```
 DATASET ACTIVATE DataSet1.
SAVE OUTFILE='/Users/hunghoang/Desktop/data12age-edu.sav'
 /COMPRESSED.
CROSSTABS
  /TABLES=area BY gender edufather edumother BY year
  /FORMAT=AVALUE TABLES
  /STATISTICS=CHISQ
  /CELLS=COUNT ROW COLUMN TOTAL
  /COUNT ROUND CELL.
```

# Crosstabs

**Notes**

| | | |
|---|---|---|
| **Output Created** | | **18-OCT-2023 23:58:12** |
| **Comments** | | |
| **Input** | **Data** | /Users/hunghoang/Desktop/data12age-edu.... |
| | **Active Dataset** | **DataSet1** |
| | **Filter** | **<none>** |
| | **Weight** | **<none>** |
| | **Split File** | **<none>** |
| | N of Rows in Working Data File | **4773** |
| **Missing Value Handling** | **Definition of Missing** | User-defined missing values are treated as missing. |
| | **Cases Used** | Statistics for each table are based on all the cases with valid data in the specified range(s) for all variables in each table. |
| **Syntax** | | CROSSTABS /TABLES=area BY gender edufather edumother BY year /FORMAT=AVALUE TABLES /STATISTICS=CHISQ /CELLS=COUNT ROW COLUMN TOTAL /COUNT ROUND CELL. |

## Notes

| Resources | Processor Time | 00:00:00.04 |
|---|---|---|
| | Elapsed Time | 00:00:00.00 |
| | Dimensions Requested | 3 |
| | Cells Available | 112347 |

[DataSet1] /Users/hunghoang/Desktop/data12age-edu.sav

### Case Processing Summary

| | Cases | | | | | |
|---|---|---|---|---|---|---|
| | Valid | | Missing | | Total | |
| | N | Percent | N | Percent | N | Percent |
| area * gender * year | 4773 | 100.0% | 0 | 0.0% | 4773 | 100.0% |
| area * Edu-Fa * year | 4773 | 100.0% | 0 | 0.0% | 4773 | 100.0% |
| area * Edu-Mo * year | 4773 | 100.0% | 0 | 0.0% | 4773 | 100.0% |

## area * gender * year

### Crosstab

| year | | | | | gender | | Total |
|---|---|---|---|---|---|---|---|
| | | | | | female | male | |
| 1989 | area | F- area | Count | | 121 | 124 | 245 |
| | | | % within area | | 49.4% | 50.6% | 100.0% |
| | | | % within gender | | 40.2% | 44.6% | 42.3% |
| | | | % of Total | | 20.9% | 21.4% | 42.3% |
| | | F+ area | Count | | 180 | 154 | 334 |
| | | | % within area | | 53.9% | 46.1% | 100.0% |
| | | | % within gender | | 59.8% | 55.4% | 57.7% |
| | | | % of Total | | 31.1% | 26.6% | 57.7% |
| | Total | | Count | | 301 | 278 | 579 |
| | | | % within area | | 52.0% | 48.0% | 100.0% |
| | | | % within gender | | 100.0% | 100.0% | 100.0% |
| | | | % of Total | | 52.0% | 48.0% | 100.0% |
| 2003 | area | F- area | Count | | 202 | 156 | 358 |
| | | | % within area | | 56.4% | 43.6% | 100.0% |
| | | | % within gender | | 27.0% | 25.5% | 26.3% |
| | | | % of Total | | 14.8% | 11.5% | 26.3% |

