# "Effectiveness Of A School-Based Teaching Program On Knowledge Regarding Healthy Lifestyle Practices Among High School Students In A Government School At Eluru, Andhra Pradesh".

"A Study to Promote Nutrition, Physical Activity, and Mental Well-being"

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## ABSTRACT

**Background:**

Adolescence is a crucial phase for developing healthy lifestyle habits. However, many school-aged children lack knowledge about key aspects of a healthy lifestyle, such as nutrition, exercise, sleep hygiene, stress management, and hydration. To address this gap, a school-based intervention was conducted among high school students in Gajjalavari Cheruvu, Eluru, Andhra Pradesh.

**Objectives:**

The study aimed to assess students' knowledge of a healthy lifestyle, implement a structured teaching program (STP), evaluate its effectiveness, and examine the association between knowledge scores and selected demographic variables.

**Methods:**

A pre-experimental one-group pre-test and post-test design was used. Fifty high school students were selected through purposive sampling. A structured questionnaire was administered before and after the intervention. A PowerPoint-based STP was delivered. Data were analyzed using descriptive and inferential statistics, including the Chi-square test and paired t-test.

**Results:**

Pre-test results indicated that 30% of students had inadequate knowledge, while 70% had adequate knowledge. After the intervention, 84% of students showed adequate knowledge, and only 16% remained with inadequate knowledge. The pre-test mean score was 8.38 (SD = 2.2153), and the post-test mean score was 9.18 (SD = 2.5), with a mean difference of 0.8. The t-test value was 2.2153 ($p < 0.05$), indicating a statistically significant improvement. The association between post-test knowledge scores and demographic variables was analyzed using the Chi-square test. A significant association was found with age ($\chi^2 = 11.01$, TV = 7.82, $p < 0.05$) and family type ($\chi^2 = -0.05$, TV = 3.84, $p < 0.05$). However, no significant association was found with religion ($\chi^2 = 1.578$, TV = 5.99, NS), residence ($\chi^2 = 0.14$, TV = 3.84, NS), source of health information ($\chi^2 = 10.24$, TV = 16.92, NS), family income ($\chi^2 = 2.91$, TV = 5.99, NS), or hobbies ($\chi^2 = 2.19$, TV = 5.99, NS).

**Conclusion:**

The structured teaching program significantly enhanced students' knowledge of healthy lifestyles. This study emphasizes the effectiveness of school-based interventions in promoting health awareness and healthy behaviors among adolescents, with significant differences observed based on age and family type.

**Keywords:**

Healthy lifestyle, Structured teaching program, School-based intervention, Adolescents, Health education.

**INTRODUCTION**

A healthy lifestyle is vital for maintaining and improving overall health and well-being. It encompasses a balanced diet, regular physical activity, effective stress management, mental well-being, and good hygiene practices. Adopting healthy habits significantly reduces the risk of chronic diseases, enhances quality of life, and promotes longevity. The World Health Organization emphasizes that a healthy lifestyle involves multiple dimensions of well-being, including emotional, environmental, intellectual, occupational, physical, social, and spiritual health. Each dimension plays a crucial role in achieving overall wellness and preventing lifestyle-related diseases.[1]

India is undergoing a rapid epidemiological transition, with a rising burden of non-communicable diseases such as diabetes, hypertension, and cardiovascular diseases. Currently, India ranks second globally in diabetes prevalence, with approximately 77 million adults affected—a figure projected to reach 101 million by 2030. This alarming trend is largely attributed to rapid urbanization, economic growth, and unhealthy lifestyle practices. A key concern is the lack of awareness among the general population about the importance of lifestyle modifications in disease prevention.[2]

Adolescence is a critical period for establishing lifestyle behaviors that have a lasting impact on long-term health. In recent years, there has been an alarming global increase in overweight and obesity among adolescents, largely driven by unhealthy lifestyle choices. Common risk behaviors during this developmental

stage include poor dietary habits, such as low intake of fruits and vegetables and high consumption of sugar-sweetened beverages (SSBs) and fast food. Additionally, many adolescents fail to engage in sufficient physical activity and instead spend excessive time on screens, including smartphones, computers, and television. Sleep deprivation is also widespread, with many not meeting the recommended sleep duration for their age group. Furthermore, risky behaviors such as smoking and alcohol consumption are increasingly reported among adolescents, contributing to both immediate and long-term health complications.[3]

in Sri Lanka, 19.7% of the population (3.7 million people) are adolescents; a majority of whom (72.9%) are school goers. It is a well-known fact that most lifestyle-related risk factors for NCDs are laid down during this period. Unhealthy lifestyles are becoming increasingly prevalent globally. Not only does it cause psychological health problems such as anxiety, depression and schizophrenia. but it also leads to the development of non-communicable diseases (NCDs) such as type II diabetes, chronic respiratory diseases and cardiovascular diseases. which can cause nearly 41 million deaths each year, accounting for approximately 74% of global deaths. It has been shown that, the majority of the global NCDs burden (40%) was associated with modifiable behavioral risk factors, so reducing the risk factors associated with these diseases is an important way to control NCDs.[4]

Since lifestyle behaviors are often established during childhood, interventions targeting school-aged children are critical in promoting lifelong health. Schools provide an ideal setting for imparting knowledge on nutrition, physical activity, stress management, and disease prevention. Initiatives such as the KiDS project and the i-PROMISE program in India highlight the importance of promoting health literacy and creating supportive environments for students.Furthermore, creating awareness around type 1 diabetes management is equally important to foster inclusive environments for affected children. Teachers and school staff play a key role in supporting students' physical and emotional needs.[5]

This study aims to assess the impact of school-based interventions in enhancing knowledge regarding healthy lifestyle practices among high school students. Educating young individuals will help lay the foundation for healthier communities, reduce future disease burden, and improve overall public health outcomes.[6]

