A study to assess the effectiveness of structured teaching programme on knowledge regarding effects of passive smoking among adults in a rural area of Nelamangala at Bengaluru

Mr. Rakesh Gomes, Mr. Panduranga R
Jupiter college of Nursing, Bengaluru

***Abstract*- Title: A Study to Assess the effectiveness of structured teaching programme on knowledge regarding effects of passive smoking among adults in a rural area of Nelamangala at Bengaluru.**

Aim: To assess the knowledge regarding effects of passive smoking..

Methodology: A one group pre-test post test design was adopted for this study. 60 subjects who met the inclusion criteria, were selected using a probability random sampling technique. Data was collected using a structured knowledge questionnaire. Chi-square test was used to find association of knowledge with their selected demographic variable.

Results: Pretest Knowledge: Maximum 34(56.7%)respondents were having average knowledge, 18(30%) respondents were having poor knowledge and remaining 8(13.3%) of respondents were having good knowledge. Post- test knowledge: Maximum 32(53.3%) of respondents were having average knowledge and remaining 28(46.7%) of respondents were having good knowledge. The findings reveal that the post-test mean knowledge scores was found higher [mean=20.26, SD of 3.36] when compared with pre-test mean knowledge score value which was 13.45with SD of 5.08.

Conclusion: The findings revealed that, Knowledge of rural adults regarding effects of passive smoking was inadequate before the administration of structured teaching program.. Since a very few studies have been conducted regarding this topic in India, nurse researcher can take further studies on the same topic.

***Index Terms*- Knowledge, structured teaching programme, passive smoking and adults in a rural area.**

I. INTRODUCTION

Smoking is a well-known world-wide public health problem. The adverse health effects from tobacco smoking were confirmed in the 1950's. Around 5,000,000 premature deaths per year is estimated to be caused by tobacco smoking. Passive smoking is now regarded as the third health threat in the world, after smoking and alcohol abuse. Though the individual risks for disease are moderately increased, the exposure to tobacco smoke has a major health impact since almost half of the constituents, varying from double to the hundred folded amounts for the different chemical constituents. This is due to the lower burning temperature between the "puffs". More than 75% of the nicotine emitted from a cigarette is emitted into the air as side stream smoke.[7]

There are approximately 600 ingredients in a cigarette and it creates more than 7,000 chemicals when burned. At least 69 of these children in the world are exposed.[1] Cigarette smoking then spread to other groups in society and has now become most prevalent among under privileged women with a short education. World Health Organisation (WHO) reports that Sweden (19%) besides Norway (29%) and New Zealand (25%) are the exclusive countries in the world where women smoke to the same extent as men.[2] There have been a plethora of interventions defeating tobacco use which have been to some extent successful: Smoking prevalence has decreased and the legislation restricting smoking and tobacco purchase has become of considerable proportions in the Western world. However, still new young smokers are recruited daily. Globally, both tobacco consumption and tobacco production increase[3]. National as well as international authorities, like WHO and EU (European Union), have made up rules and recommendations for how the "pandemic of smoking" can be defeated. Many countries have passed laws on smoke free arenas, rules for cigarette commerce and public health interventions

to control tobacco use. These legal proceedings as well as other measures have, to some extent, been successful. Parts of USA and Australia, and Sweden have done well and have the lowest prevalence of smokers (developing countries excluded) in the beginning of the 21st century (Australia 19.5%, Sweden 19%) and California 18% in 1997. In these areas smoking has become the habit of the short educated and unprivileged parts of the population[4]. Passive smoking is defined as the non-smokers inhalation of tobacco smoke produced by the active smoking of others. It is equivalent to "being exposed to second-hand smoke or tobacco smoke or ETS"(Environmental Tobacco Smoke).[5] ETS is composed of the diluted tobacco smoke from the burning ends of cigarettes, pipes and cigars (side stream smoke) and the exhaled smoke from smokers (mainstream smoke). It is a complex mixture of gas and particle-phase chemicals, and the composition changes during its dilution and distribution in the environment and upon ageing. The side stream smoke is shown to contain about the same hazardous substances as mainstream smoke. Quantitatively, however, side stream smoke contains much more of the different chemical. Chemicals are poisonous and are known to cause cancer. ETS has been classified as a known human lung carcinogen by the United States Environmental Protection Agency (EPA) since 1993. Accumulation of epidemiologic evidence has related passive smoking to cardiovascular and cerebrovascular diseases as well as respiratory diseases such as chronic obstructive pulmonary disease and asthma. ETS has also been the most widely studied risk factor of lung cancer among non-smokers.[6]

