Nurse-Student Statistics Report

Summary

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

  Answer – NO, there are no significant differences among age groups in their responses to any of the 10 questions.

- 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 between the genders in their responses to 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 – NO, there are no significant differences among the education levels in their responses to any of the 10 questions.

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

  Answer – YES, for questions 1, 5, and 6,

```
. dunntest iq1, by(ieth) ma(bh) wrap
K-Wallis probability =     0.0038

                Dunn's Pairwise Comparison of iq1 by ieth
                           (Benjamini-Hochberg)
Col Mean-|
Row Mean |       1          2          3          4
---------+--------------------------------------------
       2 |   3.061273
         |     0.0110
         |
       3 |  -0.085671  -1.871072
         |     0.5176     0.0613
         |
       4 |  -0.166771  -2.646096   0.000000
         |     0.5422     0.0204     0.5000
         |
       7 |   2.553091  -0.755791   1.387066   2.097047
         |     0.0178     0.3213     0.1379     0.0450

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

. dunntest iq5, by(ieth) ma(bh) wrap
K-Wallis probability =     0.0001
Dunn's Pairwise Comparison of iq5 by ieth
                           (Benjamini-Hochberg)
Col Mean-|
Row Mean |      1          2          3          4
---------+--------------------------------------------
       2 |   1.713447
         |     0.0866
         |
       3 |   2.264929   0.858920
         |     0.0294     0.2440
         |
       4 |  -0.476526  -1.710491  -2.265841
         |     0.3521     0.0726     0.0391
         |
       7 |   4.334614   1.465931   0.247897   3.691637
```

```
         |     0.0001     0.1019     0.4021     0.0006

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

. dunntest iq6, by(ieth) ma(bh) wrap
Kwallis probability =     0.0245

                 Dunn's Pairwise Comparison of iq6 by ieth
                           (Benjamini-Hochberg)
Col Mean-|
Row Mean |       1          2          3          4
---------+--------------------------------------------
       2 |   0.459251
         |     0.3589
         |
       3 |  -0.624727  -0.785168
         |     0.3326     0.3088
         |
       4 |  -1.215526  -1.110396   0.000000
         |     0.2242     0.2224     0.5000
         |
       7 |   2.934536   1.546239   2.055206   3.107180
         |     0.0084     0.1526     0.0664     0.0094

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 if respondent is or was a hospital worker?

  Answer – NO, there are no significant differences among groups, based upon hospital work experience, in their responses to any of the 10 questions.

Statistics

- 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

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


Kruskal-Wallis equality-of-populations rank test

  +------------------------+
  | iage | Obs | Rank Sum |
  |------+-----+----------|
  |    3 |   2 |    67.00 |
  |    4 |  12 |   402.00 |
  |    5 |  14 |   405.50 |
  |    6 |  25 |   806.50 |
  |    7 |  10 |   335.00 |
  +------------------------+

chi-squared =     0.550 with 4 d.f.
probability =     0.9685

chi-squared with ties =     4.037 with 4 d.f.
probability =     0.4010


                 Dunn's Pairwise Comparison of iq1 by iage
                           (Benjamini-Hochberg)
Col Mean-|
Row Mean |             3             4             5             6
---------+--------------------------------------------------------
       4 |   0.000000
```

```
          |     0.6250
          |
        5 |   0.887093   1.704583
          |     0.4688     0.4414
          |
        6 |   0.249476   0.522019  -1.459674
          |     0.5736     0.6017     0.2406
          |
        7 |   0.000000   0.000000  -1.619603  -0.489962
          |     0.5556     0.5000     0.2633     0.5201

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

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

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


Kruskal-Wallis equality-of-populations rank test

  +-----------------------+
  | iage | Obs | Rank Sum |
  |------+-----+----------|
  |    3 |   2 |    57.00 |
  |    4 |  12 |   320.50 |
  |    5 |  14 |   396.50 |
  |    6 |  25 |   857.50 |
  |    7 |  10 |   384.50 |
  +-----------------------+

chi-squared =     3.269 with 4 d.f.
probability =     0.5139

chi-squared with ties =     4.720 with 4 d.f.
probability =     0.3173


                Dunn's Pairwise Comparison of iq2 by iage
                           (Benjamini-Hochberg)
Col Mean-|
Row Mean |              3             4             5             6
---------+--------------------------------------------------------
       4 |   0.153782
         |     0.4877
         |
       5 |   0.015486  -0.268804
         |     0.4938     0.4926
         |
