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Reseach Article

Prevalence of Hearing Loss in Steel Mill Workers

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Abstract: Hearing damage caused by workplace excessive noise results in severe, nearly100 percent avoidable impairment. Hearing loss have three types: Conductive, Sensorineural and Mixed. Noise-induced hearing loss (NIHL) an inability of hearing due to exposure loud noises. **Objective(s):** To see the prevalence of Hearing Loss between Steel mill workers**.** Define the degree of hearing loss in steel mill employees. **Methodology:** It was a crossed sectional studied done to measure the hearing position of factory workers, at work in high noise leveled. Then linked with the duration of work and spl (in dBA) of experience at their factory. **Results:** Hearing loss was intended in the employees by captivating the average of the 4 frequencies (500Hz, 1 KHz, 2 KHz and 4 KHz) in right and left ear independently. Results exposed that 40 (28. 8%) workers had mild HL in right ear between 26-40 dB 60 (43. 2%) of the workers had normal hearing below 25 dB 21 (15. 1%) workers with moderate (41-60 dB) hearing loss in right side. 11 (7. 9%) workers had moderate to severe HL in right ears between 61-70 dB only 7 (5. 0%) workers had severe HL in right side between 71-90 dB while in situation of left ears results displayed that 43 (30. 9%) workers had mild HL in left ear between 26- 40 dB 63 (45. 3%) of the workers had normal marks hearing loss not above 25 dB and 20 (14. 4%) workers had moderate (41-60 dB) hearing loss. 8 (5. 8%) employees had moderate to severe HL in right ears between 61-70 dB only 5 (3. 6%) workers had severe HL in right ears between 71-90 dB. **Conclusion(s):** Period of coverage of individuals were found in the series from 5 years to 10 years. 139 (100%) workers participate researched. In witch 52 (37. 4%) had 5 to 7 years noise exposure and 87 (62. 6%) had 8 to 10 years noise exposure.

Keywords: Sensorineural Hearing Loss; Noise Induced Hearing Loss; Occupational Noise; Factory Employees.

INTRODUCTION

Hearing loss due to revelation to work-related noise ends up in shattering incapacity that's almost 100% avoidable. Hearing loss is divided in three types: conductive (outer or middle ear) sensorineural (involves inner ear) mixed (combination of the two).

Noise-induced hearing disorder is a disability due to introduction to high leveled noise people may had a loss of understanding of a narrowed range of frequencies or decreased sounded perception including sounded tolerance or ringing inside the ears. Diseases like measles, mumps, contagion, diphtheria, pertussis, grippe, and some other infectious diseases result in sensorineural hearing disorder. The procedures of these disease rolled had a noxious effect on the complex nerve endings within the cochlea. Toxicities of the spinal liquid like meningitis could even cause damage to the cochlea. Cancerous developments near the acoustic nerve could source sensorineural hearing disorder thanks to burden on the nerve. Consistent with otolaryngologists, occupational noise may be a common hazard which ends up in noise induced range sickness. Noise-induced hearing leveled is that the second commonest typed of SNHL hearing discrepancy. Shearing forces produced by any sounded had a bearing on the stereo cilia of the hair cells of the nerve layer of the cochlea; when extreme, these forces could origin death. Sidestepping noise publicity stops further regression of the damage. Noise-induced hearing disorder may be banned by avoiding unnecessary noise and using hearing defense like earplugs and earmuffs. Patients who were exposed to extreme noise should be selected.[1] once hearing condition is doubted, a thorough history, bodily examination and audiometry should be done. If these examinations relate evidence of hearing condition, referral for full Audiological estimate is usually recommended. Noise-induced hearing disorder may be a SNHL hearing insufficiency that started at the highest frequencies (3. 000 to 6. 000 Hz) and develops steadily in results of chronic experience to unwarranted sounded levels. Although the loss is frequently symmetric, noise from such sources as weapons or alarms may produce an asymmetric loss.[2] acoustic trauma, is related condition, outcomes from an acute introduction to short-term thoughtless noise.

Tumorous growths near acoustic nerve be able to source SNHL range disorder thanks to force on nerve. Experience to unwarranted noise is one of the major reasoned behind hearing ailments. It's been valued that international as many as 500 million individuals in danger of create noise induced hearing disorder.[3] steel engineering is one of the noisiest productions. The foremost foundation of noise contains smoke withdrawal system, vacuum systems using condensation ejectors, electrical convertors and therefore the curve procedure in electrical bend boilers, rolling mills and therefore the large buffs used for drying. The (NIOSH) had identified that noise induced hearing disorder is one of the foremost prevailing occupational health risks pebbledash workers today.[4] Approximately 30 million people had uncovered to dangerous leveled of noise at their work positions. 9 million is testified to own occupational health illnesses. 70% people agonize from hearing disorder by the age of 60 years.[5] Death injury weekly report (MMWR) stated that noise may a worldwide problem that had large influence on the incidence of hearing disorder among the working people.[6] New approximations show that between 8 and 10 million people work on sites where volume of noise is 85 decibels (dB) or higher and that they present with enlarged risk to noise induced hearing disorder.[7] Long exposure of noise at high intensity is related to destruction the whisker cells of receptor and development of undying hearing threshold shifted, in addition as poor speech in noise fluency.[8] within the adult population it's going to significantly affect value of life and constitute serious controlled in importance hearing-critical jobs, decreasing the impending worker's chance of employment.[9] in severe cases, both outer and inner hair cells were not working properly. This is often also kind of long-lasting hearing sickness and frequently people had the advantage of cochlear implants. Another cases, the outer hair cells were work correctly, but the inner hair cells were scratched. This typed of hearing disorder is labelled auditory neuropathy spectrum disorder. A children to teach them duty shortest their consideration and shared sounds to a word. This means they need to listen, not to hear; and to looked, not just saw. The vestibular nerve links to cochlear nerve incoming from inside acoustic meatus, and to this pointed onward they were mutually called vestibule cochlear nerve. This closeness is clinically appropriate since scratches to this nerve usually crop symptoms in both the auditory and vestibular mechanisms. The broadcast of sounded from the receptor to brain is then jumbled.[10] A leading common typed is due to outer hair cells not operational properly. The person had misfortune hearing clearly, selfless speech, and construing numerous sounds. The sort of hearing sickness is permanent. In most cases hearing aids could help the person heard normally.[11] in today blaring society straight children and new adults at risk. The current homework found proof of high-frequency hearing sickness is nearly one third of a cohort of faculty scholars.