**Crosstab**

| year | | | | gender female | gender male | Total |
|---|---|---|---|---|---|---|
| **2012** | area | F+ area | Count | 547 | 456 | 1003 |
| | | | % within area | 54.5% | 45.5% | 100.0% |
| | | | % within gender | 73.0% | 74.5% | 73.7% |
| | | | % of Total | 40.2% | 33.5% | 73.7% |
| | Total | | Count | 749 | 612 | 1361 |
| | | | % within area | 55.0% | 45.0% | 100.0% |
| | | | % within gender | 100.0% | 100.0% | 100.0% |
| | | | % of Total | 55.0% | 45.0% | 100.0% |
| **2019** | area | F- area | Count | 272 | 265 | 537 |
| | | | % within area | 50.7% | 49.3% | 100.0% |
| | | | % within gender | 25.0% | 25.9% | 25.5% |
| | | | % of Total | 12.9% | 12.6% | 25.5% |
| | | F+ area | Count | 814 | 758 | 1572 |
| | | | % within area | 51.8% | 48.2% | 100.0% |
| | | | % within gender | 75.0% | 74.1% | 74.5% |
| | | | % of Total | 38.6% | 35.9% | 74.5% |
| | Total | | Count | 1086 | 1023 | 2109 |
| | | | % within area | 51.5% | 48.5% | 100.0% |
| | | | % within gender | 100.0% | 100.0% | 100.0% |
| | | | % of Total | 51.5% | 48.5% | 100.0% |
| | area | F- area | Count | 141 | 118 | 259 |
| | | | % within area | 54.4% | 45.6% | 100.0% |
| | | | % within gender | 38.0% | 33.4% | 35.8% |
| | | | % of Total | 19.5% | 16.3% | 35.8% |
| | | F+ area | Count | 230 | 235 | 465 |
| | | | % within area | 49.5% | 50.5% | 100.0% |
| | | | % within gender | 62.0% | 66.6% | 64.2% |
| | | | % of Total | 31.8% | 32.5% | 64.2% |
| | Total | | Count | 371 | 353 | 724 |
| | | | % within area | 51.2% | 48.8% | 100.0% |
| | | | % within gender | 100.0% | 100.0% | 100.0% |
| | | | % of Total | 51.2% | 48.8% | 100.0% |
| **Total** | area | F- area | Count | 736 | 663 | 1399 |
| | | | % within area | 52.6% | 47.4% | 100.0% |

**Crosstab**

| year | | | | gender female | gender male | Total |
|---|---|---|---|---|---|---|
| | | F+ area | % within gender | 29.4% | 29.3% | 29.3% |
| | | | % of Total | 15.4% | 13.9% | 29.3% |
| | | | Count | 1771 | 1603 | 3374 |
| | | | % within area | 52.5% | 47.5% | 100.0% |
| | | | % within gender | 70.6% | 70.7% | 70.7% |
| | | | % of Total | 37.1% | 33.6% | 70.7% |
| | Total | | Count | 2507 | 2266 | 4773 |
| | | | % within area | 52.5% | 47.5% | 100.0% |
| | | | % within gender | 100.0% | 100.0% | 100.0% |
| | | | % of Total | 52.5% | 47.5% | 100.0% |

**Chi-Square Tests**

| year | | Value | df | Asymp. Sig. (2–sided) | Exact Sig. (2–sided) | Exact Sig. (1–sided) |
|---|---|---|---|---|---|---|
| 1989 | Pearson Chi-Square | 1.149[c] | 1 | .284 | | |
| | Continuity Correction[b] | .975 | 1 | .323 | | |
| | Likelihood Ratio | 1.149 | 1 | .284 | | |
| | Fisher's Exact Test | | | | .313 | .162 |
| | N of Valid Cases | 579 | | | | |
| 2003 | Pearson Chi-Square | .380[d] | 1 | .538 | | |
| | Continuity Correction[b] | .308 | 1 | .579 | | |
| | Likelihood Ratio | .381 | 1 | .537 | | |
| | Fisher's Exact Test | | | | .578 | .290 |
| | N of Valid Cases | 1361 | | | | |
| 2012 | Pearson Chi-Square | .204[e] | 1 | .651 | | |
| | Continuity Correction[b] | .162 | 1 | .688 | | |
| | Likelihood Ratio | .204 | 1 | .651 | | |
| | Fisher's Exact Test | | | | .653 | .344 |
| | N of Valid Cases | 2109 | | | | |
| 2019 | Pearson Chi-Square | 1.650[f] | 1 | .199 | | |
| | Continuity Correction[b] | 1.457 | 1 | .227 | | |
| | Likelihood Ratio | 1.651 | 1 | .199 | | |
| | Fisher's Exact Test | | | | .215 | .114 |
| | N of Valid Cases | 724 | | | | |

