# NU727 Week 8: Scenario and Database

Overview: The hypothetical database has been organized and arranged for data entry.  You are to read the scenario, and visually review the data base and the variables.  Note in particular the additional information that will be needed to properly input the figures and to interpret the results.

Hypothetical Scenario:  The nurses working in the PACU unit of a large acute care hospital in the Northeast were noted through observations that they were limited in their knowledge about pulse oximetry.  The nurse manager of the unit requested a researcher from a local graduate nursing program to help the nurses by providing an educational program on the use of the pulse oximeter—what it measures, how to take a proper reading and to explain the meaning of the measurement.  The researcher, after some discussion with the nurse manager and others, received permission from the IRB of the hospital to conduct a quantitative study involving the use of the pulse oximeter. (Scenario adapted from research article by Harper, 2004)

Research Question: What is the effect of an educational program on pulse oximetry knowledge for nurses working in the PACU?

Design: one group pretest and posttest design; level of significance  p=0.05

Intervention:  educational program (IV)

**Outcome measures:** scores of the posttest (DV) as compared to the pretest (DV).

Total score possible: 100 points

Assumptions:

* All nurses working in the PACU gave written consent to participate and a random sample of 30 nurses was selected from that group.
* The 30 nurses met the inclusion criteria.
* The pretest and posttest were constructed to meet published standards and had content validity.  The reliability of the instrument was found to be r=0.75   The sample of nurses were not told of their pretest scores.
* The pretest was given *prior* to the educational intervention
* The educational program met the manufacturer guidelines for use of the pulse oximeter and procedures and various texts on the proper use and reading were used as references in putting the one-hour program together.

DATABASE—HYPOTHETICAL CASE: NURSES’ KNOWLEDGE OF PULSE OXIMETRY

n=30

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Subject Code** | **Gender/code** | **Exact age** | **Years of Experience/code\*** | **Pretest scores** | **Posttest scores** |
| 01 | M | 34 | 5 | 75 | 89 |
| 02 | M | 46 | 7 | 80 | 82 |
| 03 | F | 26 | 2 | 70 | 80 |
| 04 | F | 28 | 3 | 65 | 82 |
| 05 | F | 44 | 8 | 75 | 75 |
| 06 | F | 41 | 6 | 85 | 92 |
| 07 | F | 38 | 5 | 83 | 89 |
| 08 | M | 35 | 7 | 82 | 88 |
| 09 | F | 30 | 3 | 90 | 86 |
| 10 | M | 28 | 2 | 93 | 85 |
| 11 | F | 50 | 15 | 82 | 85 |
| 12 | F | 51 | 17 | 88 | 80 |
| 13 | F | 47 | 12 | 96 | 92 |
| 14 | M | 38 | 8 | 91 | 87 |
| 15 | M | 40 | 10 | 98 | 100 |
| 16 | M | 27 | 3 | 85 | 92 |
| 17 | M | 32 | 4 | 83 | 85 |
| 18 | F | 42 | 9 | 76 | 83 |
| 19 | F | 38 | 6 | 78 | 82 |
| 20 | F | 39 | 7 | 80 | 80 |
| 21 | F | 52 | 20 | 96 | 100 |
| 22 | F | 35 | 10 | 65 | 85 |
| 23 | F | 45 | 11 | 68 | 78 |
| 24 | M | 47 | 10 | 70 | 80 |
| 25 | M | 40 | 5 | 88 | 90 |
| 26 | M | 35 | 3 | 80 | 100 |
| 27 | F | 29 | 2 | 95 | 100 |
| 28 | F | 30 | 3 | 79 | 85 |
| 29 | F | 52 | 16 | 97 | 100 |
| 30 | M | 45 | 12 | 85 | 87 |

\*Years of Experience                   \*  Gender

       0-3  = 1                                        Male=0

       3.1-7 = 2                                      Female=1

       >7 = 3