DOI: 10.21088.ijpn.2347.7083.13225.2

International Journal of Practical Nursing
Volume 13 Number 2, May-August 2025

ORIGINAL ARTICLE

To assess the Effectiveness of Planned Teaching on Knowledge Regarding Prevention of Recurrence of Asthma among Asthmatic Patients

Sapna Chandankhede

HOW TO CITE THIS ARTICLE:

Sapna Chandankhede. To assess the Effectiveness of Planned Teaching on Knowledge Regarding Prevention of Recurrence of Asthma among Asthmatic Patients. Int J Practical Nurs. 2025; 13(2): 49-54.

ABSTRACT

Background: Conducted a study on "contribution of smoking air pollution exposures in urban areas to social differences in respiratory health", identified that socio economic status, smoking, and exposure to increased levels of environmental air pollution are associated with adverse effects on respiratory health.

Objectives: 1 To assess the existing knowledge regarding prevention of recurrence of asthma among asthmatic patients. 2 To evaluate the effectiveness of planned teaching on knowledge regarding prevention of recurrence of asthma among asthmatic patients. 3 To associate the knowledge scores with selected demographic variables.

Material and Method: This study was based on Quantitative research approach. In this study, 40 Asthmatic Patients are included. The setting of the study was selected hospital of Wardha.

Result: The result shows that 7(18%) had poor level of knowledge score, 32(80%) of them had average level of knowledge score in pretest and in posttest none of them had poor and average level of knowledge, 24(60%) of them had very good level of knowledge, 16(40%) of them had excellent level of knowledge score. Hence planned teaching was effective. It is statistically interpreted that planned teaching on knowledge regarding prevention of recurrence of asthma among asthmatic patients was effective. Thus H_1 is accepted and H_0 is rejected.

Conclusion: Thus it was concluded that planned teaching on the prevention of recurrence of asthma was found effective as a teaching strategy.

KEYWORDS

• Knowledge • Effectiveness • Asthmatic Patients • Recurrence of Asthma

AUTHOR'S AFFILIATION:

Lecturer, Department of Medical Surgical Nursing, Sonekar College of Health Sciences, Nagpur, Maharashtra, India.

CORRESPONDING AUTHOR:

Sapna Chandankhede, Lecturer, Department of Medical Surgical Nursing, Sonekar College of Health Sciences, Nagpur, Maharashtra, India.

E-mail: sapnaaa2018@gmail.com

➢ **Received:** 17.07.2025 ➢ **Accepted:** 19.08.2025

INTRODUCTION

Asthma is known from the period of Hippocrates (430-330 BC) the father of modern medicine. The word asthma derived from aazcin means to pant or exhale with open mouth.[1]

The cells of body need energy for the chemical activity that maintains homeostasis most of energy derived from chemical reaction. This can only take place in the presence of oxygen. The main waste product of this reaction is carbon dioxide the respiratory system provides the route. Breathing is a regular inflation and deflation of the lung. Which maintains a steady concentration of atmospheric gases. In the alveoli that is the constant intake of oxygen and output of carbon dioxide.[2] The lungs one of the pair of conical organs of the respiratory system. Consisting of an arrangement of air tubes (bronchi and bronchioles) terminating in air space (alveoli) they occupy most of the thoracic cavity the lung supply the blood with oxygen inhaled from the outside air and they dispose of waste carbon dioxide in the exhaled air as a part of the process known as respiration.[3]

Respiration is a process of gaseous exchange between an organism and its environment this includes external and internal respiration which involves breathing.[2]

Asthma is a disease characterized by recurrent attacks of breathlessness and wheezing which vary in severity, and frequency from person to person symptoms may occurs several time in a day or week in a affected individuals and some people became worse during physical activity or at night. During an asthma attack the lining of bronchial tubes swell causing the air way to narrow and sleeplessness day time fatigue reduced activity levels and school and work absenteeism.[4]

OBJECTIVES

1. To assess the existing knowledge regarding prevention of recurrence of asthma among asthmatic patients.
2. To evaluate the effectiveness of planned teaching on knowledge regarding prevention of recurrence of asthma among asthmatic patients.
3 To associate the knowledge scores with selected demographic variables.

ASSUMPTION

- Patient may have some knowledge on prevention of recurrence of asthma.
- Planned teaching will enhance the knowledge regarding prevention of recurrence asthma.

HYPOTHESIS

H_1: There is significant difference in knowledge regarding prevention of recurrence of asthma among asthmatic patients after the planned teaching.

