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Research Article

## A Study to Evaluate the Effectiveness of Self-instructional Module on Knowledge Regarding Risk factors and prevention of Peptic Ulcer Disease Among Adults in a Selected Rural Areas of Udaipur

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### Abstract

**Background and Objectives:** Prevention of peptic ulcer disease is an important determinant of health over the course of life. The early years of life are a period of considerable opportunity for growth or vulnerability to harm. Therefore, it is of great importance that an adult should be aware about the risk factors and various ways to prevent peptic ulcer disease as possible. This study aimed to assess the knowledge of adults regarding risk factors and prevention of peptic ulcer disease among selected rural areas of Udaipur.

**Method:** A pre-experimental one group pre-test post-test design was adopted. The study involved 50 adults with in a selected rural area at Udaipur. Data collection included pre-test and post-test assessments of knowledge, demographic surveys, and statistical analysis to evaluate knowledge changes and associations. The self-instructional module was distributed and covered the following areas like: Introduction, Definition, Causes, Risk factors & Prevention. The effectiveness was measured by comparing pre-test and post-test scores, and associations were analyzed using chi-square tests.

**Results:** The data reveals that 60% of adult had inadequate knowledge, 24% had moderately adequate knowledge and only 16% had adequate knowledge in pre-test and that 68% had adequate knowledge 14% had moderately adequate knowledge and only 18% had inadequate knowledge in post-test. After the intervention, majority (34%) of adults had good knowledge level whereas during pre-test only (8%) of adults had good knowledge. Before intervention the mean knowledge score was 20.22. After intervention, the mean knowledge score was increased to 22.37. Statistically there was a significant difference in the mean knowledge score before and after the intervention ( $t = 10.95^*$ ,  $df = 19$ ,  $P < 0.05$ ). Hence the hypothesis, there will be a significant difference in the pre and post-test mean knowledge score after the intervention was accepted. The data concluded that, there was a significant increase in the mean knowledge score after intervention because of self-instructional module.

**Interpretation and Conclusion:** The study revealed that the self-instructional module was effective in improving the knowledge regarding the prevention of peptic ulcers.

**Keywords:** Peptic Ulcer Disease, Self-Instructional Module, Knowledge, Risk factor

## INTRODUCTION

An "ulcer" is an open sore. The word "peptic" means that the cause of the problem is due to acid. Peptic ulcer disease is characterized by discontinuation in the inner lining of the gastrointestinal (GI) tract because of gastric acid secretion or pepsin. It extends into the muscularis propria layer of the gastric epithelium. It usually occurs in the stomach and proximal duodenum. It may involve the lower esophagus, distal duodenum, or jejunum. Epigastric pain usually occurs within 15-30 minutes following a meal in patients with a gastric ulcer; on the other hand, the pain with a duodenal ulcer tends to occur 2-3 hours after a meal. Today, testing for *Helicobacter pylori* is recommended in all patients with peptic ulcer disease. Endoscopy may be required in some patients to confirm the diagnosis, especially in those patients with sinister symptoms. Today, most patients can be managed with a proton pump inhibitor (PPI) based triple-drug therapy. Symptoms of peptic ulcer disease are variable and may include abdominal pain, nausea, vomiting, weight loss and bleeding or

perforation with complicated disease. Identifying the risk factors and mechanisms that lead to the development of PUD helps to understand the approach behind diagnostic and treatment strategies.

The main risk factors for PUD are *H. pylori* and NSAID use, however not all individuals infected with *H. pylori* or taking NSAIDs develop PUD. Almost half of the world's population is colonized by *H. pylori*. The organism is usually acquired in childhood and persists until treated. Risk factors for acquiring the infection include a lower socioeconomic status and unsanitary conditions or crowding.

## OBJECTIVES

To assess the pre and post-test level of knowledge of adults regarding risk factors and prevention of peptic ulcer disease.

To evaluate the effectiveness of self-instructional module on risk factors and prevention of peptic ulcer among adults.

To determine the association between the post-test

knowledge level of adults regarding risk factors and prevention of peptic ulcer disease with selected demographic variables.

**ASSUMPTIONS**

Adults may have some knowledge on risk factors and prevention of peptic ulcer disease.

Education may enhance the knowledge of adults regarding risk factors and prevention of peptic ulcer disease. Adults may act according to the information they perceive.

**HYPOTHESES**

H<sub>1</sub>: There will be significant difference between the mean pretest and post test knowledge scores of adults regarding the risk factors and prevention of peptic ulcer disease.

