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## Effects of exposure to loud noise on the hearing of the residents of Calabar, Cross River State, Nigeria

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### APPENDICES

#### APPENDIX I

Table A1. Distribution of respondents by sex in the high noise zones

Zone	No of Respondents		
	Male	Female	Total
HNZ 1	90	42	132
HNZ 2	120	78	208
HNZ 3	63	29	92
HNZ 4	91	16	107
HNZ 5	150	28	178
HNZ 6	80	42	121
HNZ 7	58	16	74
HNZ 8	56	32	88
Total	708	292	1000
%	70.8	29.2	100

Table A2. Distribution of respondents by sex in the low noise zones

Zone	No of Respondents		
	Male	Female	Total
LNZ 1	63	56	119
LNZ 2	22	15	37
LNZ 3	109	61	170
LNZ 4	22	18	40
LNZ 5	187	80	267
LNZ 6	190	99	289
LNZ 7	29	16	45
LNZ 8	23	10	33
Total	645	355	1000
%	64.5	35.5	100

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Table A3. Distribution by marital status of respondents in the high noise zones

<b>Zones</b>	<b>No of Respondents</b>		
	<b>Married</b>	<b>Single</b>	<b>Total</b>
HNZ 1	20	112	132
HNZ 2	18	190	208
HNZ 3	20	72	92
HNZ 4	20	87	107
HNZ 5	78	100	178
HNZ 6	88	33	121
HNZ 7	20	54	74
HNZ 8	30	58	88
TOTAL	294	706	1000
%	29.4	70.6	100

Table A4. Distribution by marital status of respondents in the low noise zones

<b>Zones</b>	<b>No of Respondents</b>		
	<b>Married</b>	<b>Single</b>	<b>Total</b>
LNZ 1	33	88	119
LNZ 2	26	11	37
LNZ 3	30	140	170
LNZ 4	24	16	40
LNZ 5	55	112	267
LNZ 6	18	271	289
LNZ 7	30	15	45
LNZ 8	16	17	33
TOTAL	232	668	1000
%	23.2	66.8	100

Table A5. Educational level of respondents in the high noise zones

<b>Zones</b>	<b>Educational level</b>			
	<b>Primary School</b>	<b>Secondary School</b>	<b>Tertiary School</b>	<b>Total</b>
HNZ 1	7	100	25	132
HNZ 2	26	168	14	208
HNZ 3	30	52	10	192
HNZ 4	22	80	5	107
HNZ 5	68	100	10	178
HNZ 6	39	70	12	121
HNZ 7	20	40	14	74
HNZ 8	55	25	8	88
TOTAL	269	635	98	1000
%	26.9	63.5	9.8	100

Table A6. Educational level of respondents in the low noise zones

Zones	Educational level			
	Primary School	Secondary School	Tertiary School	Total
LNZ 1	11	80	28	119
LNZ 2	7	9	21	37
LNZ 3	60	50	60	170
LNZ 4	8	20	12	40
LNZ 5	37	150	80	267
LNZ 6	65	200	24	289
LNZ 7	10	21	14	45
LNZ 8	18	10	5	33
TOTAL	216	540	244	1000
%	21.6	54.0	24.4	100

Table A7. Distribution of duration of exposure per day for respondents in the high noise zones

Zones	Duration of exposure per day			
	1-4hr	5-8hr	Above 8hr	Total
HNZ 1	2	110	20	132
HNZ 2	10	160	38	208
HNZ 3	1	81	10	92
HNZ 4	17	80	10	107
HNZ 5	28	140	10	178
HNZ 6	6	110	5	121
HNZ 7	3	51	20	71
HNZ 8	6	61	21	88
TOTAL	73	793	134	1000
%	7.3	79.3	13.4	100

Table A8. Distribution of duration of exposure per day for respondents in the low noise zones

Zones	Duration of exposure per day			
	1-4hr	5-8hr	Above 8hr	Total
LNZ 1	13	80	26	119
LNZ 2	2	20	15	37
LNZ 3	5	115	50	170
LNZ 4	5	25	10	40
LNZ 5	17	100	150	267
LNZ 6	39	120	130	289
LNZ 7	0	40	5	45
HNZ 8	4	21	8	33
TOTAL	85	521	399	1000
%	8.5	52.1	39.9	100