## Chi-Square Tests

| year | | Value | df | Asymp. Sig. (2-sided) | Exact Sig. (2-sided) | Exact Sig. (1-sided) |
|---|---|---|---|---|---|---|
| Total | Pearson Chi-Square | .006[a] | 1 | .940 | | |
| | Continuity Correction[b] | .002 | 1 | .965 | | |
| | Likelihood Ratio | .006 | 1 | .940 | | |
| | Fisher's Exact Test | | | | .949 | .483 |
| | N of Valid Cases | 4773 | | | | |

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 664.18.

b. Computed only for a 2x2 table

c. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 117.63.

d. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 160.98.

e. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 260.48.

f. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 126.28.

# area * Edu-Fa * year

### Crosstab

| year | | | | completed primary school | completed secondary school | Completed high school | Total |
|---|---|---|---|---|---|---|---|
| 1989 | area | F- area | Count | 33 | 66 | 146 | 245 |
| | | | % within area | 13.5% | 26.9% | 59.6% | 100.0% |
| | | | % within Edu-Fa | 36.3% | 44.0% | 43.2% | 42.3% |
| | | | % of Total | 5.7% | 11.4% | 25.2% | 42.3% |
| | | F+ area | Count | 58 | 84 | 192 | 334 |
| | | | % within area | 17.4% | 25.1% | 57.5% | 100.0% |
| | | | % within Edu-Fa | 63.7% | 56.0% | 56.8% | 57.7% |
| | | | % of Total | 10.0% | 14.5% | 33.2% | 57.7% |
| | Total | | Count | 91 | 150 | 338 | 579 |
| | | | % within area | 15.7% | 25.9% | 58.4% | 100.0% |
| | | | % within Edu-Fa | 100.0% | 100.0% | 100.0% | 100.0% |
| | | | % of Total | 15.7% | 25.9% | 58.4% | 100.0% |
| 2003 | area | F- area | Count | 53 | 89 | 216 | 358 |
| | | | % within area | 14.8% | 24.9% | 60.3% | 100.0% |

The Edu-Fa header spans: completed primary school, completed secondary school, Completed high school.

**Crosstab**

| year | | | | completed primary school | completed secondary school | Completed high school | Total |
|---|---|---|---|---|---|---|---|
| | | | % within Edu-Fa | 25.2% | 25.1% | 27.1% | 26.3% |
| | | | % of Total | 3.9% | 6.5% | 15.9% | 26.3% |
| | | F+ area | Count | 157 | 265 | 581 | 1003 |
| | | | % within area | 15.7% | 26.4% | 57.9% | 100.0% |
| | | | % within Edu-Fa | 74.8% | 74.9% | 72.9% | 73.7% |
| | | | % of Total | 11.5% | 19.5% | 42.7% | 73.7% |
| | Total | | Count | 210 | 354 | 797 | 1361 |
| | | | % within area | 15.4% | 26.0% | 58.6% | 100.0% |
| | | | % within Edu-Fa | 100.0% | 100.0% | 100.0% | 100.0% |
| | | | % of Total | 15.4% | 26.0% | 58.6% | 100.0% |
| 2012 | area | F- area | Count | 79 | 129 | 329 | 537 |
| | | | % within area | 14.7% | 24.0% | 61.3% | 100.0% |
| | | | % within Edu-Fa | 25.3% | 25.5% | 25.5% | 25.5% |
| | | | % of Total | 3.7% | 6.1% | 15.6% | 25.5% |
| | | F+ area | Count | 233 | 377 | 962 | 1572 |
| | | | % within area | 14.8% | 24.0% | 61.2% | 100.0% |
| | | | % within Edu-Fa | 74.7% | 74.5% | 74.5% | 74.5% |
| | | | % of Total | 11.0% | 17.9% | 45.6% | 74.5% |
| | Total | | Count | 312 | 506 | 1291 | 2109 |
| | | | % within area | 14.8% | 24.0% | 61.2% | 100.0% |
| | | | % within Edu-Fa | 100.0% | 100.0% | 100.0% | 100.0% |
| | | | % of Total | 14.8% | 24.0% | 61.2% | 100.0% |
| 2019 | area | F- area | Count | 49 | 63 | 147 | 259 |
| | | | % within area | 18.9% | 24.3% | 56.8% | 100.0% |
| | | | % within Edu-Fa | 42.2% | 35.8% | 34.0% | 35.8% |
| | | | % of Total | 6.8% | 8.7% | 20.3% | 35.8% |
| | | F+ area | Count | 67 | 113 | 285 | 465 |
| | | | % within area | 14.4% | 24.3% | 61.3% | 100.0% |

