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“A Study To Assess The Effectiveness Of Planned Teaching On Knowledge Regarding Silicosis and its prevention among the workers of selected granite factories in Sangli, Miraj, Kupwad corporation area.”

Mrs. Snehalata S. Reddy ¹Mrs. Nirmala A. Londhe ²

Affiliations details of all authors with address

1. Assistant Professor, Bharati Vidyapeeth Deemed to be University, College of Nursing, Sangli, Maharashtra, India 416414.
2. Clinical Instructor, Bharati Vidyapeeth Deemed to be University, College of Nursing, Sangli, Maharashtra, India 416414.

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Abstract

Inhaling respirable crystalline silica dust leads to silicosis, an incurable occupational lung disease. These particles cause the lungs to swell and fibrose which results in an illness that is gradual, irreversible, and may even be crippling

The present study was Quasi- experimental with one group pretest and post test design, The sample size of this study is 90 and samples are granite factories workers, with this simple random sampling technique used. Result of this study, according to knowledge level, the mean score of knowledge before giving planned teaching programme was 7.30, S.D. is 3.4464 and the mean score of knowledge after giving planned teaching programme was 15.64, S.D. is 3.4694 and t – value is 30.8517 and p – value is 0.00001 < 0.05 (at 5 % level of significance). Since the test is statistically significant at p= 0.00001 according to their mean knowledge score. It shows that highly significant difference is found between pre- test and post- test mean score of knowledge regarding Silicosis and its prevention working in granite factories. This clearly shows that the planned teaching programme regarding Silicosis and its prevention working in granite factories had significant improvement in their level of knowledge in the post- test. This reveals the planned teaching programme on knowledge regarding Silicosis and its prevention working in granite factories was effective.

Keywords .Assess, knowledge, Silicosis

Introduction

India is a developing nation, and the strength of its building sector is a key sign of its progress. Massive investment is envisaged in this area as a result of the expansion of physical infrastructure. The construction sector offered investment opportunities in a number of linked industries. The stone crushing industry is a significant industrial sector, much like the expanding construction industry in India.¹

There are numerous operations performed at the site, including stone loading, stone cutting, and stone crushing. This industry is unorganized. Crushed stone is needed as a raw material for a variety of construction projects, including the construction of buildings, bridges, canals, highways, hospitals, etc. As evidenced by the roughly 500,000 individuals employed in diverse operations at the stone crusher site, this industry is labor-intensive. A significant amount of heavy silica dust is created.²

Inhaling respirable crystalline silica dust leads to silicosis, an incurable occupational lung disease. These particles cause the lungs to swell and fibrose, which results in an illness that is gradual, irreversible, and may even be crippling. A higher risk of lung infections (particularly tuberculosis), lung cancer, emphysema, autoimmune disorders, and kidney illness is also linked to silica exposure.⁴

According to survey of Silicosis incidence in agriculture conducted in northern India, and annual incidence of per year 2 million moderate to serious event and 53,000 deaths per year was estimated. Lack of education unawareness of silicosis one's occupation, general backwardness in sanitation poor nutrition climatic proneness to epidemics aggravates workers of Silicosis in the work environment⁷

The objectives of the study:-

1. To Assess the existing knowledge regarding silicosis and its prevention among the workers.
2. To assess the post - test knowledge score.
3. To compare the pre-test and post- test knowledge scores.

Material and Methods

The present study was Quasi- experimental with one group pretest and post test. The sample size was calculated by power analysis formula.⁶ The present study consisted of 90 granite factories workers with this simple random sampling technique were used to select the sample for the present study. The reliability was conducted at of 10 samples. The reliability of the tool was done by using Karl Pearson's coefficient formula, The „r“ value of the tool is 0.8 which found to be reliable.⁷ The pilot study was conducted in selected area Sangli, Miraj, kupwad, corporation. Dist.-Sangli .The sample size was 10. The setting and samples used for pilot study are excluded from the final study. The purpose and significance of the study was explained to the participants. After that the data was analyzed with the help of statistician. It was revealed that the p value is 0.05 which is less than 0.05 and hence H1 is accepted.