       6 |  -0.517415  -1.417114  -1.174105
         |     0.4320     0.2607     0.3004
         |
       7 |  -0.842084  -1.797699  -1.603668  -0.727096
         |     0.3997     0.3611     0.2720     0.3893

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

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

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


Kruskal-Wallis equality-of-populations rank test

  +-----------------------+
  | iage | Obs | Rank Sum |
  |------+-----+----------|
  |    3 |   2 |    20.00 |
  |    4 |  12 |   428.00 |
  |    5 |  14 |   405.50 |
  |    6 |  25 |   806.00 |
  |    7 |  10 |   356.50 |
  +-----------------------+

chi-squared =     4.146 with 4 d.f.
probability =     0.3866
```

```
chi-squared with ties =     8.316 with 4 d.f.
probability =     0.0807


                Dunn's Pairwise Comparison of iq3 by iage
                           (Benjamini-Hochberg)
Col Mean-|
Row Mean |             3             4             5             6
---------+--------------------------------------------
       4 |  -2.596467
         |     0.0471
         |
       5 |  -1.938328   1.316342
         |     0.0657     0.1881
         |
       6 |  -2.338350   0.753882  -0.758192
         |     0.0323     0.2818     0.3202
         |
       7 |  -2.558488   0.003007  -1.247607  -0.704145
         |     0.0263     0.4988     0.1768     0.2674

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

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

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


Kruskal-Wallis equality-of-populations rank test

  +------------------------+
  | iage | Obs | Rank Sum |
  |------+-----+----------|
  |    3 |   2 |    52.50 |
  |    4 |  12 |   305.00 |
  |    5 |  14 |   419.50 |
  |    6 |  25 |   854.50 |
  |    7 |  10 |   384.50 |
  +------------------------+

chi-squared =     3.509 with 4 d.f.
probability =     0.4765

chi-squared with ties =     5.484 with 4 d.f.
probability =     0.2411


                Dunn's Pairwise Comparison of iq4 by iage
                           (Benjamini-Hochberg)
Col Mean-|
Row Mean |             3             4             5             6
---------+--------------------------------------------
       4 |   0.074414
         |     0.4703
         |
       5 |  -0.335113  -0.788405
         |     0.4097     0.3587
         |
       6 |  -0.735992  -1.701869  -0.861331
         |     0.2886     0.2219     0.3891
         |
       7 |  -1.074190  -2.076021  -1.397796  -0.778325
         |     0.3534     0.1895     0.2703     0.3117

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

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

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


Kruskal-Wallis equality-of-populations rank test

  +------------------------+
```

```
  | iage | Obs | Rank Sum |
  |------+-----+----------|
  |    3 |   2 |    39.50 |
  |    4 |  12 |   326.00 |
  |    5 |  14 |   419.50 |
  |    6 |  25 |   861.00 |
  |    7 |  10 |   370.00 |
  +-----------------------+

chi-squared =     3.087 with 4 d.f.
probability =     0.5433

chi-squared with ties =     7.650 with 4 d.f.
probability =     0.1053


                Dunn's Pairwise Comparison of iq5 by iage
                           (Benjamini-Hochberg)
Col Mean-|
Row Mean |              3             4             5             6
---------+--------------------------------------------------------
       4 |  -0.833898
         |     0.2527
         |
       5 |  -1.160351  -0.610687
         |     0.2049     0.3008
         |
       6 |  -1.716672  -1.778507  -1.151401
         |     0.1075     0.1255     0.1783
         |
       7 |  -1.912387  -1.972161  -1.459248  -0.587541
         |     0.1396     0.2430     0.1445     0.2784

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

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

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


Kruskal-Wallis equality-of-populations rank test

  +-----------------------+
  | iage | Obs | Rank Sum |
  |------+-----+----------|
  |    3 |   2 |    83.00 |
  |    4 |  12 |   402.50 |
  |    5 |  14 |   380.00 |
  |    6 |  25 |   742.50 |
  |    7 |   9 |   345.00 |
  +-----------------------+

chi-squared =     3.125 with 4 d.f.
probability =     0.5372

chi-squared with ties =     4.632 with 4 d.f.
probability =     0.3272


                Dunn's Pairwise Comparison of iq6 by iage
                           (Benjamini-Hochberg)
Col Mean-|
Row Mean |              3             4             5             6
---------+--------------------------------------------------------
       4 |   0.703165
         |     0.3012
         |
       5 |   1.281683   1.097642
         |     0.3333     0.3405
         |
       6 |   1.083624   0.738198  -0.516952
         |     0.2785     0.3837     0.3362
         |
       7 |   0.273361  -0.733301  -1.767517  -1.498732
         |     0.3923     0.3310     0.3857     0.3349

False Discovery Rate =   0.05
```