BASED ON OCCUPATIONAL SAFETY & HEALTH ADMINISTRATION (OSHA), 2008

Maximum job-noise exposure allowed by law Sound level, decibels Duration, daily

Duration (Hours)	PEL (dB)
8	90
4	95
2	100
1	105
30 Minutes	110
15 Minutes	115

A main purpose of this studied was to seek out link between the noise and hearing disorder. The prevalence of disablement be able to vary extensively from person to individual. Some people with limited hearing disorder, meaning the ear could gobble some sounds others had a complete hearing sickness, meaning that the auricle cannot heard in any respect (men with complete hearing disorder were called deafened).[12] Some sorts of hearing illness, someone had way more trouble when their background signal. Therefore, this studied had been deliberate to seek out local statistics on frequency of noise induced hearing disorder and its prevalence early intervention and detection of the hearing disorder is important to forestall supplementary problems with hearing disorder.[13]

MATERIAL AND METHODS

Study Design:

This was crossed sectional analytical studied design.

Settings:

Data was collected from Zeal Engineering steel mill sharaq pur Road Lahore.

Study Duration:

The duration of this studied was 3 months after the approval of synopsis.

Sample Size:

139 [36]

Sampling Technique:

Purposive sampling.

Sample Selection:

Inclusion Criteria:

- 25 years to 40 years age limit
- 5 to 10 years working Steel mill workers.
- Male workers
- Workers working in indoor excessive noise area

Exclusion Criteria:

- Cases other than comorbidities were excluded.

Equipment(s): Otoscope, Tympanometer, Pure tone audiometer

Otoscope: Otoscope is an instrument by which we examine the external and middle ear to rule out any kind of ailment

Tympanometer: it is an instrument which is used to check the middle ear prestige i.e. middle ear pressure, compliance and ear canal volume.

Audiometer: (Entombed SA 203 calibration before 8 months) it is an instrument which is used to regulate the degree and type of hearing loss. In this instrument there is a range of pure tones or frequencies started from 250 Hz to 8000Hz.

RESULTS

Question No 1:

Age of the participants					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	25 to 30	33	23.7	23.7	23.7
	31 to 35	49	35.3	35.3	59.0
	36 to 40	57	41.0	41.0	100.0
	Total	139	100.0	100.0	

The total 139 participants was participate in which 33 have age group between 25 to 30 years. 49 participants have age group Between 31 to 35 years and 57 participants have age group Between 36 to 40 years shown in table 1.

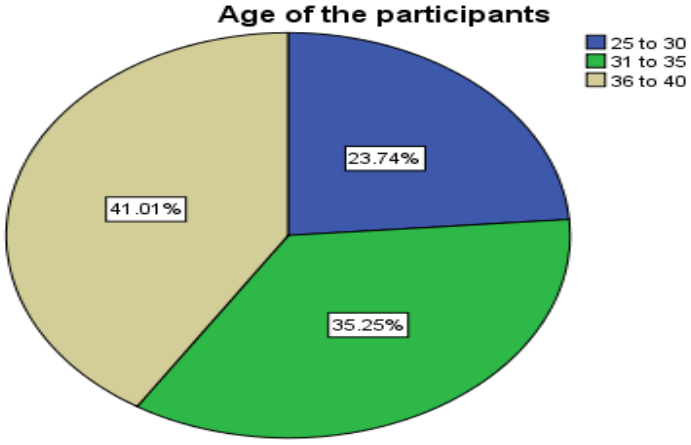

Figure 1: pie chart represent the age of the participants

The total of 100% participants was participate in which 23.7% have age between 25 to 30 years.35.3% participants have age between 30 to 35 years and 41.0% participants have age between 35 to 40 years shown in figure 1.

Question No 2:

Experience of the participants					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	5 to 7	52	37.4	37.4	37.4
	8 to 10	87	62.6	62.6	100.0
	Total	139	100.0	100.0	

The experience of the participants was 5 to 10 years. In which 52 participants have 5 to 7 years of experience and 87 participants have 8 to 10 years of experience shown in table 1.

