

## INTRODUCTION

- Noise is one of the important occupational hazards worldwide, and hypertension is a risk factor that could end with cardiovascular diseases, which is considered as one of the greatest reasons for disability retirement worldwide.
- Many occupational hazards has been a risk for the workers all over the world despite all the promotions and plans done by different organization<sup>1</sup>.
- Noise is persistent in the day-to-day life and can trigger many health issues. It can cause both hearing as well as non-hearing health effects<sup>2</sup>.
- Higher risk for hypertension was found among workers who crossed the mean threshold noise limit<sup>3,4</sup>.
- Loud noise is a major stressor in the workplace whose effects on human body include hearing loss<sup>5</sup>.

## OBJECTIVES

- To determine the prevalence of high blood pressure among workers who are exposed to different levels of noise pollution.
- To determine the role of noise levels as the determinant of high blood pressure (systolic and diastolic) and the association between high blood pressure and socio-economic and demographic factors

## METHODS

- The study followed a cross-sectional design.
- A validated self-administered questionnaire was used for data collection, along with blood pressure and blood sugar measurement.
- Data were collected from Masafi Crusher in Fujairah.
- Ethical approval was obtained prior to the study.
- Data were analyzed using SPSS v. 27.
- Chi square test was used to find association and Binomial and Multiple logistic regression was used to determine the factors.

