

The Locus of Control Scale

This memo discusses the Locus of Control scale. Social psychological scales, such as locus of control, play an important role in research on educational attainment. The UW-BHS senior survey included seven questions which allowed for the construction of a locus of control scale (Rosenberg 1965). This memo will review the survey questions used to create the locus of control scale, suggestions for creating an index, and basic descriptive statistics for two versions of the Locus of Control scale.

In social psychology, locus of control is a term which refers to the extent to which individuals believe that they can control events and outcomes in their own lives (Rotter, 1966). Individuals with a high internal locus of control believe that events in their life are a result of their own actions, while those with a low external locus of control believe that the events in their life are primarily a result of outside forces (e.g. other people, fate, chance) acting upon them. Prior analyses have displayed a positive association between locus of control and educational achievement (e.g. Ekstrom et al. 1986; Ross and Broh, 2000). For more on locus of control see Rotter's article 'Generalized expectancies for internal versus external control of reinforcement' (1966).

Locus of Control Questions in the UWBHS

To measure locus of control, the Senior Survey included six questions that constitute a locus of control scale. The questions are listed below. The response option for all six questions was a four point scale that included strongly agree (1), agree (2), disagree (3), and strongly disagree (4). These questions are scattered throughout the survey.

s007. In my life, good luck is more important than hard work for success;
s009. When I make plans, I am almost certain I can make them work;
s013. Every time I try to go ahead, something or somebody stops me;
s017. My plans hardly ever work out, so planning makes me unhappy;
s105. I do not have enough control over the direction my life is taking;
s106. Chance and luck are very important for what happens in my life.

Creating the Locus of Control Scale

The construction of the locus of control scale is straightforward—it is the mean of the six questions that constitute the scale. The SPSS syntax used to create the scale is included at the end of the memo. The syntax creates two variables—locussc4 and locusscl. The only difference between these measures is the magnitude of their scale. Locussc4 is a scale from 1 to 4 with high values indicating high internal locus, while locusscl is a scale from 0 to 1 with high values indicating a high internal locus.

Descriptive Statistics for Locus of Control Scales

		N	Minimum	Maximum	Mean	Std. Deviation
locusscl	High	9575	.00	1.00	.6935	.14532
Locus Control, (0-1) mean.3(Q7,Q9r,Q13,Q17,Q105,Q106)						
locussc4	High	9575	1.00	4.00	3.0804	.43595
Locus Control, (0-4) mean.3(Q7,Q9r,Q13,Q17,Q105,Q106)						

Citations

Ekstrom, Ruth B., Margaret E. Goertz, Judith M. Pollack and Donald A. Rock. 1986. "Who Drops Out and Why? Findings From a National Study." *College Teachers Record* 87(3):356-373.

Ross, Catherine E and Beckett A Broh. 2000. "The Roles of Self-Esteem and the Sense of Personal Control in the Academic Achievement Process." *Sociology of Education* 73:270-284

Rotter, JB. 1996. "Generalized expectancies for internal versus external control of reinforcement." *Psychological Monographs*. Vol. 80(1).

SPSS Syntax to Create Locus of Control Measure

Note: comments explaining reverse coding and the minimum threshold of valid responses to create the index are included in the syntax below and they are italicized

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**** CREATING LOCUS OF CONTROL SCALE utilizing: S007 S009 S013 S017 S105 S106.
* S007 In my life, good luck is more impntnt than hard wk for succss (+).
* S009 When I make plans, I am almost certain I can make them work (neg).
* S013 Every time I try to get ahead, smthng or smbdy stops me (+).
* S017 My plans hardly evr work out, so plnng only makes me unhappy (+).
* S105 Agree? I don't have enough control over direction of my life (+).
* S106 Agree? Chance and luck are impntnt for what happens in my life (+).

* 1 'Strongly Agree'
* 2 'Agree'
* 3 'Disagree'
* 4 'Strongly Disagree' .
```

**Reverse coding Question 9. *A review of question 9 illustrates that a response of strongly disagree (4) indicates an external locus while a response of strongly disagree (4) on the other five questions indicates an internal locus. *To make the responses match across all seven questions, question 9 is reverse coded into a new variable so that a value of 4 indicates an internal locus (as it does on Qs7, 13, 17, 105, and 106).*

```
missing values S007 S009 S013 S017 S105 S106 (-99797 thru -999) .
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```
do repeat
a = S009 /
b = S009r .
compute b = (a * -1 ) + 5 .
end repeat .
variable label S009r 'Rev code, When I make plans, I can make them work' .
** NOTE: compute b = (a * -1 ) + 5 is the same as the following.
* if a = 1 b = 4 .
* if a = 2 b = 3 .
* if a = 3 b = 2 .
* if a = 4 b = 1 .
```

** The percentage of cases with missing data is very low for these 6 questions—it is in the range of 1 to 3.5% missing for each indicator. *However across all seven questions the percentage of cases with at least one missing value is 6%. *As the data appear to be missing at random and given that we want to minimize the number of cases with missing values, the self-esteem scale is constructed for any cases that have at least three valid responses to any 6 of the self esteem questions (meaning if a respondent, for example, has three valid responses on any of the six questions the mean of those three questions will be his/her score on the scale). *The final version of the scale has values for 99.2% of all cases.*

```
compute locussc4=mean.3(S007, S009r, S013, S017, S105, S106) .
compute locussc1 = ((locussc4 - 1) / 3) .
variable label locussc4 'High Locus Control, (0-4)
Mean.3(Q7,Q9r,Q13,Q17,Q105,Q106' .
variable label locussc1 'High Locus Control, (0-1)
mean.3(Q7,Q9r,Q13,Q17,Q105,Q106' .
value labels S009r
1 'Strongly agree'
2 'Agree'
3 'Disagree'
4 'Strongly Disagree' .
```