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

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

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


Kruskal-Wallis equality-of-populations rank test

  +------------------------+
  | iage | Obs | Rank Sum |
  |------+-----+----------|
  |    3 |   2 |    18.00 |
  |    4 |  12 |   342.00 |
  |    5 |  14 |   476.00 |
  |    6 |  25 |   827.00 |
  |    7 |  10 |   353.00 |
  +------------------------+

chi-squared =     4.164 with 4 d.f.
probability =     0.3843

chi-squared with ties =     5.665 with 4 d.f.
probability =     0.2256


                Dunn's Pairwise Comparison of iq7 by iage
                           (Benjamini-Hochberg)
Col Mean-|
Row Mean |              3              4              5              6
---------+--------------------------------------------
       4 |  -1.624636
         |     0.1303
         |
       5 |  -2.104451  -0.889632
         |     0.0883     0.3114
         |
       6 |  -2.085160  -0.829861   0.175376
         |     0.0618     0.2904     0.4304
         |
       7 |  -2.160529  -1.010574  -0.199794  -0.377545
         |     0.1537     0.3122     0.4676     0.4411

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

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

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


Kruskal-Wallis equality-of-populations rank test

  +------------------------+
  | iage | Obs | Rank Sum |
  |------+-----+----------|
  |    3 |   2 |    62.00 |
  |    4 |  12 |   319.50 |
  |    5 |  14 |   441.00 |
  |    6 |  25 |   806.50 |
  |    7 |  10 |   387.00 |
  +------------------------+

chi-squared =     2.389 with 4 d.f.
probability =     0.6646

chi-squared with ties =     2.751 with 4 d.f.
probability =     0.6003


                Dunn's Pairwise Comparison of iq8 by iage
                           (Benjamini-Hochberg)
Col Mean-|
Row Mean |              3              4              5              6
---------+--------------------------------------------
       4 |   0.335334
         |     0.5267
```

```
         |
       5 |  -0.038721  -0.725439
         |     0.4846     0.4682
         |
       6 |  -0.100377  -0.939317  -0.133283
         |     0.5111     0.4345     0.5587
         |
       7 |  -0.581934  -1.650916  -1.018004  -1.007582
         |     0.4672     0.4938     0.7717     0.5228

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

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

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


Kruskal-Wallis equality-of-populations rank test

  +------------------------+
  | iage | Obs | Rank Sum |
  |------+-----+----------|
  |    3 |   2 |    58.00 |
  |    4 |  12 |   289.50 |
  |    5 |  14 |   451.00 |
  |    6 |  25 |   843.50 |
  |    7 |  10 |   374.00 |
  +------------------------+

chi-squared =     3.363 with 4 d.f.
probability =     0.4989

chi-squared with ties =     4.008 with 4 d.f.
probability =     0.4049


                Dunn's Pairwise Comparison of iq9 by iage
                           (Benjamini-Hochberg)
Col Mean-|
Row Mean |              3             4             5             6
---------+--------------------------------------------
       4 |   0.380111
         |     0.4399
         |
       5 |  -0.253220  -1.224538
         |     0.4000     0.3679
         |
       6 |  -0.384128  -1.630434  -0.272188
         |     0.5006     0.2575     0.4364
         |
       7 |  -0.645800  -1.846324  -0.745866  -0.582520
         |     0.5184     0.3242     0.5697     0.4668

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

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

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


Kruskal-Wallis equality-of-populations rank test

  +------------------------+
  | iage | Obs | Rank Sum |
  |------+-----+----------|
  |    3 |   2 |    70.00 |
  |    4 |  12 |   389.00 |
  |    5 |  14 |   394.00 |
  |    6 |  25 |   813.00 |
  |    7 |  10 |   350.00 |
  +------------------------+

chi-squared =     0.968 with 4 d.f.
probability =     0.9147
```

```
chi-squared with ties =     3.737 with 4 d.f.
probability =     0.4428


                 Dunn's Pairwise Comparison of iq10 by iage
                            (Benjamini-Hochberg)
Col Mean-|
Row Mean |             3             4             5             6
---------+--------------------------------------------
       4 |   0.362629
         |     0.5121
         |
       5 |   0.972529   1.164725
         |     0.4135     0.4069
         |
       6 |   0.361822  -0.031546  -1.405830
         |     0.4484     0.5416     0.3994
         |
       7 |   0.000000  -0.646845  -1.775587  -0.710605
         |     0.5000     0.4314     0.3790     0.4773

