IJNRD.ORG **ISSN : 2456-4184**

INTERNATIONAL JOURNAL OF NOVEL RESEARCH AND DEVELOPMENT (IJNRD) | IJNRD.ORG

An International Open Access, Peer-reviewed, Refereed Journal

A STUDY TO ASSESS THE EFFECTIVENESS OF STRUCTURED TEACHING PROGRAMME ON BYSSINOSIS (OCCUPATIONAL LUNG DISEASE) AMONG THE COTTON TEXTILE WORKERS AT THIRUBUVANAI, PUDUCHERRY

S. SAKTHIPRIYA [1], J. PRAKASH [2],

[1]Assistant Professor in Department of Community Health Nursing, SMVNC, Puducherry

[2]B.Sc., (Nursing)-IV Year, Sri Manakula Vinayagar Nursing College, Puducherry

ABSTRACT:

Introduction: Byssinosis is an occupational lung disease caused by inhalation of cotton or jute dust in inadequately ventilated working environments and can develop over time with repeated exposure. Objectives of the study: The main objective of the study to assess the effectiveness of structured teaching programme on regarding Byssinosis (Occupational lung disease) among the cotton textile workers. Methodology: The research approach used for this study was quantitative research approach. A Quasi-experimental – one group pre and post-test research design was adopted for this present study. By using purposive sampling technique, 30 textile workers were selected for the present study. Results: The present study reveals that in pretest 23(76.7%) whose having inadequate knowledge and 7(23.3%) having moderate level of knowledge. In post-test 23(76.7%) whose having adequate knowledge and 7(23.3%) having moderate level of knowledge. Conclusion: The finding concluded that after structured teaching programme majority of the textile workers had adequate knowledge regarding prevention of byssinosis.

Keywords: Byssinosis, cotton textile workers, structured teaching program

INTRODUCTION:

Occupational lung diseases are work-related conditions caused by materials in the workplace, including occupational asthma, industrial bronchitis, chronic obstructive pulmonary disease (COPD), bronchiolitis obliterans, inhalation injury, interstitial lung diseases, infections, lung cancer, and mesothelioma. These diseases can be caused directly or due to immunological response to various dusts, chemicals, proteins, or organisms. The Occupational Safety and Health Administration (OSHA) set a permissible exposure limit (PEL) for cotton dust in 1971, and later developed the Cotton Dust Standard in 1978 to prevent occupational respiratory diseases like byssinosis.

Byssinosis is an occupational lung disease caused by inhalation of cotton or jute dust in inadequately ventilated working environments and can develop over time with repeated exposure. It is most common in textile workers in yarn and fabric manufacture industries. The causative agents are endotoxins from gram-negative bacteria that grow on the cotton. Current smokers are also at risk for developing byssinosis or having complications relating to it.

There is a lack of information regarding the prevalence and impact of byssinosis in low- and middle-income countries (LMICs), but many textile mills and fibre producing factories located in LMICs have high rates of chronic respiratory disease caused by byssinosis. Byssinosis is still common in developing countries, and smoking increases the risk of developing this disease. Employers should take preventative measures to ensure workers are not exposed to excessive dust and cotton during their work shifts.

NEED FOR THE STUDY

The Center for Disease Control (CDC) reports a significant decline in reported deaths from byssinosis between 1979 and 2010, but comprehensive epidemiological data are lacking. Byssinosis is common in countries with cotton industries, such as India, Pakistan, Nepal, Sri Lanka, and Bangladesh, and is exacerbated by heavy smoking. Despite modernization and improved working environments, byssinosis remains prevalent in many parts of Pakistan, India, Indonesia, Ethiopia, Turkey, and Sudan. An epidemiological study in Ahmedabad, India, found a mean prevalence of 29.62% in the blow section and 37.83% in the card section. A Tamil Nadu study found high prevalence of chronic byssinosis, diabetes, cardiovascular problems, hypercholesterolemia, pulmonary TB, asthma, and respiratory problems among cotton mill workers. A case-control study in Pondicherry, India, found that dusty worksites, heavy smoking, and prolonged service duration were significant risk factors for symptomatic byssinosis.

STATEMENT OF THE PROBLEM

A study to assess the effectiveness of structured teaching programme on byssinosis (occupational lung disease) among the textile workers at Thirubuvanai, Puducherry

OBJECTIVES OF THE STUDY

•To assess the pre-test knowledge regarding Byssinosis (Occupational lung disease)

•To evaluate the effectiveness of structured teaching programme on regarding Byssinosis (Occupational lung disease) among the cotton textile workers.

