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ORIGINAL ARTICLE

A Study to assess the Effectiveness of Structured Teaching Programme on Knowledge Regarding Bronchial Asthma and its Management among Mothers of Asthmatic Children in Selected Hospital, Greater Noida

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ABSTRACT

Bronchial asthma is one of the most common chronic respiratory conditions affecting children worldwide. Proper knowledge among mothers is essential for effective home management. This quasi-experimental study assessed the effectiveness of a structured teaching programme (STP) on knowledge regarding bronchial asthma and its management among mothers of asthmatic children at a selected hospital in Amravati, Greater Noida. A total of 60 mothers participated. Pre and post-test knowledge scores were compared using a structured questionnaire. The results showed a significant increase in knowledge scores after the STP. The study concluded that structured teaching is effective in enhancing maternal knowledge regarding asthma management in children.

Statement of the Problem: A study to assess the effectiveness of structured teaching programme on knowledge regarding bronchial asthma and its management among mothers of asthmatic children in selected hospitals.

Objective of the study:

1. To assess the pre test knowledge on bronchial asthma and its management among mothers of asthmatic children.
2. To assess the posttest knowledge on bronchial asthma and its management among mothers of asthmatic children.
3. To assess the effectiveness of structured teaching programme on bronchial asthma and its management among mothers of asthmatic children.

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4. To associate post test knowledge on bronchial asthma and its management among mothers of asthmatic children with their selected demographic variable

KEYWORDS

• Acute asthma Children • Inhaled salbutamol • Inhaled budesonide • Magnesium sulphate • Terbutaline infusion

INTRODUCTION

Asthma is a condition that causes inflammation in the lungs and limits airflow, making breathing difficult. Asthma is derived from a Greek term. An estimated 300 million people worldwide suffer from asthma, which results in 2, 50,000 asthma related deaths and lost disability adjusted life years. Every year, asthma causes over 5,00,000 hospital admissions (34.6% of those who are 18 years of age or younger).

Asthma-related illnesses cost around 6.2 billion dollars. An estimated 1.81 million persons (47.8% of those who are 18 years of age or younger) need ER care each year. In an effort to increase awareness of asthma and enhance asthma care globally, the Global Initiative for Asthma organizes World Asthma Day in partnership with health care organizations and asthma educators.

Despite the fact that inhaled corticosteroids have improved results, asthma is under diagnosed and undertreated. An increase in severe asthma is reflected in the rising number of hospital admissions for asthma, which are most noticeable in young adults. Poverty and inadequate disease control Asthma causes 1,80,000 deaths globally per year, despite a decline in general mortality rates since the 1980s. In many western countries, the annual burden of asthma patients ranges from 300 to 1,300, with those with the most severe disease bearing a disproportionate share of the burden. The majorities of asthma deaths, which are mostly preventable, occur in people aged 45 and are often linked to inadequate long-term medical care or delays in receiving medical care.

Patient education, documented treatment plans, and continuous contact and review with patients and their providers are the main priorities of the worldwide asthma project. The WHO estimates that between 100 and 150 million people worldwide roughly the same number as the Russian Federation suffer from asthma, and that number is growing. Asthma related fatalities have topped 180,000 each year.

An estimated 15 to 20 million people in India suffer from asthma. In the WHO's western Pacific area, the incidence ranges from almost none in Papua New Guinea to more than 50% in youngsters on Caroline Island.

MATERIALS AND METHODS

Research Design: Quasi experimental - One group Pre-test & Post-test design

RESEARCH VARIABLE

- **Dependent Variable**: Knowledge of mothers regarding bronchial asthma and its management.
- **Independent variable**: Structured teaching program on bronchial asthma and its management.
- **Demographic variables:** Age of mothers, educational status of mothers, occupation of mothers, family income, religion, duration of illness of child, place of residence, family history of asthma, previous exposure to information on bronchial asthma and its management.
- **Setting:** The study will be conducted at hospital, Greater Noida
- **Population:** Population consists of all mothers of asthmatic children admitted in hospital, Greater Noida
- **Sample:** Mothers who fulfill the inclusive criteria will be the sample and sample size is 60.

TARGET POPULATION

Inclusion Criteria

1. Mothers of children admitted who having children of age 2-12 years
2. Mothers who are willing to participate in the study

3. Mothers who can understand Hindi or English language.

Exclusion Criteria

1. Mothers whose children are less than 2 years of age and more than 12 years of age.
2. Mothers of children admitted with some other illness.