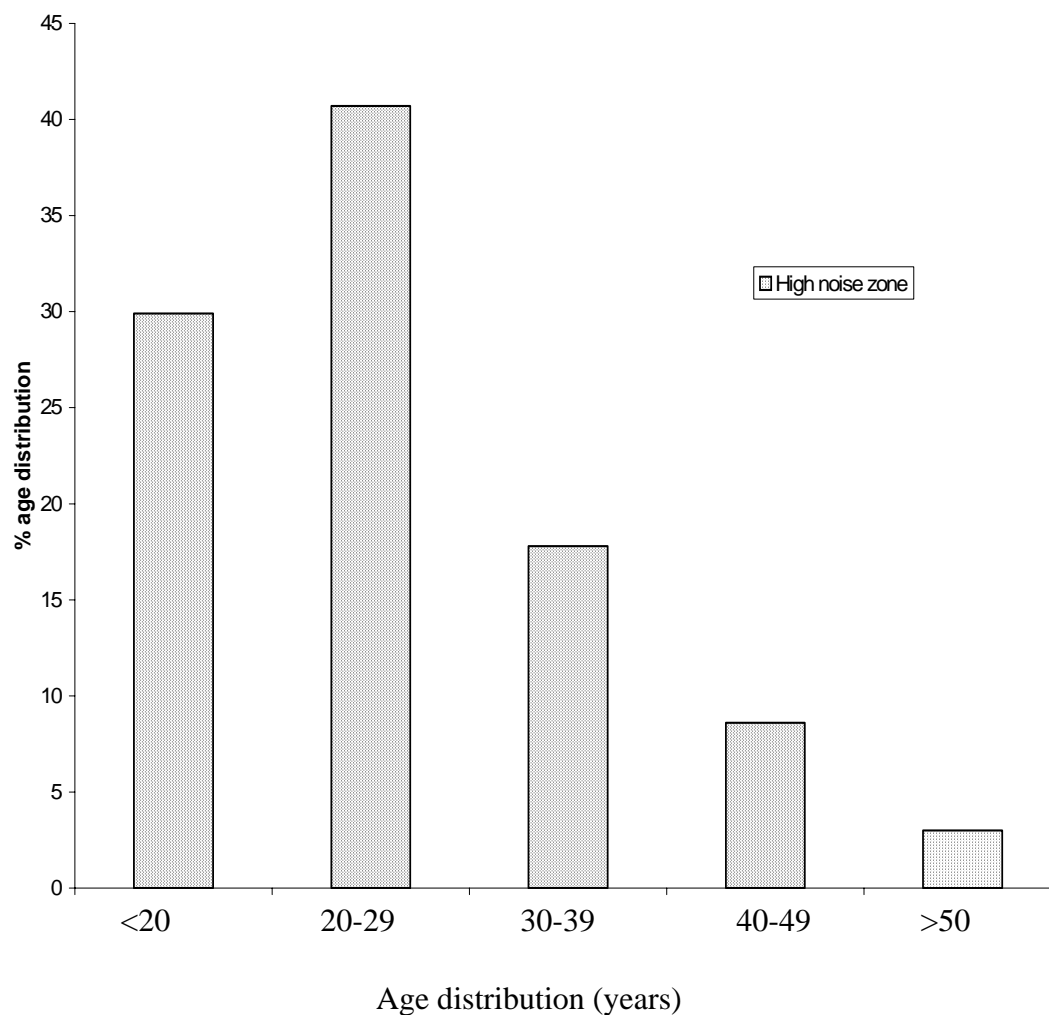
Table A9. Distribution of duration of exposure of respondents in high noise zones in years

<b>Zones</b>	<b>Duration of exposure in years</b>			
	<b>1-5</b>	<b>6-8</b>	<b>Above 8</b>	<b>Total</b>
HNZ 1	80	40	12	132
HNZ 2	180	20	8	208
HNZ 3	54	26	12	92
HNZ 4	60	30	17	107
HNZ 5	34	80	64	178
HNZ 6	11	80	30	121
HNZ 7	23	37	11	71
HNZ 8	57	21	10	88
<b>TOTAL</b>	<b>499</b>	<b>337</b>	<b>164</b>	<b>1000</b>
<b>%</b>	<b>49.9</b>	<b>33.7</b>	<b>16.4</b>	<b>100</b>

