Hardy-Weinberg

AJR

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Suppose that we observe $n = 25$ individuals, and we get the following distribution of tasters:

10 (TT), 5(tT or Tt), 10 (tt)

$O_1 = 10$
$O_2 = 5$
$O_3 = 10$

What is the total number of T alleles?
What is the total number of t alleles?

What is the total number of alleles?

p = Proportion of alleles that are T =

q = Proportion of alleles that are t =

E_1 = Expected number of TT = np^2

E_2 = Expected number of Tt or tT = $n2pq$

E_3 = Expected number of TT: nq^2

Compute a χ^2 test statistic:

$(O_1 - E_1)/E_1 + (O_2 - E_2)/E_2 + (O_3 - E_3)/E_3 =$

```
##  significance_level critical_value
##               0.500          0.455
##               0.100          2.706
##               0.050          3.841
##               0.020          5.412
##               0.010          6.635
##               0.001         10.827
```