Research Article

Effectiveness of a Self-instructional Booklet for Healthy Eating Habits of School Students

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ABSTRACT

Aim of the Study: The aim of the study was to determine whether the self-instructional booklet made any change in the knowledge and practice with regard to healthy eating habits of middle schoolchildren. **Materials and Methods:** The conceptual framework used in this study was based on a modified effectiveness model. The independent variable was the self-instructional booklet, and the dependent variables were knowledge and practice on healthy eating habits. The study was conducted in a selected government school, Sulur, Coimbatore. The pre-test was conducted by giving a self-administered knowledge questionnaire and practice checklist to 60 students in the various age categories and selected by systematic random sampling technique. After the pre-test, orientation was given to the students regarding the purpose of the study, and the self-instructional booklet was issued to the students and asked them to read the booklet and practice the diet provided in the booklet. After 25 days, post-test was conducted using the same self-administered questionnaire and checklist to the same group of students. **Results:** The data were analyzed using descriptive and inferential statistics. The result of the study showed that before the intervention overall mean knowledge score regarding eating habits was 8.366 (41.83%), whereas after the intervention, the mean knowledge score had increased to 14.97 (74.85%). Statistically, there has been a considerable difference between the mean knowledge score on eating habits before and after the intervention. Before the intervention, the mean practice score regarding healthy and unhealthy eating habits was 8.3 (83%), whereas after the intervention, the mean practice score had slightly increased to 9.85 (98.5%). Statistically, there was a significant difference between the mean practice score on eating habits before and after the intervention. **Conclusion:** This study concluded that there was a significant increase in the mean knowledge score and mean practice score of eating habits after the intervention.

Keywords: Eating Habits, Health, Booklet, Students

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Introduction

"To consume is a necessity, however, to eat intelligently is an art." The word nutrients itself way "the process of nourishing or being nourished, in particular, the technique

by means of which a living organism assimilates meals and makes use of it for the increase and replacement of tissues." Human beings need food for sustenance. Food helps to maintain growth, repair, and to give energy, thereby enabling human beings to work, remain healthy and to live long. Food, nutrition, and health are strongly related to providing energy to the body.

Nutrition describes the processes through which all the foods someone eats are taken in and the vitamins that the frame needs are absorbed. Good nutrition for teenagers can assist sickness and promotes the right health, growth, and development. Adequate intakes of vitamins and minerals are an important part of nutrition. Vitamins are organic substances present in food. They are required by the body in small amounts to regulate metabolism and to maintain

normal growth and functioning. Minerals are vital because they are the building blocks that make up the muscles, tissues, and bones.[1]

Good nutrition is essential for the attainment of normal growth and development during human life. Physical growth, intellectual development, learning, and behavior are affected by malnutrition. Adequate nutrition is needed for adult life maintenance for optimum health.

Healthy eating is encouraged among children in the belief that they will benefit from the long-term physiological consequences of a good diet in childhood and that healthy eating in childhood is more likely to lead to healthy eating later in life. Overconsumption of energy-dense foods has been linked with obesity. Diets high in fruit and vegetables have been associated with reductions in a range of diseases including certain cancers, cardiovascular heart disease, hypertension, and tooth decay. Recent surveys have found that British children are eating less than half the recommended five portions of fruit and vegetables per day.

Nutrition is particularly important in the adolescent's years, which are a time of rapid growth and development. Healthy eating and a healthy lifestyle assist children to develop and grow to their potential, thus contributing to optimal educational outcomes and a healthy adult life.[2] Furthermore, nutrition during adolescent period is also important in preventing lifestyle diseases such as obesity, dental disease, type 2 diabetes, hypertension, in later life, osteoporosis, cardiovascular disease, and a range of cancers.

Dietary deficiency may be due to ignorance, food fads, illiteracy, size of the family, cultural factors, gender discrimination, poverty, etc. It is, therefore, very important to educate adolescents, their parents, community, and society about the nutritional needs of adolescents and young adults and planning and preparing nutritious diet using inexpensive food.[3]

The aim of the study was to determine whether the self-instructional booklet made any change in the knowledge and practice with regard to eating habits of middle schoolchildren.

Methodology and its Structure

The findings and preparation of a self-instructional booklet are a tedious process, and it consists of a lot of discrepancies also. The following approach describes the methodologies of self-instructional booklet preparation.

