HPESS Survey Statistics Report

- Question – For each of the questions, 1-10, is there a difference in the average response by age?

  Answer – YES, but for only two questions:
  Q1: age group 1 differed from all of the other groups.
  Q2: age groups 1 and 5 differed from groups 2,3,4, but did not differ from each other.

- Question – For each of the questions, 1-10, is there a difference in the average response by gender?

  Answer – NO – there are no significant differences in responses between genders for any of the 10 questions.

- Question – For each of the questions, 1-10, is there a difference in the average response by level of education

  Answer – YES, for questions 1, 2, 3, and 10

Q1:		1 v. 3	2 v. 3
Q2:		1 v. 3	2 v. 3
Q3:	1 v.2	1 v. 3	2 v. 3
Q10:		1 v. 3	2 v. 3

- Question: For each of the questions, is there a difference in the average response based upon racer or ethnicity

  Answer - NO – there are no significant difference in responses among races or ethnicities for any of the 10 questions.

- Question – For each of the questions, 1-10, is there a difference in the average response if respondent is or was a hospital worker?

  Answer – YES – for questions 1, 2, and 5. For all three questions, group 1 is significantly different from both group 0, and group 2.

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- Question – For each of the questions, 1-10, is there a difference in the average response by age among those who identified their age group?

```
. dunntest iq1, by(iage) ma(bh) wrap

Kruskal-Wallis equality-of-populations rank test

  +------------------------+
  | iage | Obs | Rank Sum |
  |------+-----+----------|
  |    1 |   1 |     3.50 |
  |    2 |  23 |   878.50 |
  |    3 |  35 |  1376.50 |
  |    4 |  11 |   456.50 |
  |    5 |   5 |   169.50 |
  |------+-----+----------|
  |    6 |   1 |    41.50 |
  +------------------------+

chi-squared =     3.004 with 5 d.f.
probability =     0.6994
```

```
chi-squared with ties =    13.768 with 5 d.f.
probability =     0.0171


                Dunn's Pairwise Comparison of iq1 by iage
                           (Benjamini-Hochberg)
Col Mean-|
Row Mean |             1             2             3             4             5
---------+------------------------------------------------------------
       2 |  -3.292779
         |     0.0025
         |
       3 |  -3.424849  -0.409178
         |     0.0023     0.4265
         |
       4 |  -3.527106  -0.873848  -0.609012
         |     0.0032     0.3583     0.3699
         |
       5 |  -2.690371   0.843972   1.100788   1.366042
         |     0.0134     0.3322     0.2903     0.2149
         |
       6 |  -2.604940  -0.313598  -0.207567   0.000000  -0.672593
         |     0.0138     0.4349     0.4476     0.5000     0.3759

False Discovery Rate =   0.05
Reject Ho if p = P(Z <= |z|) <= FDR/2 with stopping rule


. dunntest iq2, by(iage) ma(bh) wrap

Kruskal-Wallis equality-of-populations rank test

  +------------------------+
  | iage | Obs | Rank Sum |
  |------+-----+----------|
  |    1 |   1 |     4.50 |
  |    2 |  22 |   849.00 |
  |    3 |  35 |  1357.50 |
  |    4 |  11 |   462.00 |
  |    5 |   5 |   172.50 |
  |------+-----+----------|
  |    6 |   1 |     4.50 |
  +------------------------+

chi-squared =     5.286 with 5 d.f.
probability =     0.3819

chi-squared with ties =    18.489 with 5 d.f.
probability =     0.0024


                Dunn's Pairwise Comparison of iq2 by iage
                           (Benjamini-Hochberg)
Col Mean-|
Row Mean |             1             2             3             4             5
---------+------------------------------------------------------------
       2 |  -2.861006
         |     0.0063
         |
       3 |  -2.900874  -0.061439
         |     0.0070     0.5095
         |
       4 |  -3.080845  -0.792177  -0.797937
         |     0.0155     0.2920     0.3187
         |
       5 |  -2.349976   0.708544   0.769210   1.193206
         |     0.0201     0.2761     0.2761     0.1940
         |
       6 |   0.000000   2.861006   2.900874   3.080845   2.349976
         |     0.5000     0.0053     0.0093     0.0077     0.0176

False Discovery Rate =   0.05
Reject Ho if p = P(Z <= |z|) <= FDR/2 with stopping rule


. dunntest iq3, by(iage) ma(bh) wrap

Kruskal-Wallis equality-of-populations rank test
```

```
  +-----------------------+
  | iage | Obs | Rank Sum |
  |------+-----+----------|
  |    1 |   1 |     7.00 |
  |    2 |  23 |   921.00 |
  |    3 |  35 |  1347.00 |
  |    4 |  11 |   419.00 |
  |    5 |   5 |   187.00 |
  |------+-----+----------|
  |    6 |   1 |    45.00 |
  +-----------------------+

chi-squared =     2.250 with 5 d.f.
probability =     0.8136

chi-squared with ties =     5.288 with 5 d.f.
probability =     0.3817


                Dunn's Pairwise Comparison of iq3 by iage
                           (Benjamini-Hochberg)
Col Mean-|
Row Mean |             1             2             3             4             5
---------+-------------------------------------------------------------
       2 |  -2.245722
         |     0.1854
         |
       3 |  -2.155302   0.402900
         |     0.1168     0.5725
         |
       4 |  -2.066574   0.369776   0.079295
         |     0.0969     0.4851     0.4684
         |
       5 |  -1.926615   0.371927   0.157658   0.088931
         |     0.1013     0.5325     0.5046     0.4978
         |
       6 |  -1.865437  -0.336858  -0.445925  -0.459239  -0.481654
         |     0.0932     0.4601     0.6147     0.6922     0.7876

False Discovery Rate =   0.05
Reject Ho if p = P(Z <= |z|) <= FDR/2 with stopping rule



. dunntest iq4, by(iage) ma(bh) wrap

Kruskal-Wallis equality-of-populations rank test

  +-----------------------+
  | iage | Obs | Rank Sum |
  |------+-----+----------|
  |    1 |   1 |    13.00 |
  |    2 |  23 |   934.00 |
  |    3 |  36 |  1433.50 |
  |    4 |  11 |   362.00 |
  |    5 |   5 |   211.00 |
  |------+-----+----------|
  |    6 |   1 |    49.50 |
  +-----------------------+

chi-squared =     2.656 with 5 d.f.
probability =     0.7529

chi-squared with ties =     4.393 with 5 d.f.
probability =     0.4944


                Dunn's Pairwise Comparison of iq4 by iage
                           (Benjamini-Hochberg)
Col Mean-|
Row Mean |             1             2             3             4             5
---------+-------------------------------------------------------------
       2 |  -1.553696
         |     0.9019
         |
       3 |  -1.520764   0.169968
         |     0.3208     0.4325
         |
```

```
       4 |  -1.095769   1.207400   1.153083
         |     0.2927     0.3409     0.3111
         |
       5 |  -1.532336  -0.185389  -0.286737  -0.990242
         |     0.4704     0.4569     0.4467     0.3019
         |
       6 |  -1.483678  -0.500363  -0.548924  -0.913141  -0.383084
         |     0.2586     0.4206     0.4373     0.3010     0.4385

False Discovery Rate =   0.05
Reject Ho if p = P(Z <= |z|) <= FDR/2 with stopping rule


. dunntest iq5, by(iage) ma(bh) wrap

Kruskal-Wallis equality-of-populations rank test

  +-----------------------+
  | iage | Obs | Rank Sum |
  |------+-----+----------|
  |    1 |   1 |     7.00 |
  |    2 |  23 |   836.00 |
  |    3 |  35 |  1476.50 |
  |    4 |  11 |   377.00 |
  |    5 |   5 |   185.00 |
  |------+-----+----------|
  |    6 |   1 |    44.50 |
  +-----------------------+

chi-squared =     3.728 with 5 d.f.
probability =     0.5892

chi-squared with ties =     9.323 with 5 d.f.
probability =     0.0968


                Dunn's Pairwise Comparison of iq5 by iage
                           (Benjamini-Hochberg)
