



# A STUDY TO EVALUATE THE EFFECTIVENESS OF SELF MOTIVATIONAL BOOKLET REGARDING KNOWLEDGE ON HARMFUL EFFECTS OF SMOKING AND BENEFITS OF QUITTING AMONG SMOKERS IN SELECTED RURAL COMMUNITY AREAS AT GONDA

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## Abstract

Smoking kills approximately 6 million people globally every year. Nurses play a crucial role in community health programs by educating smokers about the harmful effects of tobacco abuse and reducing related morbidity and mortality. Creating a healthy, tobacco-free environment is a public health priority. Nursing practice should focus on health education and interventions to combat tobacco abuse. Objectives of this study included assessing smokers' knowledge about smoking effects, evaluating the effectiveness of educational booklets, and exploring associations between knowledge and demographics. The study used an evaluative approach with a quasi-experimental design involving 60 smokers. Results showed improvement in knowledge levels post-intervention, indicating the effectiveness of the self-motivational booklet.

**Keywords:** Smoking, knowledge, educational booklets

## Introduction

Smoking involves the act of burning substances like tobacco or cannabis, inhaling or tasting the resulting smoke. It is commonly used as a method for recreational drug consumption, releasing active components like nicotine for absorption through the lungs. Besides recreational use, smoking can be part of rituals for inducing trances or spiritual experiences.<sup>1</sup>

Cigarettes are the most prevalent form of smoking today, whether commercially produced or hand rolled. Other smoking devices include pipes, cigars, hookahs, and vaporizers. Smoking is linked to numerous diseases, with half of long-term smokers succumbing to smoking-related illnesses. Reports indicate that approximately 4.9 million people die annually due to smoking-related causes.<sup>2</sup>

The negative impacts of smoking, especially tobacco, are widely acknowledged. Initially, interventions focused on providing information about the health risks of smoking in hopes of reducing prevalence. However, strategies employing fear tactics were found to be limited in effectiveness. Subsequently, interventions shifted towards skill-building approaches in educational settings.<sup>3</sup>

According to the World Health Organization (WHO), tobacco use disproportionately affects the impoverished, with a majority of smokers residing in developing or transitional economies. While smoking rates have stabilized or decreased in developed nations, they continue to rise in developing countries at a rate of 3.4% annually. WHO projections estimate millions of deaths globally due to tobacco-related causes, with the

majority occurring in developing nations. The number of smokers is expected to increase significantly by 2025, reaching 1.5 to 1.9 billion globally.<sup>4</sup>

### Need for study

Numerous studies indicate that many regular smokers initiate smoking either before or during adolescence. Individuals who begin with occasional cigarette use during their teenage years face a twofold increased risk of becoming regular smokers in early adulthood. Moreover, engaging in monthly smoking habits during adolescence escalates the likelihood of transitioning to regular smoking in young adulthood by over 16 times. Additionally, adolescents exhibit higher rates of nicotine dependence compared to adults, even with similar levels of nicotine consumption.<sup>5</sup>

The harmful effects of smoking extend not only to active smokers but also to passive smokers. Despite the known health risks associated with smoking, many individuals struggle with addiction and find it challenging to quit. Some attempt to reduce their cigarette intake upon realizing the health hazards, often aiming to limit their smoking to a moderate level. However, given the long-term adverse effects of smoking, particularly on the cardiovascular system, it is essential to consider the impact on the human heart.<sup>6</sup>

Continuous smoking has a detrimental impact on the cardiovascular system, leading to the damage of arteries and increasing the risk of life-threatening conditions such as heart blockage and atherosclerosis. Therefore, raising awareness about the risks associated with smoking addiction is crucial in promoting public health.<sup>7</sup>

Smoking stands as a prominent preventable cause of death worldwide, with tobacco-related diseases claiming the lives of approximately 6 million individuals annually on a global scale. Nurses play a vital role in community health initiatives, where they can educate smokers about the detrimental effects of tobacco use and work towards reducing the morbidity and mortality associated with tobacco abuse.<sup>8</sup>

Creating a healthy and tobacco-free environment, particularly by curbing tobacco smoking, is a key national public health priority. Health education and interventions aimed at preventing tobacco abuse should be central to nursing practice, with the goal of promoting a tobacco-free lifestyle and improving overall community health.