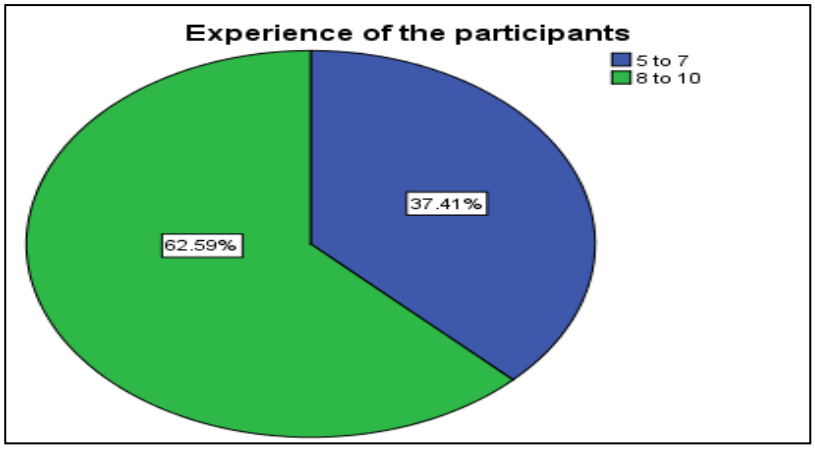

Figure 2: Experience of the participants

The 37.41% of the participants have experience of 5 to 7 years and 62.59% have experience of 8 to 10 years show in figure 2.

Question No 3:

Table 3:Hearing loss in Right ear of the participants

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Normal	60	43.2	43.2	43.2
	Mild	40	28.8	28.8	71.9
	Moderate	21	15.1	15.1	87.1
	Moderate to Severe	11	7.9	7.9	95.0
	Severe	7	5.0	5.0	100.0
	Total	139	100.0	100.0	

The total of 139 participant's 60was normal and 79 have hearing loss. In which 40 have mild hearing loss, 21 have moderate hearing loss, 11 have moderately severe hearing loss and 7 participants have severe hearing loss.

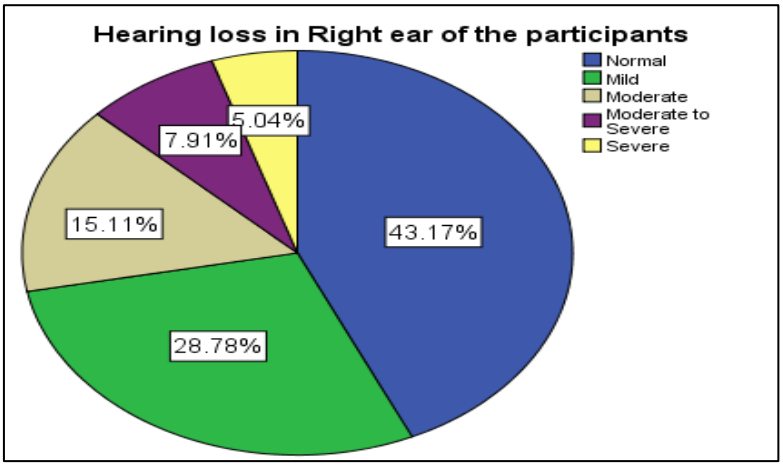

Figure 3: Pie chart represent prevalence and Degree of hearing loss

The 43.2% participants was normal. 28.8% have mild hearing loss, 15.1% moderate, 7.9% have moderately severe and 5% have severe hearing loss.

Question No 4:

Table 4: Hearing loss in Left ear of the participants

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Normal	63	45.3	45.3	45.3
	Mild	43	30.9	30.9	76.3
	Moderate	20	14.4	14.4	90.6
	Moderate to Severe	8	5.8	5.8	96.4
	Severe	5	3.6	3.6	100.0
	Total	139	100.0	100.0	

The total of 139 participant's 63 was normal and 76 have hearing loss. In which 43 have mild hearing loss, 20 have moderate hearing loss, 8 have moderately severe hearing loss and 5 participants have severe hearing loss.

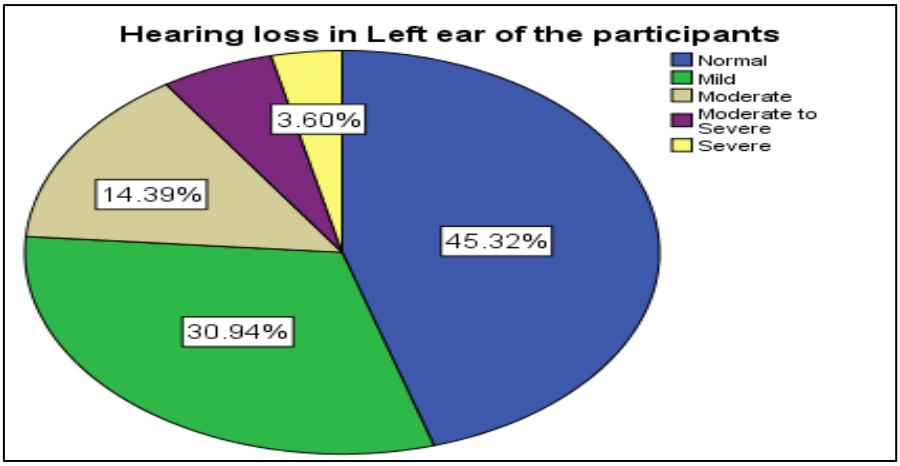

Figure 4: Pie chart represent the Prevalence and Degree of Hearing loss

The 45.32% participants was normal. 30.94% have mild hearing loss, 14.3% moderate, 5.8% have moderately severe and 3.6% have severe hearing loss.

