

INCREASED HOMOZYGOSITY NEGATIVELY AFFECTS FITNESS

It is not easy to measure fertility in populations where it is more cultural than natural. Swinford et al. (PNAS¹) investigated the fertility of Namibian Himba, an endogamous agro-pastoralist population, that until very recently practiced natural fertility. The population has recently experienced a bottleneck which, in addition to consanguineous marriages, has led to a notable increase in haplotype sharing (long runs of homozygosity) in many of the 681 analyzed individuals. The study revealed that higher homozygosity is significantly associated with lower fertility.

In simpler terms: heterozygosity is better (from a different, but equally interesting point of view), as evidenced in a 2019 paper by Xu et al. (BMC Genetics²).

If extrapolation is permitted, the idea of a “pure race” is genetically meaningless.

1. <https://www.pnas.org/doi/10.1073/pnas.2309552120>
2. <https://bmcbgenomdata.biomedcentral.com/articles/10.1186/s12863-019-0758-4>