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?

```
. dunntest iq1, by(igender)

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


Kruskal-Wallis equality-of-populations rank test

  +---------------------------+
  | igender | Obs | Rank Sum |
  |---------+-----+----------|
  |       1 |  19 |   636.50 |
  |       2 |  44 |  1379.50 |
  +---------------------------+

chi-squared =     0.182 with 1 d.f.
probability =     0.6695

chi-squared with ties =     1.338 with 1 d.f.
probability =     0.2474


                Dunn's Pairwise Comparison of iq1 by igender
                              (No adjustment)
Col Mean-|
Row Mean |             1
---------+-----------
       2 |   1.156689
         |     0.1237

alpha =   0.05
Reject Ho if p = P(Z <= |z|) <= alpha/2

.
. dunntest iq2, by(igender)

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


Kruskal-Wallis equality-of-populations rank test

  +---------------------------+
  | igender | Obs | Rank Sum |
  |---------+-----+----------|
  |       1 |  19 |   565.00 |
  |       2 |  44 |  1451.00 |
  +---------------------------+

chi-squared =     0.415 with 1 d.f.
probability =     0.5196
```

```
chi-squared with ties =     0.599 with 1 d.f.
probability =     0.4390


                Dunn's Pairwise Comparison of iq2 by igender
                              (No adjustment)
Col Mean-|
Row Mean |             1
---------+-----------
       2 |  -0.773826
         |     0.2195

alpha =   0.05
Reject Ho if p = P(Z <= |z|) <= alpha/2

.
. dunntest iq3, by(igender)

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


Kruskal-Wallis equality-of-populations rank test

  +---------------------------+
  | igender | Obs | Rank Sum |
  |---------+-----+----------|
  |       1 |  19 |   629.00 |
  |       2 |  44 |  1387.00 |
  +---------------------------+

chi-squared =     0.099 with 1 d.f.
probability =     0.7531

chi-squared with ties =     0.198 with 1 d.f.
probability =     0.6560


                Dunn's Pairwise Comparison of iq3 by igender
                              (No adjustment)
Col Mean-|
Row Mean |             1
---------+-----------
       2 |   0.445408
         |     0.3280

alpha =   0.05
Reject Ho if p = P(Z <= |z|) <= alpha/2

.
. dunntest iq4, by(igender)

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


Kruskal-Wallis equality-of-populations rank test

  +---------------------------+
  | igender | Obs | Rank Sum |
  |---------+-----+----------|
  |       1 |  19 |   534.50 |
  |       2 |  44 |  1481.50 |
  +---------------------------+

chi-squared =     1.212 with 1 d.f.
probability =     0.2710

chi-squared with ties =     1.894 with 1 d.f.
probability =     0.1688


                Dunn's Pairwise Comparison of iq4 by igender
                              (No adjustment)
Col Mean-|
Row Mean |             1
---------+-----------
       2 |  -1.376105
         |     0.0844

alpha =   0.05
```

```
Reject Ho if p = P(Z <= |z|) <= alpha/2

.
. dunntest iq5, by(igender)

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


Kruskal-Wallis equality-of-populations rank test

  +---------------------------+
  | igender | Obs | Rank Sum |
  |---------+-----+----------|
  |       1 |  19 |   614.50 |
  |       2 |  44 |  1401.50 |
  +---------------------------+

chi-squared =     0.009 with 1 d.f.
probability =     0.9225

chi-squared with ties =     0.023 with 1 d.f.
probability =     0.8782


                Dunn's Pairwise Comparison of iq5 by igender
                              (No adjustment)
Col Mean-|
Row Mean |             1
---------+-----------
       2 |   0.153230
         |     0.4391

alpha =   0.05
Reject Ho if p = P(Z <= |z|) <= alpha/2

.
. dunntest iq6, by(igender)

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


Kruskal-Wallis equality-of-populations rank test

  +---------------------------+
  | igender | Obs | Rank Sum |
  |---------+-----+----------|
  |       1 |  19 |   587.50 |
  |       2 |  43 |  1365.50 |
  +---------------------------+

chi-squared =     0.028 with 1 d.f.
probability =     0.8666

chi-squared with ties =     0.042 with 1 d.f.
probability =     0.8380


                Dunn's Pairwise Comparison of iq6 by igender
                              (No adjustment)
Col Mean-|
Row Mean |             1
---------+-----------
       2 |  -0.204490
         |     0.4190

alpha =   0.05
Reject Ho if p = P(Z <= |z|) <= alpha/2

.
. dunntest iq7, by(igender)

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


Kruskal-Wallis equality-of-populations rank test

  +---------------------------+
  | igender | Obs | Rank Sum |
  |---------+-----+----------|
```

```
  |       1 |  19 |   551.00 |
  |       2 |  44 |  1465.00 |
  +--------------------------+

chi-squared =     0.729 with 1 d.f.
probability =     0.3933

chi-squared with ties =     0.991 with 1 d.f.
probability =     0.3194


               Dunn's Pairwise Comparison of iq7 by igender
                             (No adjustment)
Col Mean-|
Row Mean |             1
---------+-----------
       2 |  -0.995685
         |     0.1597

alpha =   0.05
Reject Ho if p = P(Z <= |z|) <= alpha/2

.
. dunntest iq8, by(igender)

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


Kruskal-Wallis equality-of-populations rank test

  +--------------------------+
  | igender | Obs | Rank Sum |
  |---------+-----+----------|
  |       1 |  19 |   561.00 |
  |       2 |  44 |  1455.00 |
  +--------------------------+

chi-squared =     0.495 with 1 d.f.
probability =     0.4815

chi-squared with ties =     0.570 with 1 d.f.
probability =     0.4501


               Dunn's Pairwise Comparison of iq8 by igender
                             (No adjustment)
Col Mean-|
Row Mean |             1
---------+-----------
       2 |  -0.755307
         |     0.2250

alpha =   0.05
Reject Ho if p = P(Z <= |z|) <= alpha/2

.
. dunntest iq9, by(igender)

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


Kruskal-Wallis equality-of-populations rank test

  +--------------------------+
  | igender | Obs | Rank Sum |
  |---------+-----+----------|
  |       1 |  19 |   491.00 |
  |       2 |  44 |  1525.00 |
  +--------------------------+

chi-squared =     3.070 with 1 d.f.
probability =     0.0797

chi-squared with ties =     3.658 with 1 d.f.
probability =     0.0558


               Dunn's Pairwise Comparison of iq9 by igender
                             (No adjustment)
```

```
Col Mean-|
Row Mean |             1
---------+-----------
       2 |  -1.912701
         |     0.0279

alpha =   0.05
Reject Ho if p = P(Z <= |z|) <= alpha/2

.
. dunntest iq10, by(igender)

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


Kruskal-Wallis equality-of-populations rank test

  +--------------------------+
  | igender | Obs | Rank Sum |
  |---------+-----+----------|
  |       1 |  19 |   603.00 |
  |       2 |  44 |  1413.00 |
  +--------------------------+

chi-squared =     0.006 with 1 d.f.
probability =     0.9403

chi-squared with ties =     0.022 with 1 d.f.
probability =     0.8830


               Dunn's Pairwise Comparison of iq10 by igender
                              (No adjustment)
Col Mean-|
Row Mean |             1
---------+-----------
       2 |  -0.147156
         |     0.4415

alpha =   0.05
Reject Ho if p = P(Z <= |z|) <= alpha/2
```