H_0: There is no significant difference in knowledge regarding prevention of recurrence of asthma among asthmatic patients after the planned teaching.

METHODOLOGY

Research approach:	Quantitative research approach
Research design:	One group pretest-post test research design.
Setting of study:	Selected hospital of Wardha.
Sample:	Asthmatic Patients
Sample size:	40
Sampling technique:	Non probability convenient sampling technique

RESULT

- **Section A -** Percentage wise distribution of sample with regards to selected demographic variables.

Table 1: Percentage wise distribution of samples with regards to selected demographic variables. n=40

Demographic variable	Frequency	Percentage (%)
Age (years)		
18-28	7	17.5%
29-38	19	47.5%
39-48	7	17.5%
49 and above	7	17.5%
Gender		
Male	24	60%
Female	16	40%

Table cont....

Demographic variable	Frequency	Percentage (%)
Education		
Primary	19	47.5%
Secondary	15	37.5%
Higher secondary	4	10%
Graduation and above	2	5%
Types of Occupation		
Farmer	12	30%
Business	9	22.5%
Labourer	10	25%
Services	0	0%
Industrial worker	2	5%
Other	7	17.5%
Duration of disease (years)		
0-2	16	40%
2-4	18	45%
4-6	6	15%
6 and above	0	0%

(Section B–I) Assessment of existing knowledge regarding prevention of recurrence of asthma among asthmatic patients.

Table 2: Assessment of existing knowledge regarding prevention of recurrence of asthma n=40

Level of knowledge score	Score range	Percentage score	Pre-test	
			Frequency	Percentage
Poor	0-5	0-20%	7	18%
Average	6-10	21-40%	32	80%
Good	11-15	41-60%	1	2%
Very good	16-20	61-80%	0	0%
Excellent	21-25	81-100%	0	0%
Minimum score			4	
Maximum score			11	
Mean score			7.40 ± 1.878	
Mean %			35.31%	

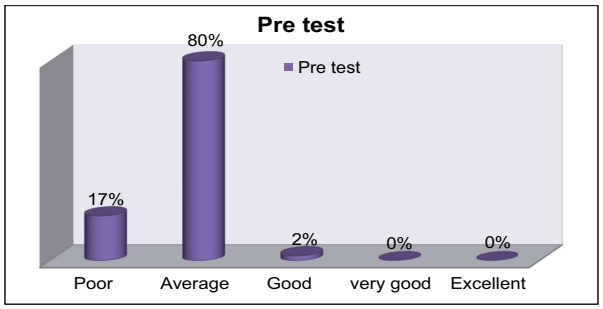

Figure 1: Knowledge score regarding prevention of recurrence of asthma

(II) Assessment of post test knowledge regarding prevention of recurrence of asthma among asthmatic patients.

Table 3: Assessment of post test knowledge regarding prevention of recurrence asthma. n =40

Level of knowledge score	Score range	Percentage score	Post Test	
			Frequency	Percentage
Poor	0-5	0-20%	0	0%
Average	6-10	21-40%	0	0%
Good	11-15	41-60%	0	0%
Very good	16-20	61-80%	24	60%
Excellent	21-25	81-100%	16	40%
Minimum score			18	
Maximum score			22	
Mean score			20.10± 1.392	
Mean %			80.4%	

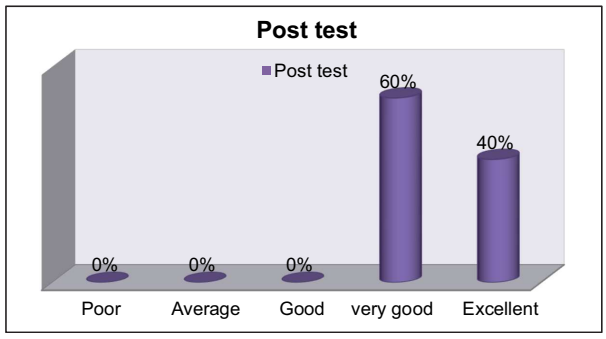

Figure 2: Knowledge score regarding prevention of recurrence of asthma in Post-test

Section C – The effectiveness of planned teaching on knowledge regarding prevention of recurrence of asthma among asthmatic patients.

Table 4: Percentage wise distribution of Effectiveness of planned teaching on knowledge regarding prevention of recurrence of asthma among asthmatic patients.

