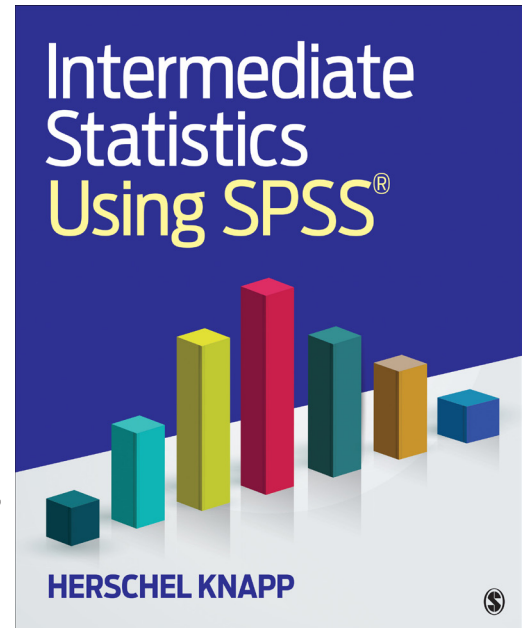


## C H A P T E R 2

# Working in SPSS

## Solutions to All Exercises



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EXERCISE 2.1

| Enrolled            |             |         |       |         |
|---------------------|-------------|---------|-------|---------|
|                     |             | Value   | Count | Percent |
| Standard Attributes | Position    | 1       |       |         |
|                     | Label       | <none>  |       |         |
|                     | Type        | Numeric |       |         |
|                     | Format      | F8      |       |         |
|                     | Measurement | Nominal |       |         |
|                     | Role        | Input   |       |         |
| Valid Values        | 1           | Yes     | 4     | 80.0%   |
|                     | 2           | No      | 1     | 20.0%   |

| Units                           |                    |         |
|---------------------------------|--------------------|---------|
|                                 |                    | Value   |
| Standard Attributes             | Position           | 2       |
|                                 | Label              | <none>  |
|                                 | Type               | Numeric |
|                                 | Format             | F8      |
|                                 | Measurement        | Scale   |
|                                 | Role               | Input   |
| N                               | Valid              | 5       |
|                                 | Missing            | 0       |
| Central Tendency and Dispersion | Mean               | 9.20    |
|                                 | Standard Deviation | 6.261   |
|                                 | Percentile 25      | 6.00    |
|                                 | Percentile 50      | 12.00   |
|                                 | Percentile 75      | 12.00   |

| Grade                           |                    |         |
|---------------------------------|--------------------|---------|
|                                 |                    | Value   |
| Standard Attributes             | Position           | 3       |
|                                 | Label              | <none>  |
|                                 | Type               | Numeric |
|                                 | Format             | F8      |
|                                 | Measurement        | Scale   |
|                                 | Role               | Input   |
| N                               | Valid              | 5       |
|                                 | Missing            | 0       |
| Central Tendency and Dispersion | Mean               | 81.40   |
|                                 | Standard Deviation | 10.550  |
|                                 | Percentile 25      | 72.00   |
|                                 | Percentile 50      | 81.00   |
|                                 | Percentile 75      | 91.00   |

EXERCISE 2.2

| ID                  |             | Value   | Count | Percent |
|---------------------|-------------|---------|-------|---------|
| Standard Attributes | Position    | 1       |       |         |
|                     | Label       | <none>  |       |         |
|                     | Type        | String  |       |         |
|                     | Format      | A8      |       |         |
|                     | Measurement | Nominal |       |         |
|                     | Role        | Input   |       |         |
| Valid Values        | AL331       |         | 1     | 20.0%   |
|                     | DD987       |         | 1     | 20.0%   |
|                     | JW105       |         | 1     | 20.0%   |
|                     | QF732       |         | 1     | 20.0%   |
|                     | RK122       |         | 1     | 20.0%   |
|                     |             |         |       |         |

