

An Evaluation of the Nutrition and Health Awareness (NHA) Program on Health Knowledge and Attitudes: A One-Year Retention Study

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INTRODUCTION

- In Arizona, the prevalence of children who are overweight or obese is approximately 28%, ranking 25th in the nation. The prevalence of obesity increases as family income decreases.
- Current AAP Clinical Practice Guidelines emphasize the importance of nutrition programs and improving food insecurity to address childhood obesity in hopes of decreasing the risk of chronic disease.
- The Nutrition & Health Awareness (NHA) curriculum addresses these concerns in a five-week program, emphasizing health practices and lifestyle modifications that can reduce the risk of chronic diseases such as heart disease and diabetes. The curriculum also aims to improve the accessibility of health education and improve self-efficacy and attitudes toward health behaviors.

OBJECTIVES

- Evaluate the effectiveness of the NHA Program in improving:
 - Knowledge of health and wellness concepts
 - 2. Attitudes towards health and wellness
 - 3. Healthy lifestyle implementation
- Provide health and wellness education in a classroom setting
- Assess the efficacy of the NHA program one year after the curriculum is implemented in a Title I school

METHODS

- **Setting:** Taught in-person at Emerson Elementary School, a Title I School in Mesa, AZ.
- **Participants:** 4th grade students (n = 112) who were assessed again one year later as 5th graders.
- Prior to the curriculum, participants completed a pre-survey. 15 objective questions evaluated health knowledge and 12 subjective questions evaluated health attitudes.
- 2. Students self labeled the questionnaire with their numerical School Perm ID to maintain confidentiality.
- 3. 5 lessons were taught once a week for 5 weeks. The lessons included topics on physical exercise, nutrition labels, food groups, sugar metabolism, and heart disease.
- 4. One week after the lessons concluded, participants were assessed using the same questionnaire (post-test), then again one year later as 5th graders (post-retention).

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RESULTS

- 67 participants were matched from the pre-test to the post-test 53 participants were matched from the pre-test to the post-retention



FIGURE 1. KNOWLEDGE QUESTIONS

5 WEEKS: Pre-Test vs. Post-Test

- Average score increased from 8.3 to 10.3, p < 0.01 using paired t-test</p>
- 1 YEAR: Pre-Test vs. Post-Test vs. Post-Retention
- Average score was 10.0 on post-retention
- Pre-Test vs. Post-Retention p < 0.01 using paired t-test</p>
- Post-Test vs. Post-Retention p = 0.15 using paired t-test



FIGURE 2. HEALTH ATTITUDE QUESTIONS

- Left: 21% pre-test said "A lot" vs. 42% post-retention (p = 0.02 chi-square) Right: 59% pre-test said "True" vs. 70% post-retention (p = 0.16 chi-square)

- physical activity, nutrition, and preventable diseases.

ACKNOWLEDGEMENTS

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DISCUSSION

Students scored significantly higher on the post-test compared to the pre-test, demonstrating greater knowledge collectively related to

Students did not show a statistically significant change between the post-test and the post-retention, showing a similar knowledge level and retention of the information taught in the curriculum one year later.

Students self-reported to know more about their health with significantly more students answering "A lot" for the health attitude question, "How much do you know about your health?". Other health attitude questions did have positive changes, although not significant.

CONCLUSION

The NHA program was successful in improving understanding of health concepts and attitudes, and as a result, health literacy, when delivered in a classroom-based format. The significant increase of scores demonstrates a positive shift in both health knowledge and attitudes, with effects lasting 1 year after implementing the curriculum. • A change from previous years included having a Spanish-translated version of the test for students whose first language is not English. Limitations included participant attrition and matching issues. Of 112 pre-test responses, only 67 were matched to the post-test and 53 to the post-retention, likely due to coordination challenges with teachers and inconsistencies in student ID input across time points.

Future research could explore barriers to behavior change in the pediatric population and consider different pedagogical approaches.

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