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Research Paper

"Efficacy of video assisted teaching programme on knowledge regarding coal workers pneumoconiosis among the coal workers"

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ABSTRACT: *India is a vast country with a huge population. As in many parts of the world, „health" is synonymous with curative services. The majority of the working population belongs to the unorganized sector. Further, the working population being largely illiterate is unaware of the hazards associated with their occupation. Thus, awareness and health education programme should be carried out for these peoples. Occupational lung disease is one of the most frequently occurring, most severely disabling and most amenable to prevention of all the categories of occupational diseases. Consequently, occupational lung disease has been listed as one of the priority areas in occupational health by the World Health Organization (WHO) The World Health Organization (WHO) Assembly adopted a resolution in May 1996, the WHO Global Strategy for Occupational Health for All (OHA). Coalwokers Pneumoconiosis is such an occupational disease which needs special attention.*

KEYWORDS: *Risk, Prevention, Effectiveness, Coal workers pneumoconiosis, Coal workers working in coal mines, Video assisted teaching programme*

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I. INTRODUCTION

India is a vast country with a huge population. The working population being largely illiterate is unaware of the hazards associated with their occupation occupational lung disease has been listed as one of the priority areas in occupational health by the World Health Organization (WHO) .Coalwokers Pneumoconiosis is such an occupational disease which needs special attention. The major occupational diseases/morbidity of concern in India is coal workers' pneumoconiosis Coal workers' pneumoconiosis (CWP), also known as black lung disease or black lung, is caused by long exposure to coal dust.

It is common in coal miners and others who work with coal. Inhaled coal dust progressively builds up in the lungs and cannot be removed by the body; this leads to inflammation, fibrosis, and in worse cases, necrosis. . It has killed hundreds of thousands of coal miners over the years. Coal workers' pneumoconiosis (CWP) is a slowly progressive occupational lung disease caused by the inhalation and retention of airborne coal mining dust within the lungs. CWP is a preventable, but incurable lung disease of which severity depends primarily on the cumulative mass of coal mine dust inhaled. Especially those who have worked underground for many years are at risk of developing CWP even at low levels of dust exposure.

The occurrence of CWP and its rate of progression are related to many factors such as concentration of respirable coal dust, dust size and composition, free silica content, coal rank, the duration of exposure, age, work environment and work practices of workers, which increase cumulative mass of dust inhaled and retained in the lungs It is important to diagnose the condition early, as the patient must be removed from the environment at the earliest. Also, preventive measures should be taken to protect other workers from the disease.

With this background the aim of the study was to assess the effectiveness of video assisted teaching programme on knowledge regarding coal workers pneumoconiosis among the coal workers.

STATEMENT OF PROBLEM

"A Pre experimental study to assess the effectiveness of video assisted teaching programme on knowledge regarding coal workers pneumoconiosis among the coal workers residing at Adarsh nagar, Korba (C.G.)".

OBJECTIVE OF THE STUDY

1. To assess the pretest and post test knowledge score regarding coal worker's pneumoconiosis among coal workers.
2. To evaluate the effectiveness of video assisted teaching programme on knowledge regarding coal workers pneumoconiosis among coal workers.
3. To find out the association between pretest knowledge score and selected sociodemographic variable.

RESEARCH HYPOTHESIS

- **H0**-There will be no significant difference between pretest and posttest knowledge score regarding coal workers pneumoconiosis among coal workers
- **H1**- There will be significant difference between pretest and posttest knowledge score regarding coal workers pneumoconiosis among coal workers.
- **H0**- There will be no significant association between pretest knowledge score and sociodemographic variables.

H1- There will be significant association between pretest knowledge score and sociodemographic variables

II .MATERIAL AND METHODOLOGY

RESEARCH DESIGN

Pre experimental research design -one group pre- test, post-test design.

SETTING OF THE STUDY

In this study, setting is Adarsh nagar, Korba (C.G.).

SAMPLE

The sample for the present study comprised of coal workers working in coal mines.

SAMPLE TECHNIQUE

A non probability purposive sampling technique was used to select the samples.