Col Mean-|
Row Mean |             1             2             3             4             5
---------+-------------------------------------------------------------
       2 |  -2.057391
         |     0.1487
         |
       3 |  -2.484459  -1.557480
         |     0.0973     0.1279
         |
       4 |  -1.869894   0.405361   1.639361
         |     0.0922     0.4283     0.1264
         |
       5 |  -1.961161  -0.094649   0.776748  -0.362103
         |     0.1247     0.4623     0.4100     0.4138
         |
       6 |  -1.898886  -0.571498  -0.163411  -0.701210  -0.490290
         |     0.1080     0.4257     0.4662     0.4026     0.4254

False Discovery Rate =   0.05
Reject Ho if p = P(Z <= |z|) <= FDR/2 with stopping rule


. dunntest iq6, by(iage) ma(bh) wrap

Kruskal-Wallis equality-of-populations rank test

  +-----------------------+
  | iage | Obs | Rank Sum |
  |------+-----+----------|
  |    1 |   1 |    11.00 |
  |    2 |  23 |   841.50 |
  |    3 |  35 |  1397.00 |
  |    4 |  11 |   468.50 |
  |    5 |   5 |   161.50 |
  |------+-----+----------|
  |    6 |   1 |    46.50 |
  +-----------------------+

chi-squared =     2.770 with 5 d.f.
probability =     0.7354
```

```
chi-squared with ties =     5.486 with 5 d.f.
probability =     0.3595


                Dunn's Pairwise Comparison of iq6 by iage
                           (Benjamini-Hochberg)
Col Mean-|
Row Mean |             1             2             3             4             5
---------+-------------------------------------------------------------
       2 |  -1.596368
         |     0.2070
         |
       3 |  -1.816984  -0.790016
         |     0.2596     0.3221
         |
       4 |  -1.927631  -1.043792  -0.493509
         |     0.4043     0.3178     0.3586
         |
       5 |  -1.239210   0.553701   1.015019   1.215993
         |     0.3229     0.3624     0.2907     0.2800
         |
       6 |  -1.599813  -0.618474  -0.413849  -0.238527  -0.826140
         |     0.2741     0.3656     0.3637     0.4057     0.3406

False Discovery Rate =   0.05
Reject Ho if p = P(Z <= |z|) <= FDR/2 with stopping rule


. dunntest iq7, by(iage) ma(bh) wrap

Kruskal-Wallis equality-of-populations rank test

  +------------------------+
  | iage | Obs | Rank Sum |
  |------+-----+----------|
  |    1 |   1 |    13.50 |
  |    2 |  22 |   819.00 |
  |    3 |  35 |  1270.50 |
  |    4 |  11 |   493.50 |
  |    5 |   5 |   205.50 |
  |------+-----+----------|
  |    6 |   1 |    48.00 |
  +------------------------+

chi-squared =     2.907 with 5 d.f.
probability =     0.7143

chi-squared with ties =     4.855 with 5 d.f.
probability =     0.4338


                Dunn's Pairwise Comparison of iq7 by iage
                           (Benjamini-Hochberg)
Col Mean-|
Row Mean |             1             2             3             4             5
---------+-------------------------------------------------------------
       2 |  -1.376058
         |     0.2532
         |
       3 |  -1.333089   0.202096
         |     0.2281     0.4499
         |
       4 |  -1.780629  -1.226249  -1.469099
         |     0.5623     0.2358     0.3545
         |
       5 |  -1.494032  -0.463525  -0.595349   0.413781
         |     0.5069     0.4384     0.4137     0.4244
         |
       6 |  -1.446590  -0.624762  -0.684085  -0.178063  -0.373508
         |     0.2775     0.4434     0.4631     0.4293     0.4089

False Discovery Rate =   0.05
Reject Ho if p = P(Z <= |z|) <= FDR/2 with stopping rule


. dunntest iq8, by(iage) ma(bh) wrap

Kruskal-Wallis equality-of-populations rank test
```

```
  +-----------------------+
  | iage | Obs | Rank Sum |
  |------+-----+----------|
  |    1 |   1 |    16.00 |
  |    2 |  23 |   896.00 |
  |    3 |  35 |  1360.00 |
  |    4 |  11 |   356.00 |
  |    5 |   5 |   239.50 |
  |------+-----+----------|
  |    6 |   1 |    58.50 |
  +-----------------------+

chi-squared =     3.633 with 5 d.f.
probability =     0.6034

chi-squared with ties =     4.157 with 5 d.f.
probability =     0.5270


                Dunn's Pairwise Comparison of iq8 by iage
                          (Benjamini-Hochberg)
Col Mean-|
Row Mean |             1             2             3             4             5
---------+-------------------------------------------------------------
       2 |  -1.088658
         |     0.3454
         |
       3 |  -1.091772   0.017935
         |     0.4124     0.4928
         |
       4 |  -0.758949   0.871211   0.910035
         |     0.2584     0.2398     0.2721
         |
       5 |  -1.410676  -0.878018  -0.916267  -1.395398
         |     0.5938     0.2590     0.2996     0.4072
         |
       6 |  -1.455798  -0.926803  -0.938242  -1.212211  -0.468751
         |     1.0000     0.3319     0.3730     0.4227     0.3425

False Discovery Rate =   0.05
Reject Ho if p = P(Z <= |z|) <= FDR/2 with stopping rule



. dunntest iq9, by(iage) ma(bh) wrap

Kruskal-Wallis equality-of-populations rank test

  +-----------------------+
  | iage | Obs | Rank Sum |
  |------+-----+----------|
  |    1 |   1 |    26.50 |
  |    2 |  23 |   844.00 |
  |    3 |  35 |  1377.00 |
  |    4 |  11 |   443.50 |
  |    5 |   5 |   208.50 |
  |------+-----+----------|
  |    6 |   1 |    26.50 |
  +-----------------------+

chi-squared =     0.975 with 5 d.f.
probability =     0.9646

chi-squared with ties =     1.158 with 5 d.f.
probability =     0.9488


                Dunn's Pairwise Comparison of iq9 by iage
                          (Benjamini-Hochberg)
Col Mean-|
Row Mean |             1             2             3             4             5
---------+-------------------------------------------------------------
       2 |  -0.492653
         |     0.5834
         |
       3 |  -0.625047  -0.486788
         |     0.7979     0.4271
         |
       4 |  -0.653017  -0.487754  -0.139274
```

```
          |     0.9633     0.4693     0.5130
          |
        5 |  -0.684890  -0.500594  -0.243357  -0.126456
          |     1.0000     0.6607     0.5048     0.4818
          |
        6 |   0.000000   0.492653   0.625047   0.653017   0.684890
          |     0.5000     0.5185     0.6649     1.0000     1.0000

False Discovery Rate =   0.05
Reject Ho if p = P(Z <= |z|) <= FDR/2 with stopping rule


. dunntest iq10, by(iage) ma(bh) wrap

Kruskal-Wallis equality-of-populations rank test

  +------------------------+
  | iage | Obs | Rank Sum |
  |------+-----+----------|
  |    1 |   1 |     6.50 |
  |    2 |  23 |   856.50 |
  |    3 |  35 |  1427.50 |
  |    4 |  11 |   409.00 |
  |    5 |   5 |   182.50 |
  |------+-----+----------|
  |    6 |   1 |    44.00 |
  +------------------------+

chi-squared =     2.692 with 5 d.f.
probability =     0.7473

chi-squared with ties =     7.233 with 5 d.f.
probability =     0.2039


                Dunn's Pairwise Comparison of iq10 by iage
                           (Benjamini-Hochberg)
Col Mean-|
Row Mean |             1             2             3             4             5
---------+-----------------------------------------------------------------------
       2 |  -2.233632
         |     0.0957
         |
       3 |  -2.509329  -0.980744
         |     0.0907     0.4084
         |
       4 |  -2.180462   0.011605   0.773901
         |     0.0731     0.4954     0.4703
         |
       5 |  -2.032789   0.111187   0.665386   0.093832
         |     0.0789     0.5258     0.4742     0.4957
         |
       6 |  -1.968240  -0.491273  -0.235250  -0.484547  -0.508197
         |     0.0736     0.4674     0.5088     0.4282     0.5094

False Discovery Rate =   0.05
Reject Ho if p = P(Z <= |z|) <= FDR/2 with stopping rule
```