•To associate the pre-test and post-test level of knowledge on the structured teaching programme on Byssinosis (Occupational lung disease) among the cotton textile workers with their selected demographic variables.

RESEARCH METHODOLOGY:

A quantitative research approach and Quasi-experimental – one group pre and post-test research design was selected for the present study. The present study was on 30 textile workers working in textile industry Thirubhuvanai, Puducherry who meet the inclusion criteria. non-probability purposive sampling technique the samples were selected for the present study. The tool consists of demographic variables and multiple-choice questionnaires. The data of the study was evaluated by using descriptive and inferential statistics.

MAJOR FINDING

In pretest, 23(76.7%) inadequate knowledge and 7(23.3%) moderate level of knowledge. In the post test ,23 (76.7%) adequate knowledge and 7 (23.3%) moderate level of knowledge. In pretest, mean (6.20) and standard deviation is (1.730) of textile workers regarding prevention of byssinosis. Post test mean (24.13) and standard deviation is (6.543) of textile workers regarding prevention of byssinosis. Association between regarding structured teaching programme regarding prevention of byssinosis on both pretest and post-test at selected community area with their selected demographic variables. In pre-test there is no significant values. On post-test the significant demographic variables are education, nature of job and Any type of lifestyle disease belongs to significant *-$p<0.05$, others are belonging to non- significance.

RESULTS AND DISCUSSION

The study was conducted to assess the effectiveness on structured teaching programme on prevention of byssinosis among textile workers in Puducherry. The table 1 reveals the frequency and percentage wise distribution for the level of knowledge on byssinosis. In pretest 23(76.7%) whose having inadequate knowledge and 7(23.3%) having moderate level of knowledge. In post-test 23(76.7%) whose having adequate knowledge and 7(23.3%) having moderate level of knowledge.

The table 2 shows the mean and standard deviation level of knowledge on byssinosis among the textile workers, pre test 6.20+1.730 and post test 24.13+6.543. The highly significant value is 0.05.

Table 1: Frequency and percentage wise distribution for the level of knowledge structured teaching programme on byssinosis among the textile workers in pre-test and post-test. N=30

S.NO	Effectiveness of structural teaching program	PRE-TEST		POST-TEST	
		Frequency (n)	Percentage %	Frequency (n)	Percentage %
1.	Inadequate	23	76.7%	0	0%
2.	Moderate	7	23.3%	7	23.3%
3.	Adequate	0	0%	23	76.7%

Figure 1: Frequency and percentage wise distribution for the level of knowledge structured teaching programme on byssinosis among the textile workers in pre-test and post-test
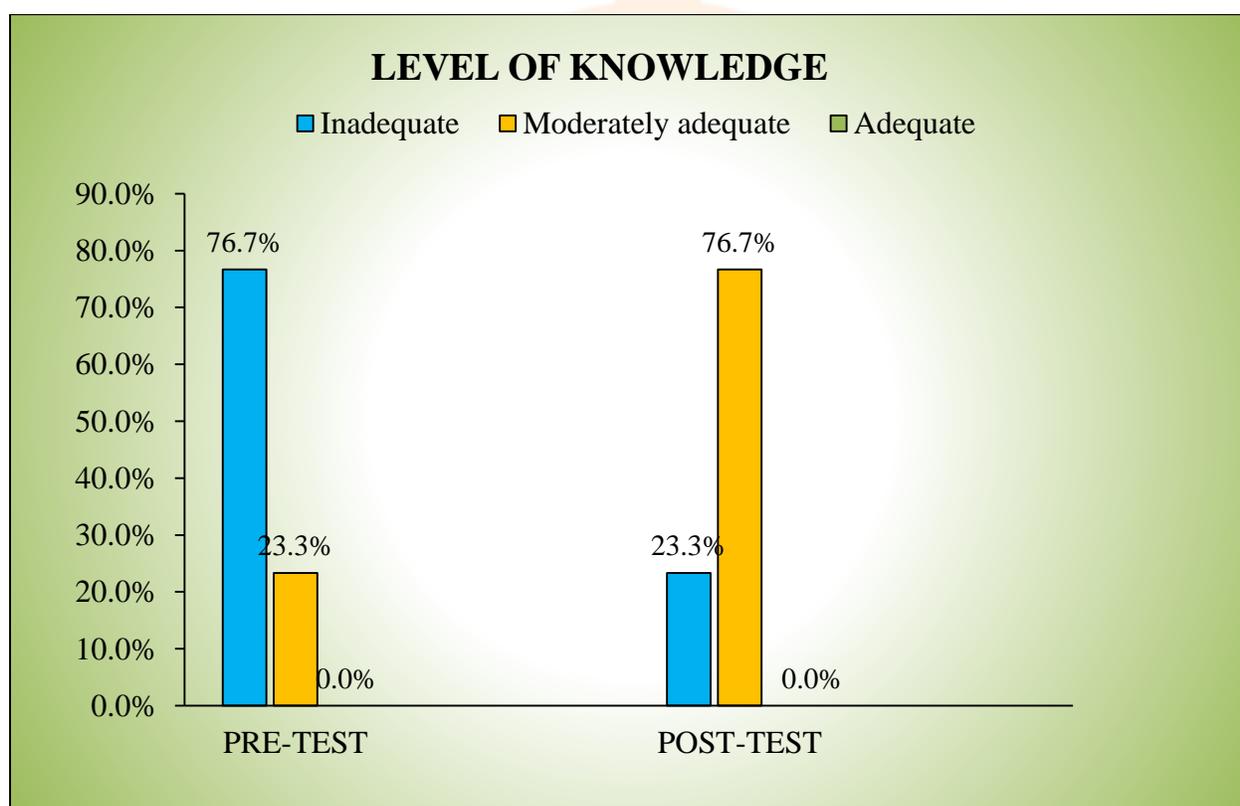
Table 2: Effectiveness on level of knowledge on structured teaching programme on Byssinosis (Occupational lung disease) among the textile workers   N = 30

