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# To Assess the Effectiveness of Self-Instructional Module on a Healthy Lifestyle to Prevent Acid Peptic Disease Among Heavy Vehicle Driver in Wardha

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## ABSTRACT

**Background:** Acid peptic disease are a very common problem among professional truck drivers due to their lifestyle and job demands. In addition to *Helicobacter pylori*, Behavioural influences such as depression and diet were the primary causes of ulcers. There are other factors too.

**Objectives:** To assess the existing knowledge regarding healthy lifestyle to prevent acid peptic disease among heavy vehicle driver and to evaluate the effectiveness of self-instructional module on knowledge regarding healthy lifestyle to prevent the same.

**Methods:** In the present study, the quantitative research approach was used. One group pre-test post-test research design was used. Sampling technique was non-probability convenient sampling technique with 70 sample size.

**Result:** The findings show that in pretest 14 (20 %) of study participants are having average knowledge, 33(47.14%) of study participants are having good knowledge, 23 (32.86%) of study participants are having very good knowledge whereas post-test 18(25.71%) were having very good knowledge, 52 (74.29%) had excellent knowledge.

**Conclusion:** The study concluded that before intervention the heavy vehicle drivers have some knowledge regarding the prevention of acid peptic disease but after the intervention, they improve their knowledge. So the self-instructional module is proved to be improving their knowledge regarding prevention of acid peptic disease.

**Key Words:** Acid peptic disease, Heavy vehicle driver, Healthy lifestyle, Self-instructional module, Stomach ulcer

## INTRODUCTION

The gastrointestinal system is one of the systems of our body which has a relation with diet. In gastrointestinal systems this is the structural elements involve Esophagus, Stomach, Intestine, Liver, Gallbladder and Pancreas.<sup>1</sup> Upper gastrointestinal inflammatory process is common and has a wide spectrum of causes and manifestations. Gastric disorders are commonly seen in population unless treated promptly and completely, they can continue to cause problems throughout the client's life. Client needs assistance to learn new eating habits to achieve, and maintain health and to make necessary lifestyle changes. This is a very important and difficult task; however, unless the client modifies behaviour, many of the gastric disorders recur. The main focus of nursing intervention is education, and modifications of the client's behaviour to promote a healthy lifestyle pattern.<sup>2</sup>

Gastric and duodenal ulcers are more prevalent and cause more death mostly in smokers, and there is also an increased chance of the recurrence along with the decrease in the healing of the gastric and duodenal ulcer. Peptic ulcer disease and gastritis have similar etiological factor and risk factors like cigarette smoking, consuming caffeine-containing foods and beverages, alcohol in large quantities, using no steroidal anti-inflammatory agents, irregular dietary habits & spicy diet, stress, increased risk of peptic ulcers if type 'O' blood and *Helicobacter pylori* infection.<sup>3</sup> The presence of almost all risk factors and the stress of traffic in the big city by frequent heavy traffic and frequent stops have made drivers prone to get the acid peptic disease. Remarks result shown that drivers quit driving early for health reasons.<sup>4</sup>

Several studies in this region were reviewed which have direct or indirect effects on acquirement or

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progression of gastrointestinal diseases and conditions.<sup>5</sup> In this study we aimed to assess the existing knowledge regarding healthy lifestyle to prevent acid peptic disease among heavy vehicle driver and evaluate the effectiveness of self-instructional module on knowledge regarding healthy lifestyle to prevent this condition.

## MATERIALS AND METHODS

In the present study quantitative approach i.e. interventional research approach was used. One group pre-test post-test research design. Sampling technique was non-probability convenience sampling. The sample was selected from Wardha district. The study population was heavy vehicle drivers. Sample Size was seventy heavy vehicle drivers. Ethical permission was taken from (Ref. no: DMIMS (DU)/IEC/DEC-2019/8659 ON DATED 13 /12/2019.

### Independent variable

In this study, the independent variable refers to the Self Instructional Module (SIM).

### Dependent variable

In this study, the dependent variable refers to the knowledge of a healthy lifestyle to prevent acid peptic disease among heavy vehicle driver.

### Demographic variables

In these study demographic variables includes age, gender, education, years of work, source of information.

### Source of data collection

The data was collected by taking a pre test and post-test. Each sample required a mean time of 30 minutes to complete the pre-test through a structured questionnaire. Then the self-instructional module was intervened to the sample. The post-test through a structured questionnaire was administered after 7 days. The collection of data was performed within the stipulated time. After the data gathering process, the investigator thanked all the study samples as well as the authorities for their cooperation.

### Data collection

**Section A:** Consist of demographic characteristics of the sample such as age, gender, education, years of work, source of information.

**Section B:** This consists of 25 structured questions prevention acid peptic disease.

### Statistical Analysis

The demographic data, collected in the pre-test stage, the analysis was done in terms of frequency and percentage. The

paired t-test was used to compare pre and post-test knowledge scores. Chi-square test was applied to find out the association between the selected variable with practice score and post-test knowledge score. For statistical analysis, SPSS version 16.0 was used. The observational checklist used for checking.

## RESULT

### Section 1: Assess the pretest knowledge score regarding prevention of acid peptic disease among heavy vehicle drivers

Table 1 shows that 20% sample shows the average score, and 47.14% had a good level of satisfaction score and 32.86% of them had a very good level of satisfaction score. Minimum satisfaction score in was 7 and maximum satisfaction score was 19. Mean satisfaction score was  $13.22 \pm 3.357$ .