- Question – For each of the questions, 1-10, is there a difference in the average response by gender?

```
. ranksum iq1, by(igender)

Two-sample Wilcoxon rank-sum (Mann-Whitney) test

     igender |      obs    rank sum    expected
-------------+---------------------------------
           1 |       17       629.5       654.5
           2 |       59      2296.5      2271.5
-------------+---------------------------------
    combined |       76        2926        2926

unadjusted variance     6435.92
adjustment for ties    -5031.72
                       ----------
adjusted variance       1404.20
```

```
Ho: iq1(igender==1) = iq1(igender==2)
             z =  -0.667
    Prob > |z| =   0.5047

.
. ranksum iq2, by(igender)

Two-sample Wilcoxon rank-sum (Mann-Whitney) test

     igender |      obs    rank sum    expected
-------------+---------------------------------
           1 |       17         564         646
           2 |       58        2286        2204
-------------+---------------------------------
    combined |       75        2850        2850

unadjusted variance     6244.67
adjustment for ties    -4459.21
                       ----------
adjusted variance       1785.46

Ho: iq2(igender==1) = iq2(igender==2)
             z =  -1.941
    Prob > |z| =   0.0523

.
. ranksum iq3, by(igender)

Two-sample Wilcoxon rank-sum (Mann-Whitney) test

     igender |      obs    rank sum    expected
-------------+---------------------------------
           1 |       17         613       654.5
           2 |       59        2313      2271.5
-------------+---------------------------------
    combined |       76        2926        2926

unadjusted variance     6435.92
adjustment for ties    -3697.73
                       ----------
adjusted variance       2738.19

Ho: iq3(igender==1) = iq3(igender==2)
             z =  -0.793
    Prob > |z| =   0.4277

.
. ranksum iq4, by(igender)

Two-sample Wilcoxon rank-sum (Mann-Whitney) test

     igender |      obs    rank sum    expected
-------------+---------------------------------
           1 |       17         659         663
           2 |       60        2344        2340
-------------+---------------------------------
    combined |       77        3003        3003

unadjusted variance     6630.00
adjustment for ties    -2621.46
                       ----------
adjusted variance       4008.54

Ho: iq4(igender==1) = iq4(igender==2)
             z =  -0.063
    Prob > |z| =   0.9496

.
. ranksum iq5, by(igender)

Two-sample Wilcoxon rank-sum (Mann-Whitney) test

     igender |      obs    rank sum    expected
-------------+---------------------------------
           1 |       17       600.5       654.5
           2 |       59      2325.5      2271.5
-------------+---------------------------------
    combined |       76        2926        2926
```

```
unadjusted variance     6435.92
adjustment for ties    -3862.43
                     ----------
adjusted variance       2573.49

Ho: iq5(igender==1) = iq5(igender==2)
             z =  -1.064
    Prob > |z| =   0.2871

.
. ranksum iq6, by(igender)

Two-sample Wilcoxon rank-sum (Mann-Whitney) test

     igender |      obs    rank sum    expected
-------------+---------------------------------
           1 |       17         684       654.5
           2 |       59        2242      2271.5
-------------+---------------------------------
    combined |       76        2926        2926

unadjusted variance     6435.92
adjustment for ties    -3186.72
                     ----------
adjusted variance       3249.19

Ho: iq6(igender==1) = iq6(igender==2)
             z =   0.518
    Prob > |z| =   0.6048

.
. ranksum iq7, by(igender)

Two-sample Wilcoxon rank-sum (Mann-Whitney) test

     igender |      obs    rank sum    expected
-------------+---------------------------------
           1 |       17         599         646
           2 |       58        2251        2204
-------------+---------------------------------
    combined |       75        2850        2850

unadjusted variance     6244.67
adjustment for ties    -2505.86
                     ----------
adjusted variance       3738.81

Ho: iq7(igender==1) = iq7(igender==2)
             z =  -0.769
    Prob > |z| =   0.4421

.
. ranksum iq8, by(igender)

Two-sample Wilcoxon rank-sum (Mann-Whitney) test

     igender |      obs    rank sum    expected
-------------+---------------------------------
           1 |       17       610.5       654.5
           2 |       59      2315.5      2271.5
-------------+---------------------------------
    combined |       76        2926        2926

unadjusted variance     6435.92
adjustment for ties     -812.08
                     ----------
adjusted variance       5623.84

Ho: iq8(igender==1) = iq8(igender==2)
             z =  -0.587
    Prob > |z| =   0.5574

.
. ranksum iq9, by(igender)

Two-sample Wilcoxon rank-sum (Mann-Whitney) test

     igender |      obs    rank sum    expected
```

```
-------------+---------------------------------
           1 |       17         597       654.5
           2 |       59        2329      2271.5
-------------+---------------------------------
    combined |       76        2926        2926

unadjusted variance     6435.92
adjustment for ties    -1019.01
                     ----------
adjusted variance       5416.90

Ho: iq9(igender==1) = iq9(igender==2)
             z =  -0.781
    Prob > |z| =   0.4347

.
. ranksum iq10, by(igender)

Two-sample Wilcoxon rank-sum (Mann-Whitney) test

     igender |      obs    rank sum    expected
-------------+---------------------------------
           1 |       17       635.5       654.5
           2 |       59      2290.5      2271.5
-------------+---------------------------------
    combined |       76        2926        2926

unadjusted variance     6435.92
adjustment for ties    -4040.59
                     ----------
adjusted variance       2395.32

Ho: iq10(igender==1) = iq10(igender==2)
             z =  -0.388
    Prob > |z| =   0.6979
```

