



## THE IMPACT OF THE STRUCTURED TEACHING PROGRAM (STP) ON ADOLESCENT CHILDREN'S KNOWLEDGE AND ATTITUDE REGARDING THE HEALTH HAZARDS OF JUNK FOODS.

### Healthcare

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### ABSTRACT

**Background:** The research that is now available shows that children's physical and psychological health are adversely affected by junk food, which is defined as unhealthy food that is high in calories but poor in nutrients. This study aimed to assess the effectiveness of structural Teaching Programme on Knowledge and attitude regarding the Health Hazards of Junk Foods among school going children in south India. **Methods:** An experimental pre-test, post-test design was adopted. Sixty School going children's were selected using convenience sampling. The knowledge and attitude regarding the Health Hazards of Junk Foods were assessed before and after the intervention with a single session Structural teaching on Health Hazards of Junk Foods. The data collection tool used to assess the children's knowledge and attitude was based on a pre-validated questionnaire. **Results:** The pre-test evaluation demonstrated inadequate knowledge among 38 (63.3%) and a moderate adequate of knowledge on 22 (36.6%) of the study subjects. The attitude scores revealed a poor attitude among 60% and a good attitude among 40% of the subjects toward Health Hazards of Junk Foods. There was a significant improvement in both mean ( $\pm$ SD) knowledge ( $6.9 \pm 3.8$  vs  $20.9 \pm 4.7$ ) and attitude ( $5.6 \pm 3.8$  vs  $11.2 \pm 4.1$ ) scores following intervention with structural teaching programme ( $p < 0.05$ ). **Conclusion:** The findings of this study show that the children's have inadequate knowledge and poor attitude regarding junk food and its hazards. Which can be improved through simple Structural teaching programme along with other measure to chooses there food choices.

### KEYWORDS

Structured Teaching Programme, knowledge, attitude, hazards of junk food and Adolescent children

#### INTRODUCTION:

Food that is rich in calories but low in nutrients is referred to as junk food. Adolescents, both boys and girls, experience a range of physical and psychological changes that lead to a greater sense of personal accountability for their own well-being. Junk food has very little or no nutritional value, and no matter how well it is promoted, eating it is not healthy (1). The availability of junk food and snacks at low prices and marketing has triggered an evolution of consumption of foods that require neither the structure nor the preparation of a formal meal (2). A cross-sectional study conducted on 200 preschool-aged children in an urban area of the state of Maharashtra revealed an 87.5% prevalence of caries, which was linked to inadequate teeth brushing and frequent consuming junk food (3). The nutrition transition has also resulted in a "double-burden" of obesity and undernutrition due to rising obesity rates in middle-class and higher-income populations and the persistence of undernutrition in low-middle-class communities (4). The studies have shown that children were not having adequate knowledge regarding the health hazards of junk foods (5, 6). Schoolchildren used to have many varieties of junk foods because of the peer pressure, motivation from the television advertisements and the various toys and play materials available freely with the junk foods (7). Without knowing the poisonous effects, today's children are consuming junk foods in bulk quantities. Schoolchildren are more vulnerable to become addict to junk foods without knowing their ill effect. Schoolchildren need some awareness about hazards of junk food. Studies have concluded that health education or teaching intervention are improving the schoolchildren's knowledge and attitude regarding junk food (8, 9).

However, the efficacy of such an intervention has not been evaluated in detail among the South Indian population. The present study aimed to assess the knowledge and attitude of regarding the Health Hazards of Junk Foods among school going children and to assess the effect of a structural Teaching program on their knowledge and attitude toward Junk food among school going children.

#### 2. MATERIAL AND METHODS

##### 2.1 Study sample

The study was conducted among 60 Adolescent school going children age between 13-15 year in selected school at Coimbatore, Tamil Nadu. The children's were randomly drawn from a list of the 170 student's attendants available with the school office.

