

FACTOR ANALYSIS OF THE EDINBURGH
HANDEDNESS INVENTORY

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Richardson (1978) explained the value of factor analysis as a means of appraising multivariate instruments for measuring handedness. One of the leading instruments is the handedness preference questionnaire known as the Edinburgh Handedness Inventory (Oldfield, 1971) and the present author has subjected 161 completed copies of this inventory to this form of analysis. The inventory was initially distributed to subjects (college students) taking part in ear advantage experiments at the University of Sussex.

The inventory asks for preference on ten forms of manual activity and for indication of a strong or weak preference. The activities are writing, drawing, throwing, scissors, toothbrush, knife (without fork), spoon, broom (upper hand), striking match (match) and opening box (lid). A strong preference for the left hand was coded 1, weak left 2, no preference 3, weak right 4, strong right 5. Table 1 gives the means and standard deviations for each activity. The principal components analysis gave one factor with eigenvalue greater than one which in fact accounted for 62.5% of the variance (the next factor had eigenvalue .80). This replicates Richardson (1978)'s finding of a "handedness" factor. The loadings of each activity on this factor are also given in Table 1. This can be seen to suggest that opening box (lid) and broom

TABLE 1. *Factor Analysis of the Edinburgh Handedness Inventory*

Activity	Mean	S.D.	Loading on Factor (H)
Writing	4.61	.92	.89
Drawing	4.54	.96	.88
Throwing	4.18	.93	.85
Scissors	4.24	.87	.76
Toothbrush	4.13	.92	.85
Knife (without fork)	4.25	.88	.82
Spoon	4.04	.82	.82
Broom (upper hand)	3.66	.94	.60
Striking match (match)	3.95	.86	.79
Opening box (lid)	3.55	.90	.56

(upper hand) are somewhat less valuable as indicators of handedness than are the other eight among which scissors are the least highly loaded. Workers seeking to shorten the inventory now have some rational grounds on which to do so as well as confirmation that writing hand is the crucial item (though with drawing hand not far behind).

ABSTRACT

This paper suggests a way of shortening the Edinburgh Handedness Inventory.

REFERENCES

- OLDFIELD, R.C. The assessment and analysis of handedness: the Edinburgh inventory. *Neuropsychologia*, 9: 97-113, 1971.
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