- Question – For each of the questions, 1-10, is there a difference in the average response by level of education

```
. dunntest iq1, by(ied) ma(bh) wrap

Warning: by() values are unlabeled, option nolabel implicit


Kruskal-Wallis equality-of-populations rank test

  +----------------------+
  | ied | Obs | Rank Sum |
  |-----+-----+----------|
  |   1 |  26 |   965.00 |
  |   2 |  49 |  1957.50 |
  |   3 |   1 |     3.50 |
  +----------------------+

chi-squared =     2.825 with 2 d.f.
probability =     0.2435

chi-squared with ties =    12.949 with 2 d.f.
probability =     0.0015


                  Dunn's Pairwise Comparison of iq1 by ied
                            (Benjamini-Hochberg)
Col Mean-|
Row Mean |             1             2
---------+----------------------
       2 |  -1.132195
         |     0.1288
         |
       3 |   3.197953   3.498063
         |     0.0010     0.0007

False Discovery Rate =   0.05
Reject Ho if p = P(Z <= |z|) <= FDR/2 with stopping rule

.
. dunntest iq2, by(ied) ma(bh) wrap
```

```
Warning: by() values are unlabeled, option nolabel implicit


Kruskal-Wallis equality-of-populations rank test

  +----------------------+
  | ied | Obs | Rank Sum |
  |-----+-----+----------|
  |   1 |  26 |   979.50 |
  |   2 |  48 |  1866.00 |
  |   3 |   1 |     4.50 |
  +----------------------+

chi-squared =     2.446 with 2 d.f.
probability =     0.2944

chi-squared with ties =     8.554 with 2 d.f.
probability =     0.0139


                  Dunn's Pairwise Comparison of iq2 by ied
                            (Benjamini-Hochberg)
Col Mean-|
Row Mean |             1             2
---------+----------------------
       2 |  -0.423546
         |     0.3359
         |
       3 |   2.793337   2.919430
         |     0.0039     0.0053

False Discovery Rate =   0.05
Reject Ho if p = P(Z <= |z|) <= FDR/2 with stopping rule

.
. dunntest iq3, by(ied) ma(bh) wrap

Warning: by() values are unlabeled, option nolabel implicit


Kruskal-Wallis equality-of-populations rank test

  +----------------------+
  | ied | Obs | Rank Sum |
  |-----+-----+----------|
  |   1 |  26 |   904.00 |
  |   2 |  49 |  2015.00 |
  |   3 |   1 |     7.00 |
  +----------------------+

chi-squared =     3.468 with 2 d.f.
probability =     0.1766

chi-squared with ties =     8.151 with 2 d.f.
probability =     0.0170


                  Dunn's Pairwise Comparison of iq3 by ied
                            (Benjamini-Hochberg)
Col Mean-|
Row Mean |             1             2
---------+----------------------
       2 |  -1.817857
         |     0.0345
         |
       3 |   1.891823   2.345120
         |     0.0439     0.0285

False Discovery Rate =   0.05
Reject Ho if p = P(Z <= |z|) <= FDR/2 with stopping rule

.
. dunntest iq4, by(ied) ma(bh) wrap

Warning: by() values are unlabeled, option nolabel implicit


Kruskal-Wallis equality-of-populations rank test
```

```
  +----------------------+
  | ied | Obs | Rank Sum |
  |-----+-----+----------|
  |   1 |  26 |  1021.50 |
  |   2 |  50 |  1968.50 |
  |   3 |   1 |    13.00 |
  +----------------------+

chi-squared =     1.369 with 2 d.f.
probability =     0.5044

chi-squared with ties =     2.264 with 2 d.f.
probability =     0.3224


                  Dunn's Pairwise Comparison of iq4 by ied
                            (Benjamini-Hochberg)
Col Mean-|
Row Mean |             1             2
---------+----------------------
       2 |  -0.019386
         |     0.4923
         |
       3 |   1.482968   1.500969
         |     0.1036     0.2000

False Discovery Rate =   0.05
Reject Ho if p = P(Z <= |z|) <= FDR/2 with stopping rule

.
. dunntest iq5, by(ied) ma(bh) wrap

Warning: by() values are unlabeled, option nolabel implicit


Kruskal-Wallis equality-of-populations rank test

  +----------------------+
  | ied | Obs | Rank Sum |
  |-----+-----+----------|
  |   1 |  26 |  1044.50 |
  |   2 |  49 |  1874.50 |
  |   3 |   1 |     7.00 |
  +----------------------+

chi-squared =     2.190 with 2 d.f.
probability =     0.3345

chi-squared with ties =     5.477 with 2 d.f.
probability =     0.0647


                  Dunn's Pairwise Comparison of iq5 by ied
                            (Benjamini-Hochberg)
Col Mean-|
Row Mean |             1             2
---------+----------------------
       2 |   0.566082
         |     0.2857
         |
       3 |   2.331166   2.215729
         |     0.0296     0.0200

False Discovery Rate =   0.05
