Acta Genet Med Gemellol 34:113-114 (1985)

Received 6 November 1984

SHORT NOTE

TWINAN: Twin Data Analysis Program for Microcomputers

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Abstract. A BASIC computer program designed to facilitate analysis of twin data is presented. The program estimates genetic parameters and tests their statistical significance based on the genetic and environmental hypothesis.

Key words: Twin data, Microcomputers, Analysis of variance

TWINAN is a twin data analysis program for microcomputers that estimates and tests genetic parameters based on MZ and DZ twin data. The original program was in a FORTRAN language and described the twin analysis model of Christian et al [1]. The program has a two step approach, that is, twin data are analyzed for single classification ANOVA with equal sample size for two types of twins. The results of means and mean squares with degrees of freedom are then used in the TWINAN-FOR program to estimate genetic variances and heritabilities, and to test the statistical significance of these estimates. Over two dozen twin investigators have requested the program since the article was published. The programs were sent either by punched cards or magnetic tapes. A new version of the TWINAN program has been implemented for IBM PC microcomputers using BASIC language. The program can be used with raw data or with the output from analysis of variance of twin data. From the raw data analysis, mean absolute differences between MZ and DZ, and range statistics as described by Corey et al [2] are included in addition to various heritability estimates [3]. The program is interactive with the IBM PC and written on 48 bytes RAM memory with DOS 2.0 Basic and 5¼ inch disc drives. The primary output is on 5¼ diskettes to be written on an 80 column printer.

I will be pleased to send copies of it, with a manual describing its use, if a 5¼ inch floppy diskette is provided.

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