| Volunteer_Hours                 |                    |  | Value   |
|---------------------------------|--------------------|--|---------|
| Standard Attributes             | Position           |  | 3       |
|                                 | Label              |  | <none>  |
|                                 | Type               |  | Numeric |
|                                 | Format             |  | F8.2    |
|                                 | Measurement        |  | Scale   |
|                                 | Role               |  | Input   |
| N                               | Valid              |  | 5       |
|                                 | Missing            |  | 0       |
| Central Tendency and Dispersion | Mean               |  | 2.2000  |
|                                 | Standard Deviation |  | 1.35093 |
|                                 | Percentile 25      |  | 1.5000  |
|                                 | Percentile 50      |  | 2.0000  |
|                                 | Percentile 75      |  | 3.0000  |

EXERCISE 2.3

| Degree              |             |             |       |         |
|---------------------|-------------|-------------|-------|---------|
|                     |             | Value       | Count | Percent |
| Standard Attributes | Position    | 2           |       |         |
|                     | Label       | <none>      |       |         |
|                     | Type        | Numeric     |       |         |
|                     | Format      | F8          |       |         |
|                     | Measurement | Ordinal     |       |         |
|                     | Role        | Input       |       |         |
| Valid Values        | 1           | Associate's | 1     | 20.0%   |
|                     | 2           | Bachelor's  | 2     | 40.0%   |
|                     | 3           | Master's    | 2     | 40.0%   |
|                     | 4           | Doctorate   | 0     | .0%     |

| Pretest                         |                    |  | Value   |
|---------------------------------|--------------------|--|---------|
| Standard Attributes             | Position           |  | 3       |
|                                 | Label              |  | <none>  |
|                                 | Type               |  | Numeric |
|                                 | Format             |  | F8      |
|                                 | Measurement        |  | Scale   |
|                                 | Role               |  | Input   |
| N                               | Valid              |  | 5       |
|                                 | Missing            |  | 0       |
|                                 | Mean               |  | 27.20   |
| Central Tendency and Dispersion | Standard Deviation |  | 3.701   |
|                                 | Percentile 25      |  | 25.00   |
|                                 | Percentile 50      |  | 28.00   |
|                                 | Percentile 75      |  | 30.00   |

| Posttest                        |                    |  | Value   |
|---------------------------------|--------------------|--|---------|
| Standard Attributes             | Position           |  | 4       |
|                                 | Label              |  | <none>  |
|                                 | Type               |  | Numeric |
|                                 | Format             |  | F8      |
|                                 | Measurement        |  | Scale   |
|                                 | Role               |  | Input   |
| N                               | Valid              |  | 5       |
|                                 | Missing            |  | 0       |
|                                 | Mean               |  | 39.00   |
| Central Tendency and Dispersion | Standard Deviation |  | 8.000   |
|                                 | Percentile 25      |  | 34.00   |
|                                 | Percentile 50      |  | 38.00   |
|                                 | Percentile 75      |  | 46.00   |

EXERCISE 2.4

| Employ              |             |            |       |         |
|---------------------|-------------|------------|-------|---------|
|                     |             | Value      | Count | Percent |
| Standard Attributes | Position    | 2          |       |         |
|                     | Label       | <none>     |       |         |
|                     | Type        | Numeric    |       |         |
|                     | Format      | F8         |       |         |
|                     | Measurement | Ordinal    |       |         |
|                     | Role        | Input      |       |         |
| Valid Values        | 1           | Unemployed | 1     | 20.0%   |
|                     | 2           | Temporary  | 1     | 20.0%   |
|                     | 3           | Part-time  | 1     | 20.0%   |
|                     | 4           | Full-time  | 2     | 40.0%   |

| Work_Hours                      |                    |         |
|---------------------------------|--------------------|---------|
|                                 |                    | Value   |
| Standard Attributes             | Position           | 3       |
|                                 | Label              | <none>  |
|                                 | Type               | Numeric |
|                                 | Format             | F8      |
|                                 | Measurement        | Scale   |
|                                 | Role               | Input   |
| N                               | Valid              | 5       |
|                                 | Missing            | 0       |
| Central Tendency and Dispersion | Mean               | 24.20   |
|                                 | Standard Deviation | 18.390  |
|                                 | Percentile 25      | 16.00   |
|                                 | Percentile 50      | 20.00   |
|                                 | Percentile 75      | 40.00   |

