

Addressing Risk Management Difficulties in Children with Food Allergies

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Received: 11-02-2026 / Revised: 10-03-2026 / Accepted: 27-03-2026

DOI: <https://doi.org/10.32553/ijmbs.v10i2.3272>

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Conflict of interest: No conflict of interest

**Abstract:**

**Background:** Food allergies in children constitute an escalating public health issue and create significant obstacles in daily management. Children and their carers must exercise continual vigilance to prevent allergy exposure, comply with food restrictions, and be prepared for emergencies such as anaphylaxis. These demands can profoundly affect quality of life and elevate the danger of inadvertent exposure, especially in contexts such as educational institutions and social environments.

**Objective:** The prevalence of risk management challenges in children with food allergies and to identify factors linked to inadequate adherence and negative clinical outcomes.

**Methods:** A retrospective analysis was performed on 100 paediatric children diagnosed with food allergies over the course of one year. Data were extracted from hospital records, encompassing demographic information, allergen type, compliance with avoidance techniques, and history of emergency allergic responses. Patients were classified according to their capacity to proficiently manage allergy-related hazards. Statistical analysis was conducted utilising SPSS software, with categorical variables represented as percentages and associations evaluated through the chi-square test. A p-value below 0.05 was deemed statistically significant.

**Results:** The study revealed that 62% of children encountered difficulties in controlling allergy-related hazards, signifying a substantial load of management challenges. Milk allergy was the most common at 30%, followed by egg at 25% and peanut at 20%, indicating prevalent food allergens in the paediatric demographic. Significantly, 28% of patients encountered emergency allergic responses during the trial duration. A notable correlation was identified between insufficient adherence to avoidance methods and the incidence of emergency episodes (p=0.01), indicating that inadequate risk management directly leads to negative outcomes.

**Conclusion:** Challenges in risk management are common among children with food allergies and are significantly linked to a heightened risk of emergency reactions. The findings underscore the pressing necessity for enhanced carer education, improved adherence techniques, and organised management programmes to elevate safety and overall quality of life in impacted youngsters.

**Keywords:** Management programmes, quality of life, risk management, food allergens, paediatric

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## Introduction

Food allergies are widely acknowledged as a major paediatric health issue globally, with a growing prevalence in recent decades. They can significantly damage both the physical health of impacted children and their psychological well-being, as well as their general quality of life. Carers may endure significant stress due to the continuous vigilance necessary to avert exposure to allergic foods, which may be included in a diverse array of common dietary products(1).

The foundation of food allergy management entails the avoidance of recognised allergens, along with thorough education for carers and patients. Moreover, readiness for emergency scenarios like anaphylaxis is crucial, encompassing recognition of initial symptoms and prompt administration of rescue drugs(2). Notwithstanding these measures, sustaining regular compliance with dietary limitations and safety protocols presents a significant problem, especially in younger children who rely extensively on parents for food selection and oversight(3).

Challenges in risk management may stem from various sources, including insufficient awareness of concealed allergens in processed foods, social effects like peer pressure and educational settings, and the potential for cross-contamination during food preparation(4). Moreover, restricted access to healthcare services and insufficient counselling may further undermine successful management. These challenges elevate the probability of inadvertent exposure, potentially leading to allergic reactions ranging from moderate to

severe, including life-threatening incidents(5).

In light of these issues, it is imperative to gain a deeper understanding of the magnitude of these risk management challenges and their clinical ramifications. This study seeks to analyse the prevalence of these problems and their effects on health outcomes in children with food allergies, thereby offering insights for enhancing management techniques.

