

A STUDY TO ASSESS THE EFFECTIVENESS OF STRUCTURED TEACHING PROGRAMME ON KNOWLEDGE REGARDING PREVENTION OF BYSSINOSIS AMONG COTTON FACTORY WORKERS IN SELECTED COTTON FACTORIES OF GUJARAT

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ABSTRACT

Introduction: Illness can strike anybody at any time or age. Occupational health is a branch of community medicine which deals with the effects of occupation or workplace on human health. Every occupation is associated with one or other ill effects on health. One of the declared aims of occupational health is to provide a safe occupational environment in order to safe guard the health of the workers and setup industrial production

Aim: The aim of the study was evaluating the effectiveness of structured teaching programme on knowledge regarding prevention of byssinosis among cotton factory workers in selected cotton factories of vadodara city.

Materials & Methods: An evaluative approach with pre-experimental one group pretest post test research design was adopted for this study. A total of 100 cotton factory workers of selected factories of Vadodara city were selected by non-probability convenient sampling method. Data were collected by using structured questionnaire. Impacted knowledge to cotton factory workers by using structured teaching program.

Results: The present study evaluates the knowledge of cotton factory workers regarding prevention of byssinosis and found that 36 had average knowledge and 64 had poor knowledge in the pretest. From the 100 subjects, 3 had poor knowledge, 78 had average knowledge 19 had good knowledge in the post test. The overall mean percentage of knowledge in the pre-test was 59.55% with standard deviation of 2.84. In the post test the overall mean percentage of knowledge was 97.85 % with standard deviation 2.36 with a positive difference of 7.66 and 't' value 18.92. **Interpretation and conclusion:** Analysis data shows that post test knowledge score is significantly higher than the pretest knowledge score at $p < 0.05$ level of significance i.e., mean difference is 7.66. There is a significant improvement in knowledge of cotton factory workers regarding prevention of byssinosis. Thus investigator concluded that structured teaching program is a good method of conveying information to cotton factory workers and it is very effective in order to gain knowledge.

INTRODUCTION

"An ounce of prevention is worth a pound of cure"

Byssinosis, commonly known as brown lung disease, is a preventable occupational respiratory disorder caused by prolonged inhalation of cotton, flax, or hemp dust in textile and cotton-processing industries. It remains a significant public health concern, particularly in developing countries where the textile industry employs a large workforce and occupational safety measures may be inadequate. Cotton factory workers are continuously exposed to airborne cotton dust during activities such as opening, carding, spinning, and weaving.² During the 16th century, with an increase in cotton production, cotton textile industry also developed rapidly and became one of the leading branches of industry in Turkey. Turkey had a 2.8% share in the world's textile trade and a 10.0% share in the world's cotton wool trade. Denizli is one of the cities where cotton mills are most important for cotton industry, and most of them produce cotton thread using high technology.³

Generally cotton dust is found in the air when handling or processing cotton. The high proportion of micro-dust arises in the course of processing in cotton industry. Exposure of workers to fine dust in cotton industry usually results in to development of respiratory symptoms in industry workers such as chronic cough, progressive dyspnea, chest tightness, cough and dyspnea and it also may lead to chronic bronchitis, emphysema. If the worker ignores the recurrent respiratory problems and symptoms it may lead to many complications such as asthma, Pneumothorax, lung cancer etc. Cotton and synthetic textile industry in India is the largest industry in the country accounting for 20 percent of industrial output and providing employment to around 20 million workers. The workers are at risk of suffering from various chronic respiratory illnesses including byssinosis, chronic bronchitis due to exposure to the cotton dust in the worksites.⁵

METHODOLOGY

An evaluative approach was used for this study to test effectiveness of structured teaching programme on knowledge regarding prevention of byssinosis among cotton factory workers in selected cotton factories of Gujarat under investigation. The research design used in this study was the quantitative, pre-experimental design i.e “one group pre-test, post-test” was used. In the present study independent variable was structured teaching programme on knowledge regarding prevention of byssinosis among cotton factory workers, dependent variable was knowledge of workers regarding prevention of byssinosis and demographic variable were Age, education, living area, educational program attended, addiction and previous respiratory treatment. The samples consist of 100 cotton factory workers, of selected cotton factories of Gujarat. Non-probability convenient sampling technique was used to recruit samples. Demographic and clinical data was collected through structured questionnaire. The pilot study was done on 5 cotton factory workers from the laxmi ginning mill, Vadodara. Descriptive statistics such as frequency and percentage distribution, measures of central tendency and inferential statistics such as paired ‘t’ test and chi-square test were used.

RESULT:

SECTION- I: DEMOGRAPHIC PROFILE OF COTTON FACTORY WORKERS

Table 1. Frequency and percentage distribution of demographic variables of cotton factory workers

DEMOGRAPHIC VARIABLES	FREQUENCY	PERCENTAGE
Age		
<20	57	57%
20-40	20	20%
>40	23	23%
Education		
Primary	53	53%
Secondary	47	47%
Living area		
Crowded	77	77%
Uncrowded	23	23%
Education program		
Yes	80	80 %
No	20	20 %
Addiction		
Yes	43	43 %
No	57	57 %
Previous respiratory treatment		
Yes	43	43 %
No	57	57 %

SECTION – II: COMPARISON OF PRE AND POST-TEST OF KNOWLEDGE OF PREVENTION OF BYSSINOSIS

Table 2. Comparison of pre and post-test mean of knowledge of prevention of byssinosis