Tests	Mean score	SD	't'(cal)-value	t'(tab)-value	Degree of freedom	p-value	Significant
Pre-test	7.40	±1.878	30.807	2.02	39	0.000	S, p<0.05
Post-test	20.10	±1.392					

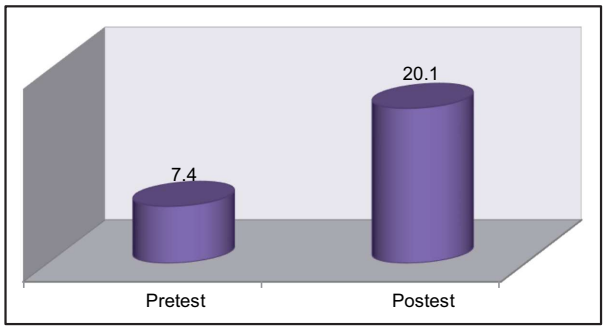

Figure 3: Percentage wise distribution of Effectiveness of planned teaching on knowledge regarding prevention of recurrence of asthma among asthmatic patients

Section D-Association of post-test knowledge score in relation to selected demographic variables.

Table 5: Significance of association of knowledge in relation to age

n=40

Age (yrs)	Frequency	Mean knowledge score	F value	P value
18-28	7	21.00±1.00	2.415	0.082 NS, p>0.05
29-38	19	19.89±1.370		
39-48	7	19.29±1.113		
49 and above	7	20.57±1.618		

Table 6: Significance of association of knowledge in relation to gender

n=40

Gender	No. of samples	Mean knowledge score	t -value	p-value
Male	24	18.70±1.506	78.556	0.000 S, p<0.05
Female	16	17.40±1.230		

Table 7: Significance of association of knowledge in relation to education

n=40

Education	No. of samples	Mean knowledge score	F-value	p-value
Primary education	19	19.84±1.537	1.877	0.151 NS, p>0.05
Secondary education	15	20.60±1.056		
Higher secondary education	4	20.25±1.500		
Graduation and above	2	0.707		

Table 8: Significance of association of knowledge in relation to types of occupation

n=40

Types of Occupation	No. of samples	Mean knowledge score	F-value	p-value
Farmer	12	20.08±1.165	0.472	0.75 NS, p>0.05
Business	9	20.22 ±1.641		
Labor	10	20.40 ± 1.350		
Services	0	00.00 ±0.00		
Industrial worker	2	19.00±0.00		
Others	7	19.86±1.773		

Table 9: Significance of association of knowledge in relation to duration of disease

n=40

Duration of disease	No. of samples	Mean knowledge score	F-value	p-value
0-2 years	16	19.56±1.315	2.308	0.114 NS, p>0.05
2-4 years	18	20.56±1.247		
4-6 years	6	20.17± 1.722		
6 and above	0	00.00 ±0.00		

MAJOR FINDINGS

Secton-I

- Majority of the, 17.5 %samples were from age group of 18-28 year, 47.5% sample were age group of 29-38 and 17.5% of 39-48 years, and remaining 17.5 were from 49 and above.
- Majority of the 60% samples were males and remaining 40% were females.
- Majority 47.5% of samples were educated primary, 37.5% were secondary, 10% were higher secondary and 5% were graduation and above.
- Majority 30% of samples were had farmer, 22.5% were had business, 25% were had labor, 0% were had services and 5% were industrial worker and 17.5% are other.

Section-II

The findings show that in pretest 7(18%) of study participants are having poor knowledge, 32(80%) of study participants are having average level of knowledge whereas posttest 24(60%) were having very good knowledge, 16(40%) had excellent knowledge.

Section-III

The findings of the study shows that posttest 24 (60%) were having very good knowledge, 16 (40%) had excellent knowledge.

The overall mean knowledge scores of pre test and post test of asthmatic patients which reveals that post test mean knowledge score was higher 20.10 with SD of ± 1.392 when compared with pre test mean knowledge score value which was 7.40 with SD of ±1.878. The statistical Student's paired t test implies that the difference in the pre test and post test knowledge score found to be 30.807 which is statistically significant at 5% level of significance($p<0.05$). Hence it is statistically interpreted that planned teaching on knowledge regarding prevention of recurrence of asthma among asthmatic patients was effective. Thus H1 is accepted and H01 is rejected.

Section-IV

There is no significant association of knowledge with age, education, occupation and duration of disease. There is significant association of knowledge score with gender in relation with prevention of recurrence of asthma.