Reject Ho if p = P(Z <= |z|) <= FDR/2 with stopping rule

.
. dunntest iq6, by(ied) ma(bh) wrap

Warning: by() values are unlabeled, option nolabel implicit


Kruskal-Wallis equality-of-populations rank test

  +----------------------+
  | ied | Obs | Rank Sum |
  |-----+-----+----------|
  |   1 |  26 |  1024.00 |
```

```
  |   2 |  49 |  1891.00 |
  |   3 |   1 |    11.00 |
  +----------------------+

chi-squared =     1.593 with 2 d.f.
probability =     0.4508

chi-squared with ties =     3.156 with 2 d.f.
probability =     0.2064


                  Dunn's Pairwise Comparison of iq6 by ied
                            (Benjamini-Hochberg)
Col Mean-|
Row Mean |             1             2
---------+----------------------
       2 |   0.208239
         |     0.4175
         |
       3 |   1.775186   1.740803
         |     0.1138     0.0613

False Discovery Rate =   0.05
Reject Ho if p = P(Z <= |z|) <= FDR/2 with stopping rule

.
. dunntest iq7, by(ied) ma(bh) wrap

Warning: by() values are unlabeled, option nolabel implicit


Kruskal-Wallis equality-of-populations rank test

  +----------------------+
  | ied | Obs | Rank Sum |
  |-----+-----+----------|
  |   1 |  26 |  1065.50 |
  |   2 |  48 |  1771.00 |
  |   3 |   1 |    13.50 |
  +----------------------+

chi-squared =     1.873 with 2 d.f.
probability =     0.3920

chi-squared with ties =     3.129 with 2 d.f.
probability =     0.2092


                  Dunn's Pairwise Comparison of iq7 by ied
                            (Benjamini-Hochberg)
Col Mean-|
Row Mean |             1             2
---------+----------------------
       2 |   0.994759
         |     0.1599
         |
       3 |   1.599098   1.373101
         |     0.1647     0.1273

False Discovery Rate =   0.05
Reject Ho if p = P(Z <= |z|) <= FDR/2 with stopping rule

.
. dunntest iq8, by(ied) ma(bh) wrap

Warning: by() values are unlabeled, option nolabel implicit


Kruskal-Wallis equality-of-populations rank test

  +----------------------+
  | ied | Obs | Rank Sum |
  |-----+-----+----------|
  |   1 |  26 |  1025.50 |
  |   2 |  49 |  1868.50 |
  |   3 |   1 |    32.00 |
  +----------------------+

chi-squared =     0.148 with 2 d.f.
```

```
probability =     0.9289

chi-squared with ties =     0.169 with 2 d.f.
probability =     0.9190


                  Dunn's Pairwise Comparison of iq8 by ied
                            (Benjamini-Hochberg)
Col Mean-|
Row Mean |             1             2
---------+----------------------
       2 |   0.261480
         |     0.3969
         |
       3 |   0.353785   0.294096
         |     1.0000     0.5765

False Discovery Rate =   0.05
Reject Ho if p = P(Z <= |z|) <= FDR/2 with stopping rule

.
. dunntest iq9, by(ied) ma(bh) wrap

Warning: by() values are unlabeled, option nolabel implicit


Kruskal-Wallis equality-of-populations rank test

  +----------------------+
  | ied | Obs | Rank Sum |
  |-----+-----+----------|
  |   1 |  26 |  1086.50 |
  |   2 |  49 |  1813.00 |
  |   3 |   1 |    26.50 |
  +----------------------+

chi-squared =     1.098 with 2 d.f.
probability =     0.5776

chi-squared with ties =     1.304 with 2 d.f.
probability =     0.5209


                  Dunn's Pairwise Comparison of iq9 by ied
                            (Benjamini-Hochberg)
Col Mean-|
Row Mean |             1             2
---------+----------------------
       2 |   0.974133
         |     0.4950
         |
       3 |   0.740520   0.513063
         |     0.3442     0.3040

False Discovery Rate =   0.05
Reject Ho if p = P(Z <= |z|) <= FDR/2 with stopping rule

.
. dunntest iq10, by(ied) ma(bh) wrap

Warning: by() values are unlabeled, option nolabel implicit


Kruskal-Wallis equality-of-populations rank test

  +----------------------+
  | ied | Obs | Rank Sum |
  |-----+-----+----------|
  |   1 |  26 |   956.50 |
  |   2 |  49 |  1963.00 |
  |   3 |   1 |     6.50 |
  +----------------------+

chi-squared =     2.501 with 2 d.f.
probability =     0.2864

chi-squared with ties =     6.720 with 2 d.f.
probability =     0.0347
```

```
                Dunn's Pairwise Comparison of iq10 by ied
                           (Benjamini-Hochberg)
Col Mean-|
Row Mean |             1             2
---------+----------------------
       2 |  -1.001222
         |     0.1584
         |
       3 |   2.206194   2.466110
         |     0.0205     0.0205

False Discovery Rate =   0.05
Reject Ho if p = P(Z <= |z|) <= FDR/2 with stopping rule
```