H<sub>2</sub>: There will be significant association between the post test level of knowledge of adults regarding risk factors and prevention of peptic ulcer disease with their selected socio-demographic variables.

**RESEARCH METHODOLOGY**

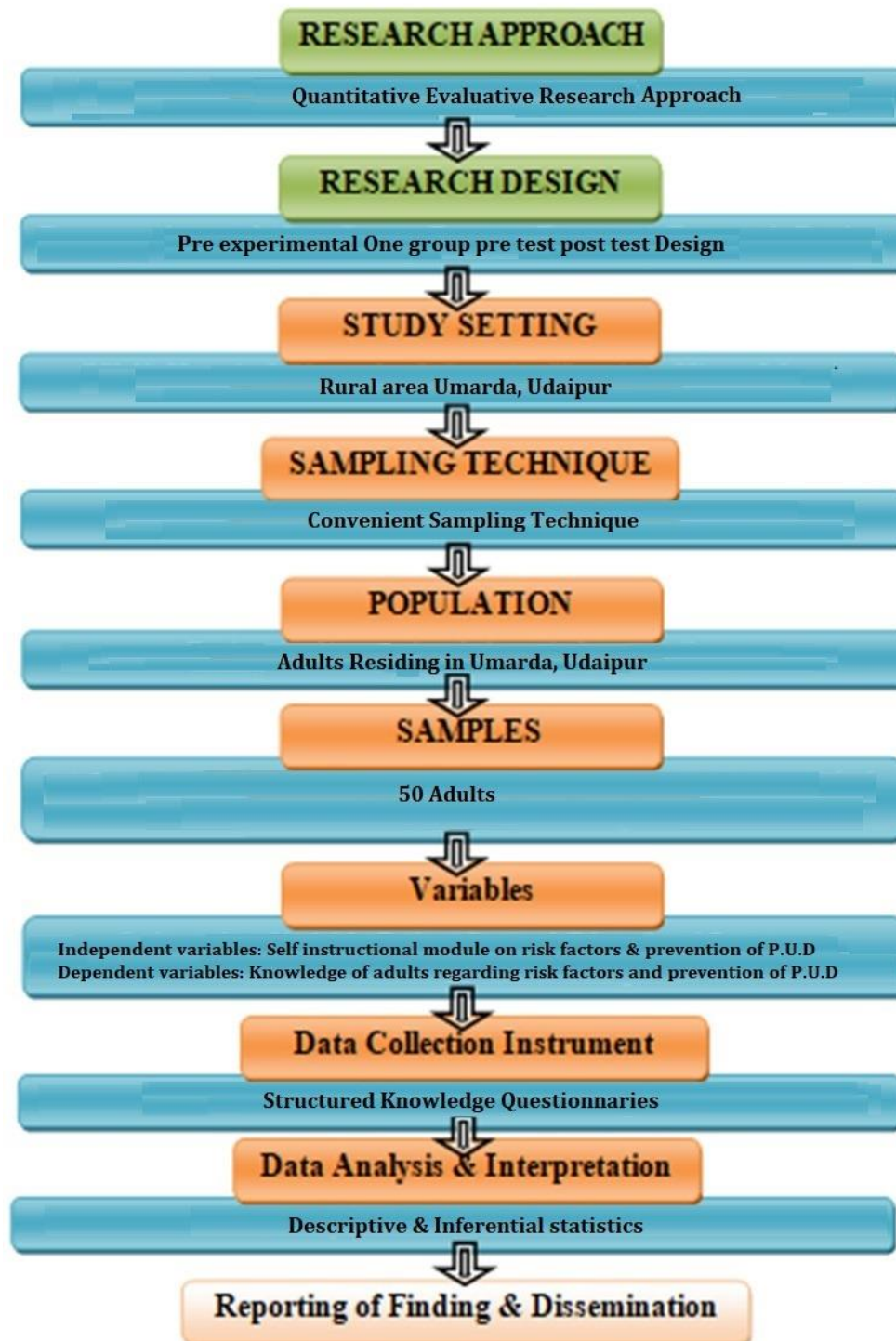


Figure-1: Schematic Presentation of Research Methodology

**RESULT****Table 1: Frequency and Percentage distribution of Demographic Variables.****N=50**

S. No	Demographic variables	N	%
1.	Age		
	(a) 18 - 32 years	10	20.00
	(b) 33 -47 years	14	28.00
	(c) 48 - 60 years	13	26.00
	(d). More than 60 yrs	13	26.00
2.	Sex		
	(a) Male	19	38.00
	(b) Female	31	62.00
3.	Educational status		
	(a) No formal education	9	18.00
	(b) Primary education	9	18.00
	(c) Secondary education	16	32.00
	(d). Graduate	16	32.00
4.	Occupation		
	(a) Daily wages	8	16.00
	(b) Self employee	20	40.00
	(c). Government employee	22	44.00
5.	Family monthly income (rupees)		
	(a) 10,000	11	22.00
	(b) 20,000	20	40.00
	(c). 30,000	12	24.00
	(d).More than 30,000	7	14.00
6.	Dietary Pattern		
	(a). Regular	11	22.00
	(b). Irregular	39	78.00
7.	Family history of peptic ulcer disease		
	a) Yes	22	44.00
	b) No	28	56.00
8.	Personal Habit		
	a) Cigarette smoking	08	16.00
	b) Drinking Alcohol	10	20.00
	c) Both	09	18.00
	d) None of the above	31	46.00
9.	Source of information		
	(a). Books and Journals	12	24.00
	(b). Friends and relatives	09	18.00
	(c). Mass media	09	18.00
	(d). Health personnel	20	40.00

## Level of pre test &amp; Post Test knowledge score of adults regarding risk factors and prevention of peptic ulcer disease.

N=50

Level of Knowledge	Score	Pre-test		Post-test	
		Frequency (n)	Percentage (%)	Frequency (n)	Percentage (%)
Inadequate knowledge	1-5	30	60.00	9	18.00
Moderate knowledge	6-10	12	24.00	7	14.00
Adequate knowledge	11-16	8	16.00	34	68.00

## Area wise comparison of Mean, Standard Deviation and Mean Percentage of pre and post- test knowledge score of adults with peptic ulcer disease.

N =50

Domain	Max. Score	Pretest			Post test			MD	Paired 't' value P<0.05 df-19
		Mean	Mean %	SD	Mean	Mean %	SD		
Risk factors	13	20.22	44.89	7.97	22.37	31.87	6.9	13.02	10.952*
Prevention	12	19.38	47.29	5.14	26.18	47.8	7.4	0.51	0.533NS

\* Significant

NS- not significant

Table value- 1.729

## RESULT

Pre- experimental design was used to assess the effectiveness of self -instructional module on knowledge regarding risk factors and prevention of peptic ulcer disease among adults in a selected rural area, Udaipur. Convenient sampling techniques was used.