Sampling Technique: Non-probability convenience sampling

Tool for data collection

Section A: Demographic Performa consisting of items on Age of mothers, Educational status of mothers, Occupation of mothers, Duration of illness of child, Place of residence, Family history of asthma.

Section B: Structured questionnaire to assess the knowledge of mothers regarding bronchial asthma and its management.

Methods of data collection

After obtaining the necessary permissions from the concerned authorities and informed consent from the samples, the investigator will collect data pertaining to demographic variables. The data will be collected in three phases

Phase One: assess the existing knowledge of mothers of asthmatic children by using a structured questionnaire.

Phase Two: Structured teaching programme on bronchial asthma and its management will be given to mothers of asthmatic children with the help of instructional aid on the same day.

Phase Three: After a period of 7 days, post test level of knowledge will be assessed within the same group by using the same questionnaire.

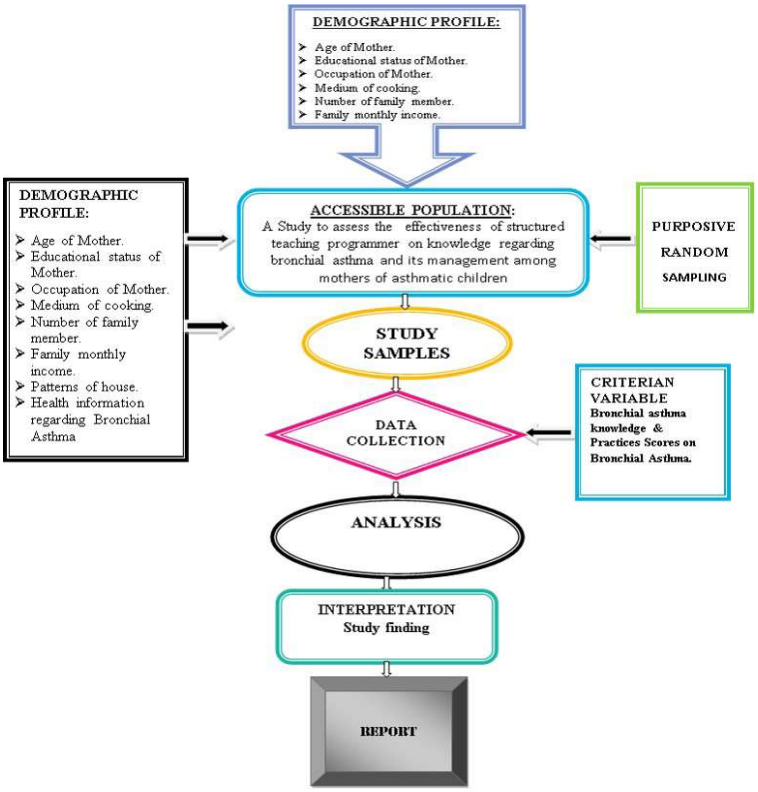
Duration of data collection is one week.

Plan for data analysis

The data collected will be analyzed by means of descriptive and inferential statistics.

Descriptive statistics: Frequency, percentage distribution, mean and standard deviation will be used to assess the level of knowledge.

Inferential statistics: Paired' test will be used to analyze the effectiveness of structured teaching programme regarding bronchial asthma and its management among mothers of asthmatic children. 'Chi square' test will be used to analyze the association between posttest knowledge regarding bronchial asthma and its management among mothers of asthmatic children with their selected demographic variables.



Schematic presentation of research design

RESULT

The goal of the study was to assess whether a Structured Teaching Programme (STP) improved the knowledge of mothers regarding bronchial asthma and its management.

Key Findings:

Test	Mean Score	Standard Deviation (SD)
Pre-test	10.2	3.5±
Post-test	18.7	2.9±
Mean Difference	**8.5**	–

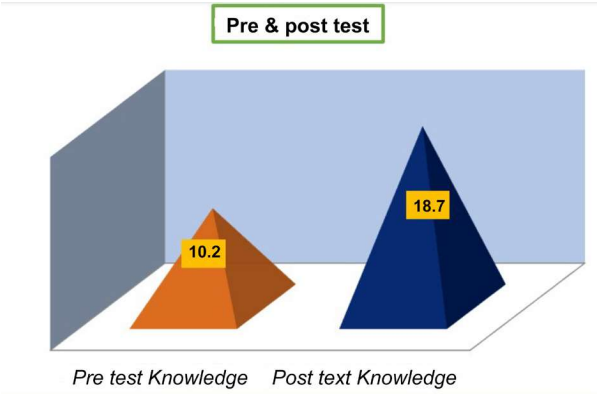


Figure 1: Knowledge score of mothers regarding bronchial asthma

- **Mean Pre-Test Score (10.2)**: This shows that **before** the structured teaching, the mothers had **low to moderate knowledge** about asthma and its management.
- **Mean Post-Test Score (18.7)**: This score indicates that **after** the teaching, the mothers' knowledge significantly **increased**.
- **Mean Knowledge Gain (8.5 points)**: On average, each mother improved their score by **8.5 points**, which is a **substantial gain** in knowledge.