- 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 |   1 |    32.50 |
  |   2 |   3 |    97.50 |
  |   3 |  57 |  1761.00 |
  +----------------------+

chi-squared =     0.031 with 2 d.f.
probability =     0.9848

chi-squared with ties =     0.218 with 2 d.f.
probability =     0.8969


                 Dunn's Pairwise Comparison of iq1 by ied
                           (Benjamini-Hochberg)
Col Mean-|
Row Mean |             1             2
---------+----------------------
       2 |   0.000000
         |     0.5000
         |
       3 |   0.239229   0.407392
         |     0.6082     1.0000
```

```
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 |   1 |    40.50 |
  |   2 |   3 |   121.50 |
  |   3 |  57 |  1729.00 |
  +----------------------+

chi-squared =     1.226 with 2 d.f.
probability =     0.5418

chi-squared with ties =     1.853 with 2 d.f.
probability =     0.3959


                  Dunn's Pairwise Comparison of iq2 by ied
                            (Benjamini-Hochberg)
Col Mean-|
Row Mean |             1             2
---------+----------------------
       2 |   0.000000
         |     0.5000
         |
       3 |   0.698004   1.188657
         |     0.3639     0.3519

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 |   1 |    36.50 |
  |   2 |   3 |   109.50 |
  |   3 |  57 |  1745.00 |
  +----------------------+

chi-squared =     0.411 with 2 d.f.
probability =     0.8143

chi-squared with ties =     0.917 with 2 d.f.
probability =     0.6323


                  Dunn's Pairwise Comparison of iq3 by ied
                            (Benjamini-Hochberg)
Col Mean-|
Row Mean |             1             2
---------+----------------------
       2 |   0.000000
         |     0.5000
         |
       3 |   0.490961   0.836076
         |     0.4676     0.6047

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 |   1 |    40.00 |
  |   2 |   3 |   120.00 |
  |   3 |  57 |  1731.00 |
  +----------------------+

chi-squared =     1.100 with 2 d.f.
probability =     0.5769

chi-squared with ties =     1.741 with 2 d.f.
probability =     0.4187


                  Dunn's Pairwise Comparison of iq4 by ied
                            (Benjamini-Hochberg)
Col Mean-|
Row Mean |             1             2
---------+----------------------
       2 |   0.000000
         |     0.5000
         |
       3 |   0.676626   1.152253
         |     0.3740     0.3738

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 |   1 |    35.50 |
  |   2 |   3 |    73.50 |
  |   3 |  57 |  1782.00 |
  +----------------------+

chi-squared =     0.479 with 2 d.f.
probability =     0.7870

chi-squared with ties =     1.261 with 2 d.f.
probability =     0.5323


                  Dunn's Pairwise Comparison of iq5 by ied
                            (Benjamini-Hochberg)
Col Mean-|
Row Mean |             1             2
---------+----------------------
       2 |   0.870715
         |     0.2879
         |
       3 |   0.383900  -1.043578
         |     0.3505     0.4450

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 |   1 |    40.50 |
  |   2 |   3 |    94.00 |
  |   3 |  56 |  1695.50 |
  +----------------------+

chi-squared =     0.344 with 2 d.f.
probability =     0.8420

chi-squared with ties =     0.500 with 2 d.f.
probability =     0.7788


                  Dunn's Pairwise Comparison of iq6 by ied
                            (Benjamini-Hochberg)
Col Mean-|
Row Mean |             1             2
---------+----------------------
       2 |   0.548145
         |     0.4377
         |
       3 |   0.699677   0.123104
         |     0.7262     0.4510

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 |   1 |    42.50 |
  |   2 |   3 |    99.50 |
  |   3 |  57 |  1749.00 |
  +----------------------+

chi-squared =     0.482 with 2 d.f.
probability =     0.7857

chi-squared with ties =     0.659 with 2 d.f.
probability =     0.7194


                  Dunn's Pairwise Comparison of iq7 by ied
                            (Benjamini-Hochberg)
Col Mean-|
Row Mean |             1             2
---------+----------------------
       2 |   0.532085
         |     0.4460
         |
       3 |   0.771080   0.275878
         |     0.6610     0.3913

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 |   1 |    47.00 |
  |   2 |   3 |   120.50 |
  |   3 |  57 |  1723.50 |
  +----------------------+

chi-squared =     1.717 with 2 d.f.
probability =     0.4237

chi-squared with ties =     1.981 with 2 d.f.
probability =     0.3713


                  Dunn's Pairwise Comparison of iq8 by ied
                            (Benjamini-Hochberg)
Col Mean-|
Row Mean |             1             2
---------+----------------------
       2 |   0.358033
         |     0.3602
         |
       3 |   1.005400   1.014200
         |     0.2360     0.4657

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 |   1 |    45.50 |
  |   2 |   3 |   136.50 |
  |   3 |  57 |  1709.00 |
  +----------------------+

chi-squared =     2.856 with 2 d.f.
probability =     0.2398

chi-squared with ties =     3.409 with 2 d.f.
probability =     0.1819


                  Dunn's Pairwise Comparison of iq9 by ied
                            (Benjamini-Hochberg)
Col Mean-|
Row Mean |             1             2
---------+----------------------
       2 |   0.000000
         |     0.5000
         |
       3 |   0.946695   1.612164
         |     0.2578     0.1604

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 |   1 |    33.50 |
  |   2 |   3 |   100.50 |
  |   3 |  57 |  1757.00 |
  +----------------------+
```