Question No 5:

Table 5: Can you hear and understand men's voices better than women or children?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	YES	79	56.8	56.8	56.8
	NO	60	43.2	43.2	100.0
	Total	139	100.0	100.0	

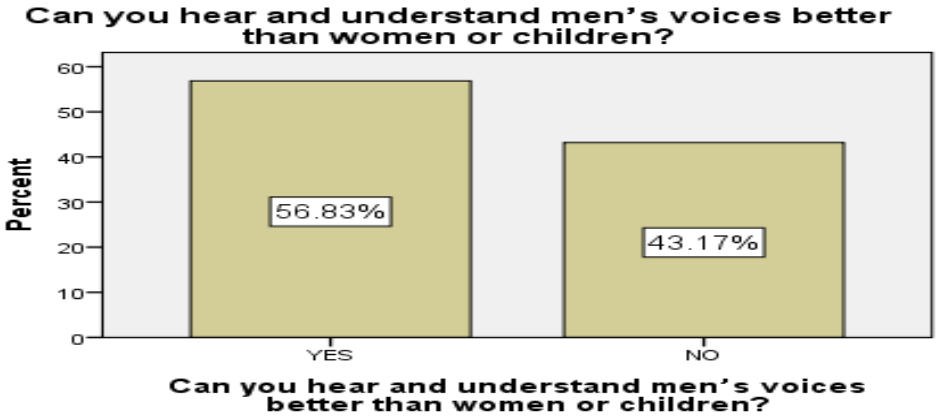

Figure 5:

Table 5 and Figure 5 show that 79 (56.83%) participants' select option YES.
60 (43.2%) participants select option NO.

Question No 6:

Table 6: Do you have trouble hearing birds or the wind in the trees?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	YES	74	53.2	53.2	53.2
	NO	65	46.8	46.8	100.0
	Total	139	100.0	100.0	

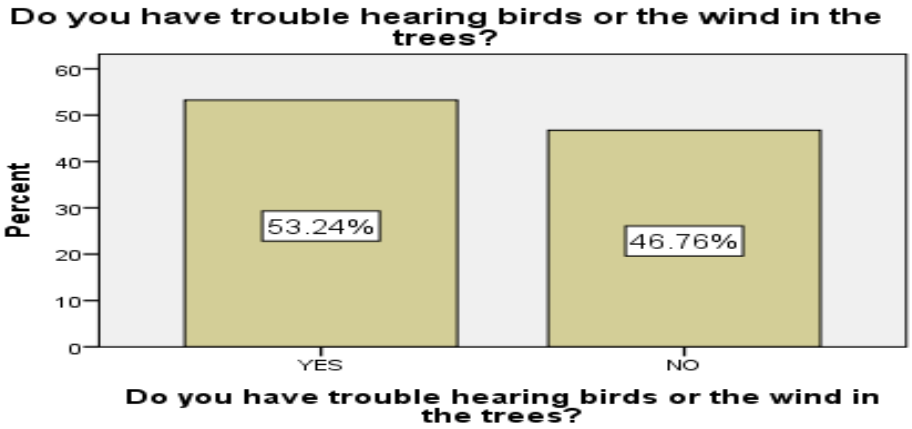

Figure 6:

Table 6 and Figure 6 show that 74 (53.2%) participants' select option YES.
65 (46.8%) participants select option NO.

Question No 7:

Table 7: Do voices sound blurry, like people mumbling?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	YES	72	51.8	51.8	51.8
	NO	67	48.2	48.2	100.0
	Total	139	100.0	100.0	

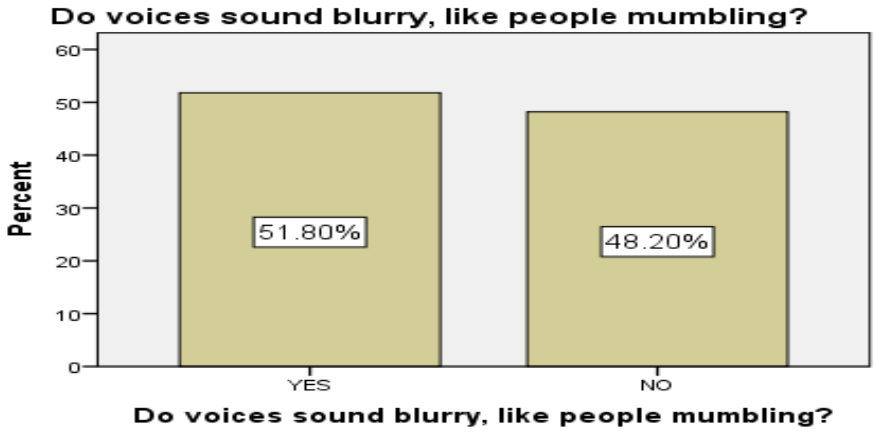

Figure 7:

Table 7 and Figure 7 show that 72 (51.8%) participants' select option YES.
67 (48.2%) participants select option NO.