| Sleep_Hours                     |                    |         |
|---------------------------------|--------------------|---------|
|                                 |                    | Value   |
| Standard Attributes             | Position           | 4       |
|                                 | Label              | <none>  |
|                                 | Type               | Numeric |
|                                 | Format             | F8.2    |
|                                 | Measurement        | Scale   |
|                                 | Role               | Input   |
| N                               | Valid              | 5       |
|                                 | Missing            | 0       |
| Central Tendency and Dispersion | Mean               | 8.3000  |
|                                 | Standard Deviation | 1.20416 |
|                                 | Percentile 25      | 7.5000  |
|                                 | Percentile 50      | 8.0000  |
|                                 | Percentile 75      | 9.0000  |

## EXERCISE 2.5

First\_Initial

|                     |             | Value   | Count | Percent |
|---------------------|-------------|---------|-------|---------|
| Standard Attributes | Position    | 2       |       |         |
|                     | Label       | <none>  |       |         |
|                     | Type        | String  |       |         |
|                     | Format      | A1      |       |         |
|                     | Measurement | Nominal |       |         |
|                     | Role        | Input   |       |         |
| Valid Values        | D           |         | 1     | 20.0%   |
|                     | J           |         | 1     | 20.0%   |
|                     | P           |         | 1     | 20.0%   |
|                     | T           |         | 1     | 20.0%   |
|                     | V           |         | 1     | 20.0%   |

Last\_Name

|                     |             | Value   | Count | Percent |
|---------------------|-------------|---------|-------|---------|
| Standard Attributes | Position    | 3       |       |         |
|                     | Label       | <none>  |       |         |
|                     | Type        | String  |       |         |
|                     | Format      | A20     |       |         |
|                     | Measurement | Nominal |       |         |
|                     | Role        | Input   |       |         |
| Valid Values        | Freeman     |         | 1     | 20.0%   |
|                     | Gower       |         | 1     | 20.0%   |
|                     | Jones       |         | 1     | 20.0%   |
|                     | Rexx        |         | 1     | 20.0%   |
|                     | Smith       |         | 1     | 20.0%   |

| Siblings                        |                    |         |
|---------------------------------|--------------------|---------|
|                                 |                    | Value   |
| Standard Attributes             | Position           | 4       |
|                                 | Label              | <none>  |
|                                 | Type               | Numeric |
|                                 | Format             | F8      |
|                                 | Measurement        | Scale   |
| N                               | Role               | Input   |
|                                 | Valid              | 5       |
|                                 | Missing            | 0       |
| Central Tendency and Dispersion | Mean               | 1.60    |
|                                 | Standard Deviation | 1.140   |
|                                 | Percentile 25      | 1.00    |
|                                 | Percentile 50      | 2.00    |
|                                 | Percentile 75      | 2.00    |

| Adopted             |             |         |       |         |
|---------------------|-------------|---------|-------|---------|
|                     |             | Value   | Count | Percent |
| Standard Attributes | Position    | 5       |       |         |
|                     | Label       | <none>  |       |         |
|                     | Type        | Numeric |       |         |
|                     | Format      | F8      |       |         |
|                     | Measurement | Nominal |       |         |
|                     | Role        | Input   |       |         |
| Valid Values        | 1           | Yes     | 1     | 20.0%   |
|                     | 2           | No      | 4     | 80.0%   |