### Section 2: Assess post-test knowledge score regarding prevention of acid peptic disease among heavy vehicle drivers

Table 2 shows that 25.71% sample that shows a very good score, and 74.29 % had an excellent level of satisfaction score. Minimum satisfaction score in was 17 and maximum satisfaction score was 24. Mean satisfaction score was  $21.29 \pm 1.598$ .

### Section 3: Significance of difference between knowledge score in pre and post-test of prevention acid peptic disease among heavy vehicle drivers

Table 3 shows that there is a significant difference between pretest and post-test knowledge score interpreting effective self-instructional module on prevention of acid peptic disease among heavy vehicle drivers. Mean value of pretest is 13.79 and post-test is 21.29 and standard deviation value of pretest  $\pm 3.357$  and post-test  $\pm 1.598$ . The calculated t value is 15.763 and p-value is 0.000. Hence it statistically interpreted that the self-instructional module regarding the prevention of acid peptic disease among heavy vehicle drivers was effective.

## DISCUSSION

Acid peptic disorders include a variety of illnesses whose pathophysiology is thought to arise from damage caused by acid and peptic action in gastric secretions, including gastroesophageal reflux disease (GERD) and peptic ulcer disease, the two most severe and well-defined disease states. Peptic ulcers (gastric and duodenal) are defects that pass across the gastrointestinal mucosa.<sup>6</sup> Peptic ulcers are sores/

breaks in the inner lining of the stomach (duodenum) or upper small intestine.<sup>7</sup> Such sores occur as unnecessary digestive juices in the stomach are secreted — which include hydrochloric acid and an enzyme called pepsin-irritate and tissue harm. Digestive juices from the stomach can also damage the oesophagus.<sup>8</sup>

Peptic ulcer disorders mean the food mucosa is digested with acid peptic. Corrosive properties of acid with a proteolytic activity of pepsin are the primary factor for developing peptic ulcer disease. Duodenum and stomach are typical sources in peptic ulcer disorders.<sup>9</sup> Peptic ulcer disorders include a break in oesophageal, gastric or duodenal mucosa cohesion. An ulcer may occur in any part of the gastrointestinal tract that comes into contact with excess gastric juices (Hydrochloric acid and pepsin). The ulcer may be found in the gastric, duodenal or jejunum after gastroenterostomy.<sup>10</sup>

### Nursing Education

The result of the study can be used by the nursing teacher as an informative illustration for nursing students. It helps the nurse educator to plan and implement the topic in the nursing curriculum. It also helps the nurse educators to explain how this knowledge regarding prevention of acid peptic disease. Educators can help students, colleagues, and junior staff regarding management and prevention of level of satisfaction regarding acid peptic disease among heavy vehicle drivers.

### Nursing Administration

Findings of the study can be used by the Nursing Administrator in creating policies and plans for preventing knowledge regarding acid peptic disease among heavy vehicle drivers. Nursing administrators should arrange staff development programs on healthy lifestyle to prevent acid peptic disease among heavy vehicle driver to update the knowledge of staff nurses.

### Nursing Research

The findings of the study have added to the existing body of knowledge in nursing. Other researchers may utilize suggestions and recommendations for conducting the further study. The tool and technique used has added to the body of knowledge and can be used for further references.

### Recommendations

- A study can be conducted to assess knowledge and attitude regarding the prevention of acid peptic disease among heavy vehicle drivers.
- A study can be conducted to assess knowledge prevention of acid peptic disease among labours.
- A comparative study can be conducted in an urban and rural area on knowledge regarding prevention of acid peptic disease among labours.

## CONCLUSION

This study aimed to identify the effectiveness of self-instructional module on a healthy lifestyle to prevent acid peptic disease among heavy vehicle driver in Wardha. Information is given to the drivers of the heavy vehicles through a self-instructional module which includes various aspects like general knowledge regarding causes, signs and symptoms, types, management and healthy lifestyle to prevent acid peptic disease. The conclusion is drawn on the basic finding of the study, the pre-test finding showed that knowledge of heavy vehicles drivers regarding healthy lifestyle to prevent acid peptic disease inadequate after given the self-instructional module helped the drivers of the heavy vehicles to understand more about prevention of healthy lifestyle to prevent acid peptic disease, most of the drivers of the heavy vehicles wear having adequate knowledge after given the self-instructional module. So the self-instructional module is proved to be improving their knowledge regarding prevention of acid peptic disease.

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**Table 1: Pre-test knowledge score regarding prevention of acid peptic disease among heavy vehicle drivers**

Level of knowledge score (n=70)	Score Range	Percentage score	Pretest	
			Frequency	Percentage %
Poor	0-5	0-20	0	00
Average	6-10	21-40	14	20
Good	11-15	41-60	33	47.14
Very good	16-20	61-80	23	32.86
Excellent	21-25	81-100	00	00
Minimum score				7
Maximum score				19
Mean satisfaction score				13.79 ±3.357

**Table 2: Post-test knowledge score regarding prevention of acid peptic disease among heavy vehicle drivers**

Level of knowledge score (n=70)	Score Range	Percentage score	Post test	
			Frequency	Percentage %
Poor	0-5	0-20	00	00
Average	6-10	21-40	00	00
Good	11-15	41-60	00	00
Very good	16-20	61-80	18	25.71
Excellent	21-25	81-100	52	74.29
Minimum score				17
Maximum score				24
Mean satisfaction score				21.29±1.598

**Table 3: Significance of difference between knowledge score in pre and post-test of prevention acid peptic disease among heavy vehicle drivers**

Test	Mean	SD	t- Value	Degree of freedom	p- value	Significan
Pretest	13.79	±3.357	15.763	69	0.001	S,P< 0.05
Post-test	21.29	±1.598				