

Logistic Regression

Chansun Hong & Colleen Orihill
COM 531
Cleveland State University

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Fictional Scenario:

CSU catering services ambitiously plans to expand its business in downtown Cleveland and needs to hire additional student employees. 274 student applications have been submitted for the limited number of catering positions. The CSU Hiring Manager is selecting students who best exude a playful warmth and generosity while connecting with the customers. He wants students who view him or herself as entertaining. With so many students applying for the limited number of catering positions, the CSU Hiring Manager needs a concrete method to identify what demographic, personality, or communication traits will predict the newly hired students to be consistently entertaining. He decided to ask the CSU School of Communication for assistance in identifying appropriate characteristics that would best predict the probability of a student entertainer. The Communication graduate students working on this research project decided to use the multivariate statistic Logistic Regression to predict the optimal student employees.

Variables from the HUMGROUP 2001 Measures were utilized for the calculations.

Research Question:

Which demographic, personality and communication style characteristics are most likely to predict the probability of an entertaining person?

Dependent Variable – Binary :

B12. I have considered being an entertainer (RECODED so that true = 1; false = 0)

Independent Variables (w/ measurement scale):**BLOCK 1**

E1. Are you male or female? (RECODED for femaleness; newvar = female as 1; male as 0)

E2. Age (years)

BLOCK 2

C8. Do you prefer action to planning for action? (Likert Scale: 1-5)

C12. Do you have frequent ups and downs in mood, either with or without apparent cause? (Likert Scale: 1-5)

C13. Would you be very unhappy if you were prevented from making social contacts? (Likert Scale: 1-5)

BLOCK 3

D6. To be friendly, I habitually acknowledge verbally other's contributions

D16. Under pressure I come across as a relaxed speaker.

D19. I always find it very easy to communicate on a one-to-one basis with strangers.

D38. I am always an extremely friendly communicator.

Recoding E1 Gender using the IF COMMAND

FILE

NEW

SYNTAX

(SPSS Syntax Editor appears)

The screenshot shows the SPSS interface. The 'Syntax1.sps - SPSS Syntax Editor' window is open, displaying the following commands:

```
IF (E1=1) newvar = 0.
IF (E1=2) newvar = 1.
```

The 'SPSS Processor is ready' message is visible at the bottom of the Syntax Editor window. In the background, the 'Data Editor' window shows a variable list with the following columns: Name, Type, Width, Decimals, Label, Values, Missing, Columns, Align, Measure. The variable 'newvar' is listed at the bottom of the list with a width of 8 and decimals of 2.

In the SPSS Syntax Editor, TYPE your recode using the IF Command. In this case the recode command is:

IF (E1=1) newvar=0.

IF (E1=2) newvar=1.

NOTE: All SPSS Syntax Editor commands must end with a period [.]

The independent variable GENDER was RECODED for femaleness; newvar = female as 1; male as 0)

RUN

ALL

The recode is complete and the new variable is created when:

- “SPSS Processor is ready” appears on the bottom of the SPSS Syntax Editor box.
- The new variable appears at the bottom of the variable list.

MINIMIZE the SPSS Syntax Editor.