Results and Discussion-

Table-1
FREQUENCY AND PERCENTAGE DISTRIBUTION OF
DEMOGRAPHIC VARIABLES
N=90

Sr. No.	Category	Frequency	Percentage	
1.	Age in Years	25-35	18	20%
		36-45	42	47%
		46-55	22	24%
		56-65	8	9%
2.	Education	No formal education	10	11%
		Primary	42	47%
		Secondary	33	37%
		Graduate and above	5	5%
3.	Religion	Hindu	31	34%
		Muslim	26	29%
		Christian	20	22%
		Other	13	15%
4.	Family Income (in Rs.)	Less than 10,000	31	34%
		10,001-15,000	31	34%
		15,001-20,000	19	21%
		More than 20,000	9	10%
5.	Work Experience	Less than 5 Yrs. 24 27%	24	27%
		6-10 Yrs.	48	53%
		11-15 Yrs.	15	17%
		More than 15 Yrs	3	3.30%
6.	Do you know about Silicosis?	Yes	15	17%
		No	75	83%

The data represented in table no.1 indicates that, the overall analysis of the demographic characteristics was carried out to find the frequency and percentage of 90 participants in each category of the demographic variables. In the category of age maximum samples 47% were from the age group of 36-45years. Regarding workers education 11% samples are having no formal education, 47% workers having primary education & 37% workers having secondary education

and 5% workers graduate and above. In the category of religion 34% workers in Hindu religion, 29% workers in Muslim religion and 20% workers in Christian religion. In other religion 15% workers is there. In the category of family monthly income, minimum 10% of the samples had family income of Rs. More than 20,000, 34% of the samples had family income of Rs. Less than 10,000, 34% of the samples had family income of Rs. 10001-15000 and 21% i.e. 14 samples had family income of Rs. 15001-20,000. Regarding work experience maximum 53% samples have 6-10 yrs, 27% samples have experience less than 5 yrs, 17% samples have experience 11-15 yrs.

TABLE NO -2**A) PRE TEST KNOWLEDGE****Frequency and percentage distribution of pre- test knowledge score.****N=90**

Category	Frequency	Percentage
(15 to 21) Good Knowledge	0%	0%
(8 to 14) Average Knowledge	29%	32%
(0 to 7) Poor Knowledge	61%	68%

Result: The above table shows that, most of the workers 61 (68%) have poor knowledge and 29 (32%) have average knowledge regarding Silicosis and its prevention working in granite factories.

Conclusion: None of the workers has good knowledge score regarding Silicosis and its prevention working in granite factories

TABLE NO 3:**B) POST TEST KNOWLEDGE****Frequency and percentage distribution of post- test knowledge score.****N=90**

Category	Frequency	Percentage
(15 to 21) Good Knowledge	73%	81%
(8 to 14) Average Knowledge	17%	19%
(0 to 7) Poor Knowledge	0%	0%

Result: The above table shows that, majority of the workers 73 (81%) have good knowledge and 17 (19%) have average knowledge regarding Silicosis and its prevention working in granite factories.

Conclusion: None of the workers has poor knowledge score regarding Silicosis and its prevention working in granite factories. This reveals that after the planned teaching program level of knowledge regarding Silicosis and its prevention among workers has increased.

TABLE NO: 4
Comparison between pre-test and post-test knowledge score
N-90

	MEAN	SD	d.f	Paired t test	Pvalue
PRE TEST	7.30	3.4464	89	30.8517	0.00001
POST TEST	15.64	3.4694			<0.05

Result: The above table shows that, according to knowledge level, the mean score of knowledge before giving planned teaching programme was 7.30, S.D. is 3.4464 and the mean score of knowledge after giving planned teaching programme was 15.64, S.D. is 3.4694 and t – value is 30.8517 and p – value is 0.00001 < 0.05 (at 5 % level of significance).

Conclusion:

Since the test is statistically significant at $p = 0.00001$ according to their mean knowledge score.

It shows that highly significant difference is found between pre- test and post- test mean score of knowledge regarding Silicosis and its prevention working in granite factories.

This clearly shows that the planned teaching programme regarding Silicosis and its prevention working in granite factories had significant improvement in their level of knowledge in the post- test.

This reveals the planned teaching programme on knowledge regarding Silicosis and its prevention working in granite factories was effective.

Discussion:

The present study intended to find out the effectiveness of planned teaching programme on knowledge regarding Silicosis and its prevention among the workers of selected granite factories in Sangli, Miraj, Kupwad corporation area. In the study total 90 samples were included. The findings of the present study are discussed with reference to the objective, hypothesis stated findings of other similar studies.

Similar study conducted by Rashmika Jadhav to evaluate the effectiveness of planned teaching programme on knowledge regarding silicosis and its complications among workers in selected industries at Rajkot. Total 50 samples selected from industry setting based. Findings of the study revealed that the planned teaching programme was

effective in improving knowledge regarding prevention of silicosis and its complications among industrial workers.¹¹

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