### Objectives

The objectives of the study are,

- To assess the level of knowledge regarding harmful effects of smoking and benefits of quitting among smokers as measured by Self motivational booklet.
- To evaluate the effectiveness of self-motivational booklet regarding harmful effects of smoking and benefits of quitting among smokers in selected rural areas.
- To find out the association between the pre-test knowledge regarding harmful effects of smoking and benefits of quitting with selected socio demographic variables.

### Operational Definitions

**Effectiveness** – It refers to significant gain in knowledge as determined by increase in post-test knowledge score of harmful effects of smoking and benefits of quitting.

**Self-motivational Booklet**- It refers to the systematically developed motivational programmed for smoker to provide information regarding harmful effects of smoking and benefits of quitting.

**Knowledge**- It refers to the responses of subjects on self-administered questionnaire on harmful effects of smoking and benefits of quitting.

**Harmful effect of Smoking:** - It is a visible vapor in the air produced by burning substances, which will cause many ill effects in the body system like oral cancer, lung cancer and bladder cancer. It is the dangers effect on health of an individual caused by smoking.

### Hypothesis

H1 -There will be significant difference between pretest and posttest level of knowledge among smokers regarding harmful effects of smoking and benefits of quitting.

H2- There will be significant association between the selected demographical variables and knowledge of the smokers regarding harmful effects of smoking and benefits of quitting.

### **Assumptions:**

It is assumed that

- smokers may not have adequate knowledge regarding harmful effects of smoking and benefits of quitting.
- Self-motivational booklet may increase the knowledge of smokers regarding harmful effects of smoking and benefits of quitting.

### **Delimitations**

- The Study is limited to 60 samples.
- The study is delimited to only cigarette smokers
- The study period is limited to 4 weeks.

**Research Approach:** Quantitative research approach.

**Research Design:** Quasi-experimental (one group pretest- posttest) design.

### **Variables:**

**Independent Variables:** In the present study, the independent variable is the self-motivational booklet on knowledge regarding harmful effects of smoking and benefits of quitting.

**Dependent Variables:** In this study, the dependent variable is knowledge level of smokers in a selected community area.

**Extraneous Variables:** Age, Religion, Residence, Educational status, Family economic status and have you ever received information regarding harmful effects of smoking and benefits of quitting.

**Population:** The target population for this study was Smokers in selected community area.

**Setting of the Study:** Setting refers to the area where the study is conducted. This study was conducted in Gonda.

**Sample:** Smokers.

**Sample size:** A total number of 60 Smokers who met in the inclusion criteria.

**Sampling Technique:** Purposive sampling technique was used to select the sample.

### **Sampling Criteria**

#### **Inclusion Criteria**

In this study, the following samples were included, smokers who are

- smokers who are available during data collection.
- Who are willing to participate.
- able to read and understand Hindi.

#### **Exclusion criteria**

The study excludes smokers, who are

- not available during data collection.
- Who had already participated related to smoking hazards.
- Who cannot read and write English.

**Data collection procedure:** Data collection tools are procedures used by the researcher to observe or measure the key variables in the research problem. In this study, the tools consisted of structured questionnaire to assess the knowledge regarding harmful effects of smoking and benefits of quitting among smokers in a selected community area.

## Selection and development of the tool

The tool was developed on the basis of the objectives of the study. The following steps were adopted in the development of the tool.

- Review of literature, which provided adequate content for the tool preparation
- Consultation with the experts of community health nursing specialty and community Medicine.