## EXERCISE 2.6

| Patient_ID                      |                    | Value   |
|---------------------------------|--------------------|---------|
| Standard Attributes             | Position           | 2       |
|                                 | Label              | <none>  |
|                                 | Type               | Numeric |
|                                 | Format             | F8      |
|                                 | Measurement        | Scale   |
|                                 | Role               | Input   |
| N                               | Valid              | 5       |
|                                 | Missing            | 0       |
|                                 | Mean               | 5.27E9  |
| Central Tendency and Dispersion | Standard Deviation | 3.006E9 |
|                                 | Percentile 25      | 2.14E9  |
|                                 | Percentile 50      | 5.83E9  |
|                                 | Percentile 75      | 8.05E9  |

| Age                             |                    | Value   |
|---------------------------------|--------------------|---------|
| Standard Attributes             | Position           | 3       |
|                                 | Label              | <none>  |
|                                 | Type               | Numeric |
|                                 | Format             | F8      |
|                                 | Measurement        | Scale   |
|                                 | Role               | Input   |
| N                               | Valid              | 5       |
|                                 | Missing            | 0       |
|                                 | Mean               | 43.60   |
| Central Tendency and Dispersion | Standard Deviation | 24.337  |
|                                 | Percentile 25      | 24.00   |
|                                 | Percentile 50      | 38.00   |
|                                 | Percentile 75      | 53.00   |

| Temp                            |                    | Value    |
|---------------------------------|--------------------|----------|
| Standard Attributes             | Position           | 4        |
|                                 | Label              | <none>   |
|                                 | Type               | Numeric  |
|                                 | Format             | F8.2     |
|                                 | Measurement        | Scale    |
|                                 | Role               | Input    |
| N                               | Valid              | 5        |
|                                 | Missing            | 0        |
|                                 | Mean               | 99.7600  |
| Central Tendency and Dispersion | Standard Deviation | 1.33903  |
|                                 | Percentile 25      | 98.8000  |
|                                 | Percentile 50      | 99.0000  |
|                                 | Percentile 75      | 100.9000 |

| Flu_Shot            |             |                           |       |         |
|---------------------|-------------|---------------------------|-------|---------|
|                     |             | Value                     | Count | Percent |
| Standard Attributes | Position    | 5                         |       |         |
|                     | Label       | <none>                    |       |         |
|                     | Type        | Numeric                   |       |         |
|                     | Format      | F20                       |       |         |
|                     | Measurement | Nominal                   |       |         |
|                     | Role        | Input                     |       |         |
| Valid Values        | 1           | Yes                       | 3     | 60.0%   |
|                     | 2           | No, and I don't want one  | 1     | 20.0%   |
|                     | 3           | Not yet, but I'd like one | 1     | 20.0%   |

| Rx                  |                  |         |       |         |
|---------------------|------------------|---------|-------|---------|
|                     |                  | Value   | Count | Percent |
| Standard Attributes | Position         | 6       |       |         |
|                     | Label            | <none>  |       |         |
|                     | Type             | String  |       |         |
|                     | Format           | A20     |       |         |
|                     | Measurement      | Nominal |       |         |
|                     | Role             | Input   |       |         |
| Valid Values        |                  |         | 3     | 60.0%   |
|                     | Multivitamin     |         | 1     | 20.0%   |
|                     | Xamine, Tutsocol |         | 1     | 20.0%   |

## EXERCISE 2.7

**Passport**

|                     |             | Value             | Count | Percent |
|---------------------|-------------|-------------------|-------|---------|
| Standard Attributes | Position    | 2                 |       |         |
|                     | Label       | <none>            |       |         |
|                     | Type        | Numeric           |       |         |
|                     | Format      | F8                |       |         |
|                     | Measurement | Nominal           |       |         |
|                     | Role        | Input             |       |         |
| Valid Values        | 1           | Yes               | 2     | 40.0%   |
|                     | 2           | No                | 3     | 60.0%   |
|                     | 3           | Decline to answer | 0     | .0%     |

