Re: Is this enough information to make an inference?

Source: http://sci.tech−archive.net/Archive/sci.stat.math/2007−12/msg00568.html

- *From*: "michalchik@xxxxxxx" <michalchik@xxxxxxx>

- *Date*: Sat, 29 Dec 2007 16:57:49 −0800 (PST)

On Dec 29, 2:38 pm, David Winsemius <doe_s...@xxxxxxxxxxx> wrote:

> "Luis A. Afonso" <lic...@xxxxxxxxxxx> wrote
> innews:15951711.1198940177045.JavaMail.jakarta@xxxxxxxxxxxxxxxxxxxxxx:
>
> MichaelMichalchik
>
> _____p(obese|virus) = 0.40
>
> Nooooo, that was NOT what was stated. The probability interpretation of
> the English language sentence 3) <see below> would be:
> Pr(virus|Obese=TRUE) = 0.40
>
> _____p(obese) = 0.30
> _____p(virus) = 0.20
>
> <insert original problem assumptions that were snipped>
>
> Given:
>
> 1) The virus is a causal risk factor for obesity and that
> obesity is
>
> not a risk factor for catching the virus.
>
> 2) 20% of the general population tests positive for the virus.

3) 40% of obese people test positive for the virus.

4) 30% of the united states is obese.

−−−−resume LA's clumsy efforts at "help"−−−−−−−−−

LA> 1) p(obese|virus)= p(obese and virus) / p(virus)

The question that was posed by the homework−help−seeker is the extent to which obesity prevalence exceeds what would be expected under an assumption of independence. If obesity and virus were independent then their joint prevalence would be what you suggest. But it isn't, ... is it?

LA> 2) p(obese)*p(virus)
LA> (these two features are INDEPENDENT as you say at 1).

No. That was nowhere implied. In fact. the opposite was suggested.

Luis Amaral Afonso

Luis, are you really convinced that you should be attempting to do even simple probability homework on−line?

*** Date: Dec 28, 2007 4:09 PM
Author: MichaelMichalchik
Subject: Is this enough information to make an inference?

A link has been discovered between a certain virus (adeno−virus 36) and obesity. Casual mechanisms are being elucidated biochemically but I was wondering if there are any general statement we can make about

the virus's contribution to the obesity epidemic.
Given:

1) The virus is a causal risk factor for obesity and that obesity is not a risk factor for catching the virus. 2) 20% of the general population tests positive for the virus. 3) 40% of obese people test positive for the virus. 4) 30% of the united states is obese.

Can we infer?
A) What percantage of obesity in the general population is attributable to the effect of the virus.
B) What is the likelyhood that you will become obese if you contract the virus.***− Hide quoted text −

− Show quoted text −

I am not a homework help seeker. I would say as much if I were. I am not sure that I can prove it to you beyond you looking back over my usenet history. I am 40 years old and a science teacher. I am probably used to phrasing things in a way that sound like homework problems.
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