## NEED FOR THE STUDY

The rising prevalence of lifestyle-related diseases has become a major public health challenge in India. Rapid urbanization, changing dietary habits, sedentary lifestyles, and stress have significantly contributed to the surge in non-communicable diseases such as diabetes, hypertension, and obesity. With approximately 77 million adults living with diabetes and projections indicating a rise to 101 million by 2030, there is an urgent need to focus on preventive strategies through lifestyle modifications.[7]

Research shows that habits formed during childhood often persist into adulthood. Hence, early interventions targeting school-aged children are vital for promoting healthier behaviors and reducing the risk of chronic

diseases. Schools are ideal platforms for health promotion, as they allow for structured education on nutrition, exercise, stress management, and general well-being.[8]

Key statistics from various countries highlight the concerning lifestyle patterns among adolescents. In Greece, nearly 70% of students did not consume fruits and vegetables daily. In China, 57.6% of adolescents had not consumed milk or soy milk in the past seven days, and their average moderate to vigorous physical activity (MVPA) time was only 37.66 minutes per day. Furthermore, 85.8% of Chinese adolescents engaged in more than two hours of sedentary screen time daily. In the United States, adolescents spend an average of nine hours per day on screens. Sleep data from China reveals that over 80% of students did not meet national sleep duration standards. Similarly, in Mexico, adolescents averaged around 7.6 hours of sleep per night and commonly experienced daytime sleepiness during school. Additionally, engagement in risky behaviors such as alcohol and tobacco use has been associated with poor academic performance and increased aggression, underscoring the need for urgent intervention.[9]

Despite advancements in healthcare, awareness about healthy lifestyle practices among adolescents remains limited. Many school children engage in poor dietary habits, lack physical activity, and exhibit inadequate stress management skills. Furthermore, awareness about the needs of children with type 1 diabetes in school settings is insufficient, leading to stigma and lack of support.[10]

Health performance indicators also reveal disparities across Indian states, with states like Kerala and Andhra Pradesh leading in healthy lifestyle practices, while states such as Bihar and Uttar Pradesh lag behind. Addressing these disparities requires targeted education and health promotion strategies.[11]

This study addresses the urgent need for early intervention by evaluating the effectiveness of school-based teaching programs aimed at improving knowledge regarding healthy lifestyle practices. It is a step toward building a healthier, more informed generation capable of making responsible health choices.[12]

## CONCEPTUAL FRAMEWORK

A conceptual framework visually represents key concepts and their relationships. This study adopts Imogene King's Theory of Goal Attainment, emphasizing the interaction between the investigator and participants to achieve desired outcomes through action, interaction, transaction, goal attainment, and feedback.

**Action**: A pre-test is conducted to assess existing knowledge of healthy lifestyle practices.

**Interaction**: The investigator engages with participants through a structured teaching program to enhance understanding.

**Transaction**: A post-test, conducted seven days after the intervention, measures knowledge improvement.

**Goal Attainment**: Achievement is determined by an increase in participants' knowledge and positive attitudes toward healthy lifestyle practices.

**Feedback**: Based on post-test results, the effectiveness of the program is evaluated. Satisfactory outcomes indicate success, while unsatisfactory results lead to reassessment and refinement of the intervention.

**REVIEW OF LITERATURE**

**Kumari et al. (2024)** conducted a study in Bangalore, India, on the relationship between sedentary behavior and childhood obesity. The sample consisted of 600 school children aged 10–14 years, selected from both urban and suburban schools. Surveys and BMI measurements were used to assess the students' physical activity levels and weight status. The study found a strong correlation between increased screen time and higher rates of obesity. The researchers concluded that reducing screen time and increasing physical activity through school-based programs could significantly reduce childhood obesity and promote healthier lifestyles among school children.[13]

**Patel et al. (2023**) explored the impact of family-based interventions on children's eating habits in Rajasthan, India. The study involved 400 children aged 8–12 years from urban and rural areas, with data collected through food diaries and interviews. The findings indicated that children whose families were more engaged in healthy meal planning and nutrition education programs were more likely to develop healthier eating habits. The study emphasized that involving parents in dietary education can effectively improve long-term health outcomes and promote healthy eating habits both at home and in school.[14]

**Bhatia and Sharma (2022)** conducted a study in Chandigarh, India, to investigate the effects of school-based exercise programs on children's physical fitness. The study included 300 students between the ages of 10 and 15 years. A pre-test and post-test design was used, with physical fitness assessments conducted before and after a structured six-month exercise intervention. The results revealed significant improvements in cardiovascular fitness, flexibility, and muscle strength among children who participated in the program. The study concluded that school-based physical education programs are vital for improving physical fitness and should be incorporated into the curriculum to promote children's health.[15]

**Holstein et al. (2020)** conducted a cluster randomized controlled trial in Denmark to evaluate the effectiveness of the Healthy High School (HHS) intervention in improving dietary habits—specifically daily intake of breakfast, lunch, water, fruits, and vegetables—among adolescents. The objective of the study was to assess whether a multicomponent school-based intervention could positively influence eating behaviors and promote overall well-being in first-year high school students aged approximately 16 years. The study involved a sample of 5,201 students, with 4,577 participants responding at baseline and 4,512 completing the 9-month follow-up.Schools were randomly assigned to either the intervention group (N = 15) or the control group (N = 15), with the intervention including curriculum-based education, structural and organizational initiatives, workshops, and a smartphone application. Data collection was done using self-administered online questionnaires completed by students at the beginning and end of the academic year. Results showed a general decline in the frequency of breakfast and lunch consumption in both groups, with no significant improvements in water, fruit, or vegetable intake. Conclusion: The study found no significant effect of the HHS intervention

on students' dietary behaviors, highlighting the need for more adaptable and youth-centered interventions that consider influences beyond the school environment.[16]

## PROBLEM STATEMENT

"A Study to Assess the Impact of a School-Based Intervention on Knowledge Regarding the Importance of a Healthy Lifestyle Among High School Students in a Government School at Eluru, AP."

