

The Genetic Effects of Consanguinity on Morbidity: A Population Study

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ABSTRACT The effect of inbreeding on morbidity is assessed through genetic estimates in terms of detrimental equivalents among the Ezhavas of Alappuzha, by using a random sample of 1204 marriages. The genetic burden manifested in total morbidity was estimated between 1.0973 and 1.1136 detrimental equivalents per gamete. It suggests that an average person carries in heterozygous condition 2-3 abnormal equivalents genes that, if made homozygous, would produce recognizable defects and disease. The high B/A ratio obtained (67.28) is suggestive that genetic load disclosed by inbreeding in the group is predominantly from mutational load. Compared with unrelated parents, offspring of consanguineous marriages have a higher risk of morbidity (Relative risk (RR) = 4.4 to 13.22). The attributable risk (AR) for the whole sample is about fifty percent. It shows that inbreeding has a major impact on morbidity.