- Question: For each of the questions, is there a difference in the average response based upon racer or ethnicity

```
. dunntest iq1, by(ieth) ma(bh) wrap

Warning: by() values are unlabeled, option nolabel implicit


Kruskal-Wallis equality-of-populations rank test

  +------------------------+
  | ieth | Obs | Rank Sum |
  |------+-----+----------|
  |    1 |  39 |  1542.50 |
  |    2 |  12 |   460.00 |
  |    3 |  20 |   716.00 |
  |    4 |   3 |   124.50 |
  |    7 |   2 |    83.00 |
  +------------------------+

chi-squared =     0.480 with 4 d.f.
probability =     0.9754

chi-squared with ties =     2.201 with 4 d.f.
probability =     0.6988


                Dunn's Pairwise Comparison of iq1 by ieth
                           (Benjamini-Hochberg)
Col Mean-|
Row Mean |             1             2             3             4
---------+--------------------------------------------
       2 |   0.357681
         |     0.5147
         |
       3 |   1.322301   0.672593
         |     0.9303     0.6265
         |
       4 |  -0.315316  -0.475595  -0.892515
         |     0.4703     0.6344     0.9303
         |
       7 |  -0.260575  -0.401951  -0.745114   0.000000
         |     0.4413     0.5731     0.7603     0.5000

False Discovery Rate =   0.05
Reject Ho if p = P(Z <= |z|) <= FDR/2 with stopping rule

.
. dunntest iq2, by(ieth) ma(bh) wrap

Warning: by() values are unlabeled, option nolabel implicit


Kruskal-Wallis equality-of-populations rank test

  +------------------------+
  | ieth | Obs | Rank Sum |
  |------+-----+----------|
  |    1 |  38 |  1483.50 |
  |    2 |  12 |   429.00 |
  |    3 |  20 |   727.50 |
```

```
  |    4 |   3 |   126.00 |
  |    7 |   2 |    84.00 |
  +------------------------+

chi-squared =     0.494 with 4 d.f.
probability =     0.9741

chi-squared with ties =     1.728 with 4 d.f.
probability =     0.7857


                Dunn's Pairwise Comparison of iq2 by ieth
                           (Benjamini-Hochberg)
Col Mean-|
Row Mean |             1             2             3             4
---------+--------------------------------------------
       2 |   0.852426
         |     1.0000
         |
       3 |   0.827632  -0.146874
         |     0.6798     0.4907
         |
       4 |  -0.423606  -0.830842  -0.779591
         |     0.4799     1.0000     0.5445
         |
       7 |  -0.350170  -0.702190  -0.650840   0.000000
         |     0.4539     0.4826     0.4293     0.5000

False Discovery Rate =   0.05
Reject Ho if p = P(Z <= |z|) <= FDR/2 with stopping rule

.
. dunntest iq3, by(ieth) ma(bh) wrap

Warning: by() values are unlabeled, option nolabel implicit


Kruskal-Wallis equality-of-populations rank test

  +------------------------+
  | ieth | Obs | Rank Sum |
  |------+-----+----------|
  |    1 |  39 |  1641.00 |
  |    2 |  12 |   350.00 |
  |    3 |  20 |   710.00 |
  |    4 |   3 |   135.00 |
  |    7 |   2 |    90.00 |
  +------------------------+

chi-squared =     3.969 with 4 d.f.
probability =     0.4102

chi-squared with ties =     9.329 with 4 d.f.
probability =     0.0534


                Dunn's Pairwise Comparison of iq3 by ieth
                           (Benjamini-Hochberg)
Col Mean-|
Row Mean |             1             2             3             4
---------+--------------------------------------------
       2 |   2.715092
         |     0.0331
         |
       3 |   1.660183  -1.204134
         |     0.1615     0.2285
         |
       4 |  -0.338704  -1.702903  -1.065239
         |     0.4593     0.2215     0.2390
         |
       7 |  -0.279903  -1.439216  -0.889312   0.000000
         |     0.4331     0.1876     0.2670     0.5000

False Discovery Rate =   0.05
Reject Ho if p = P(Z <= |z|) <= FDR/2 with stopping rule

.
. dunntest iq4, by(ieth) ma(bh) wrap
```

```
Warning: by() values are unlabeled, option nolabel implicit


Kruskal-Wallis equality-of-populations rank test

  +------------------------+
  | ieth | Obs | Rank Sum |
  |------+-----+----------|
  |    1 |  39 |  1584.50 |
  |    2 |  12 |   474.00 |
  |    3 |  20 |   733.00 |
  |    4 |   3 |    37.50 |
  |    7 |   2 |    97.00 |
  +------------------------+

chi-squared =     5.096 with 4 d.f.
probability =     0.2776

chi-squared with ties =     8.628 with 4 d.f.
probability =     0.0711


                Dunn's Pairwise Comparison of iq4 by ieth
                           (Benjamini-Hochberg)
Col Mean-|
Row Mean |             1             2             3             4
---------+--------------------------------------------
       2 |   0.201372
         |     0.4202
         |
       3 |   0.852280   0.459885
         |     0.3284     0.3587
         |
       4 |   2.766202   2.464580   2.298277
         |     0.0284     0.0343     0.0269
         |
       7 |  -0.639739  -0.694317  -0.941479  -2.323629
         |     0.3265     0.3482     0.3465     0.0336

False Discovery Rate =   0.05
Reject Ho if p = P(Z <= |z|) <= FDR/2 with stopping rule

.
. dunntest iq5, by(ieth) ma(bh) wrap

Warning: by() values are unlabeled, option nolabel implicit


Kruskal-Wallis equality-of-populations rank test

  +------------------------+
  | ieth | Obs | Rank Sum |
  |------+-----+----------|
  |    1 |  39 |  1585.50 |
  |    2 |  12 |   384.00 |
  |    3 |  20 |   771.50 |
  |    4 |   3 |    96.00 |
  |    7 |   2 |    89.00 |
  +------------------------+

chi-squared =     1.818 with 4 d.f.
probability =     0.7691

chi-squared with ties =     4.548 with 4 d.f.
probability =     0.3369


                Dunn's Pairwise Comparison of iq5 by ieth
                           (Benjamini-Hochberg)
Col Mean-|
Row Mean |             1             2             3             4
---------+--------------------------------------------
       2 |   1.877283
         |     0.3024
         |
       3 |   0.541285  -1.289464
         |     0.3677     0.4931
         |
       4 |   1.034332   0.000000   0.760484
```

```
          |     0.3762     0.5000     0.3725
          |
        7 |  -0.379896  -1.172018  -0.572123  -0.980581
          |     0.3911     0.4020     0.4052     0.3268

False Discovery Rate =   0.05
Reject Ho if p = P(Z <= |z|) <= FDR/2 with stopping rule

.
. dunntest iq6, by(ieth) ma(bh) wrap

Warning: by() values are unlabeled, option nolabel implicit


Kruskal-Wallis equality-of-populations rank test

  +------------------------+
  | ieth | Obs | Rank Sum |
  |------+-----+----------|
  |    1 |  39 |  1547.50 |
  |    2 |  12 |   479.50 |
  |    3 |  20 |   666.50 |
  |    4 |   3 |   139.50 |
  |    7 |   2 |    93.00 |
  +------------------------+

chi-squared =     1.918 with 4 d.f.
probability =     0.7508

chi-squared with ties =     3.799 with 4 d.f.
probability =     0.4338


                Dunn's Pairwise Comparison of iq6 by ieth
                           (Benjamini-Hochberg)
Col Mean-|
Row Mean |             1             2             3             4
---------+--------------------------------------------
       2 |  -0.053834
         |     0.5317
         |
       3 |   1.472508   1.157760
         |     0.7044     0.4116
         |
       4 |  -0.725506  -0.645877  -1.356183