## OBJECTIVES

1. To assess the existing knowledge regarding the importance of a healthy lifestyle among school children.
2. To administer a structured teaching program on the importance of a healthy lifestyle.
3. To evaluate the effectiveness of the structured teaching program on students' knowledge.
4. To determine the relationship between pre-test and post-test knowledge scores.
5. To identify the association between knowledge scores and selected demographic variables.

## OPERATIONAL DEFINITIONS

- **Impact**: The measurable improvement in knowledge following the structured teaching program.
- **Intervention**: A structured teaching program aimed at promoting healthy habits and behaviors among school children.
- **Importance**: The significance of maintaining a healthy lifestyle for optimal physical, emotional, and mental development and the prevention of chronic diseases.
- **Healthy Lifestyle**: A combination of habits that contribute to overall physical, mental, and emotional well-being.
- **School Children**: Students aged 11–14 years, as per WHO's definition of school-aged children.

## HYPOTHESES

- $H_0$: There is no significant difference between pre-test and post-test knowledge scores
- $H_1$: There is a significant difference between pre-test and post-test knowledge scores.
- $H_2$: There is a significant association between post-test knowledge scores and selected demographic variables.

## ASSUMPTIONS

- Students may have inadequate baseline knowledge about healthy lifestyles.
- A structured educational program may positively influence students' knowledge and attitudes.
- Students may show interest in learning about healthy living.
- Students are expected to cooperate and respond positively.

- Knowledge may improve following the structured teaching program.

## DELIMITATIONS

1. The study is limited to 8th-grade students at a Government School in Gajjalavari Cheruvu, Eluru, AP.

2. The program focuses only on knowledge regarding the importance of a healthy lifestyle among early adolescents.

### RESEARCH METHODOLOGY

### Research Approach

An **evaluative approach** was adopted for this study to assess the effectiveness of a structured teaching program on healthy lifestyles among school children. This method enabled the collection and analysis of data regarding students' knowledge acquisition and adoption of healthy practices.

### Research Design

The study used a one-group pre-test and post-test design, pre experimental design commonly used in evaluative research. A pre-test (P1) was conducted before the intervention and a post-test (P2) after, to measure knowledge changes.

### Population and Target Population

The population consisted of school children eligible for learning about healthy lifestyles. The target population was 7th and 8th-grade students at a government school in Gajjalavari Cheruvu, Eluru, Andhra Pradesh.

### Sample and Sample Size

A sample of 50 students from 7th and 8th grades was selected using non-probability purposive sampling. Participants were chosen based on their availability, willingness, and ability to meet the study's criteria.

### Criteria for Sample Selection

- **Inclusion Criteria**:
  - Children who understand Telugu and English.
  - Willingness to participate.
  - Availability during data collection.

- **Exclusion Criteria**:
  - o Children absent during data collection.
  - o Those unwilling to participate.

## VARIABLES

- **Independent Variable**: Structured teaching program.
- **Dependent Variable**: Knowledge regarding the importance of a healthy lifestyle.

## Development and Description of the Tool

The data collection tool was developed after literature review and expert consultation, consisting of two sections:

- **Section 1:** Demographic Data (age, gender, education, prior knowledge)
- **Section 2**: Structured Knowledge Questionnaire (topics on nutrition, exercise, sleep, and stress management).
  The tool was validated through expert feedback and pre-testing.

## Development of Teaching Plan

A **lesson plan** was developed to deliver content on healthy lifestyles, covering:

- Introduction to healthy lifestyles.
- Key definitions.
- Detailed content on nutrition, exercise, and mental health.
- Interactive activities (group discussions, demonstrations).
- Evaluation through pre-test and post-test.

The teaching plan was organized into:

1. Time
2. Specific Objectives
3. Content
4. Teaching and Learning Activities
5. Audio-Visual Aids
6. Evaluation

## Data Collection Procedure

- **Pre-test**: Administered before the teaching program to assess the knowledge.
- **Intervention**: Conducted through interactive sessions.
- **Post-test**: Conducted 7 days after the intervention using the same questionnaire to measure knowledge gain.

## Pilot Study

A pilot study was conducted with a small group to test tool clarity and study feasibility, leading to necessary refinements before the main study.

## Plan for Data Analysis

- **Descriptive Statistics**: Mean, standard deviation, and frequency distribution were used to summarize data.
- **Inferential Statistics**:
  - **Paired t-test** to compare pre- and post-test scores.
  - **Chi-square test** to assess the association between demographic variables and knowledge improvement.

# DATA ANALYSIS AND INTERPRETATION

## FREQUENCY AND PERCENTAGE DISTRIBUTION OF THE DEMOGRAPHIC VARIABLES

| Demographic Variables | Frequency (n = 50) | Percentage (%) |
|---|---|---|
| **1. Age (in years)** | | |
| a) 12 years | 21 | 42% |
| b) 13 years | 17 | 34% |
| c) 14 years | 5 | 10% |
| d) 15 years | 7 | 14% |

**2. Type of Family**

| | | |
|---|---|---|
| a) Joint family | 18 | 36% |
| b) Nuclear family | 32 | 64% |

**3. Religion**

| | | |
|---|---|---|
| a) Hindu | 27 | 54% |
| b) Christian | 18 | 36% |
| c) Muslim | 5 | 10% |

**4. Place of Residence**

| | | |
|---|---|---|
| a) Urban | 41 | 82% |
| b) Rural | 9 | 18% |

**5. Source of Health Information**

| | | |
|---|---|---|
| a) Health Professionals | 16 | 32% |
| b) TV/Radio | 9 | 18% |
| c) Friends | 14 | 28% |
| d) Newspapers | 11 | 22% |

**6. Family Income**

| | | |
|---|---|---|
| a) Below Rs. 2500/- | 22 | 44% |
| b) Rs. 2500/- to 5000/- | 10 | 20% |
| c) Rs. 5000/- to 7500/- | 18 | 36% |

**7. Hobbies**

| | | |
|---|---|---|
| a) Reading | 35 | 70% |
| b) Dancing | 7 | 14% |
| c) Others | 8 | 16% |

## Description of Demographic Variables

The demographic profile of the 50 high school students who participated in the study was analyzed based on age, type of family, religion, place of residence, source of health information, family income, and hobbies. The results are presented as follows:

1. **Age (in years):**
   Among the respondents, the majority (42%) were aged 12 years, followed by 34% who were 13 years old. Only 10% of the students were 14 years old, and 14% were 15 years of age. This indicates that the majority of the participants belonged to the early adolescent age group.