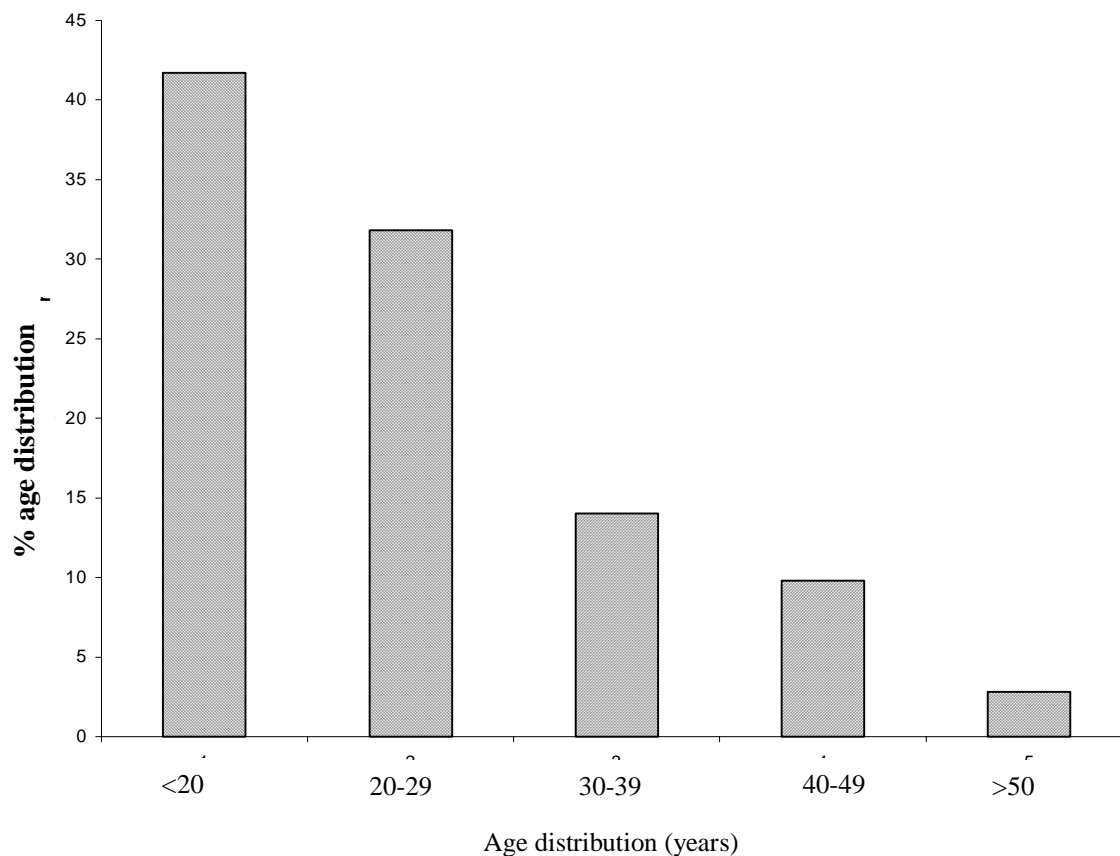
Table A10. Distribution of duration of exposure of respondents in low noise zones in years

<b>Zones</b>	<b>Duration of exposure in years</b>			
	<b>1-5</b>	<b>6-8</b>	<b>Above 8</b>	<b>Total</b>
LNZ 1	84	30	5	119
LNZ 2	28	7	2	37
LNZ 3	54	100	16	170
LNZ 4	5	30	5	40
LNZ 5	134	100	33	267
LNZ 6	45	120	24	289
LNZ 7	10	30	5	45
LNZ 8	8	21	4	33
<b>TOTAL</b>	<b>468</b>	<b>438</b>	<b>94</b>	<b>1000</b>
<b>%</b>	<b>46.8</b>	<b>43.8</b>	<b>9.4</b>	<b>100</b>