SAMPLE SIZE

The sample size consists of 60 coal workers working in coalmines residing at Adarsh nagar, Korba (C.G.)

CRITERIA FOR SELECTION OF SAMPLE

INCLUSION CRITERIA:-

The study includes the-

- Workers who are working in coalmines residing at Adarsh nagar, Korba, (C.G.)
- Workers who are willing to participate in the study.
- Workers who are able to read and write.
- Workers between 21to above 50 years of age.

EXCLUSION CRITERIA:-

The study excludes the-

- Workers who are not working in coalmines but residing at Adarsh nagar , Korba, (C.G.)
- Workers who are not willing to participate in the study.
- Workers who are illiterates.
- Workers below 21 years of age.

SCORING

- 1-8 Poor score
- 9-16 Average score
- 17-24 Good score

III. DATA ANALYSIS AND INTERPRETATION

The present chapter deals with the interpretation of data collected on 17/07/2017 to 31/07/2017 from 60 coal workers working in coalmines residing at Adarsh nagar to assess the knowledge regarding coal workers pneumoconiosis. The study also seeks to evaluate the effectiveness of video assisted teaching programme on knowledge regarding coal workers pneumoconiosis among coal workers and to find out the association between knowledge and selected demographic variable.

The purpose of the data analysis is to reduce data on an intangible and interpretable from so that the results obtained can be examined and interpreted. According the data was first tabulated and then analyzed in accordance with the objectives of the study using descriptive and inferential statistics and hypothesis to be tested.

ORGANIZATION AND PRESENTATION OF DATA

SECTION I

Description of sample characteristics-

Demographic data containing sample characteristics is analyzed using the frequency and percentages

Table -4.1:-Frequency and percentage distribution of subjects according to age-

S.No	Sample characteristics	Frequency	Percentage
1	**Age in years**		
	21-30 years	**10**	**17**
	31-40 years	**10**	**17**
	41-50 years	**14**	**23**
	Above 50 years	**26**	**43**
	Total	**60**	**100%**

Table 4.2.Frequency and percentage distribution of subjects according to educational status-

S.No	Sample characteristics	Frequency	Percentage
2	**Educational status**		
	Illiterate	**0**	**0**
	Primary	**0**	**0**
	Middle school	**4**	**7**
	Higher secondary	**29**	**48**
	Graduate	**23**	**38**
	Post graduate Above	**4**	**7**
	Total	**60**	**100%**

Table 4.3.Frequency and percentage distribution of subjects according to Exposure-

S.No	Sample characteristics	Frequency	Percentage
3	**Exposure**		
	Open coalmines	**41**	**68**
	Underground coalmines	**19**	**32**
	Total	**60**	**100%**

Table4.4.Frequency and percentage distribution of subjects according to Smoking-

S.No	Sample characteristics	Frequency	Percentage
4	**Smoking**		
	Regular	**2**	**3**
	Seldom	**35**	**58**
	Never	**23**	**38**
	Total	**60**	**100%**

Table4.5.Frequency and percentage distribution of subjects according to Hospitalization due to respiratory problem -

S.No	Sample characteristics	Frequency	Percentage
5	**Hospitalization due to respiratory problem**		
	a)Yes	**10**	**17**
	b) No	**50**	**83**
	TOTAL	**60**	**100%**

Table4.6.Frequency and percentage distribution of subjects according to previous knowledge –

S.No	Sample characteristics	Frequency	Percentage
6	**Previous knowledge**		
	Yes	**13**	**22**
	No	**47**	**78**
	TOTAL	**60**	**100%**

Table 4.7.Frequency and percentage distribution of subjects according to sources of information –

S.No	Sample characteristics	Frequency	Percentage
7	**Sources of information**		
	Mass media	**5**	**8**
	Magazines	**1**	**2**
	Health professional/ Hospitals	**6**	**10**
	Relatives and friends	**1**	**2**
	No information	**47**	**78**
	TOTAL	**60**	**100%**

