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Knowledge on Bronchial Asthma and its Prevention among the Industrial Workers in Selected Industries of Kamrup(M) Assam in a View of Developing an Information Booklet

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Abstract: Background: Industrial workers provides the basis for society to live, while workers individually gain the income they need to live. There is private gain or suffering depending on the level of wages that workers receive.
Methodology: A descriptive survey approach was adopt to assess the knowledge of industrial Workers regarding Bronchial Asthma in a selected cement Industries Kamrup (M) , Assam. 306 Industrial Workers were selected from the selected Industries of Kamrup (M), Assam. A self-structured questionnaire was used to assess the knowledge of Industrial workers regarding Bronchial Asthma in a selected Industries of Kamrup (M).
Result: The results showed that educational level, family monthly income and history of respiratory tract infection was found significant association at P<0.05 level with. Age, gender, marital status, type of family, personal habits, source of information, duration of working hours per day, working experience were non- significant at P< 0.05 level. The frequency and percentage distribution of knowledge regarding Bronchial Asthma among Industrial Workers results showed that majority (84.31%) of participants had moderate knowledge,(13.73%) had inadequate knowledge and (1.96%) of participants had adequate knowledge regarding Bronchial Asthma.
Conclusion: This findings proved that assess the knowledge of industrial workers regarding bronchial asthma in a selected Kamrup (M) was done accordance with the objectives of the study.
Keywords: Assess, Knowledge, Industrial Workers, Bronchial Asthma.

I. INTRODUCTION

Industrial workers means any person, not being in any management position who is employed in industries in which materials are manufactured, altered, cleaned, repaired, ornamented, finished, adapted for sale, broken up or demolished or in which materials are transformed. Those who are working in the cement industries, called cement industrial workers. In cement industries, workers are exposing various type of chemicals. Cement contains various types of chemicals in addition to lime and silica. These toxic chemicals are caused different health complications, in addition respiratory disorders. The most important occupational hazards for cement workers are allergy and complication related to respiratory system.According to WHO, 262 million people has asthma in 2019 and causes 455 000 deaths. Most asthma related deaths occur in low and lower in middle income countries. Asthma is a major non communicable disease, affecting both children and adults. According to Hindustan Times, in2022, Global burden of disease (GBD) study has estimated that India has over 30 million asthma patients and 70% of patients with asthma remain undiagnosed. When it comes to mortality, about 42% of patients' deaths occur in India. 82% of patients with early symptoms and 70% of patients with severe asthma remain undiagnosed in India.

A. Statement of problem

A study to assess the Knowledge on Bronchial Asthma and its Prevention among the Industrial Workers in selected Industries of Kamrup (M), Assam in a view of developing an Information Booklet.

B. Objectives of the study

1) To assess the knowledge regarding Bronchial Asthma and its prevention among Industrial workers in selected Industries of Kamrup (M) Assam.

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2) To find out the association between knowledge regarding Bronchial Asthma and its prevention with selected demographic variables among Industrial Workers in selected Industries of Kamrup (M) Assam.

C. Hypothesis

H_1: There is significant association between knowledge on bronchial asthma and its prevention among Industrial Workers with selected demographic variables.

II. RESEARCH METHODOLOGY

A quantitative research survey is adopted for the study. In the view of nature the problem, quantitative survey was considered as appropriate approach to assess the knowledge on Bronchial Asthma and its prevention among the Industrial Workers in selected industries of Kamrup (M) Assam.The research design selected for the present study is descriptive design to fulfill the objectives of the study. A descriptive design is a research design in which self report data are collected from a sample to determine the characteristics of the population.The sample size was determined by using Raosoft sample size calculator. Sample size of 306 cement industrial workers out of 1500 was taken for the study with 5 percent margin of error, 95 percent confidence level and population proportion 50 percent.In the present study,Convenient sampling technique was used to select the samples.

III. RESULTS

A. Findings related to socio demographic variables

TABLE 1.1

Frequency and percentage distribution of Industrial workers accordingto age

n=306

Age in years	Frequency(f)	Percentage(%)
20-35	181	59.15
36-50	113	36.93
>51	12	3.92
Total	306	100

The data presented in the table no.1.1 shows that out of 306 industrial workers majority of the industrial workers i.e 181(59.15%) belong to age group 20-35 years, followed by 113(36.93%) age group of 36-50 years and 12(3.93%)age group of 51years above.

TABLE 1.2

Frequency and percentage distribution of Industrial workers accordingto gender

n=306

Gender	Frequency(f)	Percentage(%)
Male	294	96.08
Female	12	3.92
Total	306	100

The data presented in the table 1.2 shows that out of 306 industrial workers majority of the industrial workers i.e294(96.08%) belonged to male and 12(3.92%) are female.