**Crosstab**

| vear | | | | Edu-Fa completed primary school | Edu-Fa completed secondary school | Edu-Fa Completed high school | Total |
|---|---|---|---|---|---|---|---|
| | | | % within Edu-Fa | 57.8% | 64.2% | 66.0% | 64.2% |
| | | | % of Total | 9.3% | 15.6% | 39.4% | 64.2% |
| | Total | | Count | 116 | 176 | 432 | 724 |
| | | | % within area | 16.0% | 24.3% | 59.7% | 100.0% |
| | | | % within Edu-Fa | 100.0% | 100.0% | 100.0% | 100.0% |
| | | | % of Total | 16.0% | 24.3% | 59.7% | 100.0% |
| Total | area | F- area | Count | 214 | 347 | 838 | 1399 |
| | | | % within area | 15.3% | 24.8% | 59.9% | 100.0% |
| | | | % within Edu-Fa | 29.4% | 29.3% | 29.3% | 29.3% |
| | | | % of Total | 4.5% | 7.3% | 17.6% | 29.3% |
| | | F+ area | Count | 515 | 839 | 2020 | 3374 |
| | | | % within area | 15.3% | 24.9% | 59.9% | 100.0% |
| | | | % within Edu-Fa | 70.6% | 70.7% | 70.7% | 70.7% |
| | | | % of Total | 10.8% | 17.6% | 42.3% | 70.7% |
| | Total | | Count | 729 | 1186 | 2858 | 4773 |
| | | | % within area | 15.3% | 24.8% | 59.9% | 100.0% |
| | | | % within Edu-Fa | 100.0% | 100.0% | 100.0% | 100.0% |
| | | | % of Total | 15.3% | 24.8% | 59.9% | 100.0% |

**Chi-Square Tests**

| year | | Value | df | Asymp. Sig. (2–sided) |
|---|---|---|---|---|
| **1989** | **Pearson Chi-Square** | **1.647**[b] | **2** | **.439** |
| | **Likelihood Ratio** | **1.667** | **2** | **.434** |
| | Linear–by–Linear Association | .910 | 1 | .340 |
| | **N of Valid Cases** | 579 | | |
| **2003** | **Pearson Chi-Square** | **.632**[c] | **2** | **.729** |
| | **Likelihood Ratio** | **.633** | **2** | **.729** |
| | Linear–by–Linear Association | .505 | 1 | .477 |
| | **N of Valid Cases** | 1361 | | |
| **2012** | **Pearson Chi-Square** | **.004**[d] | **2** | **.998** |
| | **Likelihood Ratio** | **.004** | **2** | **.998** |
| | Linear–by–Linear Association | .002 | 1 | .961 |
| | **N of Valid Cases** | 2109 | | |
| **2019** | **Pearson Chi-Square** | **2.685**[e] | **2** | **.261** |
| | **Likelihood Ratio** | **2.641** | **2** | **.267** |
| | Linear–by–Linear Association | 2.399 | 1 | .121 |
| | **N of Valid Cases** | 724 | | |
| **Total** | **Pearson Chi-Square** | **.002**[a] | **2** | **.999** |
| | **Likelihood Ratio** | **.002** | **2** | **.999** |
| | Linear–by–Linear Association | .000 | 1 | .999 |
| | **N of Valid Cases** | 4773 | | |