**Fired**

|                     |             | Value             | Count | Percent |
|---------------------|-------------|-------------------|-------|---------|
| Standard Attributes | Position    | 3                 |       |         |
|                     | Label       | <none>            |       |         |
|                     | Type        | Numeric           |       |         |
|                     | Format      | F8                |       |         |
|                     | Measurement | Nominal           |       |         |
|                     | Role        | Input             |       |         |
| Valid Values        | 1           | Yes               | 1     | 20.0%   |
|                     | 2           | No                | 3     | 60.0%   |
|                     | 3           | Decline to answer | 1     | 20.0%   |

| ER                  |             |                   |       |         |
|---------------------|-------------|-------------------|-------|---------|
|                     |             | Value             | Count | Percent |
| Standard Attributes | Position    | 4                 |       |         |
|                     | Label       | <none>            |       |         |
|                     | Type        | Numeric           |       |         |
|                     | Format      | F8                |       |         |
|                     | Measurement | Nominal           |       |         |
|                     | Role        | Input             |       |         |
| Valid Values        | 1           | Yes               | 2     | 40.0%   |
|                     | 2           | No                | 3     | 60.0%   |
|                     | 3           | Decline to answer | 0     | .0%     |

| DOB                             |                    |                  |
|---------------------------------|--------------------|------------------|
|                                 |                    | Value            |
| Standard Attributes             | Position           | 5                |
|                                 | Label              | <none>           |
|                                 | Type               | Numeric          |
|                                 | Format             | ADATE10          |
|                                 | Measurement        | Scale            |
|                                 | Role               | Input            |
| N                               | Valid              | 5                |
|                                 | Missing            | 0                |
| Central Tendency and Dispersion | Mean               | 8/21/1965        |
|                                 | Standard Deviation | 280683:12:07.445 |
|                                 | Percentile 25      | 1/23/1936        |
|                                 | Percentile 50      | 6/07/1974        |
|                                 | Percentile 75      | 3/01/1987        |

EXERCISE 2.8

| Dogs                |             |                   |       |         |
|---------------------|-------------|-------------------|-------|---------|
|                     |             | Value             | Count | Percent |
| Standard Attributes | Position    | 2                 |       |         |
|                     | Label       | <none>            |       |         |
|                     | Type        | Numeric           |       |         |
|                     | Format      | F8                |       |         |
|                     | Measurement | Ordinal           |       |         |
|                     | Role        | Input             |       |         |
| Valid Values        | 1           | Strongly disagree | 0     | .0%     |
|                     | 2           | Disagree          | 0     | .0%     |
|                     | 3           | Neutral           | 1     | 20.0%   |
|                     | 4           | Agree             | 1     | 20.0%   |
|                     | 5           | Strongly agree    | 3     | 60.0%   |

| Cats                |             |                   |       |         |
|---------------------|-------------|-------------------|-------|---------|
|                     |             | Value             | Count | Percent |
| Standard Attributes | Position    | 3                 |       |         |
|                     | Label       | <none>            |       |         |
|                     | Type        | Numeric           |       |         |
|                     | Format      | F8                |       |         |
|                     | Measurement | Ordinal           |       |         |
|                     | Role        | Input             |       |         |
| Valid Values        | 1           | Strongly disagree | 1     | 20.0%   |
|                     | 2           | Disagree          | 1     | 20.0%   |
|                     | 3           | Neutral           | 1     | 20.0%   |
|                     | 4           | Agree             | 0     | .0%     |
|                     | 5           | Strongly agree    | 2     | 40.0%   |

| Pets                            |                    |         |
|---------------------------------|--------------------|---------|
|                                 |                    | Value   |
| Standard Attributes             | Position           | 4       |
|                                 | Label              | <none>  |
|                                 | Type               | Numeric |
|                                 | Format             | F8      |
|                                 | Measurement        | Scale   |
|                                 | Role               | Input   |
| N                               | Valid              | 5       |
|                                 | Missing            | 0       |
| Central Tendency and Dispersion | Mean               | 1.20    |
|                                 | Standard Deviation | 1.304   |
|                                 | Percentile 25      | .00     |
|                                 | Percentile 50      | 1.00    |
|                                 | Percentile 75      | 2.00    |

