International Journal of Research in Engineering and Science (IJRES)
ISSN (Online): 2320-9364, ISSN (Print): 2320-9356
www.ijres.org Volume 11 Issue 6 ǁ June 2023 ǁ PP. 07-10

TITLE

AURHOR

Date of Submission: 22-05-2023 Date of acceptance: 03-06-2023

I. INTRODUCTION

Noise- induced hearing loss (NIHL) known as second leading cause of sensorineural hearing loss is the leading occupational disease today.NIHLresults in reduced ability to communicate with surrounding world and monitor environmental sounds. Noise exposure is seen in many situations but also commonly seen in the hospital kitchens.While many kitchen employees work in loud environments, in both dining and food preparation areas, there is little is information about worker exposures to noise. Research shows that long or repeated exposure to sounds at or above 85 A-weighted decibels (dBA) results in noise-induced hearing loss. Signs of having been exposed to too much noise include not hearing clearly or having ringing in your ears after leaving a noisy environment. According to Restaurant Briefing, reviewers have noted noise level averages of 80 dBA or higher in restaurants/ kitchens around the country. (A typical conversation averages about 60 dBA). These noise levels can make conversations more difficult and put individuals hearing at risk. In addition, having to speak over the phones too loudly could also put an unhealthy strain on individual voices.

Long-term exposure to noise, or even relaxing music, above a certain sound pressure level can lead to temporarily or permanently change in the structure and function of the auditory system. The continuous exposure to noise can lead to permanent threshold shift in hearing sensitivity. Temporary threshold shift seen when exposed to sudden loud noise like gunshot which can be recovered after a certain time period. To safeguard hearing it is necessary to understand the effects of noise and to be aware of techniques to shield the ears from noise exposure. This study aims to check the awareness of noise and its effects on health amonghospital kitchen employees.

II. REVIEW OF LITERATURE

Achutan (2009) evaluated noise exposure levels for employees in kitchen area, to identify noise levels from different utensils and it was found that employees were exposed to many noise sources such as metal-metal contact between utensils and blenders.

Pachpande&Attarde (2009) assessed daily noise exposure and prevalence of hearing Loss in the Shopkeepers Working Near National Highway in Jalgaon City. working for 10 to 12 hours. Results revealed that shopkeepers, 87% reported hearing loss and defined at least some difficulty with hearing in one or both ears.

Leo, Sunye, Kwok Au, Chiu & Wong (2013) did a cross sectional survey on restaurant workers. Noise exposure levels were measured in sampled restaurents and entertainment sectors. Participants received audiometric screening test and results showed that excessive noise exposure is common in Chinese restaurents and majority proportion of restaurant workers suffer noise induced hearing loss. Comprehensive HCP should be introduced.

Green & Antony (2015)evaluated full shift noise exposure to workers at 6 locally owned restaurents to examine risk factors associated with noise exposure during day shift. Participants included cooks, counter attendants, bartenders, waiters. Assessment were done weekdays and weekends to check whether time of work or year affects noise exposure. Relationship between noise exposure and type of restaurents and job classification were assessed. Study results showed that restaurent type, job classification, time of week and season affected noise exposures for daily shift workers. Intervention studies to prevent noise induced hearing loss considering these variables.

Kohli& Mehta(2022) did a exploratory study on 30 chefs working in various types of commercial kitchens to investigate numerous occupational stress experienced by chefs. A questionnaire was distributed among those employers for data collection and it was found that most individuals are exposed to various types of occupational health hazards at workplaces resulting in tremendous harmful effects on health.

Nandita, Abira& Dash (2022) studied the Impact of Noise Pollution on Human Health in Barasat Urban Area, West Bengal and concluded based survey among adults which established that people suffered from headache, anxiety, hearing impairment, hypertension and sleeping disorders that could be attributed to exposure to noise.

III. METHOD

AIM

The aim of the present study was to analyze the awareness of hazardous noise, importance of EPDs and safety among hospital kitchen employees.

The study was carried out in two phases

Phase 1: Development of questionnaire and validation of questionnaire

Phase 2: Administration of questionnaire

PHASE I

DEVELOPMENT AND VALIDATION OF QUESTIONNAIRE

A questionnaire consisting of 10 questions were prepared. All 10 questions were close ended (yes/no) questions. The questions prepared were validated by 10 audiologists who are working in the field for more than 5 years. The correction and suggestion advised by theaudiologists were incorporated accordingly and the validation process of the questionnaire was completed and ready to administer. The questionnaire is shown below.