##### 2.2. Procedure Recruitment:

The study was approved by the Institutional Ethics Committee. Prospective participants identified and selected from the list were contacted and explained briefly about the study and asked if they would consider participating. Consenting participants were informed in detail about the assessments, Structured Teaching Program (STP). Written informed consent was taken from parent's and children's both.

##### Structured Teaching Program (STP):

The STP was administered in regional language in one-hour sessions over three consecutive days. The STP focused on junk food use and the magnitude of the problem in India, adverse health effects of junk food, and prevalent myths and facts associated with the junk food. The STP also addressed the core issues of junk food, including the benefits of quitting, and how to deal with cravings and urges common among users following quitting. The content of the STP was delivered using flash card and projected audio-visual aids. All the sessions were administered using power point, illustrated with images and case vignettes. The STP was administered by the first author who is a registered nurse. The sessions were interactive, and the participants were encouraged to discuss, clarify, and actively participate. Post-intervention follow-up: Post-intervention assessments were conducted at after the weeks following the last session of the STP, to assess its effectiveness on participants' knowledge and attitude regarding the Health Hazards of Junk Foods.

##### 2.3 Measures

At baseline, information was obtained about the participants' socio-demographics and Knowledge, attitude Questionnaire (KAQ) was developed to assess participants' knowledge and attitude regarding the health hazard of junk food. The KAQ consists of 15 multiple-choice questions, with each correct answer given a score of one. Thus, the maximum possible score was 15, with increasing scores reflecting better knowledge of the participants. An Attitude Assessment Scale (AAS) was developed to assess the participants' attitude towards health hazard of junk food. The AAS comprises of 13 Likert-type statements ranging from strongly disagree (scored 0) to strongly agree (scored 4). Thus the total score ranges from 0 to 52, with increasing scores reflecting a favourable attitude towards avoiding junk food.

##### 2.4 Data analysis

The number of study participants and the number of responses were

mentioned as frequency (percentage). The knowledge and attitude scores were mentioned as mean  $\pm$  SD. The number of responses for each knowledge questionnaire item was analyzed using the McNemar test with Bonferroni correction, and the number of responses for each attitude questionnaire item was analyzed using the Wilcoxon signed-rank test with Bonferroni correction. The paired *t*-test was used for comparing the pre-test and post-test knowledge and attitude scores. Chi-square test was used to assess the association of knowledge scores with demographic variables. Data analysis was done using Statistical Package for the Social Sciences (SPSS 16.0).  $P < 0.05$  was considered statistically significant for all comparisons.

## 2.5 Ethical considerations

Institutional Human Ethical Committee gave its approval to the study. Written informed consent was obtained from the children's and parents both after explanation of the study to them.

## RESULTS:

**Table 1** displays the demographical characteristics of the participants. In this study, 60 school going children's were included, most of them between the age of 14 years (23; 38.3%). lived in urban area (45; 75%). Most of than getting monthly pocket money below 100 rupees (32; 54.4%). Nearly half of the children had previous information regarding junk food (43; 71.6) with source of mass media (32; 53.3%). The majority was an annual family income of Rs.5000 to Rs.10000 (2; 37%).

**Table 2** depicts level of knowledge and attitude for the children's baseline and after the intervention. There was a significant increase in the mean scores of knowledge and attitude ( $p < 0.001$ )

A significant decrease in the percentage of participants who had inadequate knowledge ( $p < 0.001$ ) Regarding Attitude, there were notable rises in the proportion of participants who had better attitude towards to avoid junk food ( $p < 0.001$ ).

The chi-square analysis for the association between the selected socio-demographical variable and the level of knowledge and attitude score post intervention is illustrated in **Table 3**. It shows that level of knowledge and attitude post-test scoring were associated with age, area of living, monthly pocket money and sources of information regarding health hazard junk food.

