International Journal of Advance Research in Community Health Nursing

E-ISSN: 2664-1666
P-ISSN: 2664-1658
www.communitynursing.net
IJARCHN 2024; 6(1): 134-137
Received: 12-02-2024
Accepted: 16-03-2024

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A study to assess the attitude of textile workers towards preventing against byssinosis (Occupational lung disease) at Thirubhuvanai, Puducherry

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DOI: https://doi.org/10.33545/26641658.2024.v6.i1b.180

Abstract
Introduction: Occupational health and safety remain critical concerns across various industries, as workers are exposed to a plethora of risks associated with their job environments.
Objectives of the Study: The main objective of the study to assess the level of attitude among textile workers towards preventing byssinosis and to associate the level of attitude among textile workers towards preventing byssinosis with their selected demographic variables.
Methodology: The research approach used for this study was quantitative research approach. A descriptive research design was adopted for this present study. By using convenient sampling technique, 30 textile workers were selected for the present study.
Results: The present study reveals that majority 23 (76.7%) of them had low attitude, 4 (13.3%) of them had very low attitude and 3 (10%) of them had moderate attitude.
Conclusion: The study findings concluded that majority of textile workers had low attitude towards preventing byssinosis.

Keywords: Byssinosis, occupational lung disease, prevention, textile workers

Introduction

The textile industry, a key contributor to global economic development, faces significant challenges in terms of occupational health hazards, particularly respiratory diseases. Byssinosis, a respiratory ailment caused by prolonged exposure to cotton dust and other textile-related particulates, is a significant occupational lung disease in this context. The industry relies heavily on a large workforce operating in close proximity to these particulates, making understanding the attitudes of textile workers towards preventing byssinosis crucial.

Despite advancements in automation, machinery, and production techniques, the risk of occupational lung diseases persists due to inadequate preventive measures and an incomplete understanding of health risks associated with textile work. Byssinosis, a respiratory ailment, is primarily affecting textile workers who encounter cotton dust and other textile-related particulates. Despite advancements in industrial hygiene practices, byssinosis remains a persistent occupational health challenge in regions with outdated equipment, inadequate ventilation, and limited protective measures.

Byssinosis affects workers' quality of life, places a substantial burden on healthcare systems and employers due to increased absenteeism, medical expenses, and decreased productivity. Understanding the attitudes of textile workers towards preventing byssinosis is essential for developing effective preventive strategies. However, there is a significant gap in research exploring textile workers' attitudes towards preventing occupational lung diseases, hindering the development of tailored interventions that address the unique needs and concerns of textile workers.

Need for the study

Occupational lung diseases are prevalent worldwide, with varying degrees of occurrence based on industries, regions, and exposure levels. Silicosis, asbestosis, occupational asthma, chronic obstructive pulmonary disease (COPD), and byssinosis are some of the most

common diseases. Silicosis, caused by crystalline silica dust, is a major global concern, with around 23,000 deaths attributed to it in 2016. Asbestosis, caused by inhaling asbestos fibers, is a major concern in construction and shipbuilding industries.

Occupational asthma, caused by exposure to sensitizing agents, accounts for 15% of adult-onset asthma cases worldwide. COPD, caused by dust, chemicals, and fumes, has over 3 million deaths globally in 2019. Byssinosis, a common occupational lung disease, has decreased in some regions due to improved working conditions and mechanization. It has been documented among textile workers in China, Pakistan, India, and southern states. Understanding the prevalence and nature of occupational lung diseases among textile workers can inform targeted interventions, improve workplace conditions, enhance preventive strategies, and support comprehensive healthcare programs.

Statement of the problem

A study to assess the attitude of textile workers towards preventing against byssinosis (occupational lung disease) at Thirubhuvanai, Puducherry.

Objectives of the study

- To assess the level of attitude among textile workers towards preventing byssinosis.
- To associate the level of attitude among textile workers towards preventing byssinosis with their selected demographic variables.