1. Are you aware of the harmful effects noise has on hearing?
2. Have you experienced pain, blocking sensation in the ear when exposed to loud sounds?
3. Ringing sensation in your ears after exposed to loud noise?
4. Exposure to loud sounds can damage your hearing?
5. Do you have any history of temporary hearing loss after exposure to loud noise?
6. High levels of noise can cause sleep disturbance?
7. Prolonged noise exposure makes you stressful?
8. Do you work for more than 8 hours a day?
9. Do you think periodic audiological evaluation is necessary?
10. Have you ever checked you hearing?
11. Are you aware of audiologists?
12. Do you use Ear protection devices (EPD's)?
13. Are you aware of the importance of EPDs?
14. Do you feel any changes in hearing when you are using or not using EPD's?
15. Are you willing to take measures to control noise?

PHASE II

PARTICIPANTS WITH INCLUSIVE AND EXCLUSIVE CRITERIA

A total of 30 participants who are exposed to continuous noise for longer periods with more than 5 years of work experience were included in the study. Other employees who are not exposed to continuous noise were excluded from the study.

STIMULUS USED: A closed set of 15 questions were prepared and used for the collection of the data.

PROCEDURE: The list of verified questions were circulated among the hospital kitchen employees. Task of the participants was to read and understand the questions with adequate response.

ANALYSIS: The questionnaire data collected was further summarized by using frequency and percentage. For each item the response was recorded as yes or no and credit point of one assigned for yes or zero for no.

RESULT AND DISCUSSION

The aim of the present study was to analyse the awareness of hazardous noise, importance of EPDs and safety among hospital kitchen employees and given below is the response percentage of different participants on each question

Table 1: Shows the percentage scores for the questionnaire

	Yes		No	
	Frequency	%	Frequency	%
Are you aware of the harmful effects noise has on hearing?	19	63.3	11	36.7
Have you experienced pain, blocking sensation in the ear when exposed to loud sounds?	15	50	15	50
Ringing sensation in your ears after exposed to loud noise?	13	43.3	17	56.7
Exposure to loud sound can damage your hearing?	19	63.3	11	36.7

Do you have any history of temporary hearing loss after exposure to loud noise?	22	73.3	8	26.7
High levels of noise can cause sleep disturbance?	20	66.7	10	33.3
Prolonged noise exposure makes you stressful?	21	70	9	30
Do you work for more than 8 hours a day?	0	0	30	100
Do you think periodic audiological evaluation is necessary?	22	73.3	8	26.7
Have you ever checked you hearing?	22	73.3	8	26.7
Are you aware of audiologists?	13	43.3	17	56.7
Do you use Ear protection devices (EPD's)?	13	43.3	17	56.7
Are you aware of the importance of EPDs?	13	43.3	17	56.7
Do you feel any changes in hearing when you are using or not using EPD's?	22	73.3	8	26.7
Are you willing to take measures to control noise?	30	100	0	0

