Prevalence and correlates of noise induced hearing loss among traffic policemen in the city of Colombo, Sri Lanka

NS Nagodawithana[1], A Pathmeswaran[2], AS Pannila[3], N Sathiakumar[4], AR Wickramasinghe[2]

1 Ministry of Health, Colombo, Sri Lanka.
2 Department of Public Health, Faculty of Medicine, University of Kelaniya, Sri Lanka.
3 Industrial Technology Institute, Colombo, Sri Lanka.
4 Department of Epidemiology, School of Public Health, University of Alabama, Birmingham, USA.

Introduction

•Environmental pollution by noise is a major public health problem in the world.

•The city of Colombo in Sri Lanka is vulnerable to environmental pollution by noise.

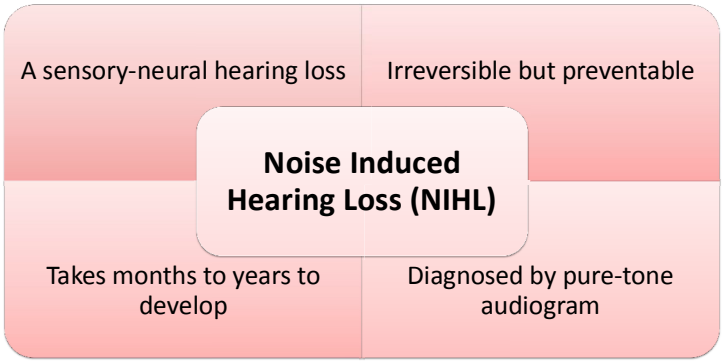
•Transportation (traffic) noise is one of the main sources of environmental noise pollution.

•Traffic policemen are working long hours in the middle of traffic at the roads.

•As a result of that traffic policemen are exposing to environmental noise (mainly to traffic noise) daily for long periods.

•Because of that they are at risk of developing health hazards due to excessive noise.

•Noise causes number of health effects to human and, out of these noise induced hearing loss (NIHL) is the most serious one



Objective

The objective of this study was to determine the prevalence and correlates of NIHL among traffic policemen in the city of Colombo.

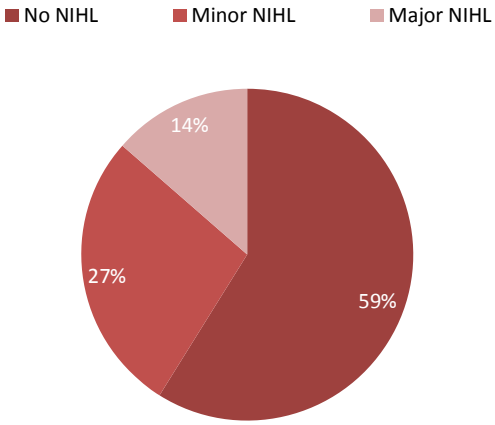
Methodology

•**Study design**
Descriptive cross sectional study
•**Study population**
All traffic policemen work in the city of Colombo
•**Sampling method**
Cluster sampling (a police station = cluster)
•**Exclusion criteria**
Participants with congenial and documented hearing problems
•**Total participants**
364 (287 attended for audiology test)
•**Study instruments**
Interviewer administered questionnaire and pure tone audiogram

Results

Some demographic and working characteristics of the participants		Number (N=364)	%
Age	18y-30y	239	65.7
	>=31y	125	34.3
Rank	Police constables	276	75.8
	Police sergeants and higher ranks	88	24.2
Duration of work as a traffic policemen in the city			
	less than 4 years	258	70.9
	more than 4 years	106	29.1
Number of hours working on roads per day			
	less than 6 hours	53	14.6
	6 to8 hours	159	43.7
	more than 8 hours	152	41.7

Distribution of participants according to audiology results (n = 287)



Correlates for noise induced hearing loss

•23 variables significantly associated with mild and major NIHL according to bi-variate analysis

•According to multi-variate analysis only "age" associated significantly with major NIHL (OR=1.088; 95% CI 1.055-1.123) while only "duration of work as a policeman" associated significantly with any NIHL (OR=1.007; 95% CI 1.005-1.009)

Conclusions

•Prevalence of NIHL among traffic policemen working in the city of Colombo was 41% (95% CI=36%–47%).
•A third of those having NIHL had major NIHL

Recommendations

•Periodic hearing assessments for traffic policemen.
•Number of hours working in the roads should be reduced.
•Traffic policemen with NIHL at present should be transferred to different sections immediately.

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