

**Effects of Noise Pollution on Academic Performance and on Impairment of Hearing of
School Children in Nungua**

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ABSTRACT

Noise levels in Nungua areas were measured and the effects of noise pollution on memory and hearing were studied. Noise levels were measured in twenty selected schools from Nungua area and it was discovered that, all the schools are exposed to very high level of noise. All the schools studied produced noise levels above 55 dBA, the Environmental Protection Agency recommended Noise Level Standards and Guidelines in educational facilities. A maximum noise level (L_{max}) value of 95.8 dBA and a minimum noise level (L_{min}) value 51.6 dBA were recorded. A peak noise level (L_1) value of 123.6 dBA and some 90% of the measured schools presented equivalent noise levels (L_{eq}) over 72.5dBA. Pupils were exposed to high noise pollution level (L_{NP}) value of 95.8dBA. The day and night noise levels (L_{dn}) were all above 72dBA. The results of interviews with respondents, showed that, 11% were found to be sensitive to listening interference, 18% sensitive to fear, 6% sensitive to sleep disturbance and 11% would keep their windows shut when noise levels go high. The study found out that about a quarter of the pupils sampled do not hear properly. The study also found out that about 98% of schools do not have acoustic materials to minimize noise levels. School children have been exposed to high noise levels which have impaired the pupils reading comprehension and long-term memory. The chronic Nungua community noise has weakened the school children's ability to perform well in class and also limited their memory recall rate. High noise level in Nungua is a major irritant and has impaired children hearing. Noise interferes with complex task performance, modifies social behaviour and causes annoyance. Locations of schools have effects on children academic performance.

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