Question No 8:

Table 8: Do you have trouble following conversations when two or more people are talking at the same time?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	YES	79	56.8	56.8	56.8
	NO	60	43.2	43.2	100.0
	Total	139	100.0	100.0	

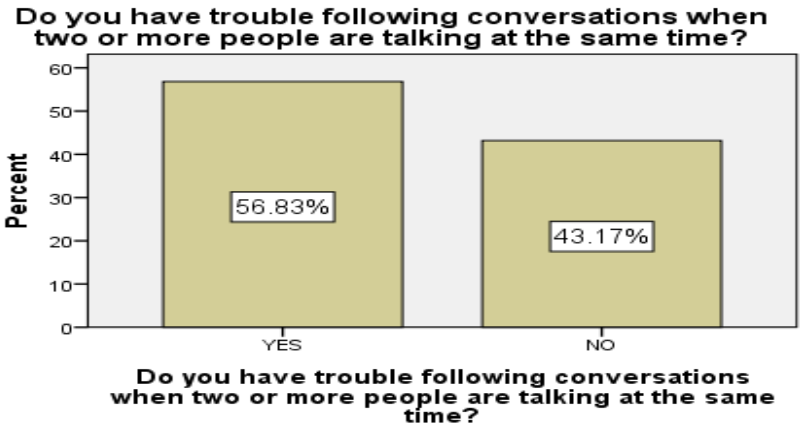

Figure 8:

Table 8 and Figure 8 show that 79 (56.8%) participants' select option YES.
60 (43.1%) participants select option NO.

Question No 9:

Table 9: Do people complain you have the TV or radio on to loud for them?					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	YES	80	57.6	57.6	57.6
	NO	59	42.4	42.4	100.0
	Total	139	100.0	100.0	

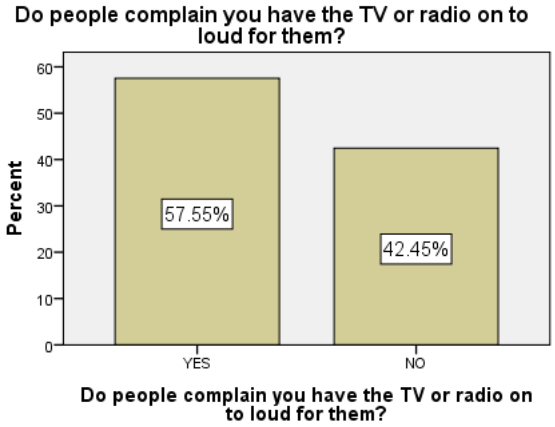

Figure 9:

Table 9 and Figure 9 show that 80 (57.5%) participants' select option YES.
59 (42.4%) participants select option NO.

Question No 10:

Table 10: Do you need to turn to towards those speaking or cup your ears to hear?					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	YES	70	50.4	50.4	50.4
	NO	69	49.6	49.6	100.0
	Total	139	100.0	100.0	

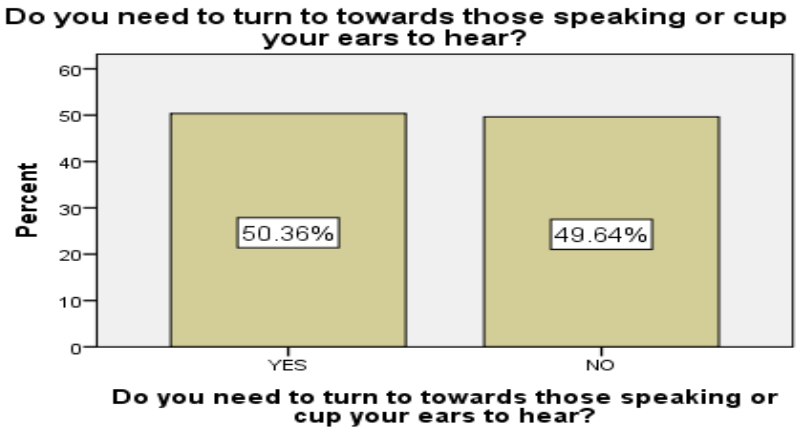

Figure 10:

Table 10 and Figure 10 show that 70 (50.3%) participants' select option YES.
69 (49.6%) participants select option NO

Question No 11:

Table 11: Do you find you need to frequently ask people to repeat themselves?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	YES	70	50.4	50.4	50.4
	NO	69	49.6	49.6	100.0
	Total	139	100.0	100.0	

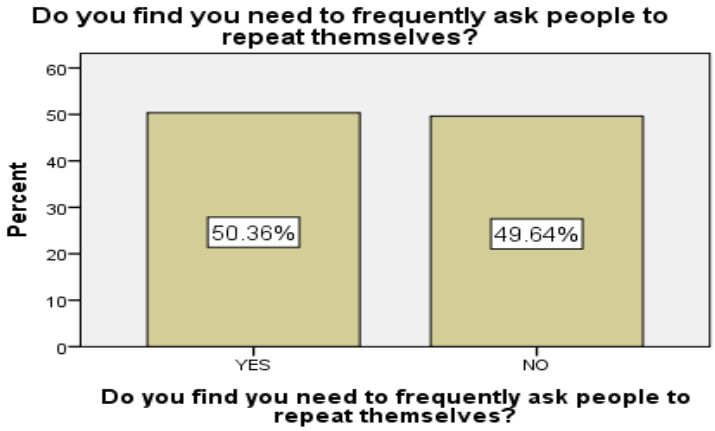

Figure 11:

Table 11 and Figure 11 show that 70 (50.4%) participants' select option YES.
69 (49.6%) participants select option NO.

