

Problem & PURPOSE

Problem:

- Food allergies affect approximately 1 in 13 children in the United States.
- Anaphylaxis can occur rapidly and requires immediate recognition and treatment.
- School personnel are often the first responders during allergic emergencies.
- Research demonstrates gaps in food allergy knowledge and preparedness among school staff.

Purpose:

The purpose of this project was to evaluate whether a food-allergy educational program improved school staff's knowledge and confidence in recognizing and managing allergic reactions and anaphylaxis.

Available Knowledge & Rationale

- Food allergy prevalence continues to increase among children (Food Allergy Research & Education [FARE], 2024).
- Studies show educational interventions improve staff knowledge and confidence (Santos et al., 2022).
- Early administration of epinephrine is critical to preventing severe outcomes (Centers for Disease Control and Prevention [CDC], 2024).
- Rural school staff may have limited access to specialized allergy training (Santos et al., 2022).
- Evidence-based education can improve preparedness and student safety (Santos et al., 2022).
- The intervention aligns with recommendations from Food Allergy Research & Education (FARE, 2024).

Methods

Context:

- ✓ Small rural public school district in a Midwest state.
- ✓ Participants: School teachers and staff
- ✓ Quality improvement educational project

Methods Continued

Intervention:

- ✓ E-mail recruitment letter, including knowledge pre-test and PowerPoint presentation sent to the principal to send to staff
- ✓ Educational PowerPoint Presentation:
 - ✓ Overview of food allergies
 - ✓ Signs and symptoms of mild and severe allergic reactions
 - ✓ Emergency response procedures
- ✓ E-mail post-test sent to principal to send to staff

Study of Intervention:

- ✓ Pre-test/Post-test design including knowledge and confidence questions.

Measure:

- ✓ Anonymous participant identifiers to match responses
- ✓ Five Knowledge assessment questions
- ✓ Five Confidence assessment questions
 - ✓ Likert responses for each question: “not confident, slightly confident, moderately confident, or confident.

Data Analysis

Outcome Measures:

- ✓ Knowledge scores and self-reported confidence levels

Analysis:

- ✓ Comparison of pre- and post-intervention scores, review of feedback regarding future educational needs

Results

- Two participants
- All knowledge questions were answered correctly by both participants.
- One participant reported being “confident”, while one participant reported being “very confident” on both the pre-test and post-test.
- Participants demonstrated baseline knowledge of food allergy management.
- No measurable change was observed between pre- and post-test scores in both knowledge and confidence.

Discussion

- Participants entered the program with relatively high baseline knowledge.
- The small sample size limited the ability to detect changes
- Educational intervention reinforced existing knowledge and preparedness.

Strengths:

- ✓ Evidence-based educational content
- ✓ Practical and easily implemented intervention
- ✓ Addressed an important school safety issue

Limitations:

- ✓ Small sample size
- ✓ Single-site implementation
- ✓ Limited generalizability
- ✓ Short follow-up period

Conclusions

- Food Allergy education remains important for maintaining school preparedness
- The intervention provided a feasible method for delivering evidence-based training
- Continued staff education may help support safe school environments for students with food allergies.
- Offer annual food allergy training.
- Include larger participant samples in future projects.
- Incorporate hands-on epinephrine administration practice.

References

Centers for Disease Control and Prevention. (2024). *Food allergies in schools*. <https://www.cdc.gov/school-health-conditions/food-allergies/index.html>

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Santos, M. J., Merrill, K. A., Gerdts, J. D., Ben-Shoshan, M., & Protudjer, J. L. P. (2022). Food allergy education and management in schools: a scoping review on current practices and gaps. *Nutrients*, 14(732). <https://pmc.ncbi.nlm.nih.gov/articles/PMC8879822/>