Statistical Test Used:

- **Paired t-test** was used to compare the **pre-test and post-test scores** of the same group.
- The **t-value** was **9.76**, and the **p-value** was **< 0.001**.

Interpretation of Statistics:

- A **t-value of 9.76** indicates a **large difference** between the pre-test and post-test scores.
- A **p-value < 0.001** means the result is **highly statistically significant** — there's **less than 0.1% chance** that this improvement happened by luck.

FINAL INTERPRETATION

The results show that the Structured Teaching Programme was highly effective in improving the mothers' knowledge about bronchial asthma and how to manage it at home. This suggests that educational interventions like STPs can play a key role in improving child health outcomes by empowering caregivers.

DISCUSSION

The findings reveal a significant increase in maternal knowledge following the educational intervention. This supports previous studies showing the positive impact of structured education on caregiver knowledge and child health outcomes. Improved understanding of asthma can reduce emergency visits, hospitalizations, and improve medication compliance. The result highlights the importance of integrating STPs into pediatric asthma care protocols.

CONCLUSION

The structured teaching programme was found to be effective in improving the knowledge of mothers regarding bronchial asthma and its management. Education of caregivers should be considered an essential component of pediatric asthma care. Similar interventions should be implemented more widely in hospitals and community health centers.

REFERENCES

1. O.P. Ghai, Piyush Gupta, V.K. Paul. Essential Pediatrics: Asthma in children. New Delhi: CBS publishers; 2006. pp. 354-62.
2. Robert M. Kleingman, Richard E. Behrman, Hal B. Jenson, Bonita F. Staton. Nelson Textbook of pediatrics. Asthma. New Delhi: Elsevier publications; 2008. pp. 953-70.
3. Doull. Learning self management strategies in asthma: The Cochrane Collaboration. 2002 November; 3 (Issue 11): Available from URL:http://thecochranecollaboration.org
4. Perrin. Educational intervention for asthma in children: Journal of respiratory medicine. 2003 January; 11(2): Available from: URL:http://interscience.in

5. M. Eric, Timothy Albertson. Bronchial Asthma-Principles of management and treatment: Treatment of asthma in children. London: Mosby publications; 2003. pp. 322-30.

6. Michael Cabanna, Noreen M Clark, Curt Chaffin. Selective provision of self-management tools to families of asthmatic children: Journal of the American Academy of Pediatrics. 2007 Volume 10 (Issue 3): available from: URL:http://pediatrics.org

7. D.S. Faffe. Asthma-Where is it going: Brazilian Journal of Medical Research.2008 September; 41(9): P. 739-49. Available from URL:http://pmid.ac.in

8. Emile Somekh. Allergy in children: Management of asthma in school children. New Jersey: Snippet publishers; 2006. pp. 211-217.

9. Eric Gershwin. Bronchial Asthma: Asthma self-management strategies. New York: Wiley and sons publishers; 2001. pp. 349-51.

10. Elliot Reeds, Charles Elliot. Allergy-principles and practice: Asthma in infancy and children. Atlanta: Lippincot Williams publishers; 2000. pp. 739-41.

11. Carol Porth. Pathophysiology-concepts of altered health states: Bronchial asthma in children. London: Bear publishers; 2005. pp. 701-02.

12. Stephen Holgate, Leonardo Fabbri. Difficult Asthma: Asthma in children. USA: Starz publishers; 1999. pp. 364-66.

13. Asthma care guidelines. National Heart Blood and Lung Institute. Washington D.C: US Department of Health Publications; 2001. Available from URL:http://nhbli.org

14. Adele Pillitteri.Child health nursing:Asthma in children. Philadelphia: Lippincott Williams and Wilkins; 2007. pp. 637-39.

15. Eigen Haslow. Diagnosis and treatment of respiratory disorders in children: Journal of clinical pediatrics. 2008 October; 47(8): pp. 735-43. Available from URL:http//sagepublications.com