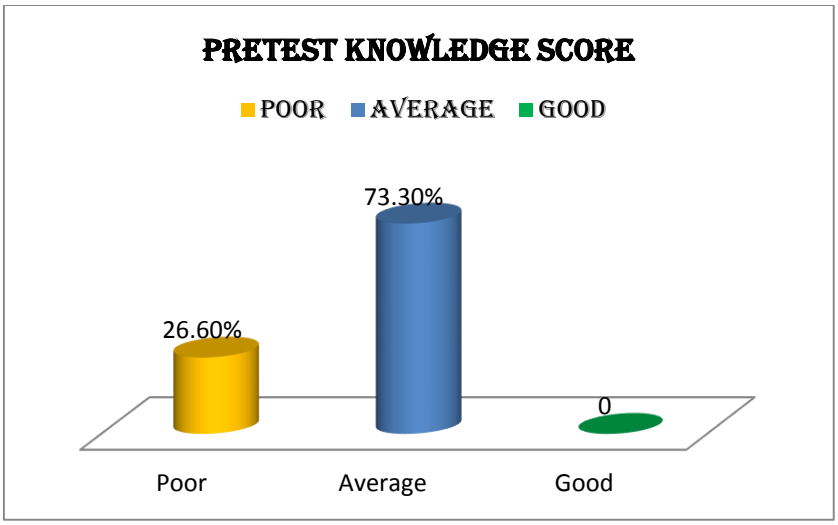
SECTION II

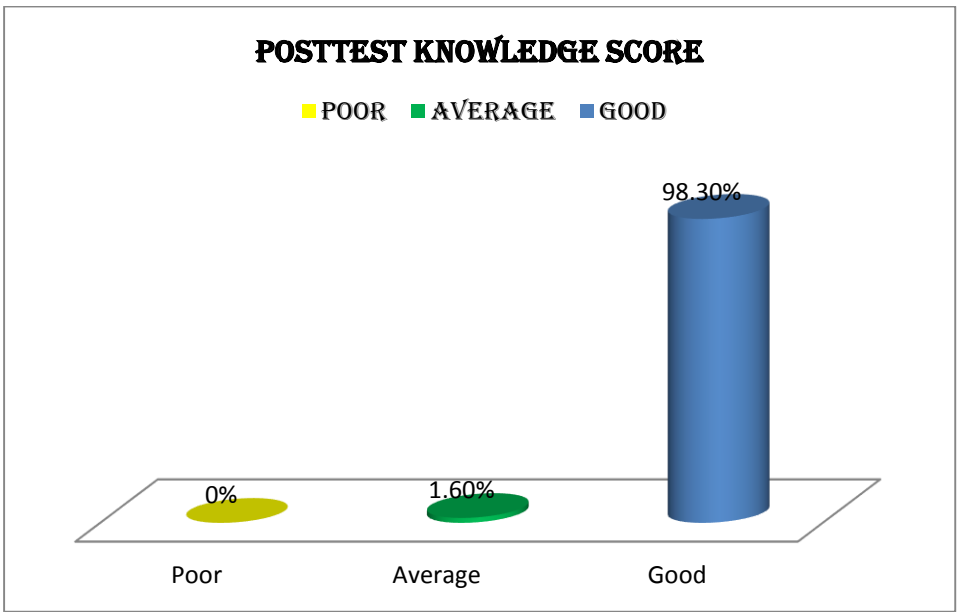
Assess the pretest and post test knowledge score regarding coal worker's pneumoconiosis among coal workers.

Pre test and post test knowledge score regarding coal worker's pneumoconiosis among coal workers is assessed by comparing mean and mean percentile of pre test and post test knowledge.

Table (4.8) Frequency and percentage pretest and posttest knowledge score for video assisted teaching

S.No	Scoring Criteria	Pretest				Posttest			
		Frequency	Percentage	Mean	Mean%	Frequency	Percentage	Mean	Mean%
1	Poor	16	26.6%	10.43	43.45%	0	0	18.91	78.79%
2	Average	44	73.3%			1	1.6%		
3	Good	0	0			59	98.3%		





SECTION III-

Effectiveness of video assisted teaching programme on knowledge regarding coal workers pneumoconiosis among coal workers.