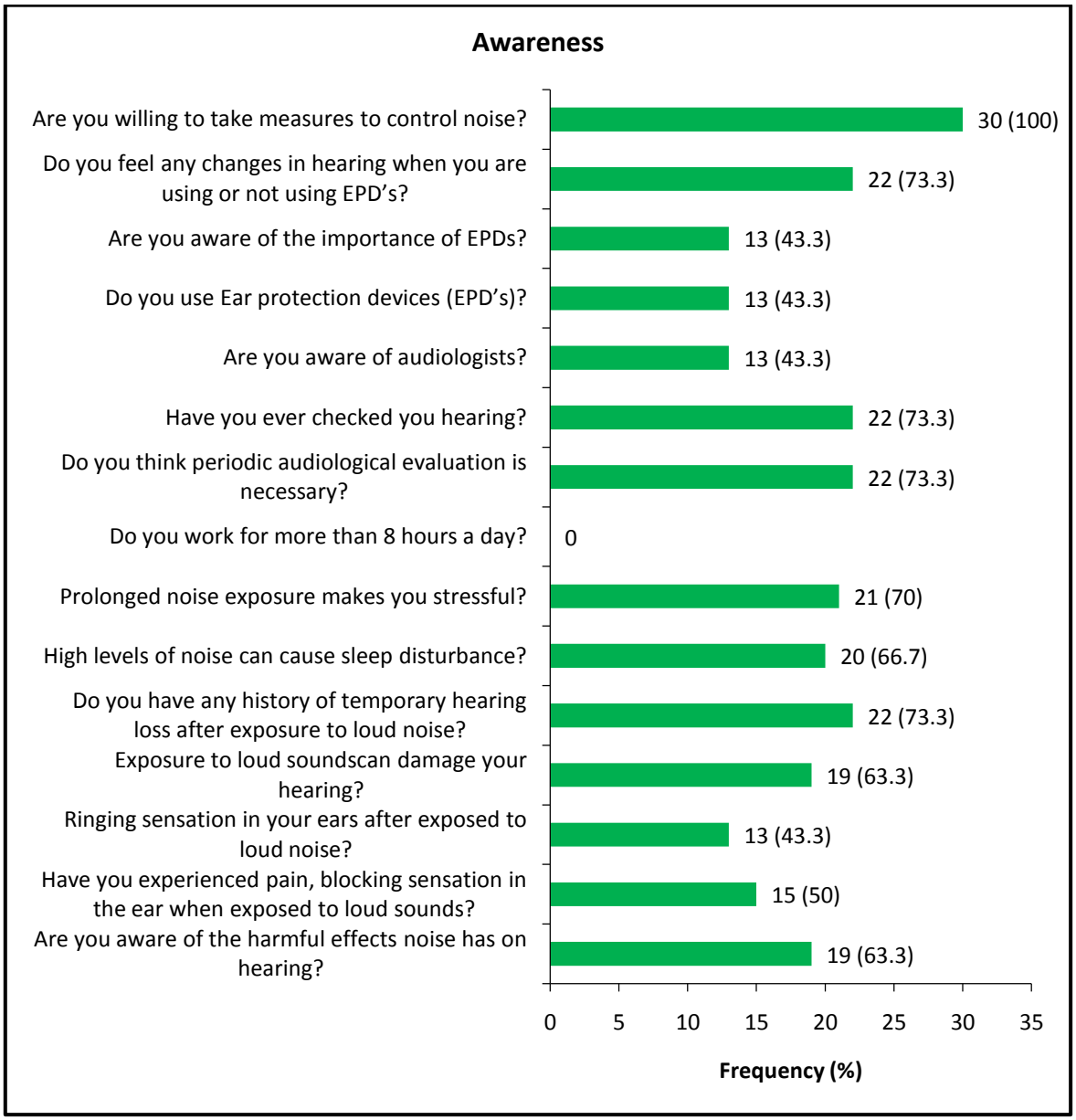

Figure 1: Shows the frequency of Awareness for questionnaire

63% of the population are aware of the harmful effects noise has on hearing. A high % of employees are aware that prolonged noise exposures leads to pain and blocking sensation (50%) Ringing sensation in (43%) individuals. 63% of individuals are aware that exposure to loud sounds can damage hearing. 73% of respondeeshave reported history of temporary hearing loss after loud noise exposure. 66.7% individuals have faced sleep disturbances. 70% of individuals have become stressful due to prolonged noise exposure. 43 of individuals use EPD's and are aware of the importance of using EPD's

IV. DISCUSSION

Hospital kitchen employees are exposed to high noise levels which can lead to noise induced hearing loss and other health issues. So, this present study aimed toanalyse find whether the hospital kitchen employees are aware of noise and its effects on health. On responding for the developed questionnaire, the results clearly say that the some employers are aware of noise and its impact on health whereas most of them aren't aware.They have experienced reduced hearing sensitivity, tinnitus, ear pain and blocking sensation

V. CONCLUSION

This study concluded that the employees who are working in the hospital kitchens are not completely aware on noise and its health hazards. By rooting this study as a reference, awareness should be extent among the populations who are exposed to continuous noise which will prevent them from a risk of developing health issues.

REFERENCE

[1]. Manohare, M., Rajasekar, E.,Parida, M.,&Vij, S.(2022). Bibliometric analysis and review of auditory and non-auditory health impact due to road traffic noise exposure. Noise Mapping, 9(1), 67-88
[2]. Deccan Herald Noise Pollution on the rise jun 03 2022 http://www.deccanherald.com/metrolife/metrolife-your-bond-with-bengaluru/noise-pollution-on-the-rise-11147555.html
[3]. National institute on deafness and other communication disorders : NH Publication No. 14-4233, March 2014
[4]. Mukherjee, K., Deb, N., Roy, A.D., & Dash, P.(2022). Impact of noise pollution on human health in Barasat Urban Area, west Bengal, in sustainable Urbanism in developing countries (pp.375-393). CRC Press