**a.** 0 cells (0.0%) have expected count less than 5. The minimum expected count is 213.68.

**b.** 0 cells (0.0%) have expected count less than 5. The minimum expected count is 38.51.

**c.** 0 cells (0.0%) have expected count less than 5. The minimum expected count is 55.24.

**d.** 0 cells (0.0%) have expected count less than 5. The minimum expected count is 79.44.

**e.** 0 cells (0.0%) have expected count less than 5. The minimum expected count is 41.50.

# area * Edu-Mo * year

**Crosstab**

| year | | | | Edu-Mo completed primary school | Edu-Mo completed secondary school | Edu-Mo Completed high school | Total |
|---|---|---|---|---|---|---|---|
| 1989 | area | F- area | Count | 64 | 84 | 97 | 245 |
| | | | % within area | 26.1% | 34.3% | 39.6% | 100.0% |
| | | | % within Edu-Mo | 46.7% | 43.1% | 39.3% | 42.3% |
| | | | % of Total | 11.1% | 14.5% | 16.8% | 42.3% |
| | | F+ area | Count | 73 | 111 | 150 | 334 |
| | | | % within area | 21.9% | 33.2% | 44.9% | 100.0% |
| | | | % within Edu-Mo | 53.3% | 56.9% | 60.7% | 57.7% |
| | | | % of Total | 12.6% | 19.2% | 25.9% | 57.7% |
| | Total | | Count | 137 | 195 | 247 | 579 |
| | | | % within area | 23.7% | 33.7% | 42.7% | 100.0% |
| | | | % within Edu-Mo | 100.0% | 100.0% | 100.0% | 100.0% |
| | | | % of Total | 23.7% | 33.7% | 42.7% | 100.0% |
| 2003 | area | F- area | Count | 100 | 104 | 154 | 358 |
| | | | % within area | 27.9% | 29.1% | 43.0% | 100.0% |
| | | | % within Edu-Mo | 24.8% | 26.1% | 27.5% | 26.3% |
| | | | % of Total | 7.3% | 7.6% | 11.3% | 26.3% |
| | | F+ area | Count | 303 | 295 | 405 | 1003 |
| | | | % within area | 30.2% | 29.4% | 40.4% | 100.0% |
| | | | % within Edu-Mo | 75.2% | 73.9% | 72.5% | 73.7% |
| | | | % of Total | 22.3% | 21.7% | 29.8% | 73.7% |
| | Total | | Count | 403 | 399 | 559 | 1361 |
| | | | % within area | 29.6% | 29.3% | 41.1% | 100.0% |
| | | | % within Edu-Mo | 100.0% | 100.0% | 100.0% | 100.0% |
| | | | % of Total | 29.6% | 29.3% | 41.1% | 100.0% |
| 2012 | area | F- area | Count | 155 | 147 | 235 | 537 |
| | | | % within area | 28.9% | 27.4% | 43.8% | 100.0% |
| | | | % within Edu-Mo | 25.4% | 24.5% | 26.1% | 25.5% |
| | | | % of Total | 7.3% | 7.0% | 11.1% | 25.5% |
| | | F+ area | Count | 456 | 452 | 664 | 1572 |
| | | | % within area | 29.0% | 28.8% | 42.2% | 100.0% |