Tobacco smoking directly or indirectly leads to health problems and is one of the causes of morbidity and mortality among the public. Prevention is better than cure. Many studies shown that still the active and passive smoking related mortality and morbidity rate is high and also the Investigator had exposure to many non smoking adults with respiratory, cardiac and other diseases and the investigator also find the cigarette smokers in the work places and the public places like Bus Stand, restaurants, Night club etc., in Bangalore city.

So the investigator felt that is the urban areas even educated adults are smoking in public and work places and in the rural areas definitely uneducated adults may not have awareness about passive smoking and its effects. So the investigator felt that there is a need for creating awareness about the effects of passive smoking among adults.

The present study is to assess the effectiveness of structured teaching programme on knowledge regarding effects of passive smoking among adults in a rural area of Nelamangala at Bengaluru

II. METHODOLOGY

A evaluative approach with one group pretest-posttest design was adopted for the study by the researchers. 60 adults were selected by probability random sampling technique from rural areas of Nelamangala. Data collected from the subject with a structured knowledge questionnaire. Data analyzed by testing the frequency, percentage distribution, chi-square test to determine the significant association between the knowledge regarding effectiveness of passive smoking with their selected demographic variables

III. RESULTS

Table 1: Frequency and percentage distribution of respondents according to demographic variables N=100

Sl No	Demographic variables	Frequency (f)	Percentage (%)
1	**Age (in yrs)**		
	a) 20-30	16	26.7
	b) 31-40	23	38.3
	c) 41-50	13	21.7
	d) 51-60	8	13.3

2	**Gender**		
	a) Male	32	53.3
	b) Female	28	46.7
3	**Religion**		
	a) Hindu	37	61.7
	b) Muslim	14	23.3
	c) Christian	6	10
	d) Others	3	5
4.	**Educational qualification**		
	a) No formal education	13	21.7
	b) Primary school	23	38.3
	c) High school	10	16.7
	d) PUC	9	15
	e) Degree and above	5	8.3
5.	**Type of family**		
	a) Nuclear	31	51.7
	b) Joint	22	36.7
	c) Extended	7	11.7
6.	**Marital status**		
	a) Married	24	40
	b) Unmarried	33	55
	c) Widowed/Divorced	3	5
7.	**History of smoking in family**		
	a) Yes	37	61.7
	b) No	23	38.3
8.	**Previous exposure to educational program**		
	c) Yes	31	51.7
	d) No	29	48.3
9.	**Source of information**		
	a) Formal education	16	26.7
	b) Books/Journals	24	40
	c) Mass media	16	26.7
	d) Seminar/Workshop	4	6.7

Table 2: Frequency and Percentage distribution of respondents according to level of Knowledge regarding effects of passive smoking

N=60

Level of Knowledge					
Pre test			**Post test**		
Poor f (%)	**Average f (%)**	**Good f (%)**	**Poor f (%)**	**Average f (%)**	**Good f (%)**
18 (30%)	34 (56.7%)	8(13.3%)	00	32 (53.3%)	28 (46.7%)