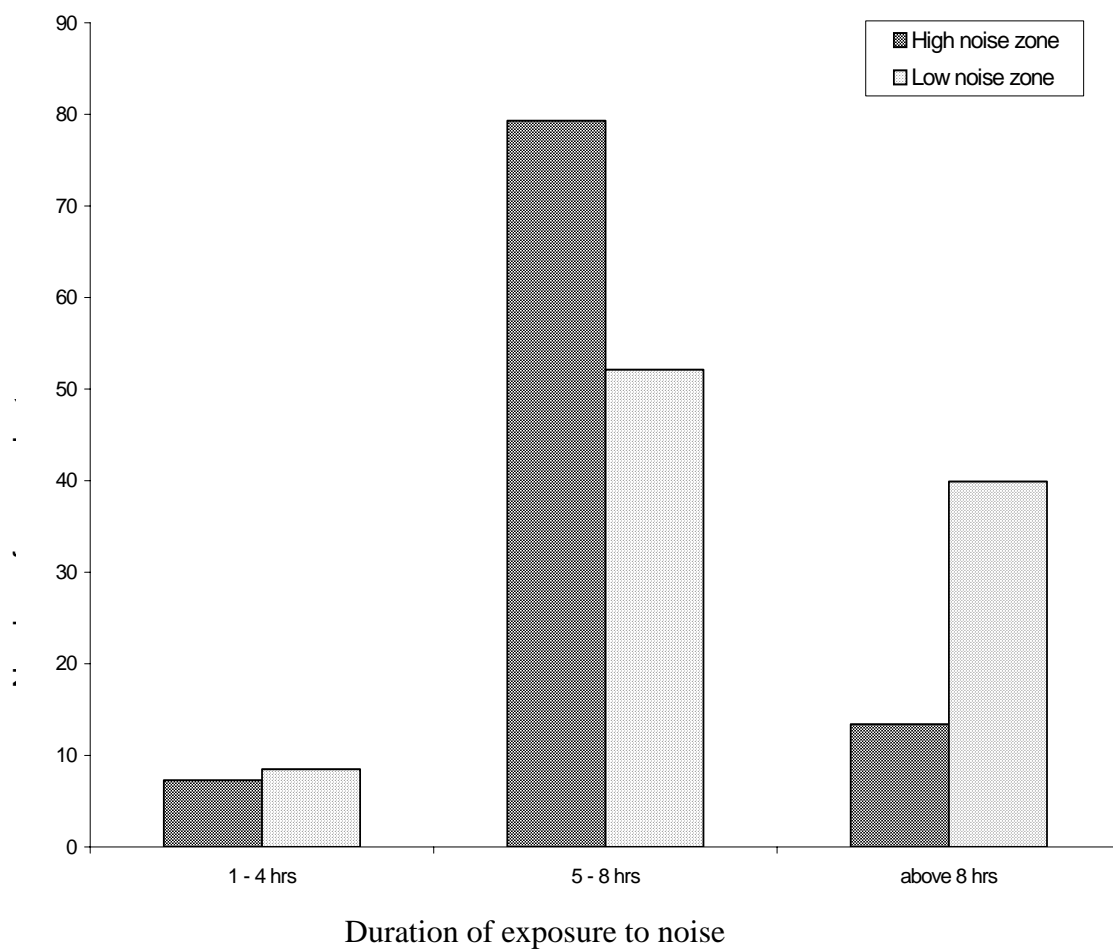
## Appendix II



**FIG. 1:** Bar chart showing the percentage age distribution of respondents in the high noise zones



**FIG. 2:** Bar chart showing the percentage age distribution of respondents in the low noise zones



**Fig. 3:** Bar chart showing the duration of exposure of respondents to noise in the high and low noise zones

## APPENDIX III

Table A11. Result of analysis for effect of noise on ears of respondents

The SAS System

The FREQ Procedure

Frequency Expected Deviation Cell Chi-Square Percent Row Pct	Table of Ear by Respondents					
	Ear	Respondents				
		<25db	26-40db	41-60db	61-80db	780db
Right ear		540	392	60	5	3
		453.5	476	50	15	5.5
		86.5	-84	10	-10	-2.5
		16.499	14.824	2	6.6667	1.1364
		27.00	19.60	3.00	0.25	0.15
		54.00	39.20	6.00	0.50	0.30
Left ear		367	560	40	25	8
		453.5	476	50	15	5.5
		-86.5	84	-10	10	2.5
		16.499	14.824	2	6.6667	1.1364
		18.35	28.00	2.00	1.25	0.40
		36.70	56.00	4.00	2.50	0.80
Total		907	952	100	30	11
		45.35	47.60	5.00	1.50	0.55
						2000
						100.00

Statistics for Table of Ear by Respondents

Statistic	DF	Value	Prob
Chi-Square	4	82.2509	<.0001
Likelihood Ratio Chi-Square	4	83.9443	<.0001
Mantel-Haenszel Chi-Square	1	44.5292	<.0001
Phi Coefficient		0.2028	
Contingency Coefficient		0.1987	
Cramer's V		0.2028	



Table A12. Data analysis effect of respondents

Statistic	Value	ASE
Gamma	0.2849	0.0380
Kendall's Tau-b	0.1554	0.0215
Stuart's Tau-c	0.1652	0.0228
Somers' D C R	0.1652	0.0228
Somers' D R C	0.1462	0.0203
Pearson Correlation	0.1493	0.0215
Spearman Correlation	0.1600	0.0221
Lambda Asymmetric C R	0.1412	0.0270
Lambda Asymmetric R C	0.1930	0.0283
Lambda Symmetric	0.1665	0.0239
Uncertainty Coefficient C R	0.0220	0.0047
Uncertainty Coefficient R C	0.0303	0.0065
Uncertainty Coefficient Symmetric	0.0255	0.0054

obtained from noise on ears of

Sample Size = 2000

## Appendix IV

$$r = \frac{n \sum_{i=1}^n x_i y_i - \sum_{i=1}^n x_i \sum_{i=1}^n y_i}{\sqrt{\left[ n \sum_{i=1}^n x^2 - \left( \sum_{i=1}^n x \right)^2 \right] \left[ n \sum_{i=1}^n y^2 - \left( \sum_{i=1}^n y \right)^2 \right]}} \quad (1)$$