26.7
-1.09	1	.5	.5	27.2
-1.06	1	.5	.5	27.7
-1.06	1	.5	.5	28.2
-1.04	1	.5	.5	28.7
-1.04	1	.5	.5	29.2
-.97	1	.5	.5	29.7
-.90	1	.5	.5	30.2
-.89	1	.5	.5	30.7
-.89	1	.5	.5	31.2
-.88	1	.5	.5	31.7
-.87	1	.5	.5	32.2
-.83	1	.5	.5	32.7
-.81	1	.5	.5	33.2
-.80	1	.5	.5	33.7
-.73	1	.5	.5	34.2
-.69	1	.5	.5	34.7
-.67	1	.5	.5	35.1
-.67	1	.5	.5	35.6
-.62	1	.5	.5	36.1
-.62	1	.5	.5	36.6
-.59	1	.5	.5	37.1
-.59	1	.5	.5	37.6
-.58	1	.5	.5	38.1
-.57	1	.5	.5	38.6
-.55	1	.5	.5	39.1
-.54	1	.5	.5	39.6
-.53	1	.5	.5	40.1
-.52	1	.5	.5	40.6
-.48	1	.5	.5	41.1
-.44	1	.5	.5	41.6
-.42	1	.5	.5	42.1
-.40	1	.5	.5	42.6
-.38	1	.5	.5	43.1
-.35	1	.5	.5	43.6
-.33	1	.5	.5	44.1
-.32	1	.5	.5	44.6
-.31	1	.5	.5	45.0
-.23	1	.5	.5	45.5
-.19	1	.5	.5	46.0
-.15	1	.5	.5	46.5
-.14	1	.5	.5	47.0
-.13	1	.5	.5	47.5
-.04	1	.5	.5	48.0
-.03	1	.5	.5	48.5
.02	1	.5	.5	49.0
.03	1	.5	.5	49.5
.07	1	.5	.5	50.0

RES_3 Residual for bmi

	Frequency	Percent	Valid Percent	Cumulative Percent
.07	1	.5	.5	50.5
.14	1	.5	.5	51.0
.15	1	.5	.5	51.5
.18	1	.5	.5	52.0
.19	1	.5	.5	52.5
.19	1	.5	.5	53.0
.21	1	.5	.5	53.5
.23	1	.5	.5	54.0
.30	1	.5	.5	54.5
.31	1	.5	.5	55.0
.34	1	.5	.5	55.4
.35	1	.5	.5	55.9
.35	1	.5	.5	56.4
.36	1	.5	.5	56.9
.38	1	.5	.5	57.4
.38	1	.5	.5	57.9
.41	1	.5	.5	58.4
.42	1	.5	.5	58.9
.45	1	.5	.5	59.4
.47	1	.5	.5	59.9
.50	1	.5	.5	60.4
.56	1	.5	.5	60.9
.57	1	.5	.5	61.4
.59	1	.5	.5	61.9
.61	1	.5	.5	62.4
.65	1	.5	.5	62.9
.68	1	.5	.5	63.4
.70	1	.5	.5	63.9
.71	1	.5	.5	64.4
.74	1	.5	.5	64.9
.74	1	.5	.5	65.3
.74	1	.5	.5	65.8
.78	1	.5	.5	66.3
.90	1	.5	.5	66.8
.90	1	.5	.5	67.3
.90	1	.5	.5	67.8
.91	1	.5	.5	68.3
.94	1	.5	.5	68.8
.94	1	.5	.5	69.3
.96	1	.5	.5	69.8
1.01	1	.5	.5	70.3
1.01	1	.5	.5	70.8
1.03	1	.5	.5	71.3
1.04	1	.5	.5	71.8
1.08	1	.5	.5	72.3
1.09	1	.5	.5	72.8
1.10	1	.5	.5	73.3
1.14	1	.5	.5	73.8
1.15	1	.5	.5	74.3
1.23	1	.5	.5	74.8
1.28	1	.5	.5	75.2
1.35	1	.5	.5	75.7
1.43	1	.5	.5	76.2

RES_3 Residual for bmi

	Frequency	Percent	Valid Percent	Cumulative Percent
1.43	1	.5	.5	76.7
1.54	1	.5	.5	77.2
1.55	1	.5	.5	77.7
1.56	1	.5	.5	78.2
1.59	1	.5	.5	78.7
1.61	1	.5	.5	79.2
1.61	1	.5	.5	79.7
1.71	1	.5	.5	80.2
1.79	1	.5	.5	80.7
1.81	1	.5	.5	81.2
1.91	1	.5	.5	81.7
1.94	1	.5	.5	82.2
2.00	1	.5	.5	82.7
2.01	1	.5	.5	83.2
2.02	1	.5	.5	83.7
2.03	1	.5	.5	84.2
2.09	1	.5	.5	84.7
2.11	1	.5	.5	85.1
2.17	1	.5	.5	85.6
2.20	1	.5	.5	86.1
2.23	1	.5	.5	86.6
2.27	1	.5	.5	87.1
2.34	1	.5	.5	87.6
2.38	1	.5	.5	88.1
2.38	1	.5	.5	88.6
2.39	1	.5	.5	89.1
2.43	1	.5	.5	89.6
2.57	1	.5	.5	90.1
2.64	2	1.0	1.0	91.1
2.65	1	.5	.5	91.6
3.09	1	.5	.5	92.1
3.12	1	.5	.5	92.6
3.20	1	.5	.5	93.1
3.28	1	.5	.5	93.6
3.29	1	.5	.5	94.1
3.31	1	.5	.5	94.6
3.32	1	.5	.5	95.0
3.49	1	.5	.5	95.5
3.61	1	.5	.5	96.0
3.67	1	.5	.5	96.5
3.79	1	.5	.5	97.0
3.80	1	.5	.5	97.5
4.25	1	.5	.5	98.0
4.39	1	.5	.5	98.5
4.98	1	.5	.5	99.0
6.19	1	.5	.5	99.5
6.88	1	.5	.5	100.0
Total	202	100.0	100.0	

FREQUENCIES VARIABLES=RES_3
 /HISTOGRAM
 /ORDER=ANALYSIS.