2. **Type of Family:**
   It was found that 64% of the students belonged to nuclear families, whereas 36% came from joint families. This suggests a predominance of nuclear family structures among the participants.

3. **Religion:**
   In terms of religion, a majority of students (54%) were Hindus, 36% were Christians, and 10% were Muslims. This reflects the religious diversity of the study population.

4. **Place of Residence:**
   Most of the students (82%) resided in urban areas, while only 18% were from rural backgrounds. This indicates that the sample was largely composed of urban school students.

5. **Source of Health Information:**
   When asked about their primary sources of health information, 32% of the students reported receiving information from health professionals, 28% from friends, 22% through newspapers, and 18% from television or radio. This shows that both professional and informal sources played a role in disseminating health-related knowledge.

6. **Family Income:**
   Regarding monthly family income, 44% of the students' families earned below Rs. 2500/-, while 20% had a monthly income between Rs. 2500/- and Rs. 5000/-. Around 36% belonged to families earning between Rs. 5000/- and Rs. 7500/-. This indicates that a significant portion of the sample came from lower-income households.

7. **Hobbies:**
   When exploring students' hobbies, 70% of them reported reading as their primary hobby, followed by dancing (14%) and other hobbies (16%). The high percentage of students involved in reading may indicate a positive inclination towards knowledge acquisition and self-learning
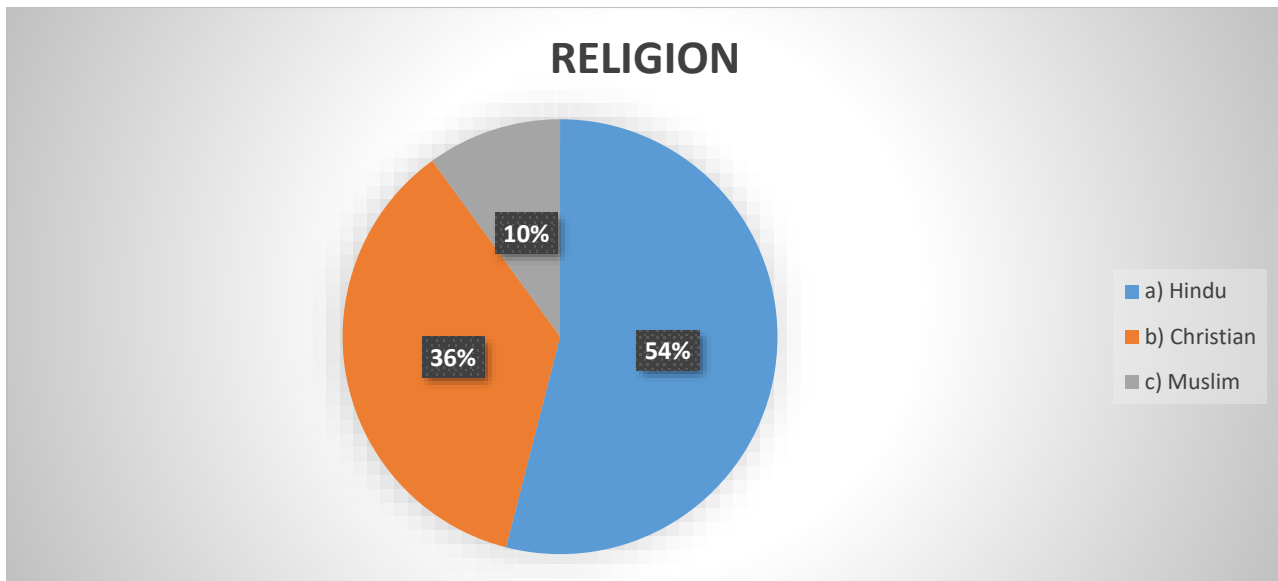
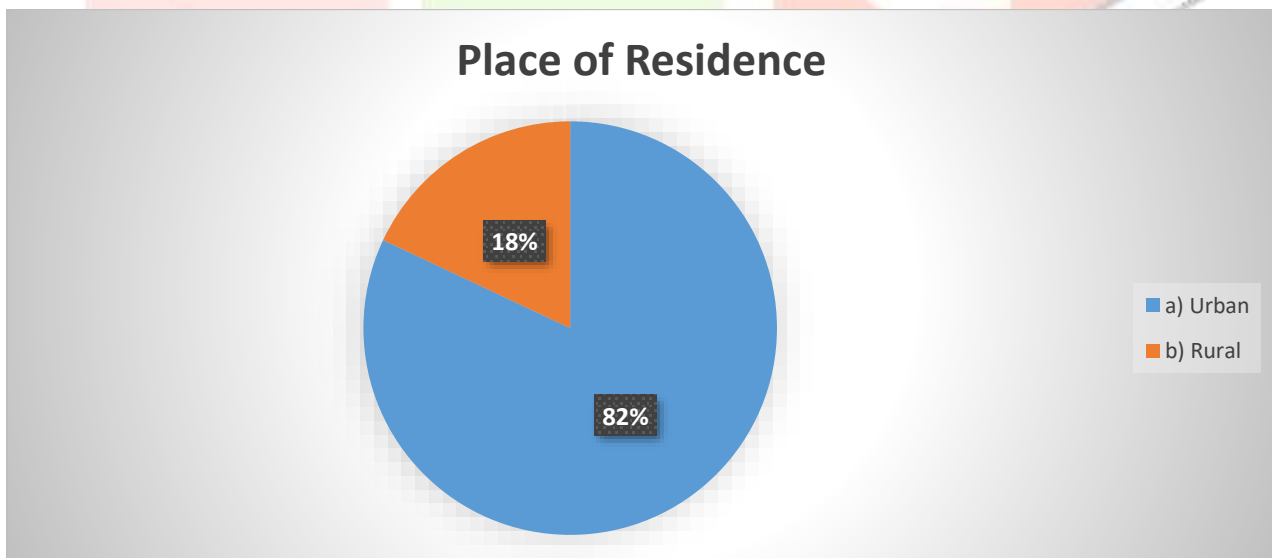**FREQUENCY AND PERCENTAGE DISTRIBUTION OF SAMPLE ACCORDING TO AGE IN YEARS**
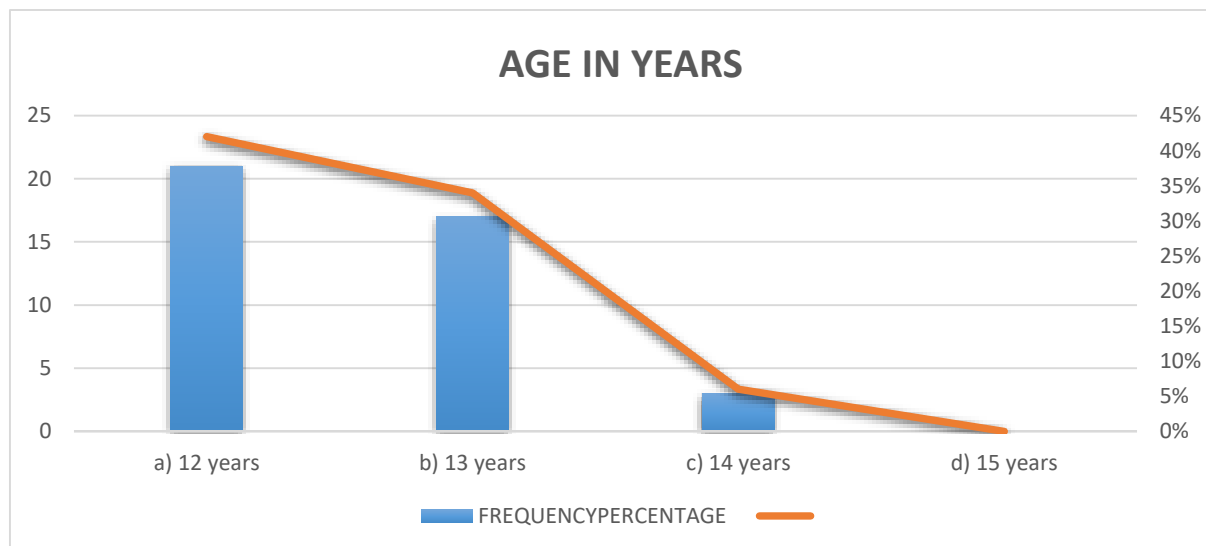