Research approach

The evaluative approach was used in this study to evaluate the effectiveness of self- instructional booklet and knowledge and practice of healthy eating habits by the middle schoolchildren. This approach was considered to be the most appropriate to achieve the aim of the study.[4]

Research design

A pre-experimental one group pretest-posttest design was used to assess the effectiveness of self-instructional booklet on healthy eating habits among middle schoolchildren.

O1--------X---------O2.

Where,

O1 - Pre-test (assessed the knowledge and self-reported practice through self-administration questionnaire).

X - Intervention (self-instructional booklet)

O2 - Post-test (on the 25th day, post-test was conducted using the same self-administered questionnaire to assess the knowledge and self-reported practice).

The pre-test was conducted by self-administered questionnaire. On the same day self, the instructional booklet was issued to each student.[5] The students were instructed to read the booklet carefully and follow the healthy eating habits regularly. On the 25th day, post-test was conducted with the same self-administered questionnaire.

Variables in the study

The independent variable was the self-instructional booklet, and the dependent variables were knowledge and practice on healthy eating habits.

The setting of the study

The study was conducted in a government middle school, Sulur.

The population of the study

The population consisted of 145 students in the age of 10–14 years studying from 6th to 8th standards (6th standard - 45, 7th standard - 52, and 8th standard - 48).

Sample size

The sample size was 60, 20 students taken from each of class, who fulfilled the eligibility criteria for sample selection.

Sampling technique

Systematic random sampling technique changed into used to choose the samples.

Sampling criteria

Inclusion criteria

Schoolchildren who were studying from the 6th to 8th standard and who were willing to participate in the study.

Exclusive criteria

Children above 15 years were excluded from the study.

Development of the tool

The tool used for this study was a self-administered questionnaire. The questionnaire consisted of three parts.
Part I:
- Demographic data, which included age, sex, education, and occupation of the parents, monthly family income, and food habits.
- Self-administered knowledge questionnaire was developed to assess the knowledge of healthy and unhealthy eating habits.
- 20 knowledge questions were organized under two headings of healthy eating habits and unhealthy eating habits.[6] The method used was multiple choice questions.
- Practice checklist was developed to assess the practice of students on healthy and unhealthy eating habits.

It consisted of 10 items organized under healthy eating practice and unhealthy eating practice. Two columns were provided to mark the response as yes or no.
The tool was developed using information obtained from a literature review. The questions were formulated and options were determined under each area. The simplicity of language, organization, and clarity of the statement was the few factors kept in mind while preparing the tool.[3]

Data Collection Procedure

A total of 60 students were selected for the main study. The students who were included in the pilot study were excluded from the main study data collection. Prepared three lists from each class (6–8th). Using systemic random sampling technique.
The pre-test was conducted using a self-administered knowledge questionnaire and practice checklist. It took 25–30 min. Following that, the self-instructional booklet was issued to the students and informed them to read the booklet and practice the diet provided in the booklet. The students were also to show the booklet to their parents and relatives. After the 25 days, post-test was conducted using the same self-administered questionnaire to the same group of students during the lunchtime.

Plans for data analysis

The data were analyzed using descriptive and inferential statistics.
Descriptive statistics:
- Frequency and percentage were used to analyze the demographic data, knowledge, and practice on eating habits.
Inferential statistics:
- Chi-square was used to finding out the association of knowledge with selected demographic variables.
- Paired t-test was used to test the hypothesis and the statistical significance.