```
chi-squared =     0.085 with 2 d.f.
probability =     0.9584

chi-squared with ties =     0.375 with 2 d.f.
probability =     0.8288


                Dunn's Pairwise Comparison of iq10 by ied
                           (Benjamini-Hochberg)
Col Mean-|
Row Mean |             1             2
---------+----------------------
       2 |   0.000000
         |     0.5000
         |
       3 |   0.314214   0.535088
         |     0.5650     0.8889

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 |  53 |  1744.50 |
  |    2 |   2 |    36.00 |
  |    3 |   1 |    33.50 |
  |    4 |   4 |   134.00 |
  |    7 |   3 |    68.00 |
  +------------------------+

chi-squared =     2.110 with 4 d.f.
probability =     0.7155

chi-squared with ties =    15.496 with 4 d.f.
probability =     0.0038


                Dunn's Pairwise Comparison of iq1 by ieth
                           (Benjamini-Hochberg)
Col Mean-|
Row Mean |             1             2             3             4
---------+--------------------------------------------
       2 |   3.061273
         |     0.0110
         |
       3 |  -0.085671  -1.871072
         |     0.5176     0.0613
         |
       4 |  -0.166771  -2.646096   0.000000
         |     0.5422     0.0204     0.5000
         |
       7 |   2.553091  -0.755791   1.387066   2.097047
         |     0.0178     0.3213     0.1379     0.0450

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 |  53 |  1798.50 |
  |    2 |   2 |    48.00 |
  |    3 |   1 |     2.00 |
  |    4 |   4 |    77.00 |
  |    7 |   3 |    90.50 |
  +-----------------------+

chi-squared =     5.615 with 4 d.f.
probability =     0.2298

chi-squared with ties =     8.107 with 4 d.f.
probability =     0.0877


                Dunn's Pairwise Comparison of iq2 by ieth
                           (Benjamini-Hochberg)
Col Mean-|
Row Mean |             1             2             3             4
---------+--------------------------------------------
       2 |   0.904070
         |     0.2614
         |
       3 |   2.073966   1.177565
         |     0.1904     0.2987
         |
       4 |   1.856443   0.359560  -1.011444
         |     0.1585     0.3596     0.3118
         |
       7 |   0.416143  -0.442842  -1.599094  -0.937000
         |     0.3763     0.4112     0.1830     0.2906

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 |  53 |  1761.50 |
  |    2 |   2 |    14.50 |
  |    3 |   1 |    38.50 |
  |    4 |   4 |   120.00 |
  |    7 |   3 |    81.50 |
  +-----------------------+

chi-squared =     4.269 with 4 d.f.
probability =     0.3708

chi-squared with ties =     8.563 with 4 d.f.
probability =     0.0730


                Dunn's Pairwise Comparison of iq3 by ieth
                           (Benjamini-Hochberg)
Col Mean-|
Row Mean |             1             2             3             4
---------+--------------------------------------------
       2 |   2.787277
         |     0.0266
         |
       3 |  -0.402941  -1.971406
         |     0.3817     0.0811
         |
       4 |   0.482159  -2.029656   0.587402
         |     0.3936     0.1060     0.3978
         |
       7 |   0.790144  -1.685695   0.758333   0.286623
         |     0.4294     0.1148     0.3735     0.3872

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 |  53 |  1803.00 |
  |    2 |   2 |    22.00 |
  |    3 |   1 |    41.50 |
  |    4 |   4 |    95.00 |
  |    7 |   3 |    54.50 |
  +-----------------------+

chi-squared =     6.055 with 4 d.f.
probability =     0.1951

chi-squared with ties =     9.464 with 4 d.f.
probability =     0.0505


                Dunn's Pairwise Comparison of iq4 by ieth
                           (Benjamini-Hochberg)
Col Mean-|
Row Mean |              1              2              3              4
---------+--------------------------------------------
       2 |   2.179479
         |     0.1465
         |
       3 |  -0.505482  -1.698444
         |     0.3407     0.1490
         |
       4 |   1.350673  -1.004099   1.082780
         |     0.1768     0.2252     0.2324
         |
       7 |   1.821760  -0.535433   1.378175   0.498577
         |     0.1712     0.3702     0.2102     0.3090

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 |  53 |  1808.50 |
  |    2 |   2 |    39.50 |
  |    3 |   1 |     7.50 |
  |    4 |   4 |   148.00 |
  |    7 |   3 |    12.50 |
  +-----------------------+

chi-squared =    10.605 with 4 d.f.
probability =     0.0314

chi-squared with ties =    26.277 with 4 d.f.
probability =     0.0001


                Dunn's Pairwise Comparison of iq5 by ieth
                           (Benjamini-Hochberg)
Col Mean-|
Row Mean |              1              2              3              4
---------+--------------------------------------------
       2 |   1.713447
         |     0.0866
```

```
          |
        3 |   2.264929   0.858920
          |     0.0294     0.2440
          |
        4 |  -0.476526  -1.710491  -2.265841
          |     0.3521     0.0726     0.0391
          |
        7 |   4.334614   1.465931   0.247897   3.691637
          |     0.0001     0.1019     0.4021     0.0006