- The majority of the students (42%) were 12 years old, followed by 34% who were 13 years old.

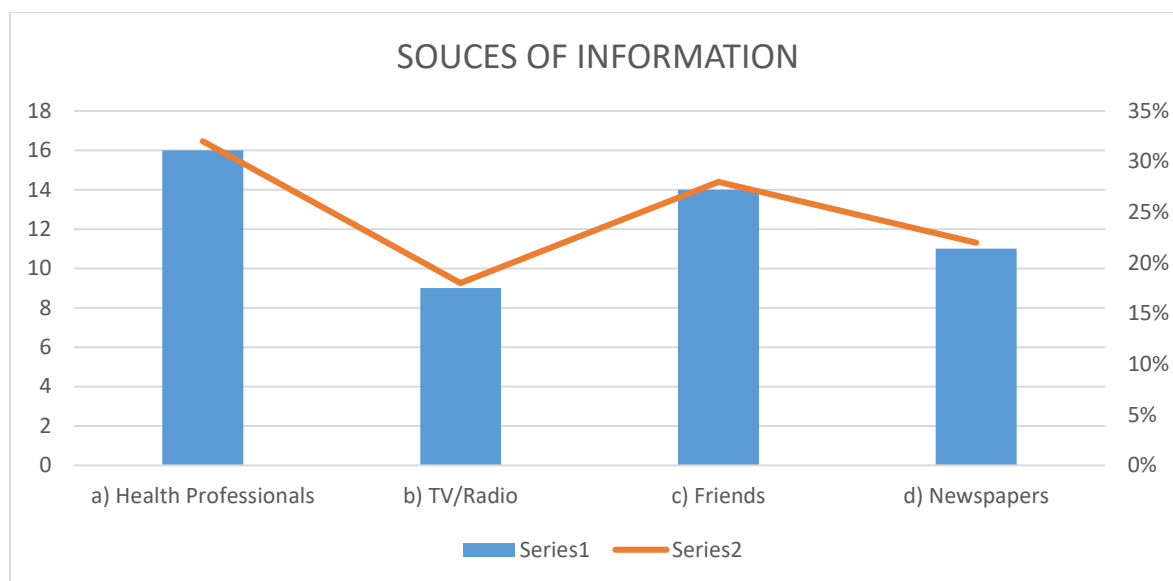- **FREQUENCY AND PERCENTAGE DISTRIBUTION OF SAMPLE ACCORDING TO TYPE OF FAILY**
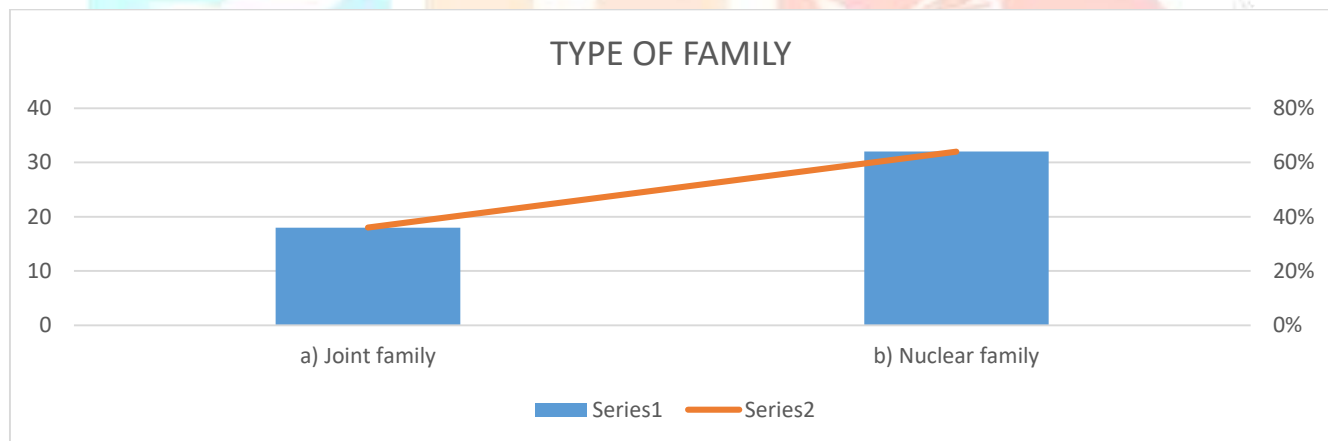