Frequencies

Notes

Output Created		12-AUG-2013 21:13:54
Comments		
Input	Data	/Users/jeromy/teaching/org-research-methods/2013/content/03-group-differences/exercises/data/ais.sav
	Active Dataset	DataSet2
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data ...	202
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics are based on all cases with valid data.
Syntax		FREQUENCIES VARIABLES=RES_3 /HISTOGRAM /ORDER=ANALYSIS.
Resources	Processor Time	00:00:00.16
	Elapsed Time	00:00:00.00

[DataSet2] /Users/jeromy/teaching/org-research-methods/2013/content/03-group-differences/exercises/data/ais.sav

Statistics

RES_3 Residual for bmi

N	Valid	202
	Missing	0

RES_3 Residual for bmi

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid -7.42	1	.5	.5	.5
-4.95	1	.5	.5	1.0
-4.43	1	.5	.5	1.5
-4.29	1	.5	.5	2.0
-4.23	1	.5	.5	2.5
-4.18	1	.5	.5	3.0
-4.05	1	.5	.5	3.5
-3.99	1	.5	.5	4.0
-3.94	1	.5	.5	4.5
-3.81	1	.5	.5	5.0
-3.74	1	.5	.5	5.4
-3.36	1	.5	.5	5.9
-3.33	1	.5	.5	6.4
-3.30	1	.5	.5	6.9
-3.28	1	.5	.5	7.4
-3.21	1	.5	.5	7.9
-3.20	1	.5	.5	8.4
-3.04	1	.5	.5	8.9
-2.82	1	.5	.5	9.4
-2.82	1	.5	.5	9.9
-2.76	1	.5	.5	10.4
-2.75	1	.5	.5	10.9
-2.74	1	.5	.5	11.4
-2.69	1	.5	.5	11.9
-2.60	1	.5	.5	12.4
-2.57	1	.5	.5	12.9
-2.54	1	.5	.5	13.4
-2.52	1	.5	.5	13.9
-2.45	1	.5	.5	14.4
-2.40	1	.5	.5	14.9
-2.38	1	.5	.5	15.3
-2.27	1	.5	.5	15.8
-2.23	1	.5	.5	16.3
-2.07	1	.5	.5	16.8
-1.70	1	.5	.5	17.3
-1.68	1	.5	.5	17.8
-1.66	1	.5	.5	18.3
-1.64	1	.5	.5	18.8
-1.64	1	.5	.5	19.3
-1.59	1	.5	.5	19.8
-1.58	1	.5	.5	20.3
-1.57	1	.5	.5	20.8
-1.56	1	.5	.5	21.3
-1.54	1	.5	.5	21.8
-1.47	1	.5	.5	22.3
-1.41	1	.5	.5	22.8
-1.40	1	.5	.5	23.3
-1.37	1	.5	.5	23.8
-1.29	1	.5	.5	24.3
-1.25	1	.5	.5	24.8
-1.23	1	.5	.5	25.2
-1.22	1	.5	.5	25.7
-1.22	1	.5	.5	26.2

RES_3 Residual for bmi

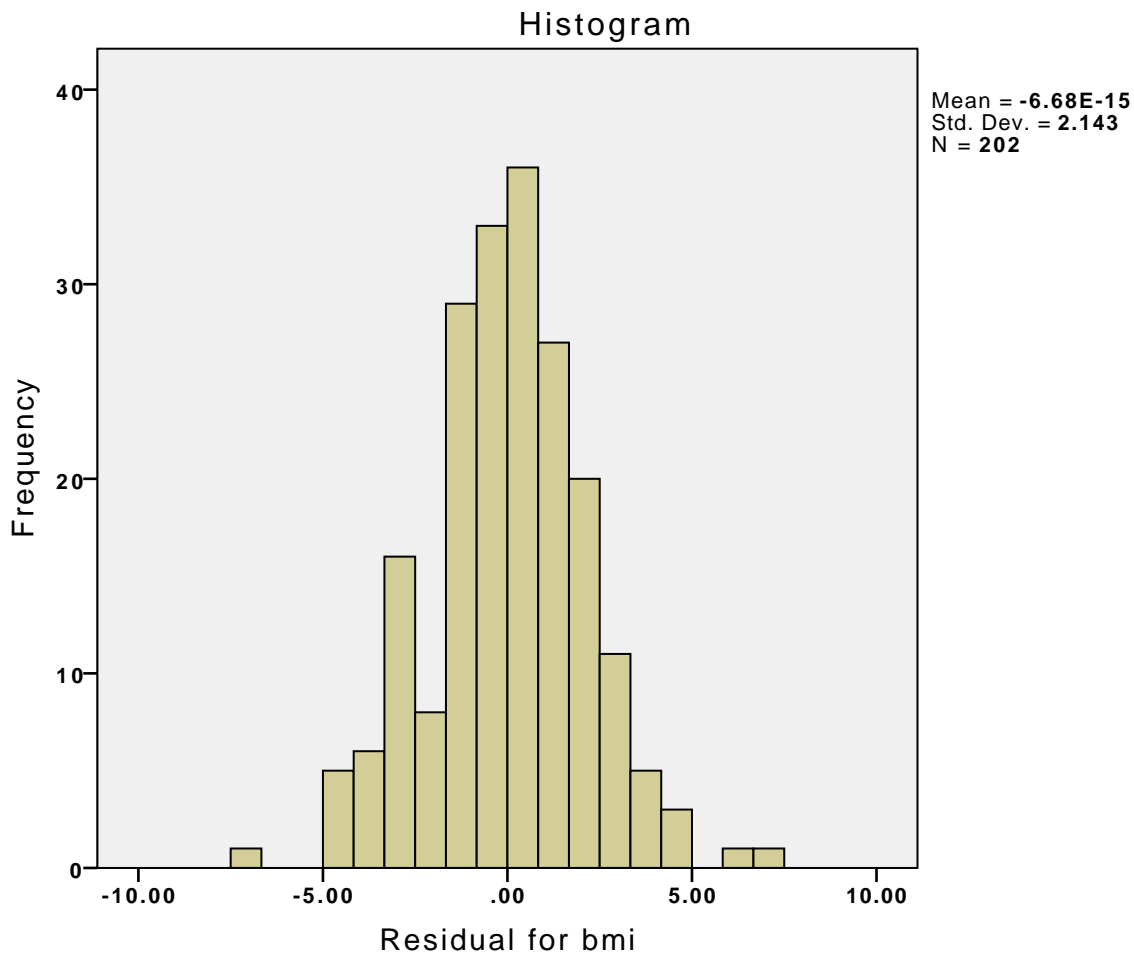
	Frequency	Percent	Valid Percent	Cumulative Percent
-1.11	1	.5	.5	26.7
-1.09	1	.5	.5	27.2
-1.06	1	.5	.5	27.7
-1.06	1	.5	.5	28.2
-1.04	1	.5	.5	28.7
-1.04	1	.5	.5	29.2
-.97	1	.5	.5	29.7
-.90	1	.5	.5	30.2
-.89	1	.5	.5	30.7
-.89	1	.5	.5	31.2
-.88	1	.5	.5	31.7
-.87	1	.5	.5	32.2
-.83	1	.5	.5	32.7
-.81	1	.5	.5	33.2
-.80	1	.5	.5	33.7
-.73	1	.5	.5	34.2
-.69	1	.5	.5	34.7
-.67	1	.5	.5	35.1
-.67	1	.5	.5	35.6
-.62	1	.5	.5	36.1
-.62	1	.5	.5	36.6
-.59	1	.5	.5	37.1
-.59	1	.5	.5	37.6
-.58	1	.5	.5	38.1
-.57	1	.5	.5	38.6
-.55	1	.5	.5	39.1
-.54	1	.5	.5	39.6
-.53	1	.5	.5	40.1
-.52	1	.5	.5	40.6
-.48	1	.5	.5	41.1
-.44	1	.5	.5	41.6
-.42	1	.5	.5	42.1
-.40	1	.5	.5	42.6
-.38	1	.5	.5	43.1
-.35	1	.5	.5	43.6
-.33	1	.5	.5	44.1
-.32	1	.5	.5	44.6
-.31	1	.5	.5	45.0
-.23	1	.5	.5	45.5
-.19	1	.5	.5	46.0
-.15	1	.5	.5	46.5
-.14	1	.5	.5	47.0
-.13	1	.5	.5	47.5
-.04	1	.5	.5	48.0
-.03	1	.5	.5	48.5
.02	1	.5	.5	49.0
.03	1	.5	.5	49.5
.07	1	.5	.5	50.0
.07	1	.5	.5	50.5
.14	1	.5	.5	51.0
.15	1	.5	.5	51.5
.18	1	.5	.5	52.0
.19	1	.5	.5	52.5

