



Full Length Research Article

A STUDY TO ASSESS THE KNOWLEDGE AND ATTITUDE OF SCHOOL TEACHERS REGARDING THE SIGNIFICANCE AND IMPLEMENTATION OF FOOD AT MIDDAY MEAL PROGRAM AT SELECTED SCHOOLS OF GOKAK TALUK, WITH A VIEW TO PROVIDE INFORMATION GUIDE SHEET

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ABSTRACT

The school health service is one of the aspects of community health nursing, it refers to providing need based comprehensive services to pupils to promote and protect their health, control diseases and maintain their health. Education plays a vital role in development of the human potential. The Mid-Day Meal (MDM) Program is just what the name implies-providing cooked meals in schools. The idea is simple; the impact significant. This study is intended to assess the knowledge and attitude of school teachers regarding significance and implementation of midday meal program at Gokak taluk. The objectives are to assess knowledge, attitude and associate them with selected demographic characteristics of teachers. Research approach was used is descriptive approach which is a non-experimental design. The target population for the study were selected from teachers of Government Primary Schools, Gokak taluk, Belgaum district, Karnataka. The data collection was made through semi structured questionnaire and 5 point likert's attitude scale which was designed to assess the knowledge and attitude of primary school teachers regarding significance and implementation of mid- day meal program. The results were described by using descriptive and inferential statistics. The respondent's mean knowledge score was 54.22% in genesis and current status of mid-day meal program, 59.0% in nutritional aspect, 54.0% in budget and maintenance, 67.5% in prevention of food borne diseases and the overall mean knowledge was 58.66%. The respondent's mean attitude score was 61.34% in positive statements and 66.13% in negative statements and the overall mean attitude score was 63.5%. The demographic variables analysed in this study, age, educational status, experience, income, source of information and in service education were found to have significant association with knowledge and attitude scores. There was no significant association between religion, sex, type of family, marital status and type of diet with knowledge and attitude scores. The overall findings of the study clearly showed that the primary school teachers had moderate knowledge score (58.66%) and positive attitude (63.5%). It reveals that, if the teachers are provided with some sort of educational interventions such as information booklets, teaching programs, modules on mid day meal program will definitely update their knowledge and develops positive attitude towards mid day meal program, which in turn contribute to improve the total quality of one's health.

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INTRODUCTION

“Healthy Children Healthy Nation”

Food insecurity poses a threat to the health, education, and overall development of children and is of critical concern to governments in developing countries. Governments have addressed this fundamental problem by implementing school meal programs that provide children with at least one nutritionally adequate meal a day.

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These programs are known to lead to higher attention spans, better concentration, and improved class performance. School meal programs also provide parents with a strong incentive to send children to school, thereby encouraging enrolment and reducing absenteeism and dropout rates. School meal programs support health, nutrition, and education goals and consequently have a multi-pronged impact on a nation's overall social and economic development (George Cheriyan, Sharma, 2007). The school is an educational institution where groups of pupils pursue defined studies at defined levels; receive instructions from one or more teachers. The school health service is one of the aspects of community health

nursing, it refers to providing need based comprehensive services to pupils to promote and protect their health, control diseases and maintain their health (Gulani, 2006). The mid day meal program is the outcome of the school health committee recommendation (1961). It was launched in 1961 by ministry of education. The program was launched to enhance the admissions and to retain students to improve literacy and also to improve health status of children. This program is also called as "noon meal program" or "school lunch program", (Gulani, 2006). The mid day meal program is the joint venture of the health and educational department with the aid from UNICEF, CARE and other non governmental organizations (Park, 2007).