EXERCISE 2.9

| Blood_Type          |             |            |       |         |
|---------------------|-------------|------------|-------|---------|
|                     |             | Value      | Count | Percent |
| Standard Attributes | Position    | 2          |       |         |
|                     | Label       | <none>     |       |         |
|                     | Type        | Numeric    |       |         |
|                     | Format      | F8         |       |         |
|                     | Measurement | Nominal    |       |         |
|                     | Role        | Input      |       |         |
| Valid Values        | 1           | A-         | 1     | 20.0%   |
|                     | 2           | A+         | 0     | .0%     |
|                     | 3           | B-         | 0     | .0%     |
|                     | 4           | B+         | 1     | 20.0%   |
|                     | 5           | AB-        | 0     | .0%     |
|                     | 6           | AB+        | 1     | 20.0%   |
|                     | 7           | O-         | 1     | 20.0%   |
|                     | 8           | O+         | 0     | .0%     |
|                     | 9           | Don't know | 1     | 20.0%   |

| Gender              |             |         |       |         |
|---------------------|-------------|---------|-------|---------|
|                     |             | Value   | Count | Percent |
| Standard Attributes | Position    | 3       |       |         |
|                     | Label       | <none>  |       |         |
|                     | Type        | Numeric |       |         |
|                     | Format      | F8      |       |         |
|                     | Measurement | Nominal |       |         |
|                     | Role        | Input   |       |         |
| Valid Values        | 1           | Female  | 2     | 40.0%   |
|                     | 2           | Male    | 3     | 60.0%   |

| Prior_Donor         |             |         |       |         |
|---------------------|-------------|---------|-------|---------|
|                     |             | Value   | Count | Percent |
| Standard Attributes | Position    | 4       |       |         |
|                     | Label       | <none>  |       |         |
|                     | Type        | Numeric |       |         |
|                     | Format      | F8      |       |         |
|                     | Measurement | Nominal |       |         |
|                     | Role        | Input   |       |         |
| Valid Values        | 1           | Yes     | 2     | 40.0%   |
|                     | 2           | No      | 3     | 60.0%   |

EXERCISE 2.10

| Entree_Food         |             |            |       |         |
|---------------------|-------------|------------|-------|---------|
|                     |             | Value      | Count | Percent |
| Standard Attributes | Position    | 2          |       |         |
|                     | Label       | <none>     |       |         |
|                     | Type        | Numeric    |       |         |
|                     | Format      | F8         |       |         |
|                     | Measurement | Nominal    |       |         |
|                     | Role        | Input      |       |         |
| Valid Values        | 1           | Fish       | 4     | 80.0%   |
|                     | 2           | Chicken    | 0     | .0%     |
|                     | 3           | Beef       | 1     | 20.0%   |
|                     | 4           | Vegetarian | 0     | .0%     |

| Entree_Quality                  |                    |         |
|---------------------------------|--------------------|---------|
|                                 |                    | Value   |
| Standard Attributes             | Position           | 3       |
|                                 | Label              | <none>  |
|                                 | Type               | Numeric |
|                                 | Format             | F8      |
|                                 | Measurement        | Scale   |
|                                 | Role               | Input   |
| N                               | Valid              | 5       |
|                                 | Missing            | 0       |
|                                 | Mean               | 8.60    |
| Central Tendency and Dispersion | Standard Deviation | 1.140   |
|                                 | Percentile 25      | 8.00    |
|                                 | Percentile 50      | 9.00    |
|                                 | Percentile 75      | 9.00    |

| Dessert_Quality                 |                    |         |
|---------------------------------|--------------------|---------|
|                                 |                    | Value   |
| Standard Attributes             | Position           | 4       |
|                                 | Label              | <none>  |
|                                 | Type               | Numeric |
|                                 | Format             | F8      |
|                                 | Measurement        | Scale   |
|                                 | Role               | Input   |
| N                               | Valid              | 5       |
|                                 | Missing            | 0       |
|                                 | Mean               | 8.80    |
| Central Tendency and Dispersion | Standard Deviation | 1.304   |
|                                 | Percentile 25      | 8.00    |
|                                 | Percentile 50      | 9.00    |
|                                 | Percentile 75      | 10.00   |