Question No 12:

Table 12: Do you sometimes miss common sounds (heard by others) i.e. door bells or the telephone

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	YES	68	48.9	48.9	48.9
	NO	71	51.1	51.1	100.0
	Total	139	100.0	100.0	

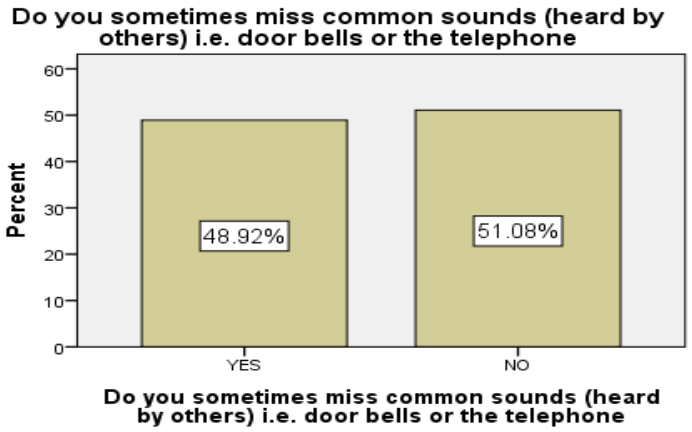

Figure 12:

Table 12 and Figure 12 show that 68 (48.9%) participants' select option YES. 71 (51.08%) participants select option NO.

Question No 13:

Table 13: Do you feel any kind of change in your hearing level during period of last 3 months?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	YES	58	41.7	41.7	41.7
	NO	81	58.3	58.3	100.0
	Total	139	100.0	100.0	

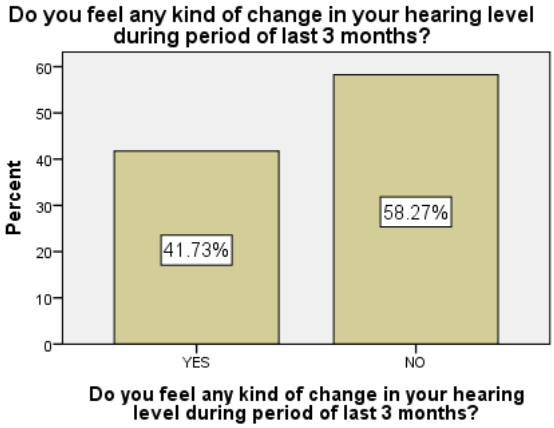

Figure 13:

Table 13 and Figure 13 show that 58 (41.7%) participants' select option YES.
81 (58.2%) participants select option NO.

Question No 14:

Table 14: Do you have difficulty in hearing over increased distances, i.e. at concert, theatres etc.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	YES	59	42.4	42.4	42.4
	NO	80	57.6	57.6	100.0
	Total	139	100.0	100.0	

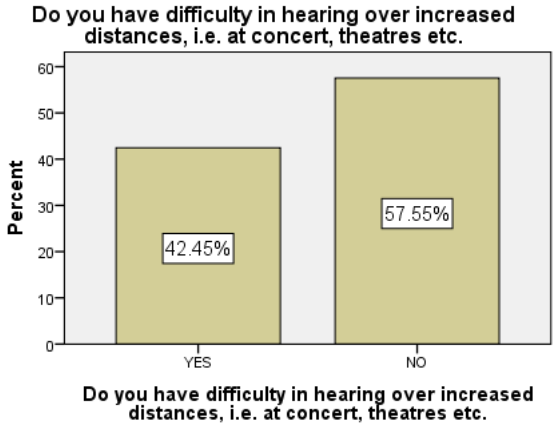

Figure 14:

Table 14 and Figure 14 show that 59 (42.4%) participants' select option YES.
80 (57.5%) participants select option NO.

Question No 15:

Table 15: Does your hearing ever seam out of balance i.e. louder on one side than the other

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	YES	55	39.6	39.6	39.6
	NO	84	60.4	60.4	100.0
	Total	139	100.0	100.0	

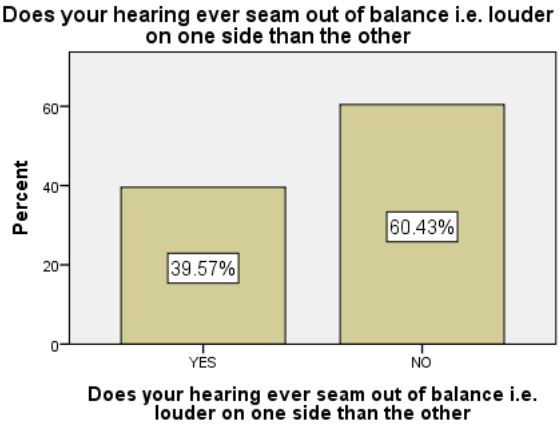

Figure15:

Table 15 and Figure 15 show that 55 (39.5%) participants' select option YES.
84 (60.4%) participants select option NO.