The percentage distribution of adults with peptic ulcer disease according to their age, higher percentage (28%) of adults were in age group of 33-47 years. 26% and 20% were in the group of 48-60 years and 18 - 32 years respectively. The percentage distribution of adults according to their sex, higher percentage (62%) adults were females, whereas 38% were males. The percentage distribution of adults according to their education, higher percentage (32%) adults were had secondary education and graduates, (18%) adults have got primary education and the same percentage of adults had no formal education. The percentage distribution of adults according to their occupation, 44% of adults were government employees and 40% of them were self employees, 16% of them were daily wages. The percentage distribution of adults according to their family income, The highest percentage (40%) of the adults had 20,000 rupees monthly income. 22% and 24% had 10,000 and 30,000 rupees income and 14% of adult's family had more than 30,000 monthly income.

The percentage distribution of adults according to their dietary pattern, the highest percentage (78%) of the adults had irregular dietary pattern and remaining 22% only had regular pattern. The percentage distribution of adults according to previous source of information, the highest percentage (40%) of adults has got information from health personnel, 18% from friends, relatives and mass media and 24% got previous information from books and journals.

The data also reveals that 60% of adult had inadequate knowledge 24% had moderately adequate knowledge and only 16% had adequate knowledge in pretest and that 68% had adequate knowledge 14% had moderately adequate knowledge and only 18% had inadequate knowledge in post-test. After the intervention, majority (34%) of adults had good

knowledge level whereas during pre-test only (8%) of adults had good knowledge.

Before intervention the mean knowledge score was 20.22. After intervention, the mean knowledge score was increased to 22.37. Statistically there was a significant difference in the mean knowledge score before and after the intervention ( $t = 10.95^*$ ,  $df = 19$ ,  $P < 0.05$ ).

Hence the hypothesis, there will be a significant difference in the pre and post test mean knowledge score after the intervention was accepted. The data concluded that, there was a significant increase in the mean knowledge score after intervention. This could be because of self-instructional module.

## CONCLUSION

The study revealed that the self-instructional module was effective in improving the knowledge regarding the prevention of peptic ulcers

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