**Crosstab**

| year | | | | Edu-Mo completed primary school | Edu-Mo completed secondary school | Edu-Mo Completed high school | Total |
|---|---|---|---|---|---|---|---|
| | | | % within Edu-Mo | 74.6% | 75.5% | 73.9% | 74.5% |
| | | | % of Total | 21.6% | 21.4% | 31.5% | 74.5% |
| | Total | | Count | 611 | 599 | 899 | 2109 |
| | | | % within area | 29.0% | 28.4% | 42.6% | 100.0% |
| | | | % within Edu-Mo | 100.0% | 100.0% | 100.0% | 100.0% |
| | | | % of Total | 29.0% | 28.4% | 42.6% | 100.0% |
| 2019 | area | F- area | Count | 66 | 64 | 129 | 259 |
| | | | % within area | 25.5% | 24.7% | 49.8% | 100.0% |
| | | | % within Edu-Mo | 35.5% | 34.4% | 36.6% | 35.8% |
| | | | % of Total | 9.1% | 8.8% | 17.8% | 35.8% |
| | | F+ area | Count | 120 | 122 | 223 | 465 |
| | | | % within area | 25.8% | 26.2% | 48.0% | 100.0% |
| | | | % within Edu-Mo | 64.5% | 65.6% | 63.4% | 64.2% |
| | | | % of Total | 16.6% | 16.9% | 30.8% | 64.2% |
| | Total | | Count | 186 | 186 | 352 | 724 |
| | | | % within area | 25.7% | 25.7% | 48.6% | 100.0% |
| | | | % within Edu-Mo | 100.0% | 100.0% | 100.0% | 100.0% |
| | | | % of Total | 25.7% | 25.7% | 48.6% | 100.0% |
| Total | area | F- area | Count | 385 | 399 | 615 | 1399 |
| | | | % within area | 27.5% | 28.5% | 44.0% | 100.0% |
| | | | % within Edu-Mo | 28.8% | 28.9% | 29.9% | 29.3% |
| | | | % of Total | 8.1% | 8.4% | 12.9% | 29.3% |
| | | F+ area | Count | 952 | 980 | 1442 | 3374 |
| | | | % within area | 28.2% | 29.0% | 42.7% | 100.0% |
| | | | % within Edu-Mo | 71.2% | 71.1% | 70.1% | 70.7% |
| | | | % of Total | 19.9% | 20.5% | 30.2% | 70.7% |
| | Total | | Count | 1337 | 1379 | 2057 | 4773 |
| | | | % within area | 28.0% | 28.9% | 43.1% | 100.0% |
| | | | % within Edu-Mo | 100.0% | 100.0% | 100.0% | 100.0% |
| | | | % of Total | 28.0% | 28.9% | 43.1% | 100.0% |

**Chi-Square Tests**

| year | | Value | df | Asymp. Sig. (2-sided) |
|------|---|---|---|---|
| **1989** | **Pearson Chi-Square** | **2.071**[b] | **2** | **.355** |
| | **Likelihood Ratio** | **2.069** | **2** | **.355** |
| | Linear-by-Linear Association | **2.067** | **1** | **.151** |
| | **N of Valid Cases** | **579** | | |
| **2003** | **Pearson Chi-Square** | **.920**[c] | **2** | **.631** |
| | **Likelihood Ratio** | **.922** | **2** | **.631** |
| | Linear-by-Linear Association | **.918** | **1** | **.338** |
| | **N of Valid Cases** | **1361** | | |
| **2012** | **Pearson Chi-Square** | **.488**[d] | **2** | **.783** |
| | **Likelihood Ratio** | **.489** | **2** | **.783** |
| | Linear-by-Linear Association | **.159** | **1** | **.690** |
| | **N of Valid Cases** | **2109** | | |
| **2019** | **Pearson Chi-Square** | **.275**[e] | **2** | **.872** |
| | **Likelihood Ratio** | **.275** | **2** | **.871** |
| | Linear-by-Linear Association | **.114** | **1** | **.736** |
| | **N of Valid Cases** | **724** | | |
| **Total** | **Pearson Chi-Square** | **.608**[a] | **2** | **.738** |
| | **Likelihood Ratio** | **.607** | **2** | **.738** |
| | Linear-by-Linear Association | **.528** | **1** | **.467** |
| | **N of Valid Cases** | **4773** | | |

**a.** 0 cells (0.0%) have expected count less than 5. The minimum expected count is 391.88.

**b.** 0 cells (0.0%) have expected count less than 5. The minimum expected count is 57.97.

**c.** 0 cells (0.0%) have expected count less than 5. The minimum expected count is 104.95.

**d.** 0 cells (0.0%) have expected count less than 5. The minimum expected count is 152.52.

**e.** 0 cells (0.0%) have expected count less than 5. The minimum expected count is 66.54.