



# A study to assess the effectiveness of video assisted teaching on knowledge regarding health problems due to decreased physical activity among secondary school children in a selected school in Varanasi

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**Abstract:** This study aimed to assess the effectiveness of video-assisted teaching on knowledge regarding health problems due to decreased physical activity among secondary school children in a selected school in Varanasi. The study evaluated the impact of video-assisted teaching on improving students' knowledge about health issues related to reduced physical activity. Results would show the efficacy of this teaching method in enhancing awareness among secondary school children. The obtained 't' value 27.749 shows that there is significant difference between pre-test and post-test level of knowledge.

**Key Words:** Knowledge Regarding Health Problems.

## 1. INTRODUCTION:

Child health is fundamental to adult health and wellbeing. Physical activity during childhood is one of the important aspects which promote better health. Physical activity is defined as any bodily movement produced by skeletal muscles that require energy expenditure. Health problems associated with decreased physical activity such as overweight / obesity, poor oral health, diabetes and other chronic physical and mental health problems among adolescence are increasing worldwide. In the present study data was collected on knowledge regarding health problems due to decreased physical activity among secondary school children in a selected school at Varanasi. Health problems associated with decreased physical activity among adolescence is increasing worldwide. The prevalence of hypertension among adolescents is 4.5% and by the age of 15 more than 25% of obese adolescents have early signs of diabetes. Among obese youth 70% have at least one risk factor of cardiovascular disease by the age of 20.

## 2. OBJECTIVES:

- To assess the knowledge regarding health problems due to decreased physical activity among secondary school children in a selected school in Varanasi.
- To evaluate the effectiveness of video assisted teaching on knowledge regarding health problems due to decreased physical activity among secondary school children.
- To find out the association between pretest level of knowledge and selected socio demographic variables.

## 3. MATERIAL AND METHODOLOGY:

A quasi experimental one group pre-test post-test design was used for this study. The study was carried out in selected school at Varanasi. The sample comprised of 100 school children studying in 8th, 9th and 10th standard in a selected school at Varanasi. The students were selected by stratified random

sampling. The data collection was carried out Formal written permission was obtained from the authorities to conduct the study. Data was collected by administering a self-administered knowledge questionnaire before and after administration of video assisted teaching. The data was analysed by using descriptive and inferential statistics. Paired 't' test was used to identify the effectiveness of video assisted teaching and correlation co-efficient test was used to find the association between the pretest level of knowledge with selected socio-demographic variables.



#### 4. MAJOR FINDINGS AND RESULTS:

The study result shows that 71% of children had moderately adequate knowledge in pretest, 29% had inadequate knowledge and no one had adequate knowledge and 59% of children had moderately adequate knowledge in the post test, 41% had adequate knowledge and no one had inadequate knowledge. The obtained 't' value 27.749 shows that there is significant difference between pretest and post-test level of knowledge. There was a significant association between Variable gender ( $\chi^2=4.801$ ) with pretest level of knowledge. There was no significant association between variables of standard ( $\chi^2 = 1.778$ ), religion ( $\chi^2 = 1.069$ ), type of diet ( $\chi^2 1.095$ ), type of family ( $\chi^2 1.3$ ) educational status of father ( $\chi^2 = 5.958$ ) educational status of mother ( $\chi^2 = 6.162$ ) occupation of father ( $\chi^2 = 3.887$ ) occupation of mother ( $\chi^2 = 3.914$ ) monthly income of family ( $\chi^2 6.834$ ), number of hours spending in physical activity ( $\chi^2 = 1.129$ ) and source of information regarding health problems due to decreased physical activity ( $\chi^2 = 0.654$ ) with pretest level of knowledge. Thus it can be interpreted that there is significant association between the pre-test level of knowledge with socio-demographic variable gender and no association with other socio-demographic variable.