RES_3 Residual for bmi

	Frequency	Percent	Valid Percent	Cumulative Percent
.19	1	.5	.5	53.0
.21	1	.5	.5	53.5
.23	1	.5	.5	54.0
.30	1	.5	.5	54.5
.31	1	.5	.5	55.0
.34	1	.5	.5	55.4
.35	1	.5	.5	55.9
.35	1	.5	.5	56.4
.36	1	.5	.5	56.9
.38	1	.5	.5	57.4
.38	1	.5	.5	57.9
.41	1	.5	.5	58.4
.42	1	.5	.5	58.9
.45	1	.5	.5	59.4
.47	1	.5	.5	59.9
.50	1	.5	.5	60.4
.56	1	.5	.5	60.9
.57	1	.5	.5	61.4
.59	1	.5	.5	61.9
.61	1	.5	.5	62.4
.65	1	.5	.5	62.9
.68	1	.5	.5	63.4
.70	1	.5	.5	63.9
.71	1	.5	.5	64.4
.74	1	.5	.5	64.9
.74	1	.5	.5	65.3
.74	1	.5	.5	65.8
.78	1	.5	.5	66.3
.90	1	.5	.5	66.8
.90	1	.5	.5	67.3
.90	1	.5	.5	67.8
.91	1	.5	.5	68.3
.94	1	.5	.5	68.8
.94	1	.5	.5	69.3
.96	1	.5	.5	69.8
1.01	1	.5	.5	70.3
1.01	1	.5	.5	70.8
1.03	1	.5	.5	71.3
1.04	1	.5	.5	71.8
1.08	1	.5	.5	72.3
1.09	1	.5	.5	72.8
1.10	1	.5	.5	73.3
1.14	1	.5	.5	73.8
1.15	1	.5	.5	74.3
1.23	1	.5	.5	74.8
1.28	1	.5	.5	75.2
1.35	1	.5	.5	75.7
1.43	1	.5	.5	76.2
1.43	1	.5	.5	76.7
1.54	1	.5	.5	77.2
1.55	1	.5	.5	77.7
1.56	1	.5	.5	78.2
1.59	1	.5	.5	78.7

RES_3 Residual for bmi

	Frequency	Percent	Valid Percent	Cumulative Percent
1.61	1	.5	.5	79.2
1.61	1	.5	.5	79.7
1.71	1	.5	.5	80.2
1.79	1	.5	.5	80.7
1.81	1	.5	.5	81.2
1.91	1	.5	.5	81.7
1.94	1	.5	.5	82.2
2.00	1	.5	.5	82.7
2.01	1	.5	.5	83.2
2.02	1	.5	.5	83.7
2.03	1	.5	.5	84.2
2.09	1	.5	.5	84.7
2.11	1	.5	.5	85.1
2.17	1	.5	.5	85.6
2.20	1	.5	.5	86.1
2.23	1	.5	.5	86.6
2.27	1	.5	.5	87.1
2.34	1	.5	.5	87.6
2.38	1	.5	.5	88.1
2.38	1	.5	.5	88.6
2.39	1	.5	.5	89.1
2.43	1	.5	.5	89.6
2.57	1	.5	.5	90.1
2.64	2	1.0	1.0	91.1
2.65	1	.5	.5	91.6
3.09	1	.5	.5	92.1
3.12	1	.5	.5	92.6
3.20	1	.5	.5	93.1
3.28	1	.5	.5	93.6
3.29	1	.5	.5	94.1
3.31	1	.5	.5	94.6
3.32	1	.5	.5	95.0
3.49	1	.5	.5	95.5
3.61	1	.5	.5	96.0
3.67	1	.5	.5	96.5
3.79	1	.5	.5	97.0
3.80	1	.5	.5	97.5
4.25	1	.5	.5	98.0
4.39	1	.5	.5	98.5
4.98	1	.5	.5	99.0
6.19	1	.5	.5	99.5
6.88	1	.5	.5	100.0
Total	202	100.0	100.0	



```
UNIANOVA ht BY sport_abbreviated sex_numeric
/METHOD=SSTYPE(3)
/INTERCEPT=INCLUDE
/SAVE=RESID
/PLOT=PROFILE(sex_numeric*sport_abbreviated)
/PRINT=HOMOGENEITY DESCRIPTIVE
/CRITERIA=ALPHA(.05)
/DESIGN=sport_abbreviated sex_numeric sport_abbreviated*sex_numeric.
```

```
UNIANOVA ht BY sport_abbreviated sex_numeric
/METHOD=SSTYPE(3)
/INTERCEPT=INCLUDE
/SAVE=RESID
/PLOT=PROFILE(sport_abbreviated*sex_numeric)
/PRINT=HOMOGENEITY DESCRIPTIVE
/CRITERIA=ALPHA(.05)
/DESIGN=sport_abbreviated sex_numeric sport_abbreviated*sex_numeric.
```