## RESULTS

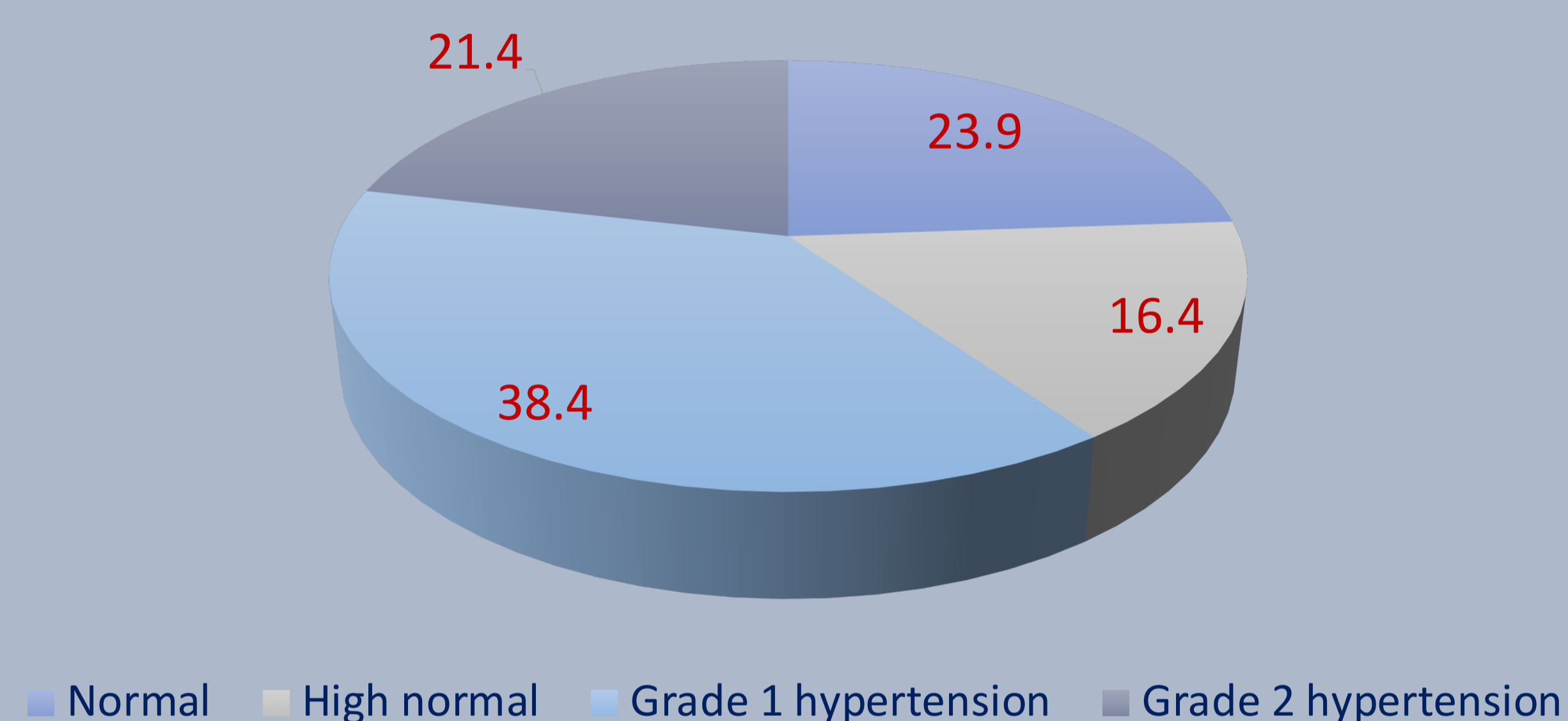


Fig 1: Prevalence of Hypertension

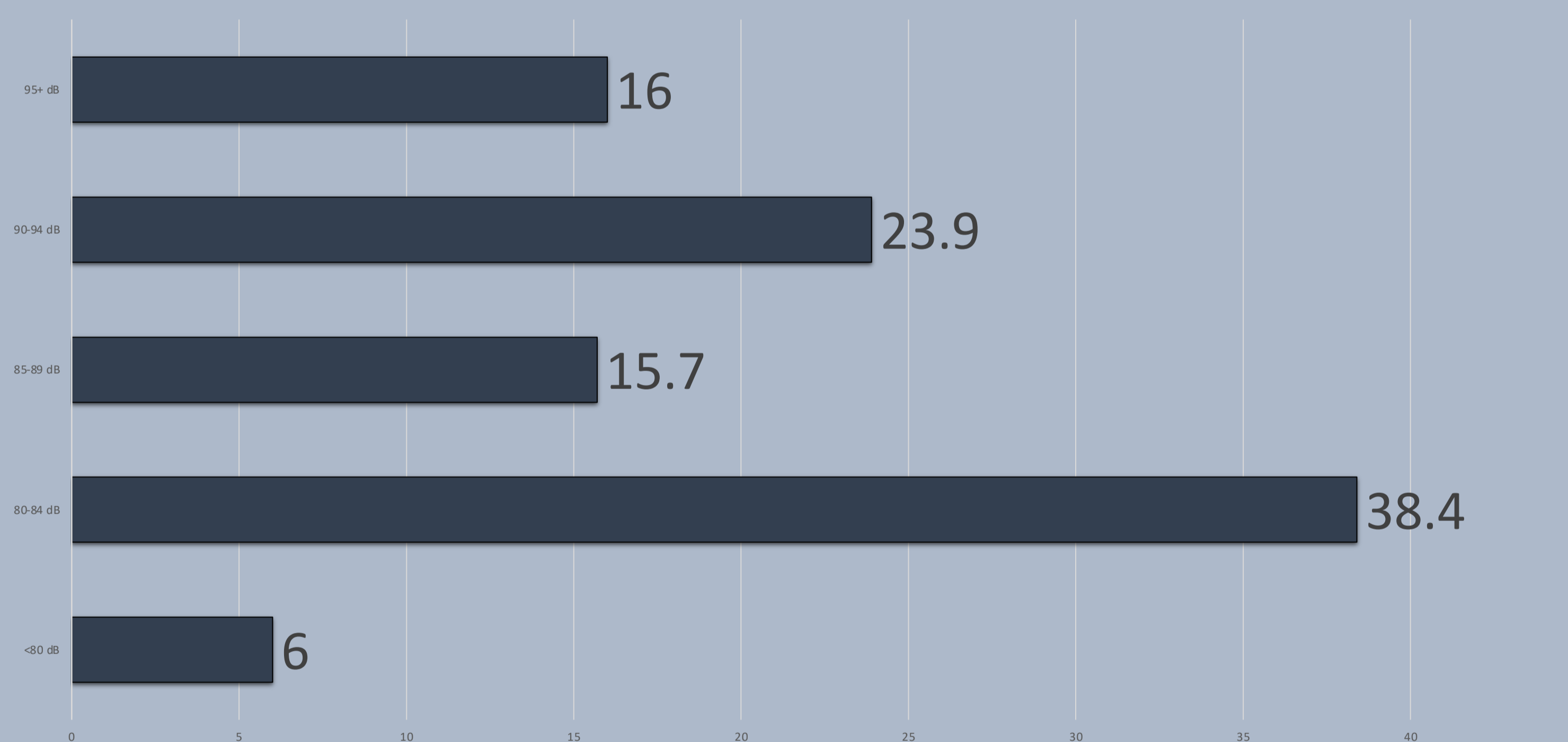


Fig 2: Level of Noise exposure among the workers

Table1: Logistic Regression Analysis of factors associated with Hypertension

Variable		Odds ratio	C.I	P-value
<b>Age group</b>	30 years & below (R)	1	--	--
	31-50 years	<b>3.82</b>	2.00-7.26	<0.001*
	Above 50 years	<b>3.87</b>	1.69-8.84	0.001*
<b>Nationality</b>	Middle East	1	--	--
	Other Asian	<b>5.60</b>	2.32-13.5	<0.001*
<b>Marital Status</b>	Married	<b>3.32</b>	1.21-9.11	0.019*
	Single (R)	1	--	--
<b>Noise level</b>	<85 dB (R)	1	--	--
	85-89 dB	0.635	0.33-1.21	0.170
	90-94 dB	1.75	0.97-3.14	0.062
	95+ dB	<b>2.36</b>	1.15-4.81	0.018*
<b>No. of years exposed to same level of noise</b>	below 4 years (R)	1	--	--
	4-6 years	2.28	0.77-6.73	0.134
	7-10 years	<b>3.61</b>	1.26-10.34	0.016*
	Above 10 years	<b>3.48</b>	1.21-10.02	0.020*

## DISCUSSION

- A study in Brazil reported that higher age group is significantly associated with hypertension.
- Those exposed to higher level of noise was 1.56 times risk of hypertension<sup>1</sup>.

## CONCLUSIONS & RECOMMENDATIONS

- Prevalence of hypertension among the workers was 59.8%.
- 40% of the workers work in an environment beyond 95 dB of noise level.
- The noise level and year exposed to same noise level were found to be the significant risk factors for high hypertension.
- The other factors which were found to be the significant risk factors are age group, nationality, and marital status.
- Steps to reduce workplace noise levels and to improve workplace-based health are thus urgently needed.

## REFERENCES

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