**TABLE 1:** Frequency and percentage distribution of children according to socio demographic variables.

| N=100                         |                     |               |              |
|-------------------------------|---------------------|---------------|--------------|
| Demographic variables         | Category            | Frequency (f) | Percentage % |
| Gender                        | Male                | 59            | 59.0         |
|                               | Female              | 41            | 41.0         |
| Standard                      | VIII std            | 35            | 35.0         |
|                               | IX std              | 35            | 35.0         |
|                               | X std               | 30            | 30.0         |
| Religion                      | Hindu               | 93            | 93.0         |
|                               | Muslim              | 5             | 5.0          |
|                               | Christian           | 1             | 1.0          |
|                               | Others              | 1             | 1.0          |
| Type of diet                  | Mixed               | 47            | 47.0         |
|                               | Vegetarian          | 53            | 53.0         |
| Types of Family               | Nuclear             | 37            | 37.0         |
|                               | Joint               | 56            | 56.0         |
|                               | Extended            | 7             | 7.0          |
| Education status of Father    | Illiterate          | 6             | 6.0          |
|                               | Primary School      | 7             | 7.0          |
|                               | Middle School       | 8             | 8.0          |
|                               | High School         | 22            | 22.0         |
|                               | Intermediate/ PUC   | 8             | 8.0          |
|                               | Graduate            | 29            | 29.0         |
|                               | Post Graduate       | 20            | 20.0         |
| Education status of Mother    | Illiterate          | 5             | 5.0          |
|                               | Primary School      | 4             | 4.0          |
|                               | Middle School       | 5             | 5.0          |
|                               | High School         | 32            | 32.0         |
|                               | Intermediate/ PUC   | 12            | 12.0         |
|                               | Graduate            | 27            | 27.0         |
| Occupational status of Father | Post Graduate       | 15            | 15.0         |
|                               | Government Employee | 39            | 39.0         |
|                               | Private Employee    | 22            | 22.0         |
|                               | Self Employed       | 38            | 38.0         |
| Occupational status of Mother | Un Employed         | 1             | 1.0          |
|                               | Government Employee | 18            | 18.0         |
|                               | Private Employee    | 15            | 15.0         |
|                               | Self Employed       | 15            | 15.0         |
|                               | Un Employed         | 52            | 52.0         |



|  |                    |    |      |
|--|--------------------|----|------|
| Monthly Income of the Family                   | Less than Rs. 5000 | 7  | 7.0  |
|  | Rs. 5000 – 10000   | 25 | 25.0 |
|  | Rs. 10001 – 15000  | 28 | 28.0 |
|  | Above Rs. 15000    | 40 | 40.0 |
| Duration of Time spending in physical activity | 2 hours            | 49 | 49.0 |
|  | 1 hours            | 22 | 22.0 |
|  | 30 minutes         | 17 | 17.0 |
|  | 15 Minutes         | 7  | 7.0  |
|  | Not spending       | 5  | 5.0  |
| Source of information                          | Mass Media         | 34 | 34.0 |
|  | Health person      | 33 | 33.0 |
|  | Formal education   | 18 | 18.0 |
|  | Self-reading       | 15 | 15.0 |

**TABLE 2:** Area wise range, mean, standard deviation and mean percentage of pre-test knowledge score of children health problems due to decrease physical activity.

N=100

| Assessment  | No. of items | Range   |         | Mean  | SD    | Mean % |
|---|--------------|---------|---------|-------|-------|--------|
|   |              | Minimum | Maximum |       |       |        |
| Introduction                                      | 5            | 0       | 5       | 2.38  | 1.071 | 47.6   |
| Benefits of physical activity                     | 4            | 0       | 4       | 1.66  | 1.085 | 41.5   |
| Sedentary life style                              | 2            | 0       | 2       | 0.48  | 0.627 | 24     |
| Causes of decreased physical activity             | 1            | 0       | 1       | 0.45  | 0.500 | 45     |
| Health problem due to decreased physical activity | 16           | 0       | 12      | 5.30  | 2.227 | 33.13  |
| Measures to improve physical activity             | 2            | 0       | 2       | 1.06  | 0.722 | 53     |
| Overall   | 30           | 6       | 19      | 11.33 | 3.201 | 37.77  |

**TABLE 3:** Area wise range, mean, standard deviation and mean percentage of post-test knowledge score of children health problems due to decrease physical activity.