## DISCUSSION:

The current investigation was carried out on school going children's in selected school at Coimbatore, Tamil Nadu. Junk foods are in the form of food and drinks contain low nutrients (e. g) vitamins, minerals and fibre. Current study revelled most of the children's were belongs to age group of 14 years, similar study conducted in Tamil Nadu for knowledge regarding junk food among children's also reported most of the between the age group of 11-13 years. Because this age group of children were more vulnerable to buy and eat junk food (10). Most of the demographical finding are similar with previous study conducted by Shalini S et al., 2019, like marital status, employment, type of family and family income status (11). like area of living, family income, exposure to any teaching regarding junk food.

Our findings suggest that school going children's were having inadequate knowledge and attitude regarding Health hazard of junk food, which is consistent with previous studies (12, 13). Current study results indicate that the mean values of knowledge and attitude health hazard of junk food increased significantly in after intervention. These results are in line with previous studies (14). In our study, depression was significantly associated with age, area of living, monthly pocket money. Study finding are more similar with previous research conducted by kaur M 2008, Indian schoolchildren's of Northern Region (15). However buy and consuming the junk food is ill effect of health in child hood life. Our study finding were supported the structural teaching program can improve the knowledge regarding health hazard of junk food.

## Limitation

The findings should be interpreted with consideration of the limitations of this study. The results of the outcome measure are based on self-reported measures. The study participants may not be representative as per convenience sampling. The long-term effect of the structural teaching programme intervention was not assessed, as it is a partial fulfilment of PG program.

## CONCLUSION:

The results of this study demonstrate that children are unaware about junk food and its dangers, and they have a bad attitude about it. Which can be enhanced with a simple structural education program and additional measures to control their eating choices.

## Role of funding source

The authors received no funding for this study

|                                          | n (%)     |
|------------------------------------------|-----------|
| Age                                      |           |
| 13 years                                 | 16 (26.6) |
| 14 years                                 | 23 (38.3) |
| 15 years                                 | 21 (35)   |
| Area of residents                        |           |
| Urban                                    | 45 (75)   |
| Rural                                    | 15 (25)   |
| Pocket money /month (Rupees)             |           |
| No                                       | 0         |
| 1 - 100                                  | 32 (54.4) |
| 100 – 500                                | 14(23.3)  |
| >500                                     | 14(23.3)  |
| Family income /month (Rupees)            |           |
| 3000- 5000                               | 20 (33)   |
| 5000-10000                               | 22 (37)   |
| >10000                                   | 18 (30)   |
| Previous information regarding junk food |           |
| Yes                                      | 43 (71.6) |
| No                                       | 17 (21.6) |
| Source of information                    |           |
| Mass media                               | 32 (53.3) |
| Teacher                                  | 8 (13.3)  |
| Family members                           | 5(8.3)    |
| Peer group                               | 15(25)    |
| Health personal                          | 0         |
| Frequency of junk food consumption /week |           |
| 1-4                                      | 46 (76.6) |
| >4 time                                  | 14 (23.3) |
| Source of junk food                      |           |
| Home                                     | 5 (8.3)   |
| Local shop                               | 5 (8.3)   |
| School canteen                           | 50 (83.3) |

**Table 2: Baseline and post-intervention level of knowledge and attitude**

| Characteristics              | Baseline Mean (SD) | End-line Mean (SD) | Mean/percentage difference | P-value |
|------------------------------|--------------------|--------------------|----------------------------|---------|
| Knowledge                    | 6.9 (3.8)          | 20.9 ( 4.7)        | 14 (0.9)                   | <0.001* |
| Attitude                     | 5.6 (3.8)          | 11.2 (4.1)         | 5.6 (0.3)                  | <0.001* |
| Level of Knowledge (n-60, %) |                    |                    |                            |         |
| Inadequate                   | 38 (63.3)          | 0 (0)              | - 38 (-63.3)               | <0.001* |
| Moderate                     | 22 (36.6)          | 22 (36.6)          | 0(0)                       |         |
| Adequate                     | 0 (0)              | 38 (63.3)          | + 38 (+63.3)               |         |
| Level of attitude (n-60, %)  |                    |                    |                            |         |
| Poor                         | 36 (60)            | 0 (0)              | -36 (-60)                  | <0.001* |
| Good                         | 24 (40)            | 20 (33.3)          | -4 (-6.7)                  |         |
| Better                       | 0 (0)              | 40 (66.6)          | +40 (+66.6)                |         |