## Methods

**Study Design:** Retrospective hospital-based study

**Duration:** 1 year

**Sample Size:** 100 paediatric patients

### Inclusion Criteria:

- Children diagnosed with food allergies
- Age  $\leq 18$  years

### Exclusion Criteria:

- Incomplete medical records
- Non-food-related allergies

### Data Collection:

- Type of food allergy
- Adherence to avoidance measures
- Occurrence of emergency reactions

### Statistical Analysis:

- Percentages for categorical variables
- Mean  $\pm$  SD for continuous variables
- Chi-square test for association
- $p < 0.05$  considered significant

## Results

**Table 1: Prevalence of Risk Management Difficulty**

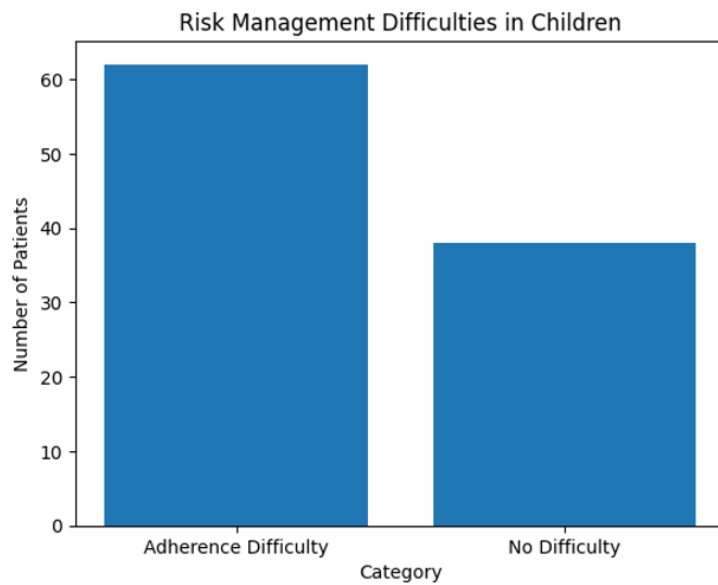
Category	Number (n=100)	Percentage
Difficulty Present	62	62%
No Difficulty	38	38%

**Table 2: Distribution of Food Allergies**

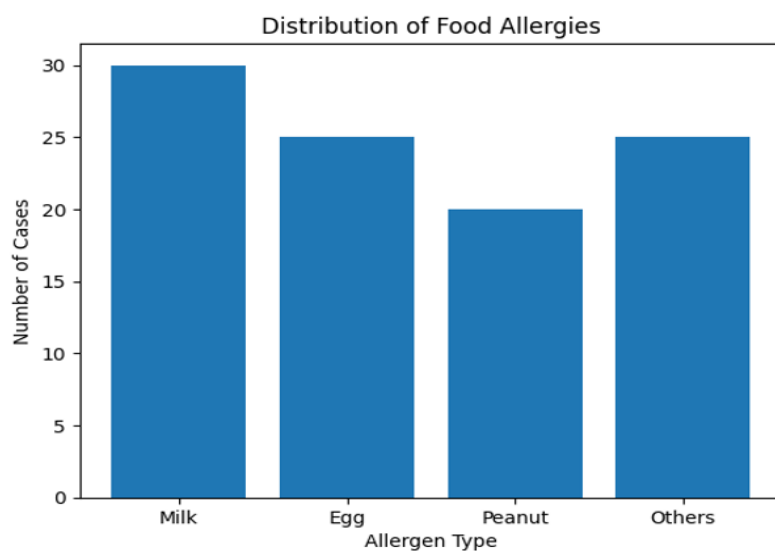
Allergen Type	Cases	Percentage
Milk	30	30%
Egg	25	25%
Peanut	20	20%
Others	25	25%

