

ON THE DISTRIBUTION OF MALE FEMALE BIRTHS

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It is commonly accepted that the number of male births in a family with a given size is distributed according to the Binomial law. This hypothesis is tested for two types of families of conceptually different nature, namely for a whole population of families and for a class of families defined as "complete families". It is seen that the hypothesis is correct for the former class and is incorrect for the latter. By means of a statistical analysis it is shown that male births in complete families fail to follow a Binomial distribution due to the dependence of family size on observed trials of the sequence. We have also shown that the assumption that probability of a male birth (p) being constant over families within the country is reasonable and that it is approximately, 0.54 (standard error 0.017).

However the hypothesis $H_0 : 0.5$ is rejected at 0.05 levels of significance. In Sri Lanka, it is found that, number of children in a family is approximately a Poisson random variable with mean 3.4, at the time of the survey.