$P < 0.05$ \* was considered as statistically significant

**Table 3: Association between Post-test level of knowledge and attitude score and selected Demographic variables**

| Characteristics | Post – level of Knowledge (n-60, %) |          | X2 p-value | Post- level of attitude score (n-60, %) |        | X2 p-value |
|-----------------|-------------------------------------|----------|------------|-----------------------------------------|--------|------------|
| Age years       | Moderate                            | Adequate |            | Good                                    | Better |            |

|                                      |           |           |                |              |              |                |
|--------------------------------------|-----------|-----------|----------------|--------------|--------------|----------------|
| 13                                   | 15 (25)   | 14 (23.3) | 7.8<br>0.001*  | 14<br>(23.3) | 12 (20)      | 7.2<br>0.021*  |
| 14                                   | 7 (11.7)  | 16 (26.6) |                | 8 (13.3)     | 10<br>(16.6) |                |
| 15                                   | 0         | 8 (13.3)  |                | 2 (3.3)      | 14<br>(23.3) |                |
| Area of living                       |           |           |                |              |              |                |
| Urban                                | 12 (20)   | 30 (50)   | 3.9<br>0.001*  | 21 (35)      | 22<br>(36.6) | 4.9<br>0.01*   |
| Rural                                | 10 (16.6) | 8 (13.3)  |                | 3 (5)        | 14<br>(23.3) |                |
| Packet money /month (rupees)         |           |           |                |              |              |                |
| No                                   | 5 (8.3)   | 4 (6.6)   | 4.3<br>0.001*  | 5 (10)       | 3 (5)        | 12.2<br>0.031* |
| 1 - 100                              | 17 (28.3) | 1 (1.6)   |                | 11<br>(18.3) | 7 (11.6)     |                |
| 100 -500                             | 0         | 21 (35)   |                | 6 (10)       | 15 (25)      |                |
| >500                                 | 0         | 12 (20)   |                | 1 (1.6)      | 11<br>(18.3) |                |
| Family income /month                 |           |           |                |              |              |                |
| 3000-5000                            | 11 (18.3) | 24 (40)   | 2.8<br>0.78    | 12 (20)      | 10<br>(16.6) | 4.4<br>1.02    |
| 5000-10000                           | 6 (10)    | 4 (6.6)   |                | 10<br>(16.6) | 12 (26)      |                |
| >10000                               | 5 (8.3)   | 10 (16.6) |                | 4 (6.6)      | 14<br>(23.3) |                |
| Frequency of eating junk food/ week  |           |           |                |              |              |                |
| < 4 time                             | 18 (30)   | 25 (41.7) | 1.7            | 21 (35)      | 22(36.6)     | 4.9            |
| > 4 time                             | 4 (6.6)   | 13 (21.7) | 0.63           | 3 (5)        | 14<br>(23.8) | 0.42           |
| Previous information about junk food |           |           |                |              |              |                |
| Yes                                  | 7 (11.6)  | 26 (43.3) | 7.5<br>0.12    | 21 (35)      | 22<br>(36.6) | 4.8<br>0.21    |
| No                                   | 15 (25)   | 12 (20)   |                | 3 (5)        | 14<br>(23.3) |                |
| Source of information                |           |           |                |              |              |                |
| Mass media                           | 15 (25)   | 12 (20)   | 14.9<br>0.001* | 11<br>(18.3) | 7 (11.6)     | 12.2<br>0.001* |
| Teacher                              | 7 (11.1)  | 6 (10.1)  |                | 6 (10)       | 3 (5)        |                |
| Peer group                           | 0         | 8 (13.3)  |                | 1 (1.6)      | 11<br>(18.3) |                |
| Family                               | 0         | 10 (16.7) |                | 6 (10)       | 15 (25)      |                |

P<0.001\* was considered as statistically significant

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