SR NO.	KNOWLEDGE VARIABLES	PRE TEST		POST TEST		Mean Difference	‘T’ TEST	INFERENCE
		MEAN	SD	MEAN	SD			
1.	Anatomy & physiology of respiratory system	2.14	0.89	2.35	0.95	0.21	1.56	NS
2.	Introduction of byssinosis	1.52	0.78	3.21	0.66	1.69	15.47	S*
3.	Causes & symptoms of byssinosis	3.08	1.01	3.36	0.98	0.28	1.84	NS
4.	Diagnosis and treatment of byssinosis	2.74	0.95	4.91	0.81	2.17	17.38	S*
5.	Prevention of byssinosis	2.43	0.87	5.74	0.76	3.31	21.64	S*
6.	OVERALL KNOWLEDGE	11.91	2.84	19.57	2.36	7.66	18.92	S*

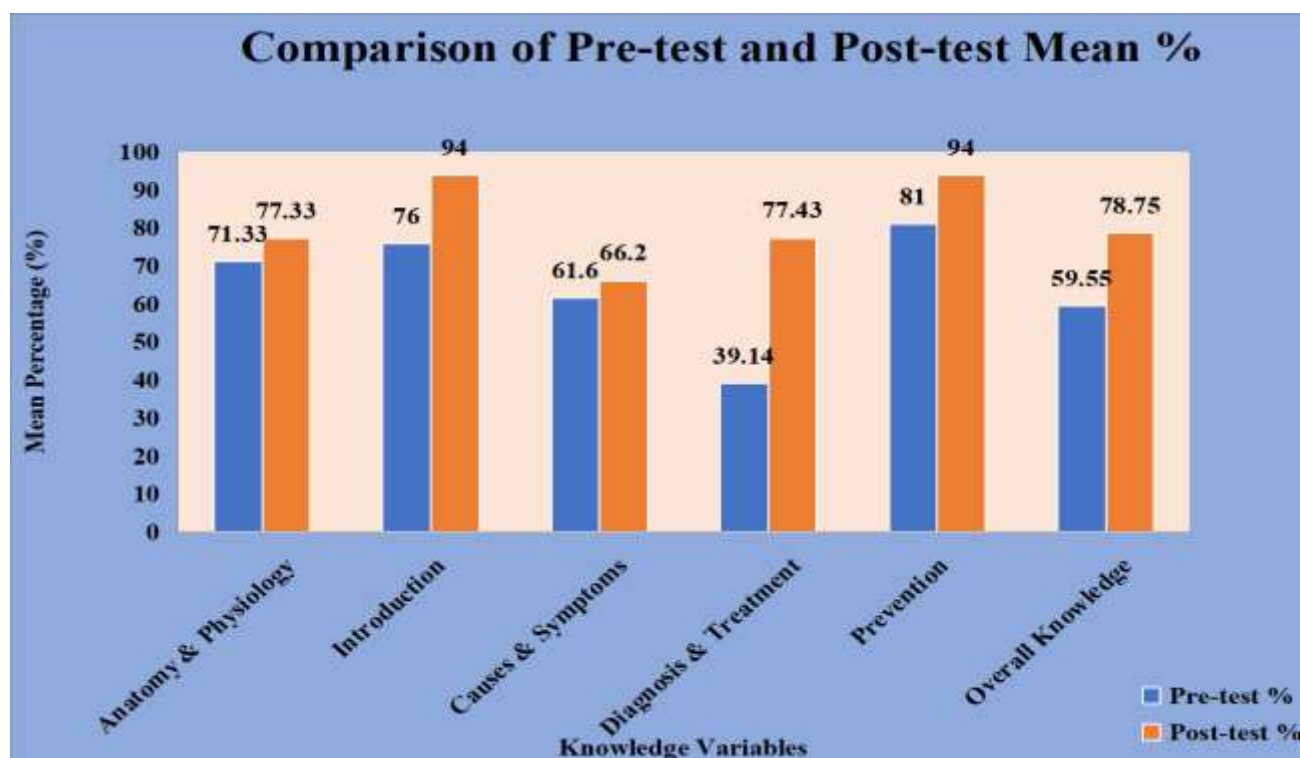


Figure 1: Comparison of pre test & Post test mean %

SECTION III: ASSOCIATION BETWEEN PRE TEST KNOWLEDGE OF COTTON FACTORY WORKERS AND DEMOGRAPHIC VARIABLES.

Table 3. Association between demographic variables and pretest knowledge level on prevention of byssinosis
N=100

SR NO	VARIABLE	CATEGORY	TOTAL SCORE		CHI SQUIRE VALUE	TABLE VALUE	INFERENCE
			< MEDIAN	> MEDIAN			
1	Age	<20 years	28	29	0.64	df = 2, 5.99	NS
		20–40 years	11	9			
		>40 years	11	12			
2	Education	Primary	28	25	0.36	df = 1, 3.84	NS
		Secondary	22	25			
3	Living area	Crowded	40	37	0.53	df = 1, 3.84	NS
		Uncrowded	10	13			
4	Education program	Yes	39	41	0.25	df = 1, 3.84	NS
		No	11	9			
5	Addiction	Yes	22	21	0.05	df = 1, 3.84	NS
		No	28	29			
6	Previous respiratory treatment	Yes	15	28	6.92	df = 1, 3.84	S

CONCLUSION OF THE STUDY

Based on the findings of the study the following conclusion was drawn. The existing knowledge regarding prevention of byssinosis among cotton factory workers. The planned teaching programme significantly increase the knowledge ('t' value is 18.92) regarding prevention of byssinosis among cotton factory worker.

Based on the statistical findings it evident that provision of such kind of tructure teaching program will motivate cotton factory workers and help them to acquire knowledge.

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