**Table 3: Association Between Adherence and Emergency Reactions**

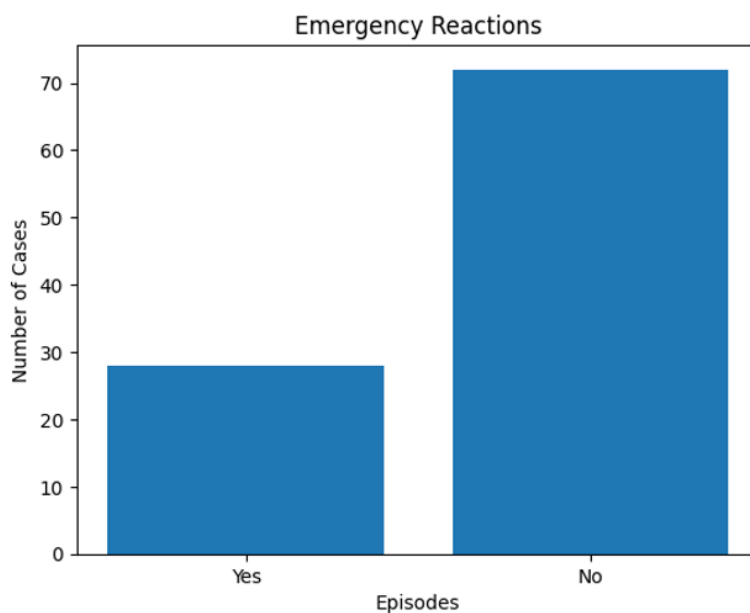
Variable	Emergency Yes	Emergency No	p-value
Poor Adherence	22	40	
Good Adherence	6	32	<b>0.01</b>



**Figure 1: Risk management difficulties in children**



**Figure 2: Distribution of food allergies**



**Figure 3: Emergency reactions**

### Discussion

This study reveals that challenges in risk management are widespread among children with food allergies, impacting approximately two-thirds of the participants. These issues possess considerable therapeutic ramifications, as they markedly elevate the probability of negative consequences, especially acute allergic reactions. The findings emphasise that proficient management of food allergies transcends diagnosis and necessitates continuous compliance with preventive measures in daily life(6).

In this investigation, milk and egg allergies were identified as the predominant allergens, aligning with established paediatric literature. These allergies are often found in a diverse array of widely consumed foods, including processed and packaged products, rendering total avoidance notably difficult. The pervasive presence heightens the danger of unintentional exposure, particularly in environments where food labelling may lack clarity or where cross-contamination could occur(7).

This study reveals a statistically significant correlation between inadequate adherence

to avoidance measures and the incidence of emergency reactions ( $p=0.01$ ). Children who could not regularly adhere to dietary restrictions or lacked adequate supervision were more prone to acute allergic reactions. This underscores the essential importance of ongoing education for both carers and patients in promoting compliance and reducing hazards(8).

Children encounter various distinct challenges that hinder successful allergy management. Their reliance on parents, carers, and school personnel for dietary selections and oversight heightens the likelihood of inadvertent exposure. Educational settings, social events, and peer interactions exacerbate these difficulties, as children may lack the ability to independently identify or evade allergic items. Moreover, insufficient information regarding concealed allergens in processed foods and the dangers of cross-contamination in kitchens or communal dining areas exacerbates inadequate risk management(9).

These findings underscore the pressing necessity for organised and thorough allergy management programmes. Programmes should incorporate targeted

carer education to enhance comprehension of allergy avoidance, school-based awareness campaigns to guarantee safe surroundings, and well defined emergency action plans to facilitate swift responses to allergic reactions. Employing these strategies can markedly diminish morbidity and enhance the quality of life for children with food allergies(10).

### Limitations:

- Retrospective design
- Single-center data
- Lack of long-term follow-up

### Conclusion

Challenges in risk management are prevalent among children with food allergies and are closely linked to negative outcomes, especially acute allergic reactions necessitating immediate medical attention. These issues frequently stem from inadequate compliance with avoidance tactics, insufficient understanding of concealed allergies, and restricted oversight in environments such as educational institutions or social events. Enhancing education for carers, children, and educational staff is crucial for improving comprehension and adherence. Establishing systematic treatment protocols, encompassing explicit food guidelines and emergency action plans, can markedly diminish risks, avert complications, and eventually improve the overall safety and quality of life for impacted children.

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