

Official Title : Evaluation of the Effectiveness of an Education Program Based on Mastery Learning Theory for Parents of Children Receiving Inhaler Treatment: A Pediatric Emergency Department Example

Ethics Committee Approval: Zonguldak Bulent Ecevit University Non-Interventional Clinic Research Ethics Committee (November 5 ,2025).

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CLINICAL RESEARCH APPLICATION FORM

A. FULL TITLE OF THE RESEARCH:

TURKISH: Evaluation of the Effectiveness of an Education Program Based on Mastery Learning

Theory for Parents of Children Receiving Inhaler Treatment: A Pediatric Emergency Department

Example

ENGLISH: Evaluation of the Effectiveness of an Education Program Based on Mastery Learning

Theory for Parents of Children Receiving Inhaler Treatment: A Pediatric Emergency Department

Example

B. NATURE OF THE RESEARCH:- Academic study- Doctoral thesis- Specialization thesis- Master's thesis- Other (Specify)

C. RESEARCH FUNDING:

-YES

-NO

- University (BAP)- Training and Research Hospital- TUBITAK (The Scientific and Technological Research Council of Turkey)- International (please specify)- Other (please specify)

D. TYPE OF RESEARCH: Observational studies (excluding drug and medical device observational studies)- In vitro studies using human-derived materials- Survey study- Retrospective file and imaging review- Research using blood, urine, tissue, radiologic imaging, or routine examination and treatment

materials- Cell or tissue culture studies; research on genetic material excluding clinical gene therapy- Research within nursing activities- Diet studies under nutritional habits- Exercise-related physiological studies

- Anthropometric studies- Studies evaluating lifestyle habits- Other: Randomized controlled trial

RESEARCH AIM:

The study aims to evaluate the effect of an education program applied to parents of children receiving inhaler treatment.

BACKGROUND:

Respiratory system diseases account for approximately 10% of pediatric emergency visits. Due to anatomical differences, acute respiratory distress and failure are more frequent in children than adults (Beytut, 2016). Early recognition and treatment of respiratory failure are crucial. Patients may be treated with non-invasive ventilation, while severe cases may require intubation and mechanical ventilation. Knowing the underlying etiology is essential for treatment (Uysalol & Besli, 2021).

Inhalation therapy is used for acute treatment in children and adults. It aims to deliver drug particles to the distal regions of the lungs quickly (Kas & Yildiz, 2021). Its non-invasive nature, ease of administration, rapid effect, and pain-free application make it preferable (Isik et al., 2013). Proper parental knowledge and correct administration enhance treatment efficacy (Lizano-Barrantes et al., 2022; Basheti et al., 2014; Nelson et al., 2011).

Incorrect inhaler technique can worsen clinical outcomes. Checklists and training improve the accuracy of inhaler administration. Studies show common mistakes include insufficient

breath-holding (34%) and incorrect breathing technique (29%) in pediatric asthma patients (Mahmood et al., 2025). Improper inhaler use increases activity intolerance and reliance on bronchodilators (Yuruk & Hacisalihoglu, 2024). Guidelines recommend demonstrating inhaler technique at each patient visit (De Vries et al., 2023).

This study evaluates the impact of an education program based on mastery learning theory for parents of children receiving inhaler treatment