

B Takkouche et al. Epidemiology. May (2001) Vol. 12 #3 p 345.

A prospective study of stress and its proposed association with the common cold.

The common cold is a significant reported cause of work absence. What is not clear is if people who take time off work for colds are also those who, for internal reasons, perceive more stress or are they those who experience a more adverse psychosocial environment?

1,149 adults took part in prospective study based at one, large institution.

At the beginning of the one-year study, all participants completed questionnaires to determine or measure: recent stressful events, negative affect, positive affect and perceived stress.

Current cases of colds, or a history of asthma, or chronic obstructive pulmonary disease were excluded at the outset.

During the follow up period, participants were surveyed every 10 weeks, to report on symptoms of colds and to confirm that other measures were unchanged.

Cold defined by choice of 8 symptoms: runny nose, sneezing, nasal congestion, headache, chills, sore throat, cough and malaise. The exact choice of these was calculated after the data collection period in order to maximise the sensitivity and specificity of diagnosis.

77.9% completed the full course.

365 colds occurred during the year, (32%).

The four measures of stress (recent stressful events, negative affect, positive affect and perceived stress) were correlated with each other, the strongest correlation being; perceived stress and negative affect. Negative affect and positive affect were anti-correlated, as expected.

Incidental risk factors for catching a cold were:

History of rhinitis IRR = 2.7 (95% CI = 2.3 to 3.2).

History of other respiratory disease IRR = 3.3 (95% CI = 2.7 to 4.0)

All four exposures (recent stressful events, negative affect, positive affect and perceived stress) showed a Dose Response relationship as illustrated by the following extreme findings:

4 th Quartile:	Incident Rate Ratio
Negative affect	3.7 (95% CI = 2.2 to 6.3)
Perceived Stress	2.8 (95% CI = 1.7 to 4.6)
Positive affect	0.6 (95% CI = 0.3 to 1.0)
Stressful events	2.0 (95% CI = 1.2 to 3.3)

Positive affect shows a (just significant) protective effect.

Comment

The study is good in the sense that it does not measure the sickness absence effect of having a cold, just the symptoms (which should be more reliably reported). This approach removes a further level of subjective interpretation from the results. However, it would also be interesting to determine the relationship between sickness absence due to cold and the four risk factors.

The clearest result is that negative affect is prospectively associated with reporting symptoms of the common cold. It is not clear whether negative affect increases vulnerability to viral infection or whether increased vulnerability to viral infection is correlated with negative affect (e.g. being of a common origin).