Results and Discussion

The facts become analyzed the usage of descriptive and inferential statistics. The result of the has a look at confirmed that before the intervention typical imply know-how score regarding eating habits was 8.366 (41.83%), whereas after the intervention, the mean knowledge score had increased to 14.97 (74.85%). Statistically, there was a significant difference between the mean knowledge score on eating habits before and after the intervention [Figure 1].
Before the intervention, the mean practice score regarding healthy and unhealthy eating habits was 8.3 (83%), whereas after the intervention, the mean practice score had slightly increased to 9.85 (98.5%). The mean knowledge score regarding eating habits before and after the intervention is accepted.
After the intervention, the majority of the students, 42 (70%) had a good level of knowledge and 18 (30%) had an average level of knowledge. There was none in a poor level of knowledge [Figure 2].
Before the intervention, 60 (100%) had poor eating habits, whereas after the intervention, majority 57 (95%) had a good practice, only 3 (5%) had a poor practice score.
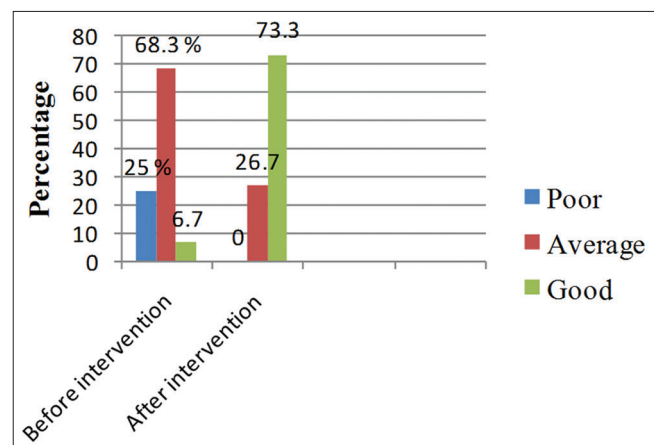Before the intervention, the mean practice score with

Figure 1: Percentage of samples with an overall level of knowledge regarding eating habits before and after the intervention
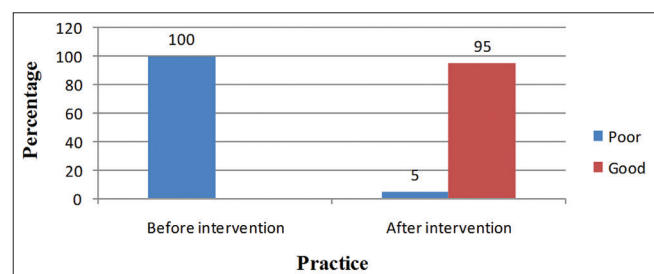

Figure 2: The percentage of overall practice regarding healthy and unhealthy practice before and after the intervention

regard to eating habits was 8.3 (83%), whereas after the intervention, the mean practice score had slightly increased to 9.85 (98.5%). Statistically, there was a significant difference between the mean practice score regarding eating habits. The *t* value calculated was more than the table value (*t* = 10.37). The mean practice score regarding eating habits before and after the intervention is accepted.

Discussion

Demographic characteristics of the sample

Majority of the students were in the age group of 12 years 23 (38.4), most of the families 43 (71.7%) had a monthly income between Rs.1000 and Rs.5000. Half of the families taking 30 (50%) both vegetarian and non-vegetarian diet.

Assessment of knowledge on eating habits

Majority of the samples, 41 (68.3%) had an average level of knowledge before the intervention, whereas after the intervention, 44 (73.3%) had a good level of knowledge. The mean knowledge score increased to 74.85% after the intervention. Statistically, there was a significant difference between the mean knowledge score eating habits before and after the intervention. The mean difference was tested using *t* value calculated more than the table value. Hence, the hypothesis H_1 - there will be a significant difference between the mean knowledge score regarding eating habits before and after the intervention is accepted.

Assessment of practice on eating habits

Before the intervention, 60 (100%) had poor eating practice, whereas after the intervention, 3 (95%) had a good practice, only 3 (5%) had poor eating practice. The mean practice score and standard deviation of the samples on various items of healthy eating habits before and after the intervention is accepted. Before the intervention, of 7 items ranged from 62% to 97%, whereas after the intervention showed the results of 65–98%. There was a difference of 1–5% just a very little difference was noticed,

but for one eating practice, that is, "eat egg daily," the range was 8% noticed.

Association of selected demographic variables with overall knowledge

Chi-square test was used to find the association between knowledge with selected demographic variables. There was a significant association between knowledge on eating habits of gender (χ^2 = 5.17), also in the dietary pattern (χ^2 = 3.53). Females had 42.85% better knowledge about eating habits than males 30.35%. Those who were eating vegetarian and non-vegetarian diet had increased level of knowledge compared to those who eat egg vegetarian.

Conclusion

This study concluded that there was a significant increase in the mean knowledge score and mean practice score of eating habits after the intervention. This study suggests that self-instructional booklet can be used as an effective strategy to promote the knowledge and practice of the students on healthy eating habits. It also helped the students maintain the practice of healthy eating habits for the betterment of their health.

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