Need for the study

Mid Day Meal in schools has had a long history in India. In 1925, a Mid Day Meal Program was introduced for disadvantaged children in Madras Municipal Corporation. By the mid 1980s three States viz. Gujarat, Kerala and Tamil Nadu and the UT of Pondicherry had universalized a cooked Mid Day Meal Program with their own resources for children studying at the primary stage. By 1990-91 the number of States implementing the mid day meal program with their own resources on a universal or a large scale had increased to twelve, namely, Goa, Gujarat, Kerala, Madhya Pradesh, Maharashtra, Meghalaya, Mizoram, Nagaland, Sikkim, Tamil Nadu, Tripura and Uttar Pradesh. In another three States, namely Karnataka, Orissa and West Bengal, the program was being implemented with State resources in combination with international assistance. Another two States, namely Andhra Pradesh and Rajasthan were implementing the program entirely with international assistance (Kasthuri Sundarrao, 2005). The Mid-Day Meal (MDM) Program is just what the name implies-providing cooked meals in schools. The idea is simple; the impact significant. Many children reach school on an empty stomach in the morning, either because they are not hungry at that time or because their parents are too busy to arrange an early breakfast, or they are just too poor. Hunger is a barrier to learning (Magaret, 1980). Nutritional support to primary education is considered as a means to achieve the objective of providing free and compulsory universal primary education to all the children below the age of 14 years by giving a boost to Universalization of primary education through increased enrollment. Improved attendance and retention and promoting nutritional status of primary school children simultaneously. With children from all castes and communities eating together, it is also a means of bringing about better social intergration (National Programme of Nutritional Support to Primary Education, 2006).

In India, today the nutritional deficiencies constitute a major public health problem. It is estimated that gross malnutrition is said to kill around 5, 00,000 of our infants and children, $\frac{3}{4}$ of the pediatric population is suffering from malnutrition. Several programs have been launched to improve the enrollment to school, to reduce the school dropouts. One such program is "Mid-day Meal Program". The Mid-day Meal Program is also called as "School Health Program" is one of the largest and earliest Supplementary Nutritional Program in the country. It started in 1956 in TamilNadu; the beneficiaries are children attending government primary schools (6-14years). The meal consists of 450 kcal of carbohydrates and 12 Gms of protein. The program coves about 12 crore children Nation wide (Rajinderpaul, 2001).

Anuradha de, Claire Noronha, Meera Samson (2005) conducted a study "Teachers' perceptions about the meal" they opined that, Teachers play a crucial role in the success of the midday meal scheme. They have to monitor the quantity and quality of the meal served to the children on an everyday basis, they need to minimize its impact on teaching time, They need to maximize supplementary benefits such as socializing children of different backgrounds to eat together. At a deeper level, they need to be sensitized to be less patronizing to children in their care. Such attitudes are particularly irksome when parents themselves feel that the children getting food reflects on perceptions about their poverty and inability to feed their children. Most important of all, they need to be made aware of how parents and children are depending on them (Anuradha De, 2005). In addition, the study indicates that Teachers were generally positive about the meal. Most did not feel it was an additional work responsibility. Also they felt it was useful in their schools where there were many children from deprived socioeconomic backgrounds. But there were teachers who were negative for various reasons. Several teachers preferred dry food because it was easier to check quantity or quality or nutritive value or it was easier to give it to the children. Dry food had less chance of being confused by parents as a substitute for food they provided at home (Julia blue, 2005). So keeping in view the above information about Mid-day Meal Program, the investigator has selected a study to assess knowledge and attitude of school teachers regarding Mid-day Meal Program.

STATEMENT OF PROBLEM: "A Study To Assess The Knowledge And Attitude Of School Teachers Regarding The Significance And Implementation Of Food At Midday Meal Program At Selected Schools Of Gokak Taluk."

OBJECTIVES OF STUDY:

- To assess the attitude of school teachers regarding the significance and implementation of midday meal program
- To find out the association between knowledge scores with selected demographic variables.
- To find out the association between attitude scores with selected demographic variables
- To find out the correlation between knowledge and attitude of school teachers regarding midday meal program.

Assumptions

The study is based on the following assumptions

- School teachers may have insufficient knowledge regarding significance and implementation of midday meal program.
- School teachers may lack positive attitude towards regarding significance and implementation of midday meal program.