**Description of the Tool:** Part I consists of 6 items pertaining to the demographic variables of the respondents such as Age, Religion, Residence, Educational status, Family economic status and have you ever received information regarding harmful effects of smoking and benefits of quitting. Part –II consists of 25 items pertaining to Information about various aspects of harmful effects of smoking and benefits of quitting. Each correct response was assigned a score of one and a wrong response a score of zero.

## Scoring and Interpretation

The questions were phrased in a multiple-choice form with 3 options as distracters and 1 correct response. The correct response is given a score of one mark and the wrong response is given a score of zero.

The resulting knowledge score ranged as

Adequate knowledge.	:-	(75% to 100%)
Moderate knowledge	:-	(51% to 74%)
In adequate knowledge	:-	(≤ 50%)

**Self-motivational booklet:** Self-motivational booklet was developed based on the topic of the study, review of the related research publications, and non-research literature.

**Content Validity:** The first draft of Self-motivational booklet along with the criteria check list was given to 8 experts comprising of 6 Nurse Educators and 2 Doctors. The experts were requested to validate Self-motivational booklet based on the criteria check list. The suggestions and opinions of experts were considered, and the Self-motivational booklet was accordingly modified under the guidance of the guide and co -guide.

**Reliability:** The tool was found to be reliable with the reliability co- efficient of  $r_2$ - 0.86.

**Pilot Study:** The investigator used purposive sampling technique to select the samples from the total population. About 6 samples were selected for the study and these 6 were excluded for the final study.

**Procedure for Data Collection:** Formal permission was obtained from medical officer, Gonda PHC at Gonda district to conduct the study. The data collection was done for a period of 4 weeks during the month of December and January 2023. The collections of pre-test and post test data as well as an implementation of Self-motivational booklet were done by the investigator.

## Results

**Table–1: Frequency and percentage distribution of Smokers according to demographic variables.**

n=60

SL NO	DEMOGRAPHIC VARIABLES	NO	%
1	Age in year		
	a) Below 30	10	16.67
	b)31-50	22	36.67
	c)51-70	19	31.67
	d)71 and above	9	15
2	Religion		
	a) Hindu	23	38.33
	b)Christian	15	25
	c)Muslim	22	36.67
3	Residence		
	a) Rural	32	53.33
	b) Semi Rural	28	46.67
4	Educational Status		

	a) No formal	19	31.67
	b) Basic education	9	15
	c) Secondary education	18	30
	d) Higher education	14	23.33
5	Family economic status		
	a) Low class	22	36.67
	b) Middle class	21	35
	c) High class	17	28.33
6	Have you ever received information regarding Harmful effect of smoking		
	a) Yes	32	53.33
	b) No	28	46.67

**Table 2:** To compare pre-test and Post-test level of knowledge of smokers regarding harmful effects of smoking and benefits of quitting.

n=60

Level of knowledge	Score	pre-test		post-test	
		No	%	No	%
Adequate	75-100%	0	0	37	61.67
Moderate	51-74%	22	36.67	23	38.33
Inadequate	50% and below	38	63.33	0	0

The above table 2 compares percentage distribution of levels of pre-test and post-test knowledge. The level of knowledge increased dramatically during treatment. A notable 61.6% of the subjects showed adequate knowledge after treatment. No subjects were there with adequate knowledge during pre-test. Likewise, no subjects found with inadequate knowledge during post-test. In addition, percentage of people with moderate knowledge also increased from 36.6% to 38.3%.

**Table 3:** To evaluate effectiveness of STP regarding harmful effects of smoking and benefits of quitting among smokers.

n=60

Domain	Max score	Mean difference	Mean% difference	t value
Harmful effects of smoking and benefits of quitting	25	7.95	31.8	21.22S*

\* S- Significant at 0.05 level (P<0.05 level)

Paired t test was calculated to analyze the difference in Pre and Post-test knowledge scores of smokers which show significant difference between the overall scores. Hence the Hypothesis  $H_1$  is accepted, and it can be interpreted that the difference observed in the mean score of the pre and post score were true difference.