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TABLE 1.3

Frequency and percentage distribution of Industrial workers accordingto marital status

n=306

Marital status	Frequency(f)	Percentage (%)
Married	249	81.37
Unmarried	57	18.63
Total	306	100

The data presented in the table no.1.3 shows that out of 306 industrial workers majority of the industrial workers i.e249(81.37%) are married and 57(18.63%) are unmarried.

TABLE 1.4

Frequency and percentage distribution of Industrial workers according to type of family

n= 306

Type of family	Frequency(f)	Percentage(%)
Nuclear	245	80.07
Joint	61	19.93
Total	306	100

The data presented in the table no.1.4 shows that out of 306 industrial workers majority of industrial workers i.e245(80.07%) are from nuclear family and 61 (19.93%) are from joint family .

TABLE 1.5

Frequency and percentage distribution of Industrial workers according to educational level

n= 306

Education level	Frequency(f)	Percentage(%)
Informal	25	8.17
Primary	123	40.2
Secondary	148	48.37
Graduate and above	10	3.26
Total	306	100

The data presented in the table no.1.5 shows thatout of 306 industrial workers majority of industrial workers i.e 148(48.37%) are secondary education passed, followed by 123(40.2%) are primary education passed , 25(8.17%) are having informal education and 10(3.26%) are graduate and above.

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TABLE 1.6

Frequency and percentage distribution of Industrial workers according to monthly family income

n=306

Monthly family income (Rs)	Frequency(f)	Percentage(%)
<2390	0	0
2391-7101	0	0
7102-11836	9	2.94
11837-17755	38	12.42
17756-23673	163	53.27
23674-47347	90	29.41
≥47348	6	1.96
Total	306	100

The data presented in the table no.1.6 shows that out of 306 industrial workers majority of the industrial workers i.e 163(53.27%) had family income of Rs. 17756-23673, followed by 90(29.41%) had family income Rs. 23674-47347, 38(12.42%) had family income Rs. 11837-17755, 9(2.94%) had family income Rs. 7102-11836 and 6(1.96%) had family income Rs. ≥47348.

TABLE 1.7

Frequency and percentage distribution of Industrial workers accordingto personal habits

n=306

Personal habits	Frequency(f)	Percentage(%)
Tobacco chewing	222	72.55
Smoking	39	12.75
Alcohol intake	35	11.44
None	10	3.26
Total	306	100

The data presented in the table no.1.7 shows that out of 306 industrial workers majority of industrial workers i.e 222(72.55%) have the habit of tobacco chewing, followed by 39(12.75%) have the habit of smoking, 35(11.44%) have the habit of alcohol intake and 10 (3.26%) have no personal habits that is none.

TABLE 1.8

Frequency and percentage distribution of Industrial workers according to their source of information

n=306

Source of information	Frequency(f)	Percentage(%)

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Mass media	0	0
Family and friend	0	0
Professional person	306	100
Total	306	100

The data presented in the table 1.8 shows that out of 306 industrial workers all of them i.e 306(100%) gather the source of information from the professional person.

TABLE 1.9

Frequency and percentage distribution of Industrial workers according to their duration of working hours

n= 306

Duration of working hours per day	Frequency(f)	Percentage(%)
<6 hours	0	0
6-10 hours	306	100
≥11 hours	0	0
Total	306	100

The data presented in the table 1.9 shows that out of 306 industrial workers all of them i.e 306(100%) are working 6-10 hours per day.

TABLE 1.10

Frequency and percentage distribution of Industrial workers according to their working experience

n=306

Working experience	Frequency(f)	Percentage(%)
<1 year	6	1.96
1-2 years	111	36.27
>2 years	189	61.77
Total	306	100

The data presented in the table 1.10 shows that out of 306 industrial workers majority of the industrial workers i.e 189(61.77%) are having >2 years experience, followed by 111(36.27%) are having 1-2 years experience and 6(1.96%) are having <1 year experience

TABLE 1.11

Frequency and percentage distribution of Industrial workers according to their history of respiratory tract infection

n=306

History of respiratory tract infection	Frequency(f)	Percentage(%)

Yes	43	14.05
No	263	85.95
Total	306	100

The data presented in the table 1.11 shows that out of 306 industrial workers majority of the industrial workers i.e 263(85.95%) does not have any history of respiratory tract infection and 43(14.05%) have history of respiratory tract infection

TABLE 2

B. Findings related toknowledge on bronchial asthma and its prevention among the cement Industrial workers.

Assessment of level of knowledge among industrial workers regarding bronchial asthma and its prevention.
n= 306

Level of knowledge	Frequency (f)	Percentage (%)	Mean	SD
Inadequate (<13)	42	13.73	14.53	1.73
Moderate (13- 17)	258	84.31		
Adequate (>17)	6	1.96		
Total	306	100		

The data presented in the table no.2 presented that out of 306 industrial workers majorityi.e 258(84.31%) of workers had moderate knowledge , 42(13.73%) had inadequate knowledge and 6(1.96%) of workers had adequate knowledge with mean knowledge score was 14.53 and SD= 1.78.

