# A Test of Hypothesis on Familial Correlations

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**Abstract**
When familial data are analysed, the model usually employed assumes independence of family observations and constancy of interclass and intraclass correlations. A statistic for testing the validity of the assumptions of family independence and constant interclass and intraclass correlations is developed. The test statistic is for constant family size; it has an asymptotic chi-square distribution. An example to illustrate the theory is given using Frets's data on head lengths. A recommendation is made on how to apply the test to the general case of varying sizes. Another recommendation is made on models to be tried once the null hypothesis is rejected.