Hypothesis

H₁ _ There is a positive correlation between knowledge and attitude of teachers regarding significance and implementation of mid day meal program.

H₂ – There is an association between knowledge of teachers and demographic variables.

H₃ There is an association between attitude of teachers and demographic variables.

Variable

Dependant variable: knowledge and attitude of school teachers regarding midday meal program.

Demographic variable: age, gender, educational qualification, professional experience, religion, type of school, source of information on midday meal program.

Operational Definations

Assess: In this study, assess refers to evaluating the level of knowledge of school teachers regarding the midday meal program

Attitude: It refers to personal opinions or views of primary school teachers regarding midday meal program.

Food: In this study, food refers to a substance containing essential nutrients provided to children through midday meal program.

Implementation: In this study, it refers to an application or execution of midday meal program.

Knowledge: It refers to the correct answers or responses by the government primary School teachers to the semi-structured questionnaire regarding midday meal program.

Mid day meal program: In this study, it refers to a program involving provision of lunch free of cost to schoolchildren on all the working days in the primary school.

School Teachers: In this study, teachers refer to a person qualified with D.Ed (Diploma in Education) and working in selected primary schools of gokaktaluk.

Significance: In this study, it refers to the importance of mid day meals

School: In this study, it refers to a government or private institutions established to provide formal education to children.

Conceptual Framework

The conceptual framework for the present study is based on Pender's Health Promotion Model (Pender, 1996).

According to this model, the primary school teacher's knowledge and attitude are modified by the factors like age, sex, education, teaching experience and type of school etc., These factors influence the school teachers to engage in health promoting behaviours/activities like

- Prevention of food borne diseases
- Efficient use of resources
- Promote healthy behaviour among children
- Early identification of ailments
- Regular and frequent health checkup
- Maintain good personal hygiene
- Diet improvement of nutritional status
- Maintenance of records

The findings of the study is aimed at the Identification of school teacher's knowledge and attitude regarding the significance and implementation of midday meal program and its improvement.

MATERIALS AND METHODS

Research Approach: Exploratory Approach.

Research Design: The descriptive survey design.

Setting of the Study: The study subjects were selected from the selected Schools of Gokak taluk, Belgaum District, Karnataka, India

Target Population: The target population for the present study was school teachers working at selected Primary Schools of Gokak taluk, Belgaum District, Karnataka, India.

Sample: A sample consists of a subset of the units that comprises the population. School teachers working at selected Primary Schools of Gokak taluk, Belgaum District, Karnataka, India.

Sample Size: The sample size was 50 Primary school teachers.

Sampling Technique: The Convienient sampling is a type of non-probability sampling method.

Criteria for Selection of Sample

Inclusion Criteria

- School teachers who are present at the time of data collection at selected primary schools.
- School teachers who are willing to participate in the study.

Exclusion Criteria

- Teachers who are not willing to participate in the study.
- Teachers who are not available at the time of study.
- Teachers who are sick/ill.

Development of Tool

The tool was developed by the investigator based on the research problems, review of the related literature and with suggestions and guidance from the experts in the field of community medicine and paediatric nursing.

Description of Tool

The tool consists of a semi structured questionnaire and 5 point attitude scale (likert's type). It is divided into 3 parts, they are as follows

Part I: This part of the tool consists of questions related to demographic data consists of 06 items.

Part II: This part of the tool consists of items related to knowledge of school teachers regarding midday meal program.

It consists of 25 items and these are objective type multiple choice questions that help in assessing their knowledge.

This part of the tool is further divided into 2 sections, they are

Section A: - Significance of the midday meal program.

Section B: - Implementation of midday meal program.

Part III: This part of the tool consists of 20 statements related to attitude of primary school teachers towards mid day meal program.

Scoring of the Items

For knowledge items each correct answer was given a score of 'one' and wrong answer a score of 'zero.' For attitude statements a range score from 5-1 for positive statements and reverse scoring of 1-5 was given for negative statements.