Effectiveness of video assisted teaching programme is analyzed by computing the mean, standard deviation, standard error and paired t test. It is computed by following parts-

Part-1- Assessing the level of knowledge of coal workers regarding coal workers pneumoconiosis after administering video assisted teaching programme.

Level of knowledge	Scoring criteria	Frequency of respondents	Percentage (%)
Poor	1-8	0	0
Average	9-16	1	7
Good	17-24	59	98
Total		60	100

Table 4.9 shows the level of knowledge of coal workers regarding coal workers pneumoconiosis after video assisted teaching programme.

Part-2- Assessing effectiveness of video assisted teaching programme by computing paired t test.

S. No.	Intervention	Mean	SD	Paired t test	Interpretation
1.	Video assisted teaching programme	8.13	3.48	18.47	This value shows that the study is highly effective. In the t table, for the degree of freedom 59(40) in 0.05 is 2.02, which shows that the calculated value is higher than table value.

Table 4.10 shows the effectiveness of video assisted teaching programme by computing mean, SD, Paired t test and interpretation regarding coal workers pneumoconiosis.

SECTION IV-

Association between level of knowledge and selected sociodemographic variables.

Association between level of knowledge and selected socio demographic variables is computed by using chi square test.

Table (4.11) Association between level of knowledge and selected socio demographic variables is computed by using chi square test.

Demographic variable	Poor	Average	Df	X2	Table value	Significance
1. Age (in years)			3	1.43	7.82	Not significant
a. 21-30 years	**3**	**7**				
b. 31-40 years	**3**	**7**				
c. 41-50 years	**5**	**9**				
d. above 50 year	**5**	**21**				
TOTAL	**16**	**44**				
2. Educational status-			**3**	**8**	**7.82**	**significant**
a. Middle school	**2**	**2**				
b. Higher secondary	**3**	**26**				
c. Graduate	**9**	**14**				
d. Post graduate and Above	**2**	**2**				
TOTAL	**16**	**44**				
3. Exposure			**1**	**9.58**	**3.84**	**significant**
a. Open coalmines	**6**	**35**				
b. Underground coalmines	**10**	**9**				
TOTAL	**16**	**44**				
4. Smoking			**2**	**6.57**	**5.99**	**significant**
a. Regular	**2**	**0**				
b. Seldom	**10**	**25**				
c. Never	**4**	**19**				
TOTAL	**16**	**44**				
5. Hospitalization due to respiratory problem			**1**	**0.068**	**3.84**	**Not significant**
a. Yes	**3**	**7**				
b. No	**13**	**37**				
TOTAL	**16**	**44**				
6.Previous knowledge			**1**	**0.37**	**3.84**	**Not significant**
a. Yes	**3**	**10**				
b. No	**15**	**32**				

TOTAL	**18**	**42**				
7. Sources of information			**4**	**3.68**	**9.49**	**Not significant**
a. Mass media	**1**	**4**				
b. Magazines	**0**	**1**				
c. Health professional/ Hospitals	**0**	**6**				
d. Relatives and friends	**0**	**1**				
e. No Information	15	32				
TOTAL	**16**	**44**				

IV. DISCUSSION

The chapter deals with data analysis, interpretation and discussion of the data collected to evaluate the effectiveness of video assisted teaching programme on knowledge regarding coal workers pneumoconiosis among coal workers residing at Adarsh nagar, Korba (C.G.) .Findings revealed that mean post test knowledge percentage score 78.79% is higher than mean pre test knowledge percentage score 43.45%. Thus the finding reveals that there has been significant increased knowledge among coal workers regarding coal workers pneumoconiosis after administering video assisted teaching programme.

V. CONCLUSION

After the detailed analysis, this study leads to following conclusion that video assisted teaching programme regarding coal workers pneumoconiosis is more effective in improving knowledge of coal workers residing at Adarsh nagar, Korba, (C.G.).

RECOMMENDATIONS

The following recommendations are made on the basis of the present study

- A similar study can be replicated for larger samples, in different setting for making broad generalizations.
- Evaluative study can be carried out to evaluate the effectiveness of video assisted teaching programme on knowledge regarding coal workers pneumoconiosis.
- A similar study can be carried out in other risk group such as patients with silicosis, asbestosis.

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