Question No 16:

Table 16: Do you always wear the hearing protection provided by the company?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	YES	28	20.1	20.1	20.1
	NO	111	79.9	79.9	100.0
	Total	139	100.0	100.0	

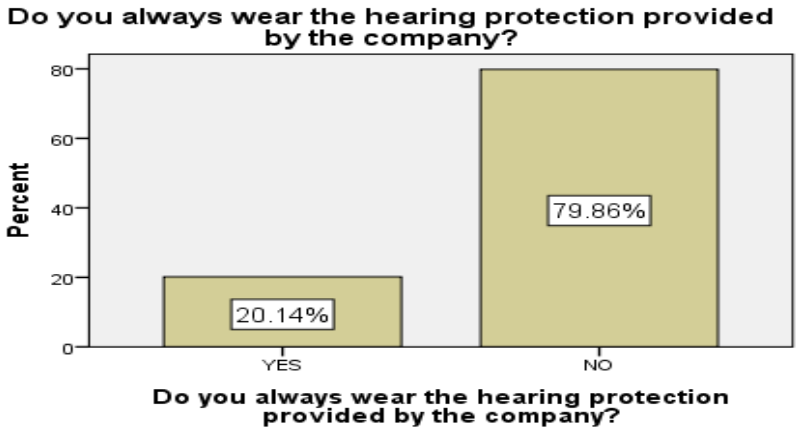

Figure16:

Table 16 and Figure 16 show that 28 (20.1%) participants' select option YES.
111 (79.8%) participants select option NO.

Question No 17:

Table 17: Have you ever seen an audiologist or had a hearing test?					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	YES	23	16.5	16.5	16.5
	NO	116	83.5	83.5	100.0
	Total	139	100.0	100.0	

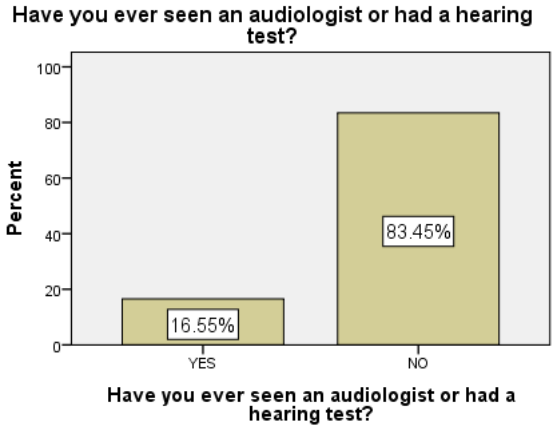

Figure 17:

Table 17 and Figure 17 show that 23 (16.5%) participants' select option YES.
116 (83.5%) participants select option NO.

DISCUSSION

Noise is some intrusive sounded that could be distracting at low concentration, and could harm hearing at intensity. The present studied found that workplace noise sensitivity is correlated substantially with raised hearing levels, as seen in several international studies (Agrawal etal 2010)[37], (Amedofu 2002)[38] and (nelson etal 2005)[39]. Current studied showed that 40 (28. 8%) labors with mild SNHL in right ears and 21 (15. 1%) employees had moderate hearing loss. 11 (7. 9%) workers had moderate to severe hearing loss and only 7 (5. 0%) workers had severe hearing loss. While in case to left ears results indicated that 43 (30. 9%) workers had mild SNHL in left ear and 20 (14. 4%) workers had moderate hearing loss. 8 (5. 8%) workers had modest to severe hearing loss and only 5 (3. 6%) workers had severe degree of hearing loss of left ear. 57% workers had hearing loss to right ear and 55% had hearing loss from left ear.

Gaurav Agarwal, Prakash s Nagpur, sweated v gadget researched in 2014 found 129 (37 percent) staffs had mild SNHL to right ears and 9(2 percent) workers had moderate hearing loss comparison with other participants. Whereas the findings for left ears revealed 145(42. 52%) employees had mild SNHL in left ear. only 11(3. 23%) employees had moderate hearing loss and no one workers had extreme or serious hearing loss, hearing loss was 40% in the right ear and 45. 75% in left ear. Hendarmin (1971) earned 50 per cent NIHL from ice and processing factory employees in jakarta.[40]

In a 1997 studied by Murat etal in brazil, studied the impact of environmental exposure to cleaning agents and noise in hearing of rotogravure production employees finding that 49% of the employees had hearing loss.[41] harmed et al., 2004 conducted a report on steel mill workers. He found that 84 per cent of staff experienced hearing loss if they were subjected to > 90dBa spl. Together with the hearing loss when exposure period in years was measured. Results to be in contrast with other authors.[42] another report by Damon Ketabi etal in 2010 identified the cruel hearing loss in manufacturing employees be 37 to 56 in 11-15 years and category of exposure to radiation 16-20 years. None in the sample population had a pure-tone audiometry for non-employment to assess the baseline hearing leveled. To almost all of them this analysis was the first of such studies. While the responsibility be placed on individual employees. Their employers for failing to check their hearing, the truth was that in our community there were few services and resources for audio logical evaluation.

We know, in addition, that NIHL (permanent shifted in the threshold) is only treatable and not curable. Therefore routine medical exams were required for staff in manufacturing. Now instruction to avoided form of manufacturing disease (NIHL), it is therefore important used personal defensive equipment and provide proper medical instruction for together employees and administrative team of said factories. High noise sensitivity poses a significant trial to the auditory system; however, constant sounded penetration to ears caused incremental injury to the auditory border and cochlea. Trimming forces induced by any sounded influence the stereo cilia of the cochlea's basilar membrane hair cells; these forces may cause cell death if severe. Avoiding noise sensitivity will interrupted additional injury development. A continuous repetition of motions creates a chronic strain that could cause pain and fatigue, and impair muscular and other tissue functions. Our researched is also in confirmation with other studies that showed that increased hearing thresholds correlated sensitivity to workplace noise significantly.

