

Biostatistics 2016 // Homework assignment #4

Practical case #1

A University conducted a survey of its recent graduates to collect demographic and health information for future planning purposes as well as to assess students' satisfaction with their undergraduate experiences. The survey revealed that a substantial proportion of students were not engaging in regular exercise. Based on the table below, is there a relationship between the gender and the frequency of exercise?

Gender	No regular exercise	Sporadic exercise	Regular exercise	Total
Male	103	342	56	501
Female	151	296	43	490
Total	254	638	99	991

Practical case #2

An asthma prevalence study was conducted in 2013. Based on the table below, is there an association between residence and asthma?

Residence	Number of people with asthma	Number of people without asthma	Total
Big city	11 562	103 526	115 088
Suburb	7 956	85 124	93 080
Small town	2 014	52 304	54 318
Rural	523	12 034	12 557
Total	22 055	252 988	275 043

Practical case #3

The table below presents the results from a study on obesity and diabetes in 3 857 residents of Plovdiv. Based on these data, is there an association between obesity and diabetes?

BMI	Number of people with diabetes	Number of people without diabetes	Total
Underweight	12	536	548
Normal weight	36	1423	1 459
Overweight	136	856	992
Obese	256	602	858
Total	440	3417	3 857