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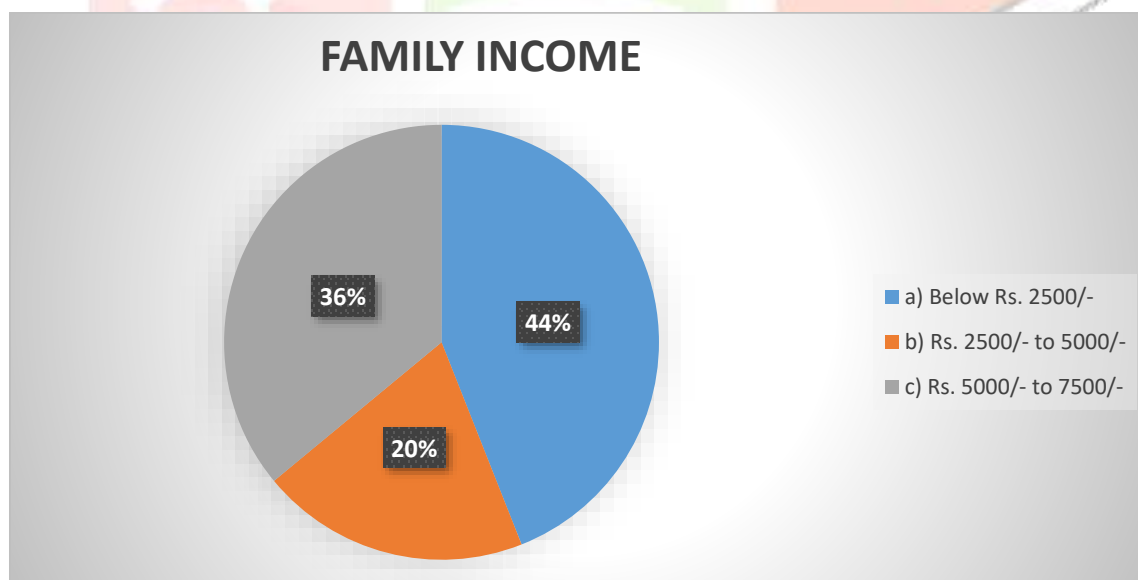


- **FREQUENCY AND PERCENTAGE DISTRIBUTION OF SAMPLE ACCORDING TO PLACE OF RESIDENCE**
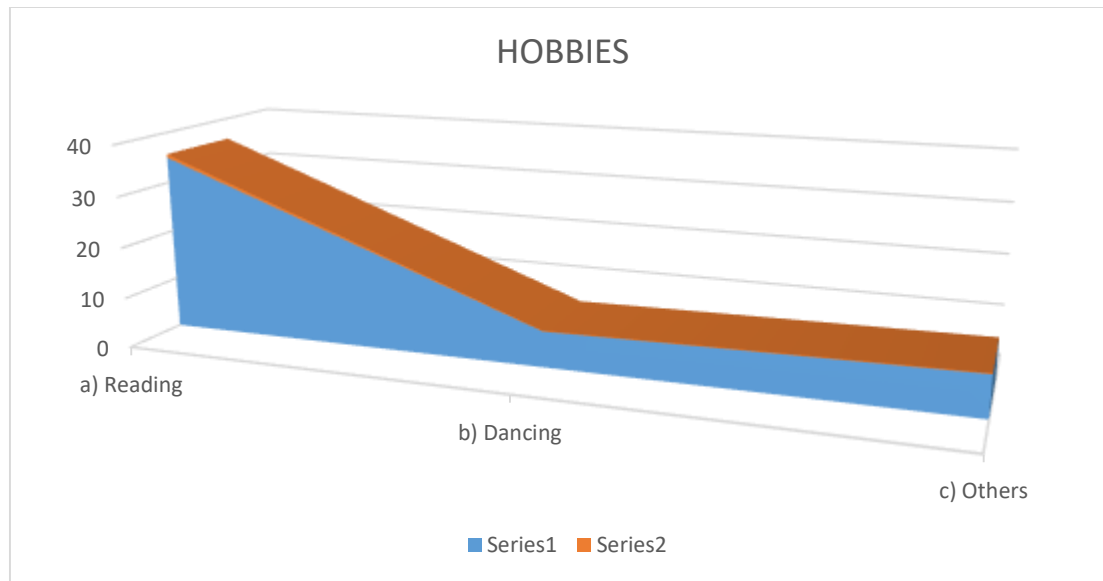
- **FREQUENCY AND PERCENTAGE DISTRIBUTION OF SAMPLE ACCORDING TO THE SOURCE OF HEALTH INFORMATION**