Validity of the Tool

The prepared tool was submitted to 14 experts who include the experts in the field of paediatric health nursing, paediatrician and statistician. According to expert's suggestions the tool was modified.

Reliability of the Tool

The tool after the validation was subjected to test for its reliability. The semi structured questionnaire and 5 point likert's attitude scale was administered to 5 samples. The reliability of the tool was computed by split half Karl Pearson's correlation formula (raw score method). The reliability co-efficient of knowledge found to be 0.963 and reliability co-efficient of attitude found to be 0.765 revealing the tool is feasible for administration for the main study. Since the reliability co-efficient for scale $r > 0.70$, the tool was found to be reliable and feasible. ($r = 2r / 1+r$) Brawn's prophecy formula was used.

Description of the Information guide sheet

- Introduction
- Genesis and current status of mid day meal program
- The mid day meal program in Karnataka
- Objectives of mid day meal program
- Nutritional aspect of mid day meal program
- Budget and maintenance of mid day meal program
- Benefits/ advantages of mid day meal program
- Prevention of food borne diseases
- Role of teachers in mid day meal program

Major Findings

Demographic Characteristics of Respondents

The results indicated that (78%) of respondents were females as compared to 22% of male respondents. Further, it depicts that majority (84%) of the respondents had qualified TCH/D.Ed, 12% have completed D.Ed with graduation and remaining 04% were B.Ed holders. The result shows that 48% of the respondents had 11-15 years of teaching experience compared with 22% with 6-10 years, 22% with 16 & more

years and 08% with 0-5 years of teaching experience. Majority (90%) of the respondents were Hindus and 08% of respondents were Muslims followed by 02% of Christians. Majority (50%) of respondents had obtained information regarding Mid day meal program from head master instructions followed by 24% from Mass media followed by 24% from training program and remaining 02% of them obtained information from books.

Aspect wise Knowledge Score of Respondents on Mid day meal program

The total mean knowledge score was found to be 58.66% with SD of 17.16% on mid day meal program. The aspect wise mean knowledge score of respondents was ranged between 54.00% and 67.50%. The highest (67.50%) mean knowledge score was found in the aspect of Prevention of food borne diseases followed by Nutritional aspects (59.00%), Genesis and current status (54.22%), Budget and maintenance (54.00%).

Aspect wise Attitude Score of Respondents on Mid day meal program

In the positive statements, the respondents had mean attitude score of 61.34% and in the negative statements; the respondents had mean attitude score of 66.13%. Which indicate that most of the teachers have favourable attitude towards mid day meal program but Remaining subjects need to change their attitude. Hence the investigator will develop information guide sheet intending to bring about change in their attitude towards mid day meal program. The overall mean attitude score was found to be 63.50% with SD as 10.46% towards mid day meal program.

Overall Mean Knowledge and Attitude Scores of Respondents on Mid day meal program

The over all mean knowledge score of respondents on Mid day meal program was found to be 58.66% and SD as 17.16% as compared to over all mean attitude score of 63.50% and SD as 10.46%.

Findings related to knowledge and attitude of school teachers

- The respondent's mean knowledge score was 54.22% in genesis and current status, 59.0% in nutritional aspect, 54.0% in budget and maintenance, 67.5% in prevention of food borne diseases and the overall mean knowledge was 58.66%.
- The respondent's mean attitude score was 61.34% in positive statements and 66.13% in negative statements.

Findings related to association of knowledge and attitude scores with selected demographic variables

- There is a positive significant relationship between knowledge and attitude of respondents on mid day meal program i.e., higher the knowledge score better is the attitude of respondents ($r = +0.696$).
- Among the demographic variables analysed in this study, educational status, experience, source of information were found to have significant association with knowledge and attitude scores. There was no

significant association between gender, religion, type of school with knowledge and attitude scores.

