**BIRZEIT UNIVERSITY**

**NURS(232)**

**Homework 2. Student ID: 1202109**

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1. During a period of 5 years 100 new cases of obstructive lung disease were diagnosed among 1100 children 2 months of age at start of follow-up. The mean level of air pollution during the period was measured. The cases and the children with no lung disease showed the following distribution according to air pollution at their place of residence.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | Cases | Non-cases | Total |
| Pollution | Low  Medium  High | 50  20  30 | 700  150  150 | 750  170  180 |

1. Please calculate the relative risk for obstructive lung disease for those exposed to medium and then to high level of pollution using those exposed to low level of air pollution as the reference category.

What are your conclusions from this result?

**Solution: RR= R (exposed) / R(non exposed)**

**RR(Medium)= Re / Ro**

**= (20/170)/(50/750)**

**= (1.76-1)\*100**

**= 76%**

**RR(High)= Re /Ro**

**= (30/180)/(50/750)**

**= (2.5-1)\*100**

**= 150%**

**Relative risk(High& Medium) > 1 increased risk (There’s a positive association)**

2.Case-control study- pancreatic cancer and coffee drinking

pancreatic cancer

cases controls

|  |  |
| --- | --- |
| 28  Yes  no  Coffee    **N** | 280 |
| 140 | 2600 |

1. 2880

Please calculate the odds ratio(OR) what do you conclude?

**Solution: OR= Odds of exposure among cases / Odds of exposure among controls.**

**OR= (28/140)/(280/2600)**

**OR= (28\*2600)/( 140\*280)**

**OR= 1.85**

**OR > 1 it means that there’s an association between the exposure & the disease.**