Research Methodology

A quantitative research approach and descriptive research design was selected for the present study. The study was conducted in Thirubhuvanai, Puducherry. The study population comprised of all the textile workers who are all working in Puducherry. The sample consists of 30 textile workers who are all working in Thirubhuvanai, Puducherry, who meet the inclusion criteria. Using a convenient sampling technique the samples were selected for the present study. The tool consists of demographic variables and attitude assessment scale. The data of the study was evaluated by using descriptive and inferential statistics.

Major Finding

Regarding the age in years, the majority 10 (33.3%) were in the age group of 21-30 years, 13(43.3%) were in the age group of 31-40 years and 4 (13.3%) were in the age group of 41-50 years. With regards to gender, majority 22 (73.3%) were male and 8 (26.7%) were female. In the aspect of education status, the data shows majority 13 (43.3%) were uneducated and 1 (3.3%) were completed primary level. In the aspect of occupation status majority, 30 (100%) were private employed. In the aspect of religion majority, 28 (93.3%) were Hindu, 1 (3.3%) were Muslim and 1 (3.3%) were Christian. Regarding income per month, the data shows that the majority 13 (43.3%) come under Rs.9001 to Rs.15000 and 9 (30%) were come under Rs. 15000/- to Rs20000/-. With regards to marital status majority, 22 (73.3%) were married and 8 (26.7%) were single. In the aspect of type of family, 12 (40%) had 3-6 years of experience and 6 (20%) had below 3 years experience. With regards to history of occupation lung disease majority 17 (56.7%) had previous history and 13 (43.3%) had no previous history.

Results and Discussion

The study was conducted study to assess the attitude of textile workers towards preventing against byssinosis (occupational lung disease) at Thirubhuvanai, Puducherry. The table 1 reveals the frequency and percentage-wise distribution of level of attitude among textile workers towards preventing byssinosis. The finding shows that, majority 23 (76.7%) of them had low attitude, 4 (13.3%) of them had very low attitude and 3 (10%) of them had moderate attitude.

The table 2 shows that there is significance association between education status and year of experience with level of attitude among textile workers towards preventing byssinosis where $p<0.05$. There is no significance association between Age, Gender, Occupation, Religion, Income per month, Marital status, Type of family, Any history of occupational lung diseases with level of attitude among textile workers towards preventing byssinosis.

Table 1: Distribution of the level of attitude among textile workers towards preventing byssinosis. N = 30

S. No	Level of Attitude	Frequency (n)	Percentage %
1.	Very low Attitude	4	13.3%
2.	Low Attitude	23	76.7%
3.	Moderate Attitude	3	10%
4.	High Attitude	0	0

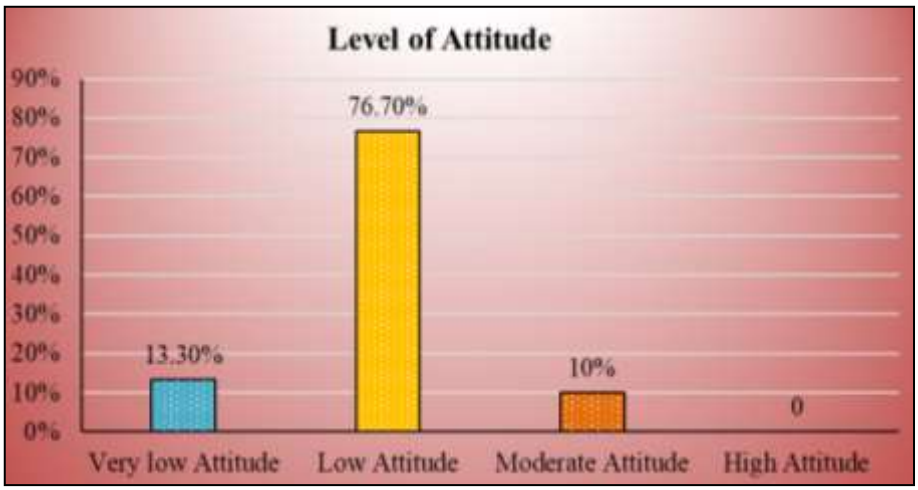

Fig 1: Percentage wise distribution of level of attitude among textile workers towards preventing byssinosis