C. Findings related to Association between level of knowledge regarding Bronchial Asthma and Its prevention among the cement Industrial workers with selected demographic variables

In the present study, The overall statistical significant were found in regards to educational level (χ^2=29.2, P value=0.0001) , monthly family income(χ^2=39.66, p value= 0.0001) and history of respiratory tract infection(χ^2=13.74, P value=0.0010) regarding knowledge of bronchial asthma and its prevention. The rest of demographic variable i.e age, gender, marital status, type of family, personal habits, source of information, duration of working hours per day, working experience regarding knowledge of bronchial asthma and its prevention are found not significant. Hence the null hypothesis, H01is rejected and the research hypothesis i.eH_1there is significant association between knowledge on bronchial asthma and its prevention among Industrial Workers with selected demographic variablesis accepted in terms of educational status, monthly family income and history of respiratory tract infection.

IV. DISCUSSION

Knowledge on Bronchial asthma and its prevention among Industrial Workers In selected Industries of Kamrup(M) Assam in a view of developing information Booklet.

The findings of the present study, Majority of the industrial workers i.e 181(59.15%) out of 306 industrial workers belong to age group 20-35 years, followed by 113(36.93%) age group of 36-50 years and 12(3.93%)age group of 512 years above.

Findings of the study were supported by Sheikh A M, Farooq N, Paddar U, Hussain T(2022) conduct a study to assess the knowledge regarding prevention of bronchial asthma among workers in JK cement factory of Kashmir. This study included awide range of participants. The largest age (42%) was aged between 21-40.

It has been observed from the present study, assess the knowledge of industrial workers revealed that the majority i.e 258(84.31%) had moderate knowledge and 42(13.73%) had inadequate knowledge and only 6(1.96%) had adequate knowledge of bronchial asthma and its prevention.

The study findings were supported by a study conducted by Deyannavar H and Bhupali P (2019)“ A descriptive study to assess the knowledge regarding prevention of bronchial asthma among industrial workers at textile industries in Belgavi city”.The descriptive study conducted using structured knowledge questioners and demographic variables analyzed for the study are age, gender and diagnosis. The study was conducted among 60 industrial workers of selected textile industry of Belagavi city. In these studies, Non probability purposive sampling techniques was used for the selection of samples. The study revealed that most of the workers (73.33%) had average knowledge, (15%) had good knowledge & least (11.67%) had poor knowledge regarding bronchial asthma.

