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The effectiveness of computer assisted teaching on knowledge regarding the effects of junk food on health among higher secondary students in Kayalpattinam and Arumuganeri, Thoothukudi district in Tamil Nadu

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Abstract

High-calorie food can add to kids' already high-fat, sugar-filled diets and negatively affect their self-esteem. In addition, being overweight or inactive at a young age can lead to various health conditions, such as diabetes and heart disease. Kids don't have enough nutrients, which can also affect their growth and development. Numerous processed foods contain excessive amounts of sodium, which can contribute to elevated blood pressure and heart-related conditions. According to a pan India survey, it was discovered that 93% of children between the ages of 9 and 14 consume packed food. Research conducted in Puducherry, a region in South India, revealed that 70.1% of school-aged children consume food that is not considered healthy. Pre-experimental study to assess the effectiveness of computer assisted teaching on knowledge regarding the effects of junk food on health among higher secondary students in Kayalpattinam and Arumuganeri, Thoothukudi district, Tamil Nadu. This study employed a quantitative research approach, and a pre-experimental one group pre-test and post-test research design was utilized. The study sample age group was respectively 16 years, studying 12th standard in higher secondary school at Kayalpattinam and Arumuganeri. 60 samples were selected by convenience sampling technique who full fill the inclusion criteria. The knowledge was assessed using 25 self-designed questionnaires. The children's post-test knowledge score was 34.53% higher than their pre-test score, which was 20.56%. The obtained 't' value was statistically significant at 0.05 levels. The study demonstrated that computer-assisted teaching was successful in illustrating the impact of junk food on health.

Keywords: Computer-assisted teaching, junk food, health effects, knowledge

Introduction

Junk food has become a significant component of contemporary eating habits, particularly among school children. Due to its delicious flavor, widespread accessibility, and convenience, junk food frequently replaces nutritious meals in their everyday diet. Nevertheless, indulging in excessive junk food can have detrimental effects on students' health, academic performance, and overall well-being. Junk food is often packed with unhealthy fats, excessive sugar, high sodium content, and artificial additives, while being deficient in vital nutrients such as vitamins, minerals, and fiber. Consuming these foods on a regular basis can result in a range of health issues, such as obesity, digestive problems, heart diseases, and a higher likelihood of developing diabetes. Moreover, the excessive sugar found in junk food can result in sudden bursts of energy, followed by a rapid decline, which can lead to tiredness, difficulty focusing, and a decline in academic performance.

Statement of the Problem: The effectiveness of Computer Assisted Teaching on Knowledge regarding the effects of Junk food on health among Higher Secondary students in Kayalpattinam and Arumuganeri, Thoothukudi District in Tamil Nadu

Objectives

1. To assess the pretest and posttest knowledge regarding the effects of junk food on health among higher secondary students.

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- To assess the effectiveness of computer assisted teaching on knowledge regarding the effects of junk food on health among higher secondary students.
- To find out the association between the posttest knowledge score of the effects of junk food on health among Higher secondary students and demographic variables of such as age, sex, birth order, religion, types of family, Parent education, father occupation, mother occupation, monthly income, residential.

Hypothesis

H₁: There is a significant difference between the pretest and posttest knowledge score regarding the effects of junk foods on health among higher secondary students.

H₂: There is an association between posttest knowledge score of the effects of junk food on health among higher secondary students and demographic variables such as age, sex, birth order, religion, types of family, Parent education, father occupation, mother occupation, monthly income, residential.

Research Methodology

The study employed a quantitative research approach and a pre-experimental one group pre-test and post-test research design. The research was carried out in high school in Kayalpattinam and Arumuganeri, located in the Thoothukudi district of Tamil Nadu. The sample size consisted of 60 high school students who met the inclusion criteria and were chosen through convenience sampling. A written authorization received from the college and the establishment of the educational institution. After obtaining consent from the participants, the pre and post-test was assessed using 25 self-structured questionnaires. The experts provided the necessary content and tools for validation. The tool's reliability was confirmed through the test-retest method.

Table 1: Diagrammatic representation of the research design

Study Sample	I st Week	II nd Week	III rd Week
School children	O ₁	-	O ₂
	X ₁		

O₁ – Pre-test

X₁ – Intervention by researcher

O₂ – Post-test

Results and Discussion

Table 2: Pre and post-test knowledge score on the effects of junk food on health among higher secondary students.

Level of Knowledge	Pre-test		Post-test	
	F	%	F	%
Adequate	0	0	37	62
Moderately Adequate	44	73	23	38
Inadequate	16	27	0	0

Table 3: Effectiveness of Computer Assisted Teaching on Knowledge regarding the effects of junk food on health among higher secondary students

Variables	Mean	Standard deviation	t' value
Pre-test	20.56	5.53	18.66
Post-test	34.53	5.79	

The association between post-test knowledge score and demographic variables of the effects of Junk food on health among higher secondary students

There is no significant association between the post-test knowledge scores on effects of junk food on health among higher secondary students and their selected demographic variables such as age, sex, birth order, religion, types of family, Parent education, father occupation, mother occupation, monthly income, residential.

Nursing Implication

Nursing Practice

- Computer-assisted teaching is one of the media used in health teaching programs. Nurses working in different healthcare settings, such as hospitals, community health programs, and school health programs, can utilize it to share important health information with the community.
- Nursing personal in pediatric department and community, should be given in-service education about technological advancements like computer assisted teaching methods are easy to understand and motivate them to utilize in nursing carrier

Nursing Education

- Nursing educational institution adequately prepared the nursing students about health education program through computer assisted teaching method in various health information
- Nurse educators must take the responsibility to utilize computer effectively in the curriculum

Nursing Administration

- The nurse administrator to encourage the nurses to use different techniques based on recent trends
- Encourage the nurses to create recent learning materials for providing health information.

Nursing Research

- Educational institution and nursing service organization can motivate researchers to implement the computer assisted teaching method on various topics to impart knowledge to the children by providing required fund.
- It can also take initiative steps to publish effectiveness of teaching program in terms of computer assisted teaching methods through mass media and journals.





Conclusion

Computer-assisted teaching methods are advanced teaching techniques that offer early learning opportunities for individuals who cannot afford formal schooling and play a crucial role in health education programs. It can enable children to engage in suitable learning activities for their age, and it can enhance their cognitive, linguistic, and social growth. The numerous studies demonstrated that computer-assisted teaching methods are highly effective in enhancing knowledge among school children.

Conflict of Interest

Not available

Financial Support

Not available

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