Table 2: Association of the level of attitude among textile workers towards preventing byssinosis with their selected demographic variables. N = 30

S. No	Demographic variables	Level of Knowledge						X^2 value
		Low attitude		Moderate attitude		Very low		
	Age in years	**N**	**%**	**N**	**%**	**N**	**%**	
1	a) 21-30 years	1	2	9	18	0	0	X^2 = 5.177 P= 0.521 (NS)
	b) 31-40years	2	4	10	20	1	2	
	c) 41-50 year	1	2	2	4	1	2	
	d) >50 years	0	0	2	4	1	2	
2.	**Gender**							X = 2.208 P= 0.331 (NS)
	a) Male	2	4	17	34	3	6	
	b) Female	2	4	6	12	0	0	
3.	**Education status**							X^2 = 7.585 p = 0.042 **(S)***
	a) uneducated	1	2	10	20	2	4	
	b) Primary level	0	0	1	2	0	0	
	c) Higher secondary	1	2	5	10	1	2	
	d) Graduation	2	4	7	14	0	0	
4.	**Occupation**							**K**
	a) Government employed	0	0	0	0	0	0	
	b) Unemployed	0	0	0	0	0	0	
	c) Self employed	0	0	0	0	0	0	
	d) Private employed	4	7	23	46	3	6	
5.	**Religion**							X^2 = 0.652 p = 0.893 (NS)
	a) Hindu	4	8	21	42	3	6	
	b) Muslim	0	0	1	2	0	0	
	c) Christian	0	0	1	2	0	0	
	d) Others	0	0	0	0	0	0	
6.	**Income per month**							X^2 = 4.845 p = 0.564 (NS)
	a) Below Rs. 9000/-	1	2	6	12	0	0	
	b) Rs. 9001/- to Rs.15000/-	2	4	8	16	3	6	
	c) Rs. 15000/- to Rs.20000/-	1	2	8	16	0	0	
	d) Above Rs.20000/-	0	0	1	2	0	0	
7.	**Marital status**							X^2 =3.320 p = 0.190 **(S)***
	a) Single	0	0	8	16	0	0	
	b) Married	4	8	15	30	3	6	
8.	**Type of family**							X^2 = 4.725 p = 0.094 (NS)
	a) Joint	4	0	10	20	1	2	
	b) Nuclear	0	8	13	26	2	4	
9.	**Year of experience**							X^2 =9.762 p = 0.013 (S)*
	a) Below 3 years	0	0	6	12	0	0	
	b) 3-6 years	3	6	9	18	0	0	
	c) 7-10 years	1	2	5	10	1	2	
	d) Above 10 years	0	0	3	6	2	4	
10.	**Any history of occupational lung disease**							X^2 = 0.195 p = 0.907 (NS)
	a) Yes	2	4	13	26	2	4	
	b) No	2	4	10	20	1	2	

*p<0.05 - Significant; p<0.01 - Highly Significant K= constant

Conclusion

The present study assessed the attitude of textile workers towards preventing against byssinosis (occupational lung disease) at Thirubhuvanai, Puducherry. The study findings concluded that most of the textile workers had low attitude towards preventing byssinosis. There is significance association between education status and year of experience with level of attitude among textile workers towards preventing byssinosis where p<0. 05.

Recommendations

- Same study can be conducted with large samples.
- Same study to can be conducted among the general public.

Conflict of Interest

Not available

Financial Support

Not available

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How to Cite This Article
Preetha K, Sakthipriya S, Muthamilslevi G. A study to assess the attitude of textile workers towards preventing against byssinosis (Occupational lung disease) at Thirubhuvanai, Puducherry. International Journal of Advance Research in Community Health Nursing. 2024;6(1):134-137