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 |  52 |  1672.00 |
  |    2 |   2 |    54.50 |
  |    3 |   1 |    41.50 |
  |    4 |   4 |   166.00 |
  |    7 |   3 |    19.00 |
  +------------------------+

chi-squared =     7.553 with 4 d.f.
probability =     0.1094

chi-squared with ties =    11.196 with 4 d.f.
probability =     0.0245


                Dunn's Pairwise Comparison of iq6 by ieth
                           (Benjamini-Hochberg)
Col Mean-|
Row Mean |              1             2             3             4
---------+--------------------------------------------
       2 |   0.459251
         |     0.3589
         |
       3 |  -0.624727  -0.785168
         |     0.3326     0.3088
         |
       4 |  -1.215526  -1.110396   0.000000
         |     0.2242     0.2224     0.5000
         |
       7 |   2.934536   1.546239   2.055206   3.107180
         |     0.0084     0.1526     0.0664     0.0094

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 |  53 |  1815.00 |
  |    2 |   2 |    47.00 |
  |    3 |   1 |    15.00 |
  |    4 |   4 |    77.00 |
  |    7 |   3 |    62.00 |
  +------------------------+

chi-squared =     5.167 with 4 d.f.
probability =     0.2705
```

```
chi-squared with ties =     7.030 with 4 d.f.
probability =     0.1343


                Dunn's Pairwise Comparison of iq7 by ieth
                           (Benjamini-Hochberg)
Col Mean-|
Row Mean |             1             2             3             4
---------+--------------------------------------------
       2 |   0.949225
         |     0.4281
         |
       3 |   1.213236   0.441625
         |     0.3751     0.6588
         |
       4 |   1.840200   0.312276  -0.241888
         |     0.3287     0.5392     0.5055
         |
       7 |   1.455928   0.197500  -0.312276  -0.118029
         |     0.3635     0.4686     0.6290     0.4530

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 |  53 |  1804.00 |
  |    2 |   2 |    27.00 |
  |    3 |   1 |    48.50 |
  |    4 |   4 |    92.50 |
  |    7 |   3 |    44.00 |
  +------------------------+

chi-squared =     7.123 with 4 d.f.
probability =     0.1295

chi-squared with ties =     8.202 with 4 d.f.
probability =     0.0845


                Dunn's Pairwise Comparison of iq8 by ieth
                           (Benjamini-Hochberg)
Col Mean-|
Row Mean |             1             2             3             4
---------+--------------------------------------------
       2 |   1.669101
         |     0.1189
         |
       3 |  -0.838757  -1.672942
         |     0.2869     0.1572
         |
       4 |   1.232034  -0.650622   1.328647
         |     0.1816     0.3221     0.1840
         |
       7 |   1.910806  -0.074816   1.715276   0.648313
         |     0.2801     0.4702     0.2157     0.2871

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 |  53 |  1765.00 |
  |    2 |   2 |    58.00 |
  |    3 |   1 |    23.00 |
  |    4 |   4 |   108.50 |
  |    7 |   3 |    61.50 |
  +-----------------------+

chi-squared =     2.026 with 4 d.f.
probability =     0.7310

chi-squared with ties =     2.414 with 4 d.f.
probability =     0.6601


                Dunn's Pairwise Comparison of iq9 by ieth
                          (Benjamini-Hochberg)
Col Mean-|
Row Mean |             1             2             3             4
---------+--------------------------------------------
       2 |   0.355651
         |     0.6018
         |
       3 |   0.607788   0.291742
         |     0.9055     0.5503
         |
       4 |   0.709405   0.128933  -0.219717
         |     1.0000     0.4986     0.5163
         |
       7 |   1.284614   0.554503   0.128933   0.516561
         |     0.9946     0.7240     0.4487     0.6055

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 |  53 |  1700.00 |
  |    2 |   2 |    70.00 |
  |    3 |   1 |    35.00 |
  |    4 |   4 |   140.00 |
  |    7 |   3 |    71.00 |
  +-----------------------+

chi-squared =     0.808 with 4 d.f.
probability =     0.9373

chi-squared with ties =     3.122 with 4 d.f.
probability =     0.5376


                Dunn's Pairwise Comparison of iq10 by ieth
                          (Benjamini-Hochberg)
Col Mean-|
Row Mean |             1             2             3             4
---------+--------------------------------------------
       2 |  -0.435279
         |     0.5528
         |
       3 |  -0.310626   0.000000
         |     0.5401     0.5556
         |
       4 |  -0.604682   0.000000   0.000000
         |     0.5454     0.6250     0.5000
         |
       7 |   1.519075   1.331032   1.052274   1.590888
         |     0.3219     0.3053     0.3658     0.5582