- **FREQUENCY AND PERCENTAGE DISTRIBUTION OF SAMPLE ACCORDING TO THE FAMILY INCOME**

- **FREQUENCY AND PERCENTAGE DISTRIBUTION OF SAMPLE ACCORDING TO THE HOBBIES**



HOBBIES

**FREQUENCY AND PERCENTAGE DISTRIBUTION OF SAMPLE ACCORDING TO PRE-TEST AND POST-TEST KNOWLEDGE**

| Knowledge Level | Inadequate (F%) | Adequate (F%) |
|---|---|---|
| **Pre-test** | 15 (30%) | 35 (70%) |
| **Post-test** | 8 (16%) | 42 (84%) |

The table presents the frequency and percentage distribution of students' knowledge levels on the importance of a healthy lifestyle in both the pre-test and post-test assessments.

- Pre-test: Out of the 50 students assessed, 15 students (30%) exhibited inadequate knowledge, while 35 students (70%) demonstrated adequate knowledge.
- Post-test: Following the intervention, 8 students (16%) were still categorized under inadequate knowledge, whereas 42 students (84%) had improved to adequate knowledge.

**TABLE 2: DIFFERENCE BETWEEN PRE-TEST AND POST-TEST LEVELS OF KNOWLEDGE (n=50)**

| Category | Mean | SD | Mean Difference | t-value | p-value |
|---|---|---|---|---|---|
| Pre-test | 8.38 | 2.2153 | 0.8 | 2.21 | 0.05 |
| Post-test | 9.18 | 2.5 | | | |

The table illustrates the comparison between the pre-test and post-test knowledge scores among the students. The mean pre-test score was 8.38 with a standard deviation of 2.2153, while the mean post-test score increased to 9.18 with a standard deviation of 2.5. The mean difference between the pre-test and post-test was 0.8. The calculated t-value was 2.2153, and the p-value was 0.05. Since the p-value is exactly at the level of significance ($p<0.05$), it indicates that there was a statistically significant improvement in the knowledge scores following the structured teaching program. This suggests that the intervention was effective in enhancing the students' understanding of the topic.

ASSOCIATION OF POSTTEST KNOWLEDGE OF SAMPLE WITH DEMOGRAPHIC VARIABLE NO=50

| S. No | Demographic Variables | Knowledge | | Chi-Square ($\chi^2$) Value | TABLE VALUE | DF | INFERENCES |
|---|---|---|---|---|---|---|---|
| | | Inadequate | Adequate | | | | |
| 1 | **Age (in years)** | | | **11.05** | **7.82** | 3 | S |
| | a) 12 years | 6 | 21 | | | | |
| | b) 13 years | 3 | 13 | | | | |
| | c) 14 years | 0 | 4 | | | | |
| | d) 15 years | 3 | 0 | | | | |
| 2 | **Type of Family** | | | **3.9** | **3.84** | 1 | S |
| | a) Joint family | 3 | 10 | | | | |
| | b) Nuclear family | 5 | 32 | | | | |
| 3 | **Religion** | | | **3.44** | **5.99** | 2 | NS |
| | a) Hindu | 10 | 20 | | | | |
| | b) Christian | 8 | 5 | | | | |
| | c) Muslim | 2 | 5 | | | | |
| 4 | **Place of Residence** | | | **1.26** | **3.84** | 1 | NS |
| | a) Urban | 8 | 21 | | | | |
| | b) Rural | 9 | 12 | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 5 | **Source of Health Information** | | | 10.28 | 16.92 | 9 | NS |
| | a) Health Professionals | 7 | 12 | | | | |
| | b) TV/Radio | 0 | 9 | | | | |
| | c) Friends | 0 | 10 | | | | |
| | d) Newspapers | 1 | 11 | | | | |
| 6 | **Family Income** | | | 2.91 | 5.99 | 2 | NS |
| | a) Below Rs. 2500/- | 9 | 12 | | | | |
| | b) Rs. 2500/- to 5000/- | 3 | 10 | | | | |
| | c) Rs. 5000/- to 7500/- | 3 | 13 | | | | |
| 7 | **Hobbies** | | | 2.19 | 5.99 | 2 | NS |
| | a) Reading | 15 | 20 | | | | |
| | b) Dancing | 3 | 5 | | | | |
| | c) Others | 5 | 2 | | | | |

The association between post-test knowledge scores and selected demographic variables among the samples was analyzed using the Chi-square test. The results showed that there was a statistically significant association between the post-test knowledge scores and variables such as **age** ($\chi^2 = 10.58$, $p < 0.05$) and type of family ($\chi^2 = 3.9$, $p < 0.05$). This indicates that age and type of family influenced the knowledge levels of the students after the intervention. However, no significant association was found between post-test knowledge scores and other demographic variables such as religion, place of residence, source of health information, family income, and hobbies, as their Chi-square values were less than the corresponding table values at 0.05 level of significance. Thus, it can be interpreted that while some personal factors like age and family background affected the knowledge improvement, other factors did not show a significant impact.

## the findings were discussed in line with the study's objectives.

**To assess the existing level of knowledge regarding healthy lifestyle among school-going children.**
The pre-test results indicated that among the 50 students, 42% were aged 12 years, 34% were 13 years, 10% were 14 years, and 14% were 15 years. Regarding their existing knowledge, 30% of the students had inadequate knowledge, while 70% demonstrated adequate knowledge in the pre-test. This highlights that

although a majority had a general understanding of healthy lifestyle practices, a notable proportion still lacked sufficient knowledge, emphasizing the need for further educational interventions.