Univariate Analysis of Variance

Notes

Output Created		14-AUG-2013 10:57:00
Comments		
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	Active Dataset	DataSet2
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	N of Rows in Working Data ...	202
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics are based on all cases with valid data for all variables in the model.
Syntax		UNIANOVA ht BY sport_abbreviated sex_numeric /METHOD=SSTYPE(3) /INTERCEPT=INCLUDE /SAVE=RESID /PLOT=PROFILE (sport_abbreviated*sex_numeric) ...
Resources	Processor Time	00:00:00.16
	Elapsed Time	00:00:00.00
Variables Created or Modified	RES_5	Residual for ht

[DataSet2] /Users/jeromy/teaching/org-research-methods/2013/content/03-group-differences/exercises/data/ais.sav

Between-Subjects Factors

		Value Label	N
sport_abbreviated	1.00	Swim	22
	2.00	Track > 400m	29
	3.00	Basketball	25
sex_numeric Sex	1	Female	33
	2	Male	43

Descriptive Statistics

Dependent Variable: ht height, cm

sport_abbreviated	sex_numeric Sex	Mean	Std. Deviation	N
1.00 Swim	1 Female	173.178	5.1672	9
	2 Male	185.646	6.7858	13
	Total	180.545	8.7094	22
2.00 Track > 400m	1 Female	169.336	5.5504	11
	2 Male	179.189	5.9628	18
	Total	175.452	7.5006	29
3.00 Basketball	1 Female	182.269	8.6210	13
	2 Male	195.583	6.8560	12
	Total	188.660	10.2369	25
Total	1 Female	175.479	8.7957	33
	2 Male	185.716	9.2702	43
	Total	181.271	10.3549	76

Levene's Test of Equality of Error Variances^a

Dependent Variable: ht height, cm

F	df1	df2	Sig.
1.297	5	70	.275

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

a. Design: Intercept + sport_abbreviated + sex_numeric + sport_abbreviated * sex_numeric

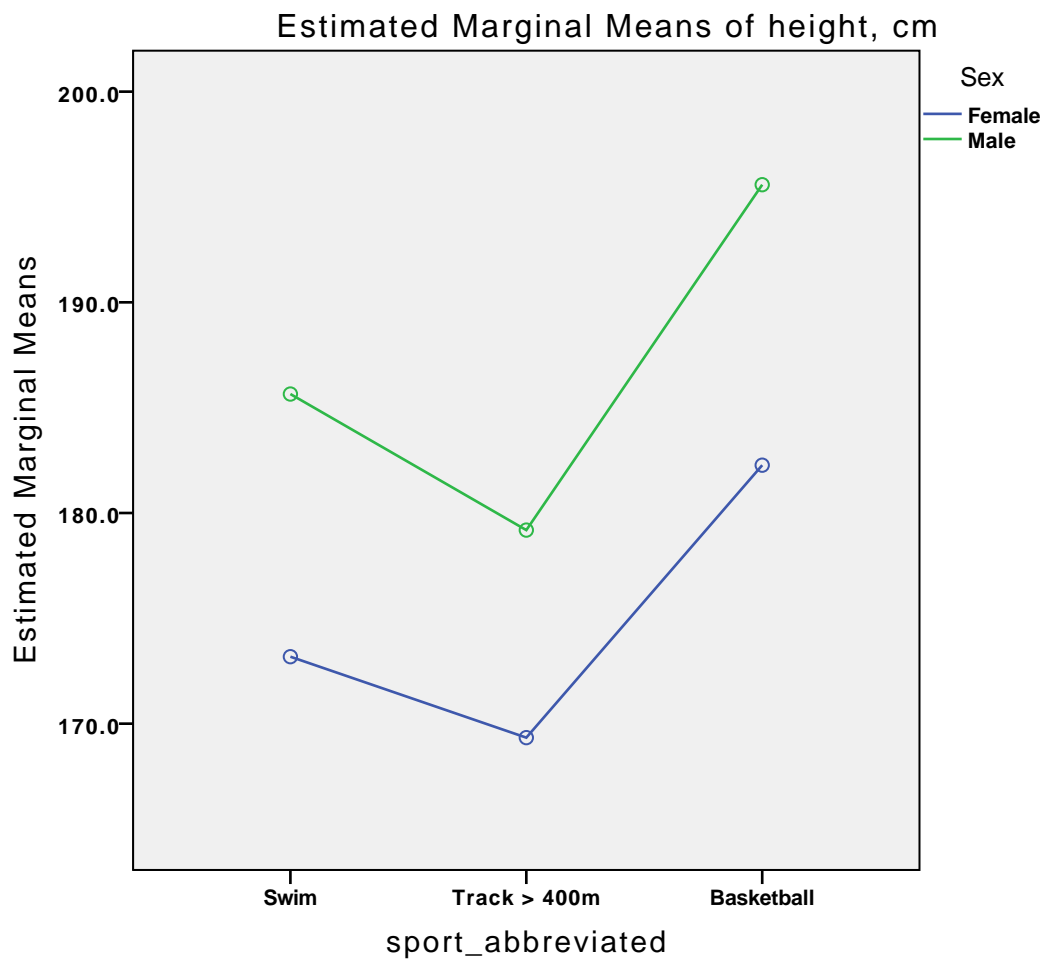
Tests of Between-Subjects Effects

Dependent Variable: ht height, cm

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	4954.241 ^a	5	990.848	22.464	.000
Intercept	2380293.79	1	2380293.79	53964.507	.000
sport_abbreviated	2856.052	2	1428.026	32.375	.000
sex_numeric	2566.630	1	2566.630	58.189	.000
sport_abbreviated * sex_numeric	42.571	2	21.286	.483	.619
Error	3087.595	70	44.109		
Total	2505340.62	76			
Corrected Total	8041.836	75			

a. R Squared = .616 (Adjusted R Squared = .589)