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 if respondent is or was a hospital worker?

```
. 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 |  38 |  1211.00 |
  |      1 |  16 |   503.50 |
  |      2 |   9 |   301.50 |
  +--------------------------+

chi-squared =     0.076 with 2 d.f.
probability =     0.9629

chi-squared with ties =     0.556 with 2 d.f.
probability =     0.7574


                Dunn's Pairwise Comparison of iq1 by ihwork
                            (Benjamini-Hochberg)
Col Mean-|
Row Mean |             0             1
---------+----------------------
       1 |   0.198272
         |     0.4214
         |
       2 |  -0.650694  -0.720741
         |     0.3864     0.7066

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 |  38 |  1229.50 |
  |      1 |  16 |   432.00 |
  |      2 |   9 |   354.50 |
  +--------------------------+

chi-squared =     2.667 with 2 d.f.
probability =     0.2635

chi-squared with ties =     3.851 with 2 d.f.
probability =     0.1458


                Dunn's Pairwise Comparison of iq2 by ihwork
                            (Benjamini-Hochberg)
Col Mean-|
Row Mean |             0             1
---------+----------------------
       1 |   1.177995
         |     0.1194
         |
       2 |  -1.243802  -1.949178
         |     0.1602     0.0769
```

```
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 |  38 |  1187.00 |
  |      1 |  16 |   482.50 |
  |      2 |   9 |   346.50 |
  +--------------------------+

chi-squared =     1.359 with 2 d.f.
probability =     0.5068

chi-squared with ties =     2.727 with 2 d.f.
probability =     0.2558


               Dunn's Pairwise Comparison of iq3 by ihwork
                           (Benjamini-Hochberg)
Col Mean-|
Row Mean |             0             1
---------+----------------------
       1 |   0.280149
         |     0.3897
         |
       2 |  -1.513775  -1.547192
         |     0.0976     0.1827

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 |  38 |  1109.50 |
  |      1 |  16 |   533.00 |
  |      2 |   9 |   373.50 |
  +--------------------------+

chi-squared =     3.388 with 2 d.f.
probability =     0.1838

chi-squared with ties =     5.295 with 2 d.f.
probability =     0.0708


               Dunn's Pairwise Comparison of iq4 by ihwork
                           (Benjamini-Hochberg)
Col Mean-|
Row Mean |             0             1
---------+----------------------
       1 |  -0.941750
         |     0.1732
         |
       2 |  -2.263389  -1.340169
         |     0.0354     0.1351

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 |  38 |  1219.00 |
  |      1 |  16 |   464.00 |
  |      2 |   9 |   333.00 |
  +-------------------------+

chi-squared =     1.099 with 2 d.f.
probability =     0.5773

chi-squared with ties =     2.723 with 2 d.f.
probability =     0.2563


                Dunn's Pairwise Comparison of iq5 by ihwork
                            (Benjamini-Hochberg)
Col Mean-|
Row Mean |             0             1
---------+----------------------
       1 |   0.887196
         |     0.1875
         |
       2 |  -1.139947  -1.648784
         |     0.1907     0.1488

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 |  38 |  1081.00 |
  |      1 |  16 |   540.00 |
  |      2 |   8 |   332.00 |
  +-------------------------+

chi-squared =     3.794 with 2 d.f.
probability =     0.1500

chi-squared with ties =     5.625 with 2 d.f.
probability =     0.0601


                Dunn's Pairwise Comparison of iq6 by ihwork
                            (Benjamini-Hochberg)
Col Mean-|
Row Mean |             0             1
---------+----------------------
       1 |  -1.200715
         |     0.1149
         |
       2 |  -2.264381  -1.207799
         |     0.0353     0.1703

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 |  38 |  1189.00 |
  |      1 |  16 |   460.00 |
  |      2 |   9 |   367.00 |
  +--------------------------+

chi-squared =     2.624 with 2 d.f.
probability =     0.2693

chi-squared with ties =     3.570 with 2 d.f.
probability =     0.1678


               Dunn's Pairwise Comparison of iq7 by ihwork
                           (Benjamini-Hochberg)
Col Mean-|
Row Mean |             0             1
---------+----------------------
       1 |   0.542224
         |     0.2938
         |
       2 |  -1.628668  -1.836862
         |     0.0775     0.0993

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 |  38 |  1080.00 |
  |      1 |  16 |   576.50 |
  |      2 |   9 |   359.50 |
  +--------------------------+

chi-squared =     3.913 with 2 d.f.
probability =     0.1413

chi-squared with ties =     4.506 with 2 d.f.
probability =     0.1051


               Dunn's Pairwise Comparison of iq8 by ihwork
                           (Benjamini-Hochberg)
Col Mean-|
Row Mean |             0             1
---------+----------------------
       1 |  -1.494891
         |     0.1012
         |
       2 |  -1.819713  -0.549796
         |     0.1032     0.2912

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 |  38 |  1096.00 |
```

```
  |      1 |  16 |   545.00 |
  |      2 |   9 |   375.00 |
  +--------------------------+

chi-squared =     3.833 with 2 d.f.
probability =     0.1471

chi-squared with ties =     4.568 with 2 d.f.
probability =     0.1019


               Dunn's Pairwise Comparison of iq9 by ihwork
                           (Benjamini-Hochberg)
Col Mean-|
Row Mean |             0             1
---------+----------------------
       1 |  -1.043163
         |     0.1484
         |
       2 |  -2.060159  -1.086818
         |     0.0591     0.2078

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 |  38 |  1206.00 |
  |      1 |  16 |   495.00 |
  |      2 |   9 |   315.00 |
  +--------------------------+

chi-squared =     0.303 with 2 d.f.
probability =     0.8596

chi-squared with ties =     1.169 with 2 d.f.
probability =     0.5574


               Dunn's Pairwise Comparison of iq10 by ihwork
                           (Benjamini-Hochberg)
Col Mean-|
Row Mean |             0             1
---------+----------------------
       1 |   0.287560
         |     0.3868
         |
       2 |  -0.943719  -1.045310
         |     0.2590     0.4438

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