

Assess the effectiveness of information booklet on knowledge regarding Rheumatoid pneumoconiosis (Caplan Syndrome) and its prevention among granite factory workers in selected granite factories at Udaipur district, (Raj.)”

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Abstract:

Background: There are increasing cases of Rheumatoid pneumoconiosis in world and in India. The Granite factory workers have less knowledge about the Rheumatoid pneumoconiosis. Present study is aimed to “Assess the effectiveness of information booklet on knowledge regarding Rheumatoid pneumoconiosis and its prevention among granite factory workers in selected granite factories at Udaipur district, (Raj.)”

Materials and methods: The method adopted for the present study was quantitative research approach as the study aimed at development of an intervention (information booklet) for assessing the knowledge of 60 granite factory workers in Green Marmo Granites & Tirupati Impex in Udaipur district, (Raj.) This approach would help the investigator to evaluate the effectiveness of specific intervention that is “information booklet” on the variable that is knowledge of Granite factory workers regarding Rheumatoid pneumoconiosis & its prevention of selected Granite factories of Udaipur. In this study samples were drawn by using non probability convenient sampling technique method. Data was collected by using structured knowledge questionnaire.

Results: Reveals that the knowledge on Rheumatoid pneumoconiosis & its prevention among Granite factory workers was assessed. The calculated value mention is greater than the table value mention at 0.05 levels. Hence the research hypothesis (H1) is accepted that there is a significant difference between pre- test and post-test knowledge score. There is an association between pre-test knowledge score with selected socio demographic variables; hence the hypothesis (H2) is accepted.

Conclusion: This study concludes that there is improvement in the level of knowledge of Granite factory workers which indicate that the information booklet was effective. The demographic variables of Granite factory workers significantly associated with the pre test knowledge score.

Key Words: Assess, Effectiveness, information booklet, Granite factory workers and Rheumatoid pneumoconiosis.

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I. Introduction

Respiratory health is important for human wellbeing. Unfortunately the industrialized world is distressful with many respiratory diseases, both acute and chronic. The ratio of death due to respiratory diseases is increasing day by day. They are the third most frequent cause of death worldwide, accounting for 8 % of all deaths. Pneumoconiosis, an occupational disease (OD) mainly with diffuse pulmonary fibrosis, is caused by long- term inhalation and deposition of mineral dust into the lungs. China is one of those countries with severe situation on pneumoconiosis around the world. In recent years, more than 80% of the new- reported OD cases were pneumoconiosis, and an annual increase was observed as well. In 2016, about 28000 new pneumoconiosis cases were reported in China. The prevalence of pneumoconiosis caused direct and indirect economic losses of around 28 billion yuan (4.3 billion US dollars) for 1 year. Pneumoconiosis is an occupational lung disorder and a restrictive lung disease caused by the inhalation of dust. Pneumoconiosis was first described by the president of the **National Puzzlers’ League**. The term pneumoconiosis derives from **Greek words: pneumo** means **air** and **konis** means **dust**. Pneumoconiosis is a chronic lung disease caused due to the inhalation of various forms of dust particles, particular in industrial workplaces, for an extended period of time.

II. Materials and Methods

Quantitative research approach was used for the present study. This approach would help the researcher to assess the effectiveness of information booklet on knowledge regarding Rheumatoid Pneumoconiosis and its

prevention among granitefactory workers in selected granite factories at Udaipur district (Raj.).

Research Design- One group pre-test post-test research design.

Research Settings- Selected granite factories at Udaipur district, Rajasthan,

Study Duration- 24/01/2024 to 12/02/2024

Sample Size- 60 granite factory workers

Population- The target accessible population comprised of all granite factory workers. In this study the sample consisted of 60 granite factory workers of selected granite factories at Udaipur district, (Raj.).

Sampling Technique- Non-Probability convenient sampling technique.

Inclusion Criteria-

1. Granite workers who were presented at the time of data collection.
2. Granite workers who were willing to participate in the study.
3. Granite workers who were able to communicate either in Hindi or English.

Exclusion Criteria-

1. Granite workers who were not presented at the time of data collection.
2. Granite workers who were already exposed to any intervention regarding rheumatoid pneumoconiosis and its prevention.