Profile Plots



```
UNIANOVA ht BY sport_abbreviated sex_numeric  
  /METHOD=SSTYPE(3)  
  /INTERCEPT=INCLUDE  
  /SAVE=RESID  
  /POSTHOC=sport_abbreviated(TUKEY)  
  /PLOT=PROFILE(sex_numeric*sport_abbreviated)  
  /PRINT=HOMOGENEITY DESCRIPTIVE  
  /CRITERIA=ALPHA(.05)  
  /DESIGN=sport_abbreviated sex_numeric sport_abbreviated*sex_numeric.
```

Univariate Analysis of Variance

Notes

Output Created		14-AUG-2013 11:13:48
Comments		
Input	Data	/Users/jeromy/teaching/org-research-methods/2013/content/03-group-differences/exercises/data/ais.sav
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	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data ...	202
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics are based on all cases with valid data for all variables in the model.
Syntax		UNIANOVA ht BY sport_abbreviated sex_numeric /METHOD=SSTYPE(3) /INTERCEPT=INCLUDE /SAVE=RESID /POSTHOC=sport_abbreviated(TUKEY) /PLOT=PROFILE (sex_numeric*sport_abbreviated)...
Resources	Processor Time	00:00:00.17
	Elapsed Time	00:00:00.00
Variables Created or Modified	RES_6	Residual for ht

[DataSet2] /Users/jeromy/teaching/org-research-methods/2013/content/03-group-differences/exercises/data/ais.sav

Between-Subjects Factors

		Value Label	N
sport_abbreviated	1.00	Swim	22
	2.00	Track > 400m	29
	3.00	Basketball	25
sex_numeric Sex	1	Female	33
	2	Male	43

Descriptive Statistics

Dependent Variable: ht height, cm

sport_abbreviated	sex_numeric Sex	Mean	Std. Deviation	N
1.00 Swim	1 Female	173.178	5.1672	9
	2 Male	185.646	6.7858	13
	Total	180.545	8.7094	22
2.00 Track > 400m	1 Female	169.336	5.5504	11
	2 Male	179.189	5.9628	18
	Total	175.452	7.5006	29
3.00 Basketball	1 Female	182.269	8.6210	13
	2 Male	195.583	6.8560	12
	Total	188.660	10.2369	25
Total	1 Female	175.479	8.7957	33
	2 Male	185.716	9.2702	43
	Total	181.271	10.3549	76

Levene's Test of Equality of Error Variances^a

Dependent Variable: ht height, cm

F	df1	df2	Sig.
1.297	5	70	.275

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

a. Design: Intercept + sport_abbreviated + sex_numeric + sport_abbreviated * sex_numeric

Tests of Between-Subjects Effects

Dependent Variable: ht height, cm

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	4954.241 ^a	5	990.848	22.464	.000
Intercept	2380293.79	1	2380293.79	53964.507	.000
sport_abbreviated	2856.052	2	1428.026	32.375	.000
sex_numeric	2566.630	1	2566.630	58.189	.000
sport_abbreviated * sex_numeric	42.571	2	21.286	.483	.619
Error	3087.595	70	44.109		
Total	2505340.62	76			
Corrected Total	8041.836	75			

a. R Squared = .616 (Adjusted R Squared = .589)

Post Hoc Tests

sport_abbreviated

Multiple Comparisons

Dependent Variable: ht height, cm

Tukey HSD

(I) sport_abbreviate d	(J) sport_abbreviate d	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
1.00 Swim	2.00 Track > 400m	5.094 [*]	1.8777	.023	.597	9.590
	3.00 Basketball	-8.115 [*]	1.9415	.000	-12.763	-3.466
2.00 Track > 400m	1.00 Swim	-5.094 [*]	1.8777	.023	-9.590	-.597
	3.00 Basketball	-13.208 [*]	1.8125	.000	-17.549	-8.868
3.00 Basketball	1.00 Swim	8.115 [*]	1.9415	.000	3.466	12.763
	2.00 Track > 400m	13.208 [*]	1.8125	.000	8.868	17.549

Based on observed means.

The error term is Mean Square(Error) = 44.109.

*. The mean difference is significant at the

Homogeneous Subsets

ht height, cm

Tukey HSD^{a,b,c}

sport_abbreviate d	N	Subset		
		1	2	3
2.00 Track > 400m	29	175.452		
1.00 Swim	22		180.545	
3.00 Basketball	25			188.660
Sig.		1.000	1.000	1.000

Means for groups in homogeneous subsets are displayed.

Based on observed means.

