

IS MEDIA INFORMATION THAT SMOKING CAUSES ILLNESS A SELF-FULFILLING PROPHECY?¹

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Summary.—Of 528 men, those 72 who derived information from the media, showed a lower rate of survival, i.e., more deaths from cancer, coronary heart disease, etc. Stress increased by constant repetition of evil consequences of smoking might constitute a self-fulfilling prophecy.

There has been a very widespread newspaper coverage of the view that smoking causes cancer and coronary heart disease as well as other serious illnesses. The probability that such publicity may cause stress in smokers has been raised by Gantt and Lincoln (2, 3, 4) in relation to studies by several groups (6, 7, 8). It deserves an empirical study.

The data to be discussed were derived from a prospective study begun in Heidelberg (West Germany) in 1973 in which some 3,500 probands were interviewed, given personality inventories to ascertain whether they were cancer-prone, coronary heart disease-prone, or healthy according to a system which has given reasonably accurate predictions for periods of 10 yr. or more (1, 5). Also, they were asked questions regarding cigarette consumption, drinking patterns, etc. Mortality was ascertained in 1986, i.e., after 13 yr.

A number of questions concerning belief in the effects of smoking on health, and the derivation of such beliefs, were asked of a relatively small subsample of 528 men. To the first question, "Are you convinced that as a smoker you will be very likely to develop lung cancer, heart infarct, or some other smoking related disease?", 196 persons replied "No." Of those who answered "Yes" to this question, they were asked: "What caused you to develop this conviction?" There were three possible answers: (a) "My own experience, e.g., the observation that smoking wasn't doing me any good." (b) Public expositions and information, e.g., newspaper articles concerning the medical harm done by smoking. (c) Own experience as well as public information.

Probands were divided into four groups according to their answers. These groups were not significantly differentiated by personality type, or intensity and duration of smoking. The table shows the number of probands in each group dying of cancer, infarct-stroke (CHD), or other causes. It may be seen that survival rates are very similar for those who answered "No,"

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who gave their own experience as a reason for answering "Yes," or who answered "Yes" by a combination of experience and information. The group deriving its information entirely from the media, however, showed a significantly lower rate of survival (by χ^2), showing more deaths from cancer, coronary heart disease and other causes.

| Answer | n | Death from: | | | | |
|-------------------|-----|-------------|-----|--------------|----------|----|
| | | Ca | CHD | Other Causes | Survival | % |
| No | 196 | 16 | 17 | 18 | 145 | 74 |
| Yes thought: | | | | | | |
| a. Own experience | 134 | 15 | 15 | 16 | 88 | 66 |
| b. Media | 72 | 22 | 24 | 17 | 9 | 12 |
| c. Both a and b | 126 | 10 | 11 | 15 | 90 | 71 |

These data lend some support to the hypothesis of Gantt and Lincoln, suggesting that the constant repetition of the evil consequences of cigarette smoking on health might add to the stress of continuing smokers and so might constitute a self-fulfilling prophecy, in the sense that the added stress might be a factor in causing deaths from cancer, coronary heart disease or other causes. This conclusion obviously requires replication of the study, if the hypothesis is to be firmly established.

REFERENCES

1. EYSENCK, H. J. The respective importance of personality, cigarette smoking and interaction effects for the genesis of cancer and coronary heart disease. *Personality and Individual Differences*, 1988, 9, 453-469.
2. GANTT, R. C., & LINCOLN, J. E. Coronary heart disease among female smokers. *New England Journal of Medicine*, 1988, 318, 1396. (a)
3. GANTT, R. C., & LINCOLN, J. E. Re: "Effects of passive smoking in the Multiple Risks Factor Intervention Trial." *American Journal of Epidemiology*, 1988, 127. (b)
4. GANTT, R. C., & LINCOLN, J. E. Marriage to a smoker and lung cancer risks. *American Journal of Public Health*, 1988, 78, 99. (c)
5. GROSSARTH-MATICEK, R., EYSENCK, H. J., & VETTER, H. Personality type, smoking habit and their interaction as predictor of cancer and coronary heart disease. *Personality and Individual Differences*, 1988, 9, 479-495.
6. HUMBLE, C. G., SAMET, J. M., & PATHAK, D. R. Marriage to smoker and lung cancer risks. *American Journal of Public Health*, 1987, 77, 598-602.
7. SVENDSEN, K. H., KULLER, I. H., MARTIN, M. I., *et al.* Effects of passive smoking in the Multiple Risks Factor Intervention Trial. *American Journal of Epidemiology*, 1987, 126, 783-795.
8. WILLETT, W. C., GREEN, A., STAMPFER, M. Z., *et al.* Relative and absolute excess risks of coronary heart disease among women who smoke cigarettes. *New England Journal of Medicine*, 1987, 317, 1303-1309.

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