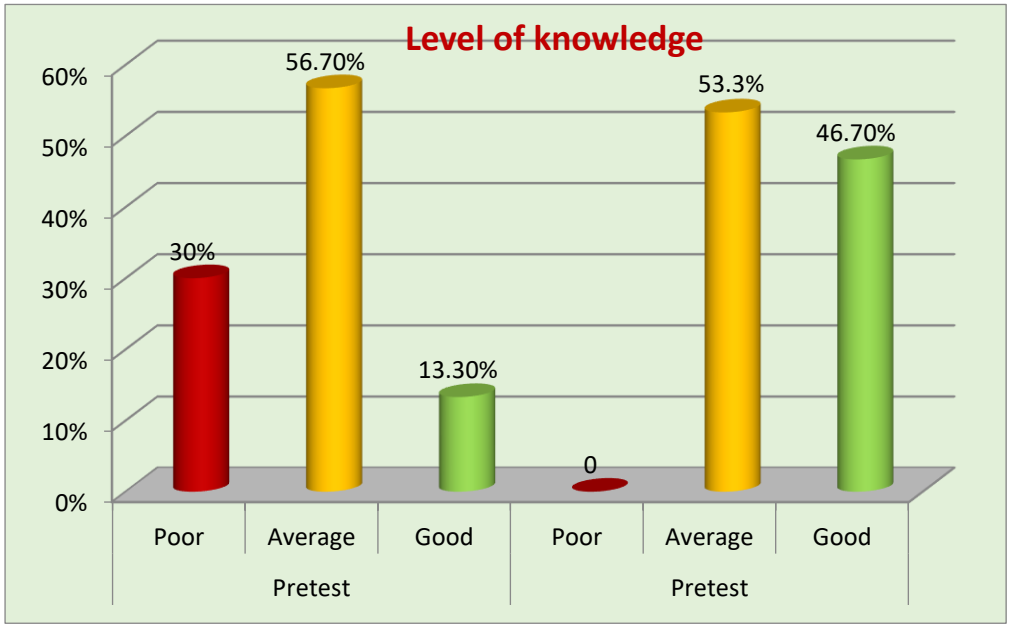

Figure 1. Pre test and post test level of knowledge of respondents regarding effects of passive smoking

Table 3: **Chi-square values between levels of knowledge of respondents regarding effects of passive smoking and their selected demographic variables.**

N=60

Sl No	Demographic variables	Knowledge score			d(f)	Chi square value	Level of significance
		Poor	Average	Good			
1	**Age (in yrs)** a) 20-30 b) 31-40 c) 41-50 d) 51-60	 7 5 4 2	 8 12 8 6	 1 6 1 0	6	**7.12**	**P>0.05** **NS***
2	**Gender** a) Male b) Female	 11 7	 16 18	 5 3	2	**0.53**	**P>0.05** **NS***
3	**Religion** a) Hindu b) Muslim c) Christian d) Others	 11 7 0 0	 23 6 4 1	 3 1 2 2	6	**14.99**	**P<0.05** **S***
4	**Educational qualification** a) No formal education b) Primary school c) High school d) PUC e) Degree and above	 4 6 5 1 2	 6 15 4 6 3	 3 2 1 2 0	8	**6.47**	**P>0.05** **NS***
5	**Type of family** a) Nuclear b) Joint c) Extended	 12 5 1	 15 15 4	 4 2 2	4	**4.15**	**P>0.05** **NS***
6.	**Marital status** a) Married b) Unmarried c) Widowed/Divorced	 7 10 1	 16 17 1	 1 6 1	4	**3.87**	**P>0.05** **NS***
7.	**History of smoking in family** a) Yes b) No	 10 8	 22 12	 5 3	2	**0.42**	**P>0.05** **NS***

8.	**Previous exposure to educational program** a) Yes b) No	 10 8	 20 14	 1 7	2	**5.72**	**P>0.05 NS***
9.	**Source of information** a) Formal education b) Books/Journals c) Mass media d) Seminar/Workshop	 5 6 6 1	 8 15 9 2	 3 3 1 1	6	**2.21**	**P>0.05 NS***

(Note: S*=SIGNIFICANT, NS*=NOT SIGNIFICANT)

IV. CONCLUSION

The study was undertaken to assess the effectiveness of structured teaching programme on knowledge regarding effects of passive smoking among adults in a rural area of Nelamangala at Bengaluru. The study reveals inadequate initial knowledge among rural adults regarding passive smoking, substantially improved through structured teaching programs.

Recommendation: A similar study can be replicated for larger samples, in different settings to make broad generalization. The findings of the study would give a strong base for the future studies.

Conflict of interest: We assure that this manuscript is original and has not been published elsewhere and is not under consideration by any other journals. We have no conflict of interest to declare.

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Ethical clearance: Informed consent was obtained from the adult population and permission was obtained from the medical Officer, PHC and Town Panchayat at Nelamangala, Bengaluru. Ethical clearance is obtained.

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