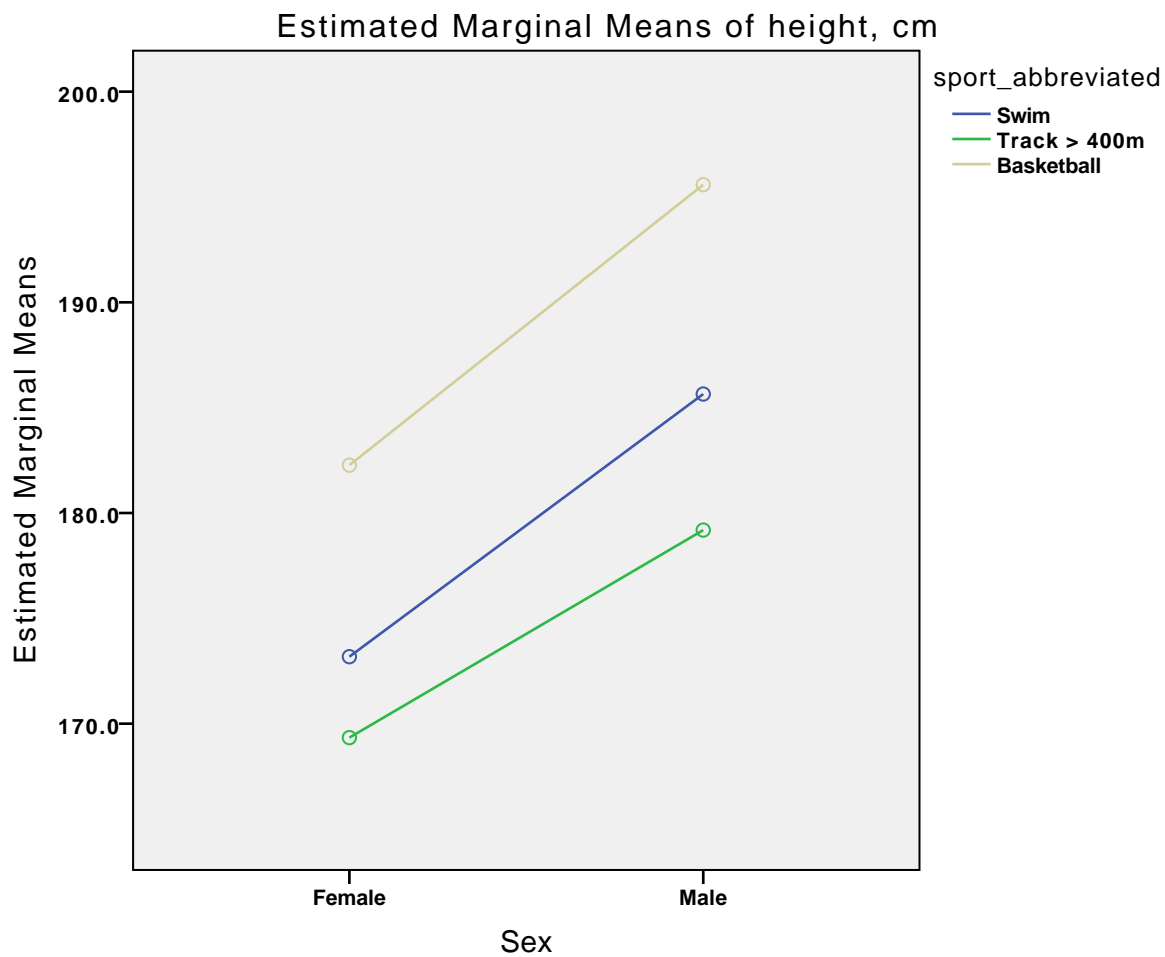
The error term is Mean Square(Error) = 44.109.

a. Uses Harmonic Mean Sample Size = 25.013.

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

c. Alpha =

Profile Plots



```
GET
  FILE='/Volumes/Lexar/Cleaned Data ready for reverse coding and scaling.sav'.
DATASET NAME DataSet3 WINDOW=FRONT.
DATASET ACTIVATE DataSet2.
DATASET CLOSE DataSet3.
PROXIMITIES rcc wcc hc hg ferr
  /VIEW=VARIABLE
  /MEASURE=CORRELATION
  /STANDARDIZE=NONE.
```

Proximities

Notes

Output Created		14-AUG-2013 17:03:18
Comments		
Input	Data	/Users/jeromy/teaching/org-research-methods/2013/content/03-group-differences/exercises/data/ais.sav
	Active Dataset	DataSet2
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	Weight	<none>
	Split File	<none>
	N of Rows in Working Data ...	202
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics are based on cases with no missing values for any variable used.
Syntax		PROXIMITIES rcc wcc hc hg ferr /VIEW=VARIABLE /MEASURE=CORRELATI...
Resources	Processor Time	00:00:00.00
	Elapsed Time	00:00:00.00
	Workspace Bytes	240

[DataSet2] /Users/jeromy/teaching/org-research-methods/2013/content/03-group-differences/exercises/data/ais.sav

Case Processing Summary

Cases					
Valid		Missing		Total	
N	Percent	N	Percent	N	Percent
202	100.0%	0	0.0%	202	100.0%

Proximity Matrix

	Correlation between Vectors of Values				
	rcc red blood cell count, in	wcc while blood cell count, in per liter	hc hematocrit, percent	hg hemaglobin concentration, in g per decaliter	ferr plasma ferritins, ng
rcc red blood cell count, in	1.000	.147	.925	.889	.251
wcc while blood cell count, in per liter	.147	1.000	.153	.135	.132
hc hematocrit, percent	.925	.153	1.000	.951	.258
hg hemaglobin concentration, in g per decaliter	.889	.135	.951	1.000	.308
ferr plasma ferritins, ng	.251	.132	.258	.308	1.000

This is a similarity matrix

```

/METHOD=SSTYPE(3)
/INTERCEPT=INCLUDE
/PRINT=DESCRIPTIVE HOMOGENEITY
/CRITERIA=ALPHA(.05)
/DESIGN= sex_numeric.

```

General Linear Model

Notes

Output Created		14-AUG-2013 17:07:55
Comments		
Input	Data	/Users/jeromy/teaching/org-research-methods/2013/content/03-group-differences/exercises/data/ais.sav
	Active Dataset	DataSet2
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data ...	202
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics are based on all cases with valid data for all variables in the model.
Syntax		GLM rcc wcc hc hg ferr BY sex_numeric /METHOD=SSTYPE(3) /INTERCEPT=INCLUDE /PRINT=DESCRIPTIVE HOMOGENEITY /CRITERIA=ALPHA(.05).
Resources	Processor Time	00:00:00.01
	Elapsed Time	00:00:00.00

[DataSet2] /Users/jeromy/teaching/org-research-methods/2013/content/03-group-differences/exercises/data/ais.sav

Between-Subjects Factors

	Value Label	N
sex_numeric Sex 1	Female	100
2	Male	102

Descriptive Statistics

	sex_numeric Sex	Mean	Std. Deviation	N
rcc red blood cell count, in	1 Female	4.4045	.32090	100
	2 Male	5.0266	.35072	102
	Total	4.7186	.45798	202
wcc white blood cell count, in per liter	1 Female	6.994	1.6954	100
	2 Male	7.222	1.8992	102
	Total	7.109	1.8003	202
hc hematocrit, percent	1 Female	40.482	2.6246	100
	2 Male	45.650	2.5685	102
	Total	43.092	3.6630	202
hg hemoglobin concentration, in g per decaliter	1 Female	13.560	.9233	100
	2 Male	15.553	.9342	102
	Total	14.566	1.3625	202
ferr plasma ferritins, ng	1 Female	56.96	30.956	100
	2 Male	96.40	52.663	102
	Total	76.88	47.501	202

Box's Test of Equality of Covariance Matrices^a

Box's M	37.658
F	2.443
df1	15
df2	160914.843
Sig.	.001

Tests the null hypothesis that the observed covariance matrices of the dependent variables are equal across groups.

