

KNOWLEDGE ON PRACTICE OF WELDERS REGARDING PREVENTION OF OCCUPATIONAL HAZARDS

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Abstract

A descriptive study was undertaken to assess the knowledge on practice of welders in Cuddalore district. 50 welders were selected by convenient sampling technique. Structured questionnaire were given to the welders and their correct response was given a score of 1. Data collected was compiled for data analysis. The findings revealed that 20% of welders had moderate knowledge on practice and 80% had inadequate knowledge. The mean value for the level of knowledge on practice was 5.62 and standard deviation value is 2.22 at $p < 0.05$ level. There was no significant association between knowledge on practice of welders with their selected demographic variables with age, place of residence, religion, working hours/day, years of working, educational status and occupational hazards at $P < 0.05$ level.

Key words: welders, practice, occupational hazards.

Introduction

Occupational hazard for workers in a welding workshop occurs during the course of work. An injury that occurs is due to the excessive exposure to energy that is beyond the physiological tolerance. The prevalence of occupational diseases are increasing in developing countries. Welding is one of the occupations that contribute to work related accidents and diseases in developing countries.

Welding hazards such as the bright and blinding light of the welding arc, the hazardous composition of the welding fumes, the sharp metal edges, molten metal particles, fast moving machinery, noise and vibration may lead to health problems in welders. It can be both acute and chronic. Welding fumes are associated with occupational asthma, metal fume fever, bronchitis and lung function abnormalities. The symptoms depend on the duration of welding, ventilation facilities and protective measures used. The acute symptoms which can occur include irritation of the chest and respiratory tract causing cough, wheezing, breathlessness, bronchitis, pulmonary edema, pneumonitis and G.I effects. It can also cause irritation of the eyes and nose.

The major chronic health effect includes increased risk of lung cancer, cancer of the larynx and urinary tract. Other chronic effects include heart and skin diseases, hearing loss, chronic gastritis, renal damage, reduction in sperm count and fecundity. Musculoskeletal problems are also on the rise like back injuries, shoulder pain, knee joint diseases, tendonitis. In a study conducted in India, a high prevalence of injuries was reported among welders younger than 30 years.

Occupational health problems are becoming a major challenge in developing countries due to lack of awareness of occupational hazards, lack of workplace safety and health policy and inefficient safety management system. There is also an information gap on occupational hazards in welding workshops in the country. Therefore the aim of this research is to assess the knowledge on practice of welders on the prevention of occupational hazards. This may help the policy makers in considering this working group in designing interventional strategies for promoting good health.

OBJECTIVE:

- To assess the knowledge on practice of welders on prevention of occupational hazards.
- To associate the level of knowledge on practice of welders with selected socio demographic variables.

METHODS:

A descriptive research design was chosen for the study. The population of study was the welders on welding mesh work shop in Cuddalore. The workshop near by Cuddalore were selected for selecting the sample. 50 samples were selected by using convenient sampling method. The tool consisting of 15 questions was used to assess the level of knowledge on practice data was analyzed using descriptive and inferential statistics

RESULTS:

The distribution of socio demographic variables among the welders of welding mesh workshop shows that 5(10%) of welders were in the age group below 20 years, 12(24%) of welders were in the age group 21-25 years, 23(46%) of them were in the age group 26-30 years and 10(20%) of them were in the age group above 31 years.

Regarding residence 22(44%) of welders were residing at rural place and 28(56%) of them were residing at urban place. Regarding religion, 45(90%) of welders were Hindus, 3(6%) of them were Christians and 2(4%) of them were Muslims. 12(24%) of welders were working 6 hours/day, 33(66%) of them were working 7 hours/day, 4(8%) of them were working 4 hours/day and 1(2%) of them is working more than 8 hours/day. 12(24%) of welders were working below 5 years, 26(52%) of them were working 6-10 years and 12(24%) of them were working above 10 years.

Regarding educational status 24(48%) of welders were completed 10th Std, 13(26%) of them were completed ITI, 10(20%) of them were completed 12th Std and 3(6%) of them have completed degree. Regarding occupational hazards, 11(22%) of welders had occupational hazards in the previous month and 39(78%) of them didn't have occupational hazards.

Table 1: Level of knowledge of welders on prevention of occupational hazards
N=50

Sl. No	Level of Knowledge	Frequency	Percentage
1.	Inadequate (<50%)	40	80%
2.	Moderate adequate (50%-75%)	10	20%

Findings showed that 40(80%) welders had inadequate knowledge, 10(20%) of welders had moderately adequate knowledge. The mean value was 5.62 with the standard deviation value of 2.22 at p< 0.05 level.

Table 2: Association between the level of knowledge among welders with their selected demographic variables

N=50

Sl. No	Demographic Variables	Inadequate (<50%)		Moderate adequate (50%-75%)		Chi-Square Value	'p' Value
		F	%	F	%		
1	below 20 years	3		2	4%	3.428	0.33 (NS)
	21-25 Years	11		1	2%		
	26-30 Years	17		6	12%		
	above 31 Years	9		1	2%		
2	place of residence					1.299	0.254 (NS)
	rural	16		6	12%		
	urban	24		4	8%		
3	religion					4.722	0.094 (NS)
	hindu	37		8	16%		
	christian	1		2	4%		
	muslim	2		0	0%		
	others	0		0	0%		
4	working hours/day					2.652	0.449 (NS)
	2-4 hours	8		4	8%		
	4-6 hours	27		6	12%		
	6-8 hours	4		0	0%		
	others	1		0	0%		
5	years of working					4.968	0.083 (NS)
	below 5 years	10		2	4%		
	6-10 years	18		8	16%		
	above 10 years	12		0	0%		
6	educational Status					0.517	0.915 (NS)
	primary	19		5	10%		
	secondary	11		2	4%		
	higher secondary	8		2	4%		
	degree	2		1	2%		
7	occupational Hazards					0.029	0.864 (NS)
	yes	9		2	4%		
	no	31		8	16%		

(S – Significant, NS – Not Significant)

There was no significant association between knowledge on practice of welders with their selected demographic variables with age, places, religion, working hours/day, years of working, educational status and occupational hazards. at $P < 0.05$ level.

NURSING IMPLICATION

The implication drawn from the present study is of vital concern to community health team in educating the welders on occupational hazards

NURSING SERVICES

The study enable the nursing services to provide primary , secondary , tertiary health care services during welding process

NURSING EDUCATION

The findings of the study will help in nursing education and play an active role to conduct health education program on awareness of welding occupational hazards preparedness and its management .

NURSING ADMINISTRATION

The findings of the study will help the community and the Public health administration regarding mass education on prevention of occupational hazards among welders. Also public health will formulate and implement the services needed by community

RECOMMENDATION

- ❖ A study can be done to assess the practice of welders
- ❖ A study can be done with a large of sampling size
- ❖ A comparative study can be done to assess the knowledge with occupational hazards of welder
- ❖ A longitudinal study can be done to assess the quality of life among welders

CONCLUSION

Most of the workers of welding mesh workshop have 20 % moderate and 80 % inadequate knowledge regarding prevention of occupational hazards. This may help the policy makers in considering this working group in designing interventional strategies for promoting good health.

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