This researched is also an evidence that noise is causing hearing loss. Occupational noise-induced audible range is a major apprehension for workers in factories, armed services, aircraft, boats, heavy industrial transport, weapons and aerospace factories where the noise leveled is continuously exposed. Present studied show the extreme number of employee right ears 139 stayed exposed to 81-85 dBA out of 60 (43%) had the hearing in normal range and 79 (57%) had hearing loss. Maximum number of workers left ears 139 had exposed to 81-85 dBA ready of which 63 (45%) were had the hearing in normal range and 76 (55%) had hearing loss. In our researched, we found that even the most common reasons identified by workforces for not using hearing guardians included pain, interfering by hearing speech and alert signals and workers perception an unavoidable mechanism that causes hearing loss is not under controlled. Workers should understand the vital value of wearing hearing protectors, despite appropriate education and training. Techniques and resources of education should be tailor-made to the individual public. The educational and training aimed is not only to educate, but also to inspire. Present studied compare with above studies prove that hearing loss increase day by day as the clatter revelation increase the risk of hearing loss also increase. As compare with previous studies the occurrence and mark of hearing loss increase in steel mill workers. There is connotation between noise and hearing loss.

CONCLUSION

Studied was noted that staff did not used hearing safety such as ear muffs and ear plugs. Workers not used personal devices to protect excessive noise. Audiological assessment of factory employees need be repeated after one year to protect from risk of hearing loss. At the other handed, no one spoke about this possibility that there is listening about the noise in which they work. A problem that workers is uneducated had no knowledge about hearing loss. The researched found that SNHL was popular in workers at factories because of the nature of their jobs. Studied had shown that that age, longer provision of noise significant danger factors cause hearing loss. While the age and length of the exposure often increase the risk of hearing loss. The employees have less experience with no hearing loss butt the more experienced workers and age had serious notch of hearing loss.

RECOMMENDATION

A detailed history, physical tests and audiometry should be done when hearing loss was identified. If these tests show signs of hearing loss, it is advised that the auditory rationale be tested in full. Though there were a variation of laws designed to sidestep hearing loss of this sort. The authorities had also accepted and implemented many of these laws but there were still lacunae. This suffering of factory worker who had this hearing loss is bonus for factory service needs to be recognized. The staff need to be inspired and trained, and they had better know that their hearing is in their hands, which could be avoided by practically 100%. Hearing damage due to ambient noise could be avoided by reducing unnecessary noise, informing and encouraging staff to used ear protection such as earplugs and earmuffs.

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Age of the participants cross check with Right ear Crosstab

Count

		Hearing loss in Right ear of the participants					Total
		Normal	Mild	Moderate	Moderate to Severe	Severe	
Age of the participants	25 to 30	21	9	0	3	0	33
	31 to 35	22	13	9	2	3	49
	36 to 40	17	18	12	6	4	57
Total		60	40	21	11	7	139

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	16.199[a]	8	.040
Likelihood Ratio	22.642	8	.004
Linear-by-Linear Association	9.492	1	.002
N of Valid Cases	139		

a. 7 cells (46.7%) have expected count less than 5. The minimum expected count is 1.66.

Age of the participants cross check with Left ear Crosstab

Count

		Hearing loss in Left ear of the participants					Total
		Normal	Mild	Moderate	Moderate to Severe	Severe	
Age of the participants	25 to 30	22	9	2	0	0	33
	31 to 35	22	18	6	2	1	49
	36 to 40	19	16	12	6	4	57
Total		63	43	20	8	5	139

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	17.223[a]	8	.028
Likelihood Ratio	19.517	8	.012

Linear-by-Linear Association	15.436	1	.000
N of Valid Cases	139		
a. 7 cells (46.7%) have expected count less than 5. The minimum expected count is 1.19.			

Experience of the participants cross check with Right ear Crosstab

Count

		Hearing loss in Right ear of the participants					Total
		Normal	Mild	Moderate	Moderate to Severe	Severe	
Experience of the participants	5 to 7	27	15	5	3	2	52
	8 to 10	33	25	16	8	5	87
Total		60	40	21	11	7	139

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	3.852[a]	4	.426
Likelihood Ratio	3.965	4	.411
Linear-by-Linear Association	2.983	1	.084
N of Valid Cases	139		
a. 3 cells (30.0%) have expected count less than 5. The minimum expected count is 2.62.			

Experience of the participants cross check with Left ear Crosstab

Count

		Hearing loss in Left ear of the participants					Total
		Normal	Mild	Moderate	Moderate to Severe	Severe	
Experience of the participants	5 to 7	29	17	5	0	1	52
	8 to 10	34	26	15	8	4	87
Total		63	43	20	8	5	139

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	8.827[a]	4	.066
Likelihood Ratio	11.637	4	.020
Linear-by-Linear Association	7.271	1	.007
N of Valid Cases	139		
a. 3 cells (30.0%) have expected count less than 5. The minimum expected count is 1.87.			