a. Design: Intercept + sex_numeric

Multivariate Tests^a

Effect		Value	F	Hypothesis df	Error df	Sig.
Intercept	Pillai's Trace	.997	11317.361 ^b	5.000	196.000	.000
	Wilks' Lambda	.003	11317.361 ^b	5.000	196.000	.000
	Hotelling's Trace	288.708	11317.361 ^b	5.000	196.000	.000
	Roy's Largest Root	288.708	11317.361 ^b	5.000	196.000	.000
sex_numeric	Pillai's Trace	.587	55.741 ^b	5.000	196.000	.000
	Wilks' Lambda	.413	55.741 ^b	5.000	196.000	.000
	Hotelling's Trace	1.422	55.741 ^b	5.000	196.000	.000
	Roy's Largest Root	1.422	55.741 ^b	5.000	196.000	.000

a. Design: Intercept + sex_numeric

b. Exact statistic

Levene's Test of Equality of Error Variances^a

	F	df1	df2	Sig.
rcc red blood cell count, in	.009	1	200	.925
wcc while blood cell count, in per liter	.655	1	200	.419
hc hematocrit, percent	2.866	1	200	.092
hg hemaglobin concentration, in g per decaliter	1.598	1	200	.208
ferr plasma ferritins, ng	20.854	1	200	.000

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

a. Design: Intercept + sex_numeric

Tests of Between-Subjects Effects

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	rcc red blood cell count, in	19.540 ^a	1	19.540	172.782	.000
	wcc while blood cell count, in per liter	2.615 ^b	1	2.615	.806	.370
	hc hematocrit, percent	1348.633 ^c	1	1348.633	200.052	.000
	hg hemaglobin concentration, in g per decaliter	200.557 ^d	1	200.557	232.457	.000
	ferr plasma ferritins, ng	78553.546 ^e	1	78553.546	41.898	.000
Intercept	rcc red blood cell count, in	4491.285	1	4491.285	39713.948	.000
	wcc while blood cell count, in per liter	10204.160	1	10204.160	3145.215	.000
	hc hematocrit, percent	374608.706	1	374608.706	55568.277	.000
	hg hemaglobin concentration, in g per decaliter	42797.753	1	42797.753	49605.021	.000
	ferr plasma ferritins, ng	1187638.06	1	1187638.06	633.447	.000
sex_numeric	rcc red blood cell count, in	19.540	1	19.540	172.782	.000
	wcc while blood cell count, in per liter	2.615	1	2.615	.806	.370
	hc hematocrit, percent	1348.633	1	1348.633	200.052	.000
	hg hemaglobin concentration, in g per decaliter	200.557	1	200.557	232.457	.000
	ferr plasma ferritins, ng	78553.546	1	78553.546	41.898	.000
Error	rcc red blood cell count, in	22.618	200	.113		
	wcc while blood cell count, in per liter	648.869	200	3.244		

Tests of Between-Subjects Effects

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.
	hc hematocrit, percent	1348.283	200	6.741		
	hg hemaglobin concentration, in g per decaliter	172.554	200	.863		
	ferr plasma ferritins, ng	374976.360	200	1874.882		
Total	rcc red blood cell count, in	4539.752	202			
	wcc while blood cell count, in per liter	10859.880	202			
	hc hematocrit, percent	377787.610	202			
	hg hemaglobin concentration, in g per decaliter	43233.100	202			
	ferr plasma ferritins, ng	1647341.00	202			
Corrected Total	rcc red blood cell count, in	42.158	201			
	wcc while blood cell count, in per liter	651.484	201			
	hc hematocrit, percent	2696.916	201			
	hg hemaglobin concentration, in g per decaliter	373.111	201			
	ferr plasma ferritins, ng	453529.906	201			

- a. R Squared = .463 (Adjusted R Squared = .461)
- b. R Squared = .004 (Adjusted R Squared = -.001)
- c. R Squared = .500 (Adjusted R Squared = .498)
- d. R Squared = .538 (Adjusted R Squared = .535)
- e. R Squared = .173 (Adjusted R Squared = .169)

```
DISCRIMINANT
/GROUPS=sex_numeric(1 2)
/VARIABLES=rcc wcc hc hg ferr
/ANALYSIS ALL
/PRIORS EQUAL
/CLASSIFY=NONMISSING POOLED.
```

Discriminant

Notes

Output Created		14-AUG-2013 17:16:05
Comments		
Input	Data	/Users/jeromy/teaching/org-research-methods/2013/content/03-group-differences/exercises/data/ais.sav
	Active Dataset	DataSet2
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data ...	202
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing in the analysis phase.
	Cases Used	In the analysis phase, cases with no user- or system-missing values for any predictor variable are used. Cases with user-, system-missing, or out-of-range values for the grouping variable are always excluded.
Syntax		DISCRIMINANT /GROUPS=sex_numeric (1 2) /VARIABLES=rcc wcc hc hg ferr...
Resources	Processor Time	00:00:00.01
	Elapsed Time	00:00:00.00

[DataSet2] /Users/jeromy/teaching/org-research-methods/2013/content/03-group-differences/exercises/data/ais.sav

Analysis Case Processing Summary

Unweighted Cases		N	Percent
Valid		202	100.0
Excluded	Missing or out-of-range group codes	0	.0
	At least one missing discriminating variable	0	.0
	Both missing or out-of-range group codes and at least one missing discriminating variable	0	.0
	Total	0	.0
Total		202	100.0

Group Statistics

sex_numeric Sex		Valid N (listwise)	
		Unweighted	Weighted
1 Female	rcc red blood cell count, in	100	100.000
	wcc while blood cell count, in per liter	100	100.000
	hc hematocrit, percent	100	100.000
	hg hemaglobin concentration, in g per decaliter	100	100.000
	ferr plasma ferritins, ng	100	100.000
2 Male	rcc red blood cell count, in	102	102.000
	wcc while blood cell count, in per liter	102	102.000
	hc hematocrit, percent	102	102.000
	hg hemaglobin concentration, in g per decaliter	102	102.000
	ferr plasma ferritins, ng	102	102.000
Total	rcc red blood cell count, in	202	202.000
	wcc while blood cell count, in per liter	202	202.000
	hc hematocrit, percent	202	202.000
	hg hemaglobin concentration, in g per decaliter	202	202.000
	ferr plasma ferritins, ng	202	202.000

Analysis 1

Summary of Canonical Discriminant Functions

Eigenvalues

Function	Eigenvalue	% of Variance	Cumulative %	Canonical Correlation
1	1.422 ^a	100.0	100.0	.766

a. First 1 canonical discriminant functions were used in the analysis.

