

GWEvans et al. Journal of Applied Psychology Oct (2000) Vol. 85 #5 p.779.

A study of low-level noise, and stress.

Previous research has indicated that cardiovascular responses to acute noise habituate rapidly i.e. after a while, acute noise has no measurable effect. Previous studies also show uncontrollable loud noise reduces problem solving ability. Both outcomes are familiar stress responses.

40 experienced female office workers were assigned at random to a well-controlled trial of office work with or without open office noise at 55 dBA.

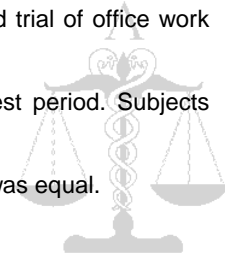
Epinephrine, nor epinephrine and cortisol were measured before and after the test period. Subjects were asked to solve insoluble problems after the test period.

Typing performance (errors and speed) was unaffected by noise. Self-report stress was equal.

Epinephrine was raised in noise exposed group.

Puzzle solving attempts were much fewer in the noise-exposed group.

The noise group was also less physically active during the trial (measured by movement of office furniture.)



Comment

Either the increased effort to perform the office tasks in the noise exposed group has taken its toll on the willingness to try to solve novel problems, or the noise exposed group were quicker to realise that the problems were insoluble!

The increase in epinephrine (proposed as an indicator of physiological stress) was not large. Chronically increased epinephrine has been associated with increased risk of heart disease.

Self reported stress does not correlate with other, more objective, signs. Uncertainty of the links between physiological responses and the now well accepted occupational stressors continues to cause difficulties in establishing a causal link between exposure to stressors and, harm.

Habituation may have occurred if the trial had been extended.