Procedure Methodology- Researcher obtained informed written consent from the study participants; confidentiality of the study subject was assured. The data collection was done after obtaining a written consent from the participants. During data collection period, the granite factory workers who met the inclusion criteria were selected by using non probability convenient sampling technique. The effectiveness of information booklet on knowledge was assessed by using structured questionnaire regarding rheumatoid pneumoconiosis and its prevention. The collected data were analyzed based on above mentioned objective using the descriptive and inferential statistics.

Statistical Analysis- The obtained data were analyzed in terms of objectives of the study using descriptive and inferential statistics. The plan for data analysis was followed by organization of data in master sheet. Obtained data were analyzed in terms of frequencies and percentages. Descriptive statistics- Description of demographic characteristics. Mean, median, SD and mean percentage is used to describe the knowledge scores of the respondents regarding rheumatoid pneumoconiosis and its prevention. Inferential statistics- Chi-square test was used to find out the association between the pre-test knowledge score and selected socio-demographic variables.

III. Results

Section A: Effectiveness of information booklet by comparing pre-test and post-test knowledge score of respondents

Section B: Distribution of respondents by the level of knowledge

Section C: Association between pre-test knowledge score with selected socio-demographic variables

Section A: Effectiveness of information booklet by comparing pre-test and post-test knowledge score of respondents

Table-01 Effectiveness of information booklet by comparing pre- test and post- test knowledge score of respondents.

Test	Mean	Variance	Mean Difference	Z Score	Z Critical value	Inference
Pre-test	5.22	2.54548	12.63	-42.98	1.96	S*
Post-test	17.85	2.638136				

N=60

S =Significant at (alpha) $\alpha < 0.05$ level of significance

Table 01: The result showed that the mean pre-test knowledge score was 5.22 & mean post -test knowledge score was 17.85 variance on the knowledge score in pre-test was 2.54 & post-test knowledge score was 2.63 Mean difference was 12.63 .Z score was -42.98 with Z critical value 1.96 that inference significant.

Section B: Distribution of respondents by the level of knowledge

Table 02: Distribution of respondents by the level of knowledge

N=60

Level of Knowledge	Score	Frequency		Percentage	
		Pre-test	Post-test	Pre-test	Post-test
Inadequate Knowledge (0-50 %)	0-10	60	0	100	0
Moderate Knowledge (51-75 %)	11-16	0	13	0	21.67
Adequate Knowledge (76-100 %)	17-22	0	47	0	78.33
Total	22	60	60	100	100

Table 11: The result showed that in pre test most of respondents had no adequate knowledge on rheumatoid pneumoconiosis, 100% respondents had inadequate knowledge & 0% had moderately knowledge on rheumatoid pneumoconiosis. After administration of information booklet, in the post test respondents gain adequate knowledge on rheumatoid pneumoconiosis that was 78.33% whereas 21.67% respondents had moderately knowledge on rheumatoid pneumoconiosis & 0% respondents had inadequate knowledge on rheumatoid pneumoconiosis & its prevention.

Section C: Association between pre-test knowledge score with selected socio-demographic variables The parametric chi square test was used to find out the association between pre-test knowledge score with selected socio-demographic variables. There was significant association between the pre test knowledge score with selected variables such as educational status 11.3, Working experience 1.25 and source of information (16.48%) while rest of the demographic variables such as age in years 1.59 ,Gender 0.00 and area of residence 0.57 was found to be non significant at df of 3 ($p>0.05$ level)

IV. Discussion

The present study has been undertaken to “Assess the effectiveness of information booklet on knowledge regarding Rheumatoid pneumoconiosis and its prevention among granite factory workers in selected granite factories at Udaipur district, (Raj.)” The first objective was to assess the pre and post test knowledge score regarding rheumatoid pneumoconiosis and its prevention among granite factory workers. The overall mean difference of the respondents on rheumatoid pneumoconiosis and its prevention was 12.63 with Z critical value 1.96.

V. Conclusion

This study concludes that there was improvement in the level of knowledge of Granite factory workers which indicate that the information booklet was effective. The demographic variables of Granite factory workers significantly associated with the pre test knowledge score.

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