N=100

| Assessment  | No. of items | Range   |         | Mean  | SD    | Mean % |
|---|--------------|---------|---------|-------|-------|--------|
|   |              | Minimum | Maximum |       |       |        |
| Introduction                                      | 5            | 2       | 5       | 3.54  | 0.858 | 70.8   |
| Benefits of physical activity                     | 4            | 1       | 4       | 2.46  | 0.834 | 61.5   |
| Sedentary life style                              | 2            | 0       | 2       | 1.05  | 0.642 | 52.5   |
| Causes of decreased physical activity             | 1            | 0       | 1       | 0.90  | 0.302 | 90     |
| Health problem due to decreased physical activity | 16           | 6       | 15      | 9.63  | 1.857 | 60.19  |
| Measures to improve physical activity             | 2            | 0       | 2       | 1.68  | 0.490 | 84     |
| Overall   | 30           | 15      | 27      | 19.26 | 2.452 | 64.2   |

**TABLE 3:** comparison of Pre and Post-test knowledge score of children health problems due to decrease physical activity.

N=100

| Area of knowledge                     | Pre-test |       | Post-test |       | Difference |       | Students paired test | Inference |
|---------------------------------------|----------|-------|-----------|-------|------------|-------|----------------------|-----------|
|                                       | Mean     | SD    | Mean      | SD    | Mean       | SD    |                      |           |
| Introduction                          | 2.38     | 1.071 | 3.54      | 0.858 | 1.160      | 1.269 | t=9.141              | *         |
| Benefits of physical activity         | 1.66     | 1.085 | 2.46      | 0.834 | 0.800      | 1.223 | t=6.543              | *         |
| Sedentary life style                  | 0.48     | 0.627 | 1.05      | 0.642 | 0.570      | 0.844 | t=6.754              | *         |
| Causes of decreased physical activity | 0.45     | 0.500 | 0.90      | 0.302 | 0.450      | 0.557 | t=8.074              | *         |



|   |       |       |       |       |       |       |          |   |
|---|-------|-------|-------|-------|-------|-------|----------|---|
| Health problem due to decreased physical activity | 5.30  | 2.227 | 9.63  | 1.857 | 4.330 | 2.118 | t=20.444 | * |
| Measures to improve physical activity             | 1.06  | 0.722 | 1.68  | 0.490 | 0.620 | 0.826 | t=7.505  | * |
| Overall   | 11.33 | 3.201 | 19.26 | 2.452 | 7.930 | 2.858 | t=27.749 | * |

p- 0.000, df=99, \* - significant at 0.05 level of significant

## 5. DISCUSSION:

A longitudinal study was conducted to document physical activity in south Indian school children aged between 8-15 in 2006 and 2007. Physical activity assessed by administering questionnaire at base line and follow up in 2006 and 2007. Frequency and duration of activity was recorded and metabolic equivalent assigned. For each daily activity and intensity were computed. Children were categorized by age group, gender and socio-economic status. There was decline in physical activity over year. Sedentary activities were higher in children aged 11 years, intensity of moderate to vigorous physical activity was higher in boys than girls. Over one year's physical activity at school significantly decreased ( $P<0.001$ ). There was also significant decrease in moderate to vigorous physical activity ( $P<0.001$ ) with interaction effects of age group ( $P<0.001$ ) and gender. An experimental study was conducted to screen the physical activity level in children on parents of 6-8-year-old children at, University of Bristol, Bristol, UK. There were 75 participants who provided consent and were randomized Intervention participants were invited to attend an eight week parenting program with each session lasting 2 hours. Children and parents wore an accelerometer for seven days and minutes of moderate-to-vigorous intensity PA (MVPA) were derived. Parents were also asked to report the average number of hours per day that both they and the target child spent watching TV. Measures were assessed at baseline (time 0) at the end of the intervention (week 8) and 2 months after the intervention had ended (week 16). The proportion of children in the intervention group watching  $\geq 2$  hours per day of TV on weekend days decreased after the intervention (time 0=76%, time 1=39%, time 2=50%), while the control group proportion increased slightly (79%, 86% and 87%).

## 6. INTERPRETATION AND CONCLUSION:

The findings of this study support the need for conducting an education programme on health problems due to decreased physical activity among school children. The findings of this study support that video assisted teaching was effective in improving the knowledge of the secondary school children regarding health problems due to decreased physical activity.

## 7. LIMITATION:

- This study is limited to 100 samples
- The study is limited to secondary school children
- This study is limited to selected school in Varanasi

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