**BIRZEIT UNIVERSITY**

**NURS (232)**

 **Homework 2.**

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 | LowMediumHigh | 502030 | 700150150 | 750170180 |

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.**
* 1. RR= R of medium exposure/ R of low exposure

 = (20/170)/ (50/750) = 0.11/0.06= 1.8

Positive (80% increase in risk).

* 2. RR= R of high exposure/ R of low exposure

 = (30/180)/ (50/750) = 0.16/0.06= 2.6

 Positive (160% increase in risk).

**-What are your conclusions from this result?**

RR of medium exposure is lower than the RR of high exposure, so exposure to air pollution increases the risk of getting obstructive lung disease.

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

 pancreatic cancer

 cases controls

|  |  |
| --- | --- |
| 28Yes noCoffee  **N** | 280 |
| 140 | 2600 |

1. 2880
* **Please calculate the odds ratio (OR) what do you conclude?**

OR= Odds of exposure among cases/ Odds of exposure among controls

 = 28\*2600/280\*140= 1.8

- There is an 80% increase in risk.

OR is higher than 1 which means that the odds of pancreatic cancer happening with the exposure to coffee drinking.