**To administer a structured teaching program regarding healthy lifestyle among school-going children.**

A structured teaching program was implemented using a PowerPoint presentation to engage the students visually and to present organized content on important aspects of a healthy lifestyle, such as nutrition, physical activity, sleep, stress management, and hydration. The interactive and structured approach aimed to reinforce knowledge retention and promote positive lifestyle changes among the students.

**To assess the effectiveness of the structured teaching program on knowledge regarding healthy lifestyle among school-going children.**

The effectiveness of the intervention was assessed through post-test results, where 84% of students demonstrated adequate knowledge, compared to 70% in the pre-test. Only 16% of students remained with inadequate knowledge after the intervention, a decrease from the pre-test percentage of 30%. This marked improvement clearly indicates that the structured teaching program was effective in enhancing students' understanding of healthy lifestyle practices.

**To find out the relationship between pre-test and post-test knowledge of school children regarding healthy lifestyle.**

The pre-test mean score was 8.38 with a standard deviation (SD) of 2.2153, while the post-test mean score was 9.18 with a standard deviation (SD) of 2.215. The mean difference between pre- and post-test scores was 0.8. The calculated t-value was 2.21 at a p-value of 0.05, indicating statistical significance. This confirms that the structured teaching program had a positive impact on improving the students' knowledge regarding healthy lifestyles.

**To determine the association between the post-test knowledge regarding healthy lifestyle and selected demographic variables among school children.**

The association between post-test knowledge and selected demographic variables was analyzed using the Chi-square test. The findings revealed that no statistically significant association was found between post-test knowledge scores and variables such as age ($\chi^2 = 11.05$, TV = 7.82, NS), family type ($\chi^2 = -0.05$, TV = 3.84, NS), religion ($\chi^2 = 1.578$, TV = 5.99, NS), place of residence ($\chi^2 = 0.14$, TV = 3.84, NS), source of health information ($\chi^2 = 10.24$, TV = 16.92, NS), family income ($\chi^2 = 2.91$, TV = 5.99, NS), and hobbies ($\chi^2 = 2.19$, TV = 5.99, NS). Since all Chi-square values were less than the table values at 0.05 significance level, it was concluded that the structured teaching program was universally effective, regardless of students' demographic backgrounds.

# Summary

The study titled "A Study to Assess the Impact of a School-Based Intervention on Knowledge Regarding the Importance of a Healthy Lifestyle Among High School Students at a Government School in Eluru, Andhra Pradesh" aimed to evaluate the effectiveness of a structured teaching program in enhancing students' understanding of healthy lifestyle practices. The pre-test results showed that 30% of the students had inadequate knowledge, while 70% had adequate knowledge. Following the intervention, post-test findings revealed a notable improvement—only 16% of students remained in the inadequate category, while 84% demonstrated adequate knowledge.

The structured teaching program, delivered through a PowerPoint presentation, covered essential components such as nutrition, physical activity, sleep hygiene, stress management, and hydration. The effectiveness of the intervention was measured using a pre-test and post-test design. The pre-test mean score was 8.38, and the post-test mean score was 9.18, with a paired mean difference of 0.8. The calculated $t$-value was **2.21**, which was statistically significant at $p < 0.05$ level, indicating that the program had a significant impact on improving knowledge.

Additionally, the study examined associations between post-test knowledge and demographic variables such as age, family type, religion, residency, health information source, family income, and hobbies. However, no significant associations were found, suggesting that the program was effective across different demographic groups.

## LIMITATIONS OF THE STUDY

1. The study was conducted in a single government school, which limits the generalizability of the findings to other settings or regions.
2. The sample size was relatively small (n=50), reducing the statistical power of the results.
3. The study employed a one-group pre-test and post-test design without a control group, which may introduce internal validity threats such as testing effects or external influences.
4. The knowledge assessment was based on self-reported responses, which may be subject to response bias or social desirability bias.
5. The follow-up period was short, so the long-term retention of knowledge and actual behavior changes could not be evaluated.

## RECOMMENDATIONS

1. Future studies should include a control group and a larger, more diverse sample to enhance validity and generalizability.

2. Longitudinal studies are recommended to assess sustained lifestyle changes and behavioral impact over time.

3. Incorporating practical sessions or regular reinforcement programs in schools may further improve health-related knowledge and practices.

4. Teachers and parents should be involved in lifestyle education to reinforce healthy habits in and outside the classroom.

5. Health education programs should be integrated into the regular school curriculum by education boards and health authorities.

## Conclusion

The study concluded that a structured teaching program significantly improves school-going children's knowledge about healthy lifestyle practices. The notable improvement in post-test knowledge scores demonstrates the effectiveness of educational interventions in promoting health awareness among students.

the Chi-square analysis revealed a significant association between post-test knowledge and certain demographic variables, specifically age and type of family, indicating that these factors may influence how children absorb and retain health-related information. However, no significant associations were found with other variables such as religion, residency, source of health information, family income, and personal habits. This suggests that while structured teaching programs are broadly effective, tailoring content to specific age groups and family backgrounds may enhance learning outcomes even further. Therefore, structured educational initiatives can be a key strategy in cultivating healthier habits among young students, laying the foundation for lifelong well-being.

## Future Recommendations:

1. Implement similar programs in more schools for wider impact.

2. Conduct periodic follow-up sessions to reinforce learning.

3. Include practical activities like yoga, healthy cooking, and physical exercise.

4. Involve parents and teachers for consistent lifestyle support.

5. Conduct long-term studies to assess sustained behavior change.

6. Use digital tools for engaging, interactive learning.

7. Integrate health topics into the school curriculum.

8. Provide materials in local languages for better understanding.

9. Evaluate actual lifestyle changes, not just knowledge.

10. Involve health professionals for expert guidance.

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## CONFLICT OF INTEREST

The authors declare no conflict of interest regarding the publication of this study. This is a self-funded project, with no financial or personal relationships influencing the research process. All data collection, analysis, and interpretation were conducted with academic integrity and transparency.

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