Summary

Noise level in our cities is rising alarmingly. And it has since passed the safety levels permitted by WHO and other recognised world bodies. Medical experiments reveal that noise where we work, live and sleep can cut down our efficiency, impairing our peace of mind, health and comfort. Noise can be nasty, resulting in sleeplessness, tired nerves and poor digestion. Increasingly common is occupational deafness, as our society gets noisier.

In view of the immense applied value of noise research and contradictory findings of the earlier studies, the present investigator decided to investigate the effect of noise on mental output.

A study based on "Block Randomized Factorial Design" involving 60 subjects - 30 belonging to high noise sensitivity group and 30 belonging to low noise sensitivity group was conducted on the students and research scholars of M.D. University, Rohtak. Modified version of Weinstein's Noise Sensitivity Scale (1989) was administered on a population of 400 and norms were computed on the basis of the results. Out of this population, the sample of 60 Ss was chosen at random. The subjects were given an audiometric screening to delete those persons not coming within the normal range of hearing. The mental output of the subjects was recorded while doing multiplications under either
continuous community noise (110 dB) or quiet. The physiological energy consumed in each case was inferred from the drop in the skin resistance of forearm.

The following hypotheses were formulated for testing in the present study.

1. Since noise is claimed to have a distracting property, it was hypothesized that there would be a quantitative fall in the mental work under noisy condition.

2. There would be a greater fall in skin resistance due to work under noisy condition than working under quiet condition indicating greater physiological energy expenditure.

3. The effects of hypotheses I & II would be more pronounced in the case of high noise sensitivity Ss.

4. There would be an interaction between the nature of working environment (Quiet/Noise) and noise sensitivity level.

5. The subjective data would be also indicating the adverse effects of noise particularly in the case of high noise sensitivity group.

Out of the five hypotheses, four were supported by the obtained results. The study did not yield significant differences when the variable of noise sensitivity was
manipulated as predicted by the third hypothesis.

A significant interaction between the two independent variables was obtained. It is of great importance since it points out that neither noise sensitivity level nor the type of working environment involved alone is so effective. Only when these factors interact with each other, that the performance is affected.

Statistical analysis of the data was done by employing parametric analysis of variance and t-test.

Findings of this study have immense applied value as already pointed out. The employer should make it a point to include the noise sensitivity scale in the personnel selection procedures so that the individuals can be assigned to various jobs on the basis of their noise sensitivity level. If this is done their efficiency is bound to go up.

The investigator is fully aware of the limitations of this study due to a number of constraints like time and financing, due to which the sample size had to be restricted. In view of these limitations and late realisation of the importance of noise research in India, the present investigator would once again like to emphasize the need of more broad-based work in the area.