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ORIGINAL ARTICLE

A Study to Assess the Effectiveness of IEC Package on Knowledge Regarding Prevention of Byssinosis among the Workers of Selected Cotton Industry, Coimbatore District

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Abstract

A pre experimental one group pre-test post-test study was under taken to assess the effectiveness of IEC package on knowledge regarding prevention of byssinosis among the selected cotton industry workers at Coimbatore. The content validy was obtained from the experts in the field of nursing, community medicine. The sample consisted of 50 cotton industry workers who are working in the weaving and spinning section. The non probability convenice sampling technique was used in this study. A structured questionnaire and IEC package was prepared to assess the knowledge of cotton industry workers. 58.2./. of employees knowledge increased moderately after successful completion of IEC programme.

Keywords: IEC package; Cotton industry; Cotton industry employees; Knowledge; byssinosis.

Introduction

Occupational health is essential in preventive medicine. Modern concept of occupational health now embraces all types of employment including mercantile and commercial enterprises, serve trades, forestry and agriculture. The industrial employee today is placed in a highly complicated environment. Cotton industry employees are at risk for occupational lung disease, including byssinosis and chronic bronchitis. The Major problem of cotton dust exists in the blow room and carding reaction of spinning mill whereas exposure level in other areas is comparatively less.

Background of the Study

The workers in all occupations need to be given comprehensive health services. An industrial worker spends more than one third of his daily life time at work place and carries the effects caused by the working condition back to home. The family and social life also reflects in his work. The quality of life of this sector or population determines the economic security of that community.

WHO and ILO (1995) estimated that there are 160 million cases of occupational diseases and injuries occurring including at least 2, 00,000 fatalities. A significant number develop into chronic disorders and diseases that are preventable.

WHO recommends that use of Personal protective equipment in occupational area peoples those at risk of occupational exposure on affected or at-risk farms should wear personal protective equipment such as Protective clothing; gloves that may be disinfected, standard well-fitted surgical masks should be used if high-efficiency N95 respiratory masks (NIOSH-certified N-95 or equivalent) are not available. Masks should be fit-tested and training should be provided goggles and protective foot.

Need of the Study

Byssinosis is one of the occupational Health hazard faced mostly by the cotton industry workers. The term 'byssinosis' introduced by *Proust in 1877*, embraces a graduation of respiratory symptoms due to cotton dust exposure which range from acute

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dysponea with cough, chest tightness and permanent respiratory disability. Cotton employees are at risk for occupational lung disease, including byssinosis and bronchitis.

Occupational safety health and Administration (OSHA) 1995 had stated that, at the time the final standard was published, as many as 100,000 workers in the cotton industry were at risk from cotton dust exposure. An estimated 35, 000 individuals are disabled from byssinosis as a result of exposure to cotton dust.

The National Institute of Occupational Health (NIOH) located in Ahmadabad identified in 1987, 88 and 90, the prevalence of byssinosis among the textile mill workers.

One of the main objectives of an occupational health service is the protection of health and well being of the workers against the stress and potential health hazards of the working environment. It also emphasizes adequate knowledge of occupational health hazards and safety measures which will greatly help to prevent or control many occupational hazards and diseases (ILO 2000).

Objectives

1. To assess the existing level of knowledge on byssinosis among cotton industry workers.
2. To assess the effectiveness of IEC package on knowledge regarding prevention of byssinosis among cotton industry workers.
3. To associate the mean improvement level of knowledge on prevention of byssinosis with selected demographic variables.

Null Hypothesis

NH1: There is no significant difference between the pre and post test level of knowledge among workers regarding byssinosis at $p<0.005$.

NH2: There is no significant association between mean Improvements level of knowledge with demographic variables of the workers at $p<0.005$

Variables

Independent variable: IEC package on prevention of byssinosis

Dependent variable: Knowledge of cotton industry workers regarding byssinosis.

Extraneous variables: Age, gender, overall experience in Cotton Industry, educational status, hours of working, income, and safety measures in prevention of byssinosis among cotton industry workers.

Research Design

Pre-experimental one group pre -test and post-test only design.

Setting

A Study was conducted in cotton industry, Avinasi, Coimbatore District.

Sample

50 Cotton industry workers from the Cotton industry, Avinasi, Coimbatore Dist.

Measurement and Tool

Self–administered structured questionnaire was used to assess the level of knowledge regarding prevention of byssinosis among the cotton industry workers. Both descriptive and inferential statistics were used for data analysis.

Findings

1. In the pre test level majority of the workers 37 [74%] had inadequate knowledge, (13.6%) had moderate knowledge (0.4%) had moderately adequate knowledge.

N=50

Knowledge Aspects	Inadequate (<50%)		Moderately Adequate (50 – 75%)		Adequate (>75%)	
	No.	%	No.	%	No.	%
General Questions	37	74.0	12	24.0	1	2.0
Causes	34	68.0	15	30.0	1	2.0
Signs & Symptoms	43	86.0	7	14.0	0	0
Diagnostic Evaluation and Treatment	50	100.0	0	0	0	0
Prevention	50	100.0	0	0	0	0

2. In the post test level most of the workers (19.2%) had adequate knowledge and (58.2%) had moderately adequate knowledge

N=50

Knowledge Aspects	Inadequate (<50%)		Moderately Adequate (50 – 75%)		Adequate (>75%)	
	No.	%	No.	%	No.	%
General Questions	8	16.0	37	74.0	5	10.0
Causes	17	34.0	17	34.0	16	32.0
Signs & Symptoms	8	16.0	37	74.0	5	10.0
Diagnostic Evaluation and Treatment	21	42.0	24	48.0	5	10.0
Prevention	10	20.0	23	46.0	17	34.0

3. There is a significant difference between the pre and post test level of knowledge among cotton industry workers.

N=50

Test	Mean score	Standard deviation	't' Value
Pretest	4.68	1.74	18.74*** (S)
Post Test	12.06	2.23	

***p<0.001, S – Significant

4. There is a statistically no significant association of mean improvement knowledge score of cotton industry workers with their selected demographic variables.

Conclusion

Majority of the cotton industry workers 58.2% exhibited moderate level of knowledge in the post test. This shows that the structured teaching programme is relevant to promotion of knowledge regarding prevention of byssinosis among the cotton industry workers

Implication

Nursing Practice

- A concentrated efforts must be made by all community health nurses to control or prevent the health problems among occupational workers by conducting physical check up periodically in occupational set up.

Nursing Education

- Curriculum can be formulated enhancing the student nurse gain experience in the industry as a part of their practical experience.
- In master degree nursing new specialization that is occupational health can be added.

Nursing Administration

- The nursing administrator can evaluate the environment provided to the working and make suggestion to the authority.
- The nurse administrator can participate in policy making in related to the occupational environment.
- The nurse administrator can recommend to the government for establishing a health center for each industry as a mandatory one.

Nursing Research

- Professional organization in nursing are convinced of one importance of nursing research as a major contribution to meeting the health and welfare needs of the patients.
- The literature review indicated that not many nurse in India have conducted more studies of the same kind. Hence more studies can be conducted in this area in order to strengthen the expanded role of nurse.

Recommendation

a. Investigator recommends that each occupational institution should assign an occupational health nurse in relation to prevention of respiratory illness.
b. Occupational institution can utilize the IEC package for the new comers.
c. Occupational institution can utilize the IEC package for the other cotton industries.
d. Studies can also be done to assess the effect of poisonous gases, chemicals and effluents on the nearby community.

Limitation

The investigator found difficulty in getting permission to conduct the main study since the cotton industries did not allow the projects. The investigator could have conducted the study on larger section.

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