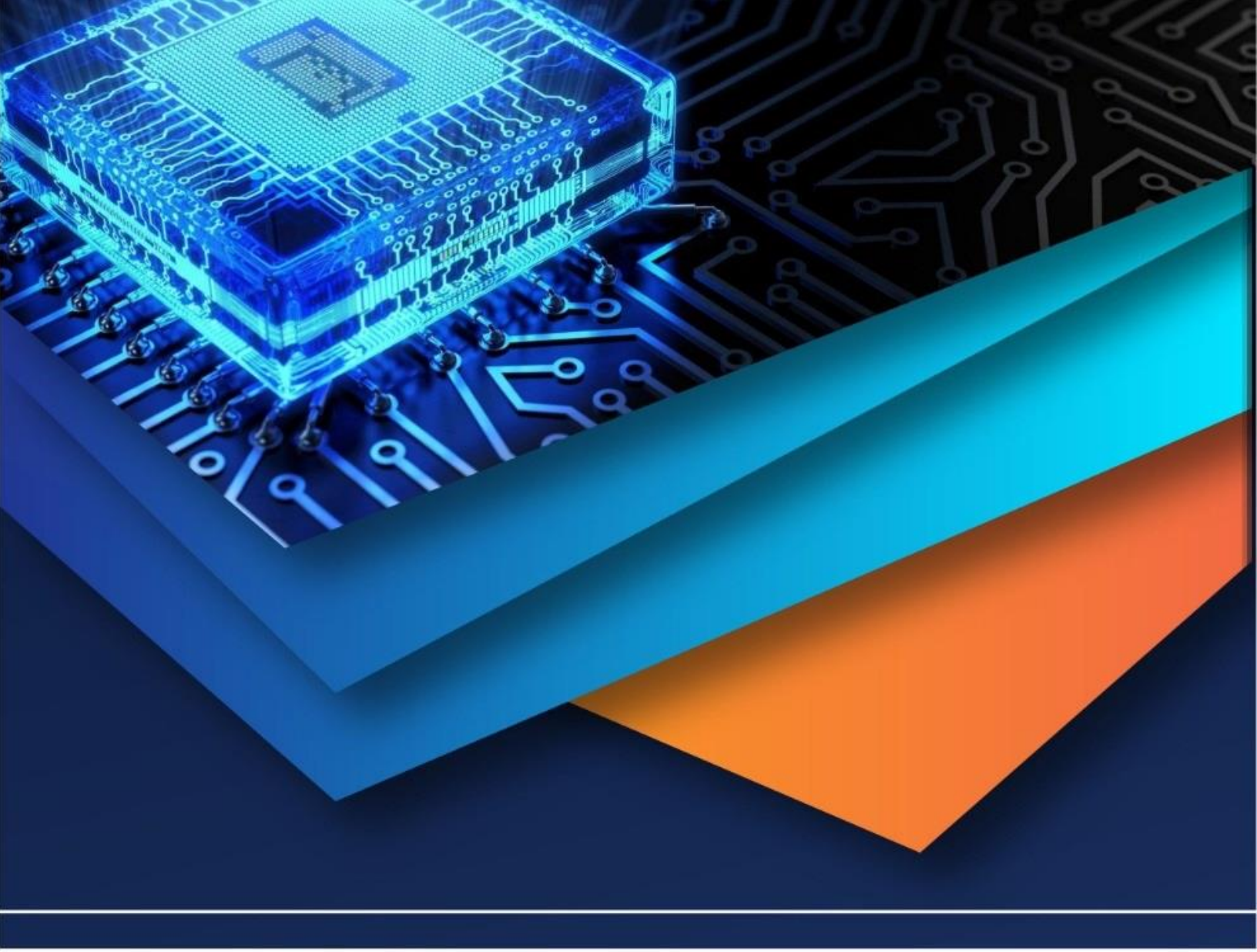
V. CONCLUSION

Bronchial asthma is one of the common disease those who are working in the industrial area. So knowledge regarding prevention on bronchial asthma is needed for this people. The aim of the study was to assess the knowledge on bronchial asthma and its prevention among industrial workers. From the findings of the present study it can conclude that information booklet (regarding Bronchial asthma and its prevention) among the industrial worker in cement industry Kamrup(M) help in educating the industrial worker to improve their life standards. In this study, assess the knowledge of industrial workers revealed that the majority i.e 258 (64.31%) had moderate knowledge, 42 (13.73%) had inadequate knowledge and only 6 (1.9%) had adequate knowledge. And in this present study also slowed that, education level, monthly family income, history of respiratory tract infection was significant association at $P<0.05$ level. Others demographic variables such as age, gender, marital status, type of family, personal habits, source of information, duration of working hours per day, working experience were non- significant association at $p<0.05$ level. Therefore, the study concludes that there is need to strengthen the industrial worker’s knowledge on bronchial asthma and its prevention through refresh training and demonstration.

REFERENCES

[1] Industrial workers definition, Factories Act,1948 [Online] [cited 2023 Jan 24] Available from: URL:https://www.lawindider.com/dictonary/industrial-worker.com
[2] Bronchial asthma [Online]. 2022 Jan 19; [cited 2023 Fab 24]. Available from: URL: https://my.clevelandclinic.org
[3] Occupational asthma [Online]. 2023 may-3[cited 2023]Available from: URL:https://medlineplus.gov/enc/article/000110.htm
[4] Occupational asthma [Online]. [cited 2023 Fab 20]Available from :URL:https://www.hopkinsmedicine.org/health/conditios-and-diseases/asthma/occupational-asthma
[5] Bronchial asthma [Online]. 2023 Jan-22 [cited 2024 Jan-27]Available from: URL :https://medlineplus.gov/ency/article/000141.htm
[6] Asthma [Online].2024 May-6 [cited 2024 July-22]Available from: URL:https://www.who.int/news-room/fact-sheets/detail/asthma#:~:text=Asthama%20affected%20an%20estimated%20262,lead%20a%20normal%2C%20active%20life.
[7] Indian accounts for over 42% of all global asthma deaths: Study [Online]. 2022 May-20 [cited 2023 Mar-22]Available from: URL:https://www.hidustantimes.com/cities/lucknow-news/india-accounts-for-over-42-of-all-global-asthma-deaths-stud-101653065042600-amp.html

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