**Table 4:** To find out association between the level of knowledge with their selected socio- demographic variables.

n=60

Sl no	Demographic variables	No	%	Level of knowledge				Chi-square
				Inadequate		Moderate		
				No	%	No	%	
<b>1</b>	<b>Age in year</b>							
	a) Below 30	10	16.67	7	18.42	3	13.64	0.477 NS
	b)31-50	22	36.67	14	36.84	8	36.36	
	c)51-70	19	31.67	11	28.95	8	36.36	
	d)71 and above	9	15	6	15.79	3	13.64	
<b>2</b>	<b>Religion</b>							
	a) Hindu	23	38.33	15	39.47	8	36.36	0.904 NS
	b)Christian	15	25	8	21.05	7	31.82	
	c)Muslim	22	36.67	15	39.47	7	31.82	
<b>3</b>	<b>Residence</b>							
	a) Rural	32	53.33	24	63.16	8	36.36	4.019 <b>S*</b>
	b) Semi rural	28	46.67	14	36.84	14	63.64	
<b>4</b>	<b>Educational status</b>							
	a) No formal	19	31.67	18	47.37	1	4.545	18.98 <b>S*</b>
	b) Basic education	9	15	5	13.16	4	18.18	
	c) Secondary education	18	30	12	31.58	6	27.27	
	d)Higher education	14	23.33	3	7.89	11	50	
<b>5</b>	<b>Family economic status</b>							
	a) Low class	22	36.67	14	36.84	8	36.36	0.25 NS
	b) Middle class	21	35	14	36.84	7	31.82	
	c) High class	17	28.33	10	26.32	7	31.82	
<b>6</b>	<b>Previous exposure with knowledge regarding harmful effects of smoking and benefits of quitting</b>							
	a) Yes	32	53.33	19	50	13	59.09	0.463 NS
	b) No	28	46.67	19	50	9	40.91	

N.S- Not Significant \*S- Significant at P&lt;0.05 level

An analysis of association between the levels of knowledge with their selected socio- demographic variables with chi square test revealed that the variables such as area of residence and educational status are the two variables significantly associate with the level of knowledge. Further, other variables such as age, religion, family economic status and previous exposure with knowledge regarding harmful effects of smoking and benefits of quitting etc., were not of significantly important.

**Discussion:** As can be seen, the post-test knowledge of smokers regarding harmful effects of smoking and benefits of quitting was significantly different from that of pretest knowledge. Interestingly, 61.67% of the subjects showed adequate knowledge during posttest whereas the remaining 38.33% showed moderate knowledge. Moreover, no subjects found with inadequate knowledge. Mean, SD and Mean% of posttest showed a different score level compared to pretest. These are calculated to be 19.12, 2.3 and 76.47 respectively after treatment. A notable 61.6% of the subjects showed adequate knowledge after treatment. No subjects were there with adequate knowledge during pre-test. Likewise, no subjects found with inadequate knowledge during post-test. In addition, percentage of people with moderate knowledge also increased from 36.6% to 38.3 Range of post-test knowledge enhanced 6-8 points from 5-18 during pretest. Likewise, mean and mean% also enhanced significantly: 7.95 points enhancement to reach 19.12 during

post-test for mean and 31.8 points enhancement in mean% from 44.67 points during pretest. SD varied 1.36 points from 3.75 to reach 2.38 points after treatment.

**Summary:** In summary, the post-test knowledge of smokers regarding the harmful effects of smoking and the benefits of quitting significantly differed from their pretest knowledge. After treatment, 61.67% of subjects demonstrated adequate knowledge, while 38.33% showed moderate knowledge, with no subjects displaying inadequate knowledge. The mean, standard deviation, and mean percentage scores in the posttest were notably different from those in the pretest, with values of 19.12, 2.3, and 76.47, respectively after treatment. Moreover, there was a marked improvement in knowledge levels post-treatment, with an increase in the percentage of subjects with adequate knowledge, and enhancements in mean, mean percentage, and standard deviation values.

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