         |     0.4681     0.4320     0.4376
         |
       7 |  -0.599554  -0.545866  -1.132205   0.000000
         |     0.3920     0.3657     0.3219     0.5000

False Discovery Rate =   0.05
Reject Ho if p = P(Z <= |z|) <= FDR/2 with stopping rule

.
. dunntest iq7, by(ieth) ma(bh) wrap

Warning: by() values are unlabeled, option nolabel implicit


Kruskal-Wallis equality-of-populations rank test

  +------------------------+
  | ieth | Obs | Rank Sum |
  |------+-----+----------|
  |    1 |  38 |  1459.00 |
  |    2 |  12 |   507.00 |
  |    3 |  20 |   644.00 |
  |    4 |   3 |   144.00 |
  |    7 |   2 |    96.00 |
  +------------------------+

chi-squared =     2.938 with 4 d.f.
probability =     0.5683

chi-squared with ties =     4.907 with 4 d.f.
probability =     0.2970


                Dunn's Pairwise Comparison of iq7 by ieth
```

```
                          (Benjamini-Hochberg)
Col Mean-|
Row Mean |              1              2              3              4
---------+--------------------------------------------
       2 |  -0.690387
         |     0.3500
         |
       3 |   1.329710   1.632067
         |     0.3060     0.5133
         |
       4 |  -0.949754  -0.528220  -1.513248
         |     0.3422     0.3733     0.3255
         |
       7 |  -0.785104  -0.446427  -1.263331   0.000000
         |     0.3603     0.3640     0.2581     0.5000

False Discovery Rate =   0.05
Reject Ho if p = P(Z <= |z|) <= FDR/2 with stopping rule

.
. dunntest iq8, by(ieth) ma(bh) wrap

Warning: by() values are unlabeled, option nolabel implicit


Kruskal-Wallis equality-of-populations rank test

  +------------------------+
  | ieth | Obs | Rank Sum |
  |------+-----+----------|
  |    1 |  39 |  1519.00 |
  |    2 |  12 |   510.00 |
  |    3 |  20 |   673.50 |
  |    4 |   3 |   106.50 |
  |    7 |   2 |   117.00 |
  +------------------------+

chi-squared =     3.060 with 4 d.f.
probability =     0.5478

chi-squared with ties =     3.502 with 4 d.f.
probability =     0.4775


                Dunn's Pairwise Comparison of iq8 by ieth
                          (Benjamini-Hochberg)
Col Mean-|
Row Mean |              1              2              3              4
---------+--------------------------------------------
       2 |  -0.521135
         |     0.3764
         |
       3 |   0.928892   1.170773
         |     0.2941     0.3021
         |
       4 |   0.278839   0.525328  -0.142791
         |     0.4335     0.4281     0.4432
         |
       7 |  -1.306345  -1.014820  -1.621568  -1.220522
         |     0.4786     0.3102     0.5245     0.3704

False Discovery Rate =   0.05
Reject Ho if p = P(Z <= |z|) <= FDR/2 with stopping rule

.
. dunntest iq9, by(ieth) ma(bh) wrap

Warning: by() values are unlabeled, option nolabel implicit


Kruskal-Wallis equality-of-populations rank test

  +------------------------+
  | ieth | Obs | Rank Sum |
  |------+-----+----------|
  |    1 |  39 |  1358.00 |
  |    2 |  12 |   488.50 |
  |    3 |  20 |   821.00 |
  |    4 |   3 |   142.50 |
```

```
  |    7 |   2 |   116.00 |
  +------------------------+

chi-squared =     3.527 with 4 d.f.
probability =     0.4738

chi-squared with ties =     4.191 with 4 d.f.
probability =     0.3808


                Dunn's Pairwise Comparison of iq9 by ieth
                          (Benjamini-Hochberg)
Col Mean-|
Row Mean |             1             2             3             4
---------+--------------------------------------------
       2 |  -0.880360
         |     0.3156
         |
       3 |  -1.118000  -0.046185
         |     0.4393     0.4816
         |
       4 |  -1.044571  -0.519338  -0.514209
         |     0.2962     0.3772     0.3373
         |
       7 |  -1.578074  -1.117498  -1.128123  -0.567738
         |     0.5727     0.3297     0.6482     0.4073

False Discovery Rate =   0.05
Reject Ho if p = P(Z <= |z|) <= FDR/2 with stopping rule

.
. dunntest iq10, by(ieth) ma(bh) wrap

Warning: by() values are unlabeled, option nolabel implicit


Kruskal-Wallis equality-of-populations rank test

  +------------------------+
  | ieth | Obs | Rank Sum |
  |------+-----+----------|
  |    1 |  39 |  1603.50 |
  |    2 |  12 |   415.50 |
  |    3 |  20 |   687.00 |
  |    4 |   3 |   132.00 |
  |    7 |   2 |    88.00 |
  +------------------------+

chi-squared =     1.933 with 4 d.f.
probability =     0.7481

chi-squared with ties =     5.194 with 4 d.f.
probability =     0.2680


                Dunn's Pairwise Comparison of iq10 by ieth
                          (Benjamini-Hochberg)
Col Mean-|
Row Mean |             1             2             3             4
---------+--------------------------------------------
       2 |   1.459385
         |     0.3611
         |
       3 |   1.825894   0.055902
         |     0.3393     0.5308
         |
       4 |  -0.357370  -1.078049  -1.156913
         |     0.5149     0.3513     0.4122
         |
       7 |  -0.295328  -0.911118  -0.965845   0.000000
         |     0.4798     0.3019     0.3341     0.5000

False Discovery Rate =   0.05
Reject Ho if p = P(Z <= |z|) <= FDR/2 with stopping rule

-------------------------------------------------------------------------------------------------------------------------

. dunntest iq1, by(ihwork) ma(bh) wrap
```

```
Warning: by() values are unlabeled, option nolabel implicit


Kruskal-Wallis equality-of-populations rank test

  +--------------------------+
  | ihwork | Obs | Rank Sum |
  |--------+-----+----------|
  |      0 |  16 |   664.00 |
  |      1 |  10 |   263.00 |
  |      2 |  50 |  1999.00 |
  +--------------------------+

chi-squared =     3.572 with 2 d.f.
probability =     0.1676

chi-squared with ties =    16.371 with 2 d.f.
probability =     0.0003


                Dunn's Pairwise Comparison of iq1 by ihwork
                            (Benjamini-Hochberg)
Col Mean-|
Row Mean |              0             1
---------+----------------------
       1 |   3.655494
         |     0.0002
         |
       2 |   0.513034  -3.828465
         |     0.3040     0.0002

False Discovery Rate =   0.05
Reject Ho if p = P(Z <= |z|) <= FDR/2 with stopping rule

.
. dunntest iq2, by(ihwork) ma(bh) wrap

Warning: by() values are unlabeled, option nolabel implicit


Kruskal-Wallis equality-of-populations rank test

  +--------------------------+
  | ihwork | Obs | Rank Sum |
  |--------+-----+----------|
  |      0 |  16 |   634.50 |
  |      1 |   9 |   228.00 |
  |      2 |  50 |  1987.50 |
  +--------------------------+

chi-squared =     3.455 with 2 d.f.
probability =     0.1777

chi-squared with ties =    12.083 with 2 d.f.
probability =     0.0024


                Dunn's Pairwise Comparison of iq2 by ihwork
                            (Benjamini-Hochberg)
Col Mean-|
Row Mean |              0             1
---------+----------------------
       1 |   2.949684
         |     0.0024
         |
       2 |  -0.028008  -3.416473
         |     0.4888     0.0010

False Discovery Rate =   0.05
Reject Ho if p = P(Z <= |z|) <= FDR/2 with stopping rule

.
. dunntest iq3, by(ihwork) ma(bh) wrap

Warning: by() values are unlabeled, option nolabel implicit