DISCUSSION

The findings of the study were discussed with reference to the objectives stated in chapter I and with the findings of the other studies in this section. The present study undertaken was "To assess the effectiveness of planned teaching on knowledge regarding prevention of recurrence of asthma among asthmatic patients."

A study was conducted in United States, to determine whether home asthma tele -monitoring with store-and-forward technology improved outcomes, compared with in-person, office-based visits. Sample size was 120 patients with persistent asthma were assigned randomly to the office-based or virtual group. The two groups followed the same ambulatory clinical pathway for 12 months. Office-based group patients received traditional in-person education and case management. Virtual group patients received computers, Internet connections, and in-home, Internet-based case management and received education through the study web site. The study concluded that Virtual group patients achieved excellent asthma therapeutic and disease control outcomes than the office – based group.[8]

A prospective study was conducted in Pahang to assess the levels of asthma knowledge in parents of asthmatic children and factors that may influence it. Sample consists of 67 parents. Data was collected between March 1998 and July 1998 by using interview method, A 31 items asthma knowledge questionnaire that had been validated and translated, and in children, asthma severity was classified. The questionnaire includes bio-data of children and parents, types of medication and dosages duration of asthma, exposure to cigarette smoke, acute asthma admissions, and parent's economic status. The result showed that the mean score for asthma knowledge was 15.5. The total score was 31. Asthma knowledge was significantly higher in parents whose children were using steroids [P= 0.03, CI (-3.58, -0.02)]. It correlated significantly with steroid dosage (r=0.29, p=0.02), and was significantly higher in parents of higher economic status. Parent's asthma knowledge had no association with children's asthma status, age of the child or parents, exposure to cigarette smoke, frequency of admission or asthma duration. Hence, the investigator suggested that low asthma knowledge level indicates the need to increase the effort in educating parents.[9]

CONCLUSION

The researcher as a part of her post graduate programmed, conducted an intervention research on the topic to assess the effectiveness of planned teaching on knowledge regarding prevention of recurrence of asthma among asthmatic patients. Thus it was concluded that planned teaching on the prevention of recurrence of asthma was found effective as a teaching strategy.

Declaration of no Conflict of Interest

The authors of this study declare no conflict of interest in the execution, analysis, or publication of this research. No financial, professional, or personal affiliations influenced the study's outcomes or the structured teaching program's effectiveness. This research was conducted solely for academic purposes to enhance knowledge and regarding prevention

of recurrence of asthma among asthmatic patients.

Funding: Self, no external source of funding received.

Ethical Clearance Statement

This study titled **"To assess the effectiveness of planned teaching on knowledge regarding prevention of recurrence of asthma among asthmatic patients"** was conducted with strict adherence to ethical research practices. The research protocol was reviewed and approved by an appropriate institutional ethics committee. Participants were informed about the purpose, procedure, and expected outcomes of the study. Informed consent was obtained from participants and their guardians, ensuring confidentiality and voluntary participation. The study was designed to avoid any physical or psychological harm to participants and followed all ethical guidelines for research involving human subjects.

REFERENCES

1. www.Indiandoctorsforum.org (www. Google. com) Dr P.C. Nair
2. Ross and Wilson, Anatomy and Physiology, 8th Edition, Publication-Churchill Livingstone. Page no-260.
3. Bailliere's Midwives dictionary, 10th Edition, Author-Dense tiran, Page no- 151.
4. www. who.int/medicenter/factshects/fs 307/ en Index/html.
5. Brunner And suddarth's, A text book of Medical surgical Nursing, Author-smeltzer s c and Bare B G , 9th edition, Publisher- lippincott, page no 460.
6. http://www.healthasthma.com, article source – http://EzineArticals.com.
7. Suresh K Sharma. Nursing research and statistics. Second Edition. Elesevier publication.
8. Chan DS, Callahan CW, Hatch-Piggott VB, Lawless A, Profit HL, Manning NE, Schweikert M, Malone FJ. Department of paediatrics', Tripler Army Medical Centre, Honolulu, Hawaii.
9. Srujana Rani V. (1999) A study to assess the awareness of asthmatic clients regarding prevention of recurrent attacks of asthma at Osmania General Hospital, Hyderabad. (Unpublished Dissertation, NTR University of Health Sciences, Vijayawada).
10. Polit. D. and Hungler B.P. Nursing research principles and methods. Philadelphia: Lippincott Company.