S.NO	Effectiveness of structural teaching program	Mean	SD	'p' Value
1.	Pre test	6.20	1.730	p = 0.05*
2.	Post test	24.13	6.543	(HS)

Figure 2: Bar diagram shows effectiveness on level of knowledge on structured teaching programme on Byssinosis (Occupational lung disease) among the textile workers
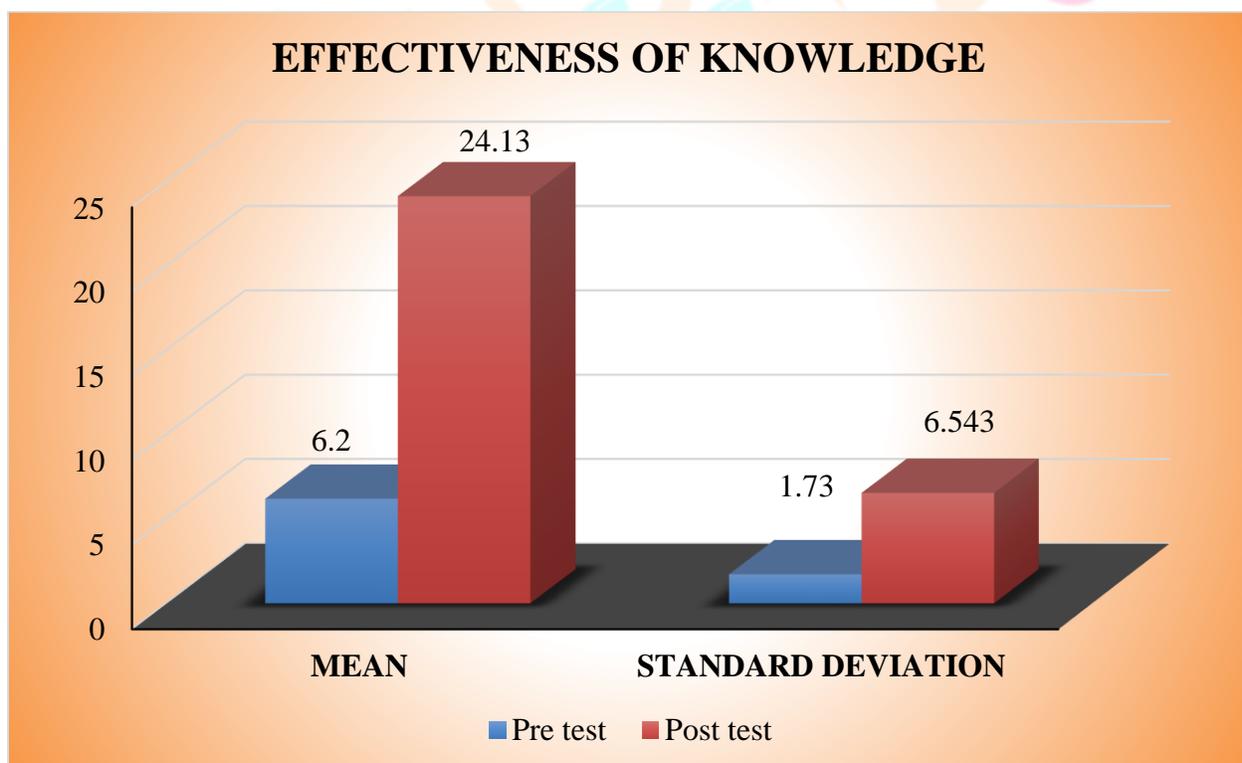
CONCLUSION:

The study findings concluded to assess the effectiveness on structured teaching programme on prevention of byssinosis among textile workers in Puducherry. The finding concluded that after structured teaching programme majority of the texitle workers had adequate knowledge regarding prevention of byssinosis. There is

no significance association between the structured teaching programme on prevention of byssinosis among textile workers with educational qualification, number of children where p <0.001.

RECOMMENDATIONS:

- Same study can be conducted with parents of school age children.

- Same study can be conducted with larger samples.

REFERENCE:

1. Laney, A. Scott, and David N. Weissman. "Respiratory Diseases Caused by Coal Mine Dust." Journal of Occupational & Environmental Medicine, no. Supplement 10, Ovid Technologies (Wolters Kluwer Health), Oct. 2014, pp. S18–22. Crossref, doi:10.1097/jom.0000000000000260.

2. Orbon, K.H., Garcia, T.R., van der Gulden, J.W. et al. Employment status and Quality of life in patients with chronic obstructive pulmonary disease. Int Arch Occup Environ Health 78, 467–474 (2005). https://doi.org/10.1007/s00420-005-0617-7

3. Chen, Xuyu, et al. "A Nomogram for Predicting Lung-Related Diseases among Construction Workers in Wuhan, China." Frontiers in Public Health, Frontiers Media SA, Dec. 2022. Crossref, doi:10.3389/fpubh.2022.1032188.

4. Meeker, John D., et al. "Engineering Control Technologies to Reduce Occupational Silica Exposures in Masonry Cutting and Tuckpointing." Public Health Reports, No. 4_suppl1, SAGE Publications, July 2009, pp. 101–11. Crossref, Doi:10.1177/00333549091244s112.

5. Oo, T.W., Thandar, M., Htun, Y.M. et al. Assessment of respiratory dust exposure And lung functions among workers in textile mill (Thamine), Myanmar: a cross-Sectional study. BMC Public Health 21, 673 (2021). https://doi.org/10.1186/s12889-021-10712-0

6. Wang, X. R. "Respiratory Symptoms and Cotton Dust Exposure; Results of a 15 Year Follow up Observation." Occupational and Environmental Medicine, no. 12,BMJ, Dec. 2003, pp. 935–41. Crossref, doi:10.1136/oem.60.12.935.

7. Sadia, Afreen, et al. "EFFECT OF COTTON DUST EXPOSURE ON RESPIRATORY HEALTH OUTCOMES AMONG TEXTILE WORKERS." Journal of Ayub Medical College Abbottabad, no. 1, Ayub Medical College, Abbottabad Pakistan, Jan. 2023. Crossref, doi:10.55519/jamc-01-10901.

8. Murgia, Nicola, and Angela Gambelunghe. "Occupational <scp>COPD</Scp>—The Most Under-recognized Occupational Lung Disease?" Respirology, no. 6, Wiley, May 2022, pp. 399–410. Crossref, doi:10.1111/resp.14272.

9. Hinson, Antoine, et al. "Cotton Dust Exposure and Respiratory Disorders among Textile Workers at a Textile Company in the Southern Part of Benin." International Journal of Environmental Research and Public Health, no. 9, MDPI AG, Sept. 2016, p. 895. Crossref, doi:3390/ijerph13090895.

10. "Cotton Dust Exposure and Respiratory Disorders among Textile Workers at a Textile Company in the Southern Part of Benin." International Journal of Environmental Research and Public Health, no. 9, MDPI AG, Sept. 2016, p. 895. Crossref, doi:10.3390/ijerph13090895.