Kruskal-Wallis equality-of-populations rank test
```

```
  +--------------------------+
  | ihwork | Obs | Rank Sum |
  |--------+-----+----------|
  |      0 |  16 |   644.00 |
  |      1 |  10 |   298.00 |
  |      2 |  50 |  1984.00 |
  +--------------------------+

chi-squared =     1.795 with 2 d.f.
probability =     0.4075

chi-squared with ties =     4.220 with 2 d.f.
probability =     0.1213


                Dunn's Pairwise Comparison of iq3 by ihwork
                            (Benjamini-Hochberg)
Col Mean-|
Row Mean |             0             1
---------+----------------------
       1 |   1.799706
         |     0.0539
         |
       2 |   0.137772  -1.980059
         |     0.4452     0.0715

False Discovery Rate =   0.05
Reject Ho if p = P(Z <= |z|) <= FDR/2 with stopping rule

.
. dunntest iq4, by(ihwork) ma(bh) wrap

Warning: by() values are unlabeled, option nolabel implicit


Kruskal-Wallis equality-of-populations rank test

  +--------------------------+
  | ihwork | Obs | Rank Sum |
  |--------+-----+----------|
  |      0 |  17 |   685.50 |
  |      1 |  10 |   300.50 |
  |      2 |  50 |  2017.00 |
  +--------------------------+

chi-squared =     1.839 with 2 d.f.
probability =     0.3987

chi-squared with ties =     3.042 with 2 d.f.
probability =     0.2185


                Dunn's Pairwise Comparison of iq4 by ihwork
                            (Benjamini-Hochberg)
Col Mean-|
Row Mean |             0             1
---------+----------------------
       1 |   1.481917
         |     0.1038
         |
       2 |  -0.003372  -1.707601
         |     0.4987     0.1316

False Discovery Rate =   0.05
Reject Ho if p = P(Z <= |z|) <= FDR/2 with stopping rule

.
. dunntest iq5, by(ihwork) ma(bh) wrap

Warning: by() values are unlabeled, option nolabel implicit


Kruskal-Wallis equality-of-populations rank test

  +--------------------------+
  | ihwork | Obs | Rank Sum |
  |--------+-----+----------|
  |      0 |  16 |   712.00 |
  |      1 |  10 |   220.00 |
```

```
  |      2 |  50 |  1994.00 |
  +--------------------------+

chi-squared =     6.959 with 2 d.f.
probability =     0.0308

chi-squared with ties =    17.404 with 2 d.f.
probability =     0.0002


                Dunn's Pairwise Comparison of iq5 by ihwork
                            (Benjamini-Hochberg)
Col Mean-|
Row Mean |             0             1
---------+----------------------
       1 |   3.997040
         |     0.0001
         |
       2 |   1.151855  -3.696235
         |     0.1247     0.0002

False Discovery Rate =   0.05
Reject Ho if p = P(Z <= |z|) <= FDR/2 with stopping rule

.
. dunntest iq6, by(ihwork) ma(bh) wrap

Warning: by() values are unlabeled, option nolabel implicit


Kruskal-Wallis equality-of-populations rank test

  +--------------------------+
  | ihwork | Obs | Rank Sum |
  |--------+-----+----------|
  |      0 |  16 |   559.00 |
  |      1 |  10 |   308.00 |
  |      2 |  50 |  2059.00 |
  +--------------------------+

chi-squared =     2.369 with 2 d.f.
probability =     0.3060

chi-squared with ties =     4.692 with 2 d.f.
probability =     0.0958


                Dunn's Pairwise Comparison of iq6 by ihwork
                            (Benjamini-Hochberg)
Col Mean-|
Row Mean |             0             1
---------+----------------------
       1 |   0.654135
         |     0.2565
         |
       2 |  -1.385120  -1.909689
         |     0.1245     0.0843

False Discovery Rate =   0.05
Reject Ho if p = P(Z <= |z|) <= FDR/2 with stopping rule

.
. dunntest iq7, by(ihwork) ma(bh) wrap

Warning: by() values are unlabeled, option nolabel implicit


Kruskal-Wallis equality-of-populations rank test

  +--------------------------+
  | ihwork | Obs | Rank Sum |
  |--------+-----+----------|
  |      0 |  16 |   644.50 |
  |      1 |   9 |   353.00 |
  |      2 |  50 |  1852.50 |
  +--------------------------+

chi-squared =     0.299 with 2 d.f.
probability =     0.8613
```

```
chi-squared with ties =     0.499 with 2 d.f.
probability =     0.7793


                Dunn's Pairwise Comparison of iq7 by ihwork
                            (Benjamini-Hochberg)
Col Mean-|
Row Mean |             0             1
---------+----------------------
       1 |   0.150716
         |     0.4401
         |
       2 |   0.667091   0.355734
         |     0.7571     0.5415

False Discovery Rate =   0.05
Reject Ho if p = P(Z <= |z|) <= FDR/2 with stopping rule

.
. dunntest iq8, by(ihwork) ma(bh) wrap

Warning: by() values are unlabeled, option nolabel implicit


Kruskal-Wallis equality-of-populations rank test

  +--------------------------+
  | ihwork | Obs | Rank Sum |
  |--------+-----+----------|
  |      0 |  16 |   521.00 |
  |      1 |  10 |   393.00 |
  |      2 |  50 |  2012.00 |
  +--------------------------+

chi-squared =     1.480 with 2 d.f.
probability =     0.4771

chi-squared with ties =     1.694 with 2 d.f.
probability =     0.4287


                Dunn's Pairwise Comparison of iq8 by ihwork
                            (Benjamini-Hochberg)
Col Mean-|
Row Mean |             0             1
---------+----------------------
       1 |  -0.809654
         |     0.3136
         |
       2 |  -1.294852  -0.131451
         |     0.2931     0.4477

False Discovery Rate =   0.05
Reject Ho if p = P(Z <= |z|) <= FDR/2 with stopping rule

.
. dunntest iq9, by(ihwork) ma(bh) wrap

Warning: by() values are unlabeled, option nolabel implicit


Kruskal-Wallis equality-of-populations rank test

  +--------------------------+
  | ihwork | Obs | Rank Sum |
  |--------+-----+----------|
  |      0 |  16 |   639.00 |
  |      1 |  10 |   379.00 |
  |      2 |  50 |  1908.00 |
  +--------------------------+

chi-squared =     0.087 with 2 d.f.
probability =     0.9574

chi-squared with ties =     0.103 with 2 d.f.
probability =     0.9496
```

```
               Dunn's Pairwise Comparison of iq9 by ihwork
                           (Benjamini-Hochberg)
Col Mean-|
Row Mean |             0             1
---------+----------------------
       1 |   0.249482
         |     0.6022
         |
       2 |   0.305457  -0.037047
         |     1.0000     0.4852

False Discovery Rate =   0.05
Reject Ho if p = P(Z <= |z|) <= FDR/2 with stopping rule

.
. dunntest iq10, by(ihwork) ma(bh) wrap

Warning: by() values are unlabeled, option nolabel implicit


Kruskal-Wallis equality-of-populations rank test

  +--------------------------+
  | ihwork | Obs | Rank Sum |
  |--------+-----+----------|
  |      0 |  16 |   666.50 |
  |      1 |  10 |   322.00 |
  |      2 |  50 |  1937.50 |
  +--------------------------+

chi-squared =     1.147 with 2 d.f.
probability =     0.5635

chi-squared with ties =     3.082 with 2 d.f.
probability =     0.2141


               Dunn's Pairwise Comparison of iq10 by ihwork
                           (Benjamini-Hochberg)
Col Mean-|
Row Mean |             0             1
---------+----------------------
       1 |   1.741221
         |     0.1225
         |
       2 |   0.751048  -1.403500
         |     0.2263     0.1204

False Discovery Rate =   0.05
Reject Ho if p = P(Z <= |z|) <= FDR/2 with stopping rule

.
```