Wilks' Lambda

Test of Function (s)	Wilks' Lambda	Chi-square	df	Sig.
1	.413	174.703	5	.000

**Standardized Canonical
Discriminant Function
Coefficients**

	Function
	1
rcc red blood cell count, in	.206
wcc while blood cell count, in per liter	-.127
hc hematocrit, percent	.126
hg hemoglobin concentration, in g per decaliter	.644
ferr plasma ferritins, ng	.412

Structure Matrix

	Function
	1
hg hemoglobin concentration, in g per decaliter	.904
hc hematocrit, percent	.839
rcc red blood cell count, in	.779
ferr plasma ferritins, ng	.384
wcc while blood cell count, in per liter	.053

Pooled within-groups correlations between discriminating variables and standardized canonical discriminant functions

Variables ordered by absolute size of correlation within function.

**Functions at Group
Centroids**

	Function
sex_numeric Sex	1
1 Female	-1.198
2 Male	1.175

Unstandardized canonical
discriminant functions
evaluated at group means

```
DESCRIPTIVES VARIABLES=rcc wcc hc hg ferr
/SAVE
/STATISTICS=MEAN STDDEV MIN MAX.
```

Descriptives

Notes

Output Created		14-AUG-2013 17:21:25
Comments		
Input	Data	/Users/jeromy/teaching/org-research-methods/2013/content/03-group-differences/exercises/data/ais.sav
	Active Dataset	DataSet2
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data ...	202
Missing Value Handling	Definition of Missing	User defined missing values are treated as missing.
	Cases Used	All non-missing data are used.
Syntax		DESCRIPTIVES VARIABLES=rcc wcc hc hg ferr /SAVE /STATISTICS=MEAN..
Resources	Processor Time	00:00:00.01
	Elapsed Time	00:00:00.00
Variables Created or Modified	Zrcc	Zscore: red blood cell count, in
	Zwcc	Zscore: while blood cell count, in per liter
	Zhc	Zscore: hematocrit, percent
	Zhg	Zscore: hemoglobin concentration, in g per decaliter
	Zferr	Zscore: plasma ferritins, ng

[DataSet2] /Users/jeromy/teaching/org-research-methods/2013/content/03-group-differences/exercises/data/ais.sav

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
rcc red blood cell count, in	202	3.80	6.72	4.7186	.45798
wcc while blood cell count, in per liter	202	3.3	14.3	7.109	1.8003
hc hematocrit, percent	202	35.9	59.7	43.092	3.6630
hg hemoglobin concentration, in g per decaliter	202	11.6	19.2	14.566	1.3625
ferr plasma ferritins, ng	202	8	234	76.88	47.501
Valid N (listwise)	202				

```

COMPUTE mean_blood=mean(Zrcc, Zwcc, Zhc, Zhg, Zferr).
EXECUTE.
UNIANOVA mean_blood BY sex_numeric
/METHOD=SSTYPE(3)
/INTERCEPT=INCLUDE

```

/CRITERIA=ALPHA(0.05)
 /DESIGN=sex_numeric.

Univariate Analysis of Variance

Notes

Output Created	14-AUG-2013 17:23:52	
Comments		
Input	Data	/Users/jeromy/teaching/org-research-methods/2013/content/03-group-differences/exercises/data/ais.sav
	Active Dataset	DataSet2
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data ...	202
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics are based on all cases with valid data for all variables in the model.
Syntax	UNIANOVA mean_blood BY sex_numeric /METHOD=SSTYPE(3) /INTERCEPT=INCLUDE /CRITERIA=ALPHA (0.05)...	
Resources	Processor Time	00:00:00.01
	Elapsed Time	00:00:00.00

[DataSet2] /Users/jeromy/teaching/org-research-methods/2013/content/03-group-differences/exercises/data/ais.sav

Between-Subjects Factors

	Value Label	N
sex_numeric Sex 1	Female	100
2	Male	102

Tests of Between-Subjects Effects

Dependent Variable: mean_blood

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	54.378 ^a	1	54.378	206.989	.000
Intercept	.005	1	.005	.020	.887
sex_numeric	54.378	1	54.378	206.989	.000
Error	52.542	200	.263		
Total	106.919	202			
Corrected Total	106.919	201			

a. R Squared = .509 (Adjusted R Squared = .506)

```
UNIANOVA mean_blood BY sex_numeric
/METHOD=SSTYPE(3)
/INTERCEPT=INCLUDE
/PRINT=DESCRIPTIVE
/CRITERIA=ALPHA(.05)
```

Univariate Analysis of Variance

Notes

Output Created		14-AUG-2013 17:24:09
Comments		
Input	Data	/Users/jeromy/teaching/org-research-methods/2013/content/03-group-differences/exercises/data/ais.sav
	Active Dataset	DataSet2
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data ...	202
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics are based on all cases with valid data for all variables in the model.
Syntax		UNIANOVA mean_blood BY sex_numeric /METHOD=SSTYPE(3) /INTERCEPT=INCLUDE /PRINT=DESCRIPTIVE /CRITERIA=ALPHA(.05) ...
Resources	Processor Time	00:00:00.01
	Elapsed Time	00:00:00.00

[DataSet2] /Users/jeromy/teaching/org-research-methods/2013/content/03-group-differences/exercises/data/ais.sav

Between-Subjects Factors

	Value Label	N
sex_numeric Sex 1	Female	100
2	Male	102

Descriptive Statistics

Dependent Variable: mean_blood

sex_numeric Sex	Mean	Std. Deviation	N
1 Female	-.5240	.48285	100
2 Male	.5137	.54008	102
Total	.0000	.72934	202

Tests of Between-Subjects Effects

Dependent Variable: mean_blood

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	54.378 ^a	1	54.378	206.989	.000
Intercept	.005	1	.005	.020	.887
sex_numeric	54.378	1	54.378	206.989	.000
Error	52.542	200	.263		
Total	106.919	202			
Corrected Total	106.919	201			

a. R Squared = .509 (Adjusted R Squared = .506)

GET

FILE=' /Users/jeromy/teaching/org-research-methods/2013/content/03-group-differences/exercises/
DATASET NAME DataSet4 WINDOW=FRONT.