DISCUSSION

The above demographic variables are similar to the study conducted by Hanamantagouda. N. Patil on Knowledge and Practice of School Teachers Regarding Management of Minor Ailments of School Children at Selected Government Schools in Bangalore Rural District with a View to Develop Self-Instructional Module. The findings are also in agreement with the findings of Al-Jundi SH, Al-Waeili H, Khairallah K (2005)¹⁰. The present study is also supported by the study conducted by Goyette CH, Connors CK, Wrich RF (1988) who suggests teachers would have to be given adequate orientation in early diagnosis of common health problems (Goyette, 1988). The findings of the present study coincides with the study conducted by Graham H, Zidenberg-Cherr S(2008) on California teachers perceive school meals as an effective nutritional tool to promote healthful eating habits (Inayama, 2013).

To assess the knowledge of school teachers regarding significance and implementation of midday meal program

The respondent's mean knowledge score was 54.22% in genesis and current status of mid-day meal program, 59.0% in nutritional aspect, 54.0% in budget and maintenance, 67.5% in prevention of food borne diseases and the overall mean knowledge score was 58.66%. The findings are similar with the study conducted by Soliah LA, Newell GK, Vaden AG, Dayton AD(2005)conducted a study on Elementary teachers' nutrition knowledge, attitudes, and practices (Mansour, 2002).

To assess the attitude of school teachers regarding significance and implementation of midday meal program

The respondent's mean attitude score was 61.34% in positive statements and 66.13% in negative statements and the overall mean attitude score was 63.5%. The findings of the present study coincides with the study conducted by National Institute of Public Cooperation & Child Development, Indore (2007) on the Mid-Day Meal Scheme in Madhya Pradesh (Soliah, 2005). The findings are also similar with the study conducted by Soliah LA, Newell GK, Vaden AG, Dayton AD (2005) conducted a study on Elementary teachers' nutrition knowledge, attitudes, and practices.¹⁵ The finding also coincides with the study conducted by Anuradha de, Claire Noronha, Meera Samson (2005)conducted a study on Teachers' perceptions about the meal. The results indicated that teachers were generally positive about the meal (Anuradha De, 2005).

To find out the association between the level of knowledge and attitude with the selected demographic variables

Among the demographic variables analysed in this study, Educational status, professional experience, source of information were found to have significant association with knowledge and attitude scores.

Education - The data subjected for statistical test, indicates that the association is statistically significant ($X^2 = 15.53^*$ at $P < 0.05$ for knowledge and $X^2 = 15.53$ at $P < 0.05$ for attitude). It is clearly indicated that there is significant association

between knowledge and attitude level and education of the respondents on mid day meal program. It is proved that, education is for life, Education imparts knowledge and brings up one's attitude towards any socially acceptable programs as such mid day meal program. The findings of the study coincides with the study conducted by Soliah LA, Newell GK, Vaden AG, Dayton AD(2005) conducted a study on Elementary teachers' nutrition knowledge, attitudes, and practices (Julia blue, 2005). Teaching Experience - The value of X^2 is found to be significant at 5% level ($X^2 = 29.52^*$, $P < 0.05$ for knowledge and $X^2 = 25.77^*$, $P < 0.05$ for attitude). It indicates that there is significant association between knowledge and teaching experience of respondents. The mid day meal program is an earliest and largest national program started in the year 1956. The teachers since then are the supervisors of the program at the school level which opens a whole lot of opportunities for teachers to improve their knowledge and have a positive attitude towards mid day meal program. The findings also coincides with the study conducted by Inayama T, Kashiwazaki H, Sakamoto M. (2003) conducted a study on Role of school lunch in primary school education a trial analysis of school teachers' views using an open-ended questionnaire (Inayama, 2003).

Source of information- The value of X^2 is found to be significant at 5% level ($X^2 = 27.24^*$, $P < 0.05$ for knowledge and $X^2 = 22.52^*$, $P < 0.05$ for attitude). It indicates that there is significant association between knowledge and attitude level and the Source of Information. There was no significant association between gender, religion, and type of school with knowledge and attitude scores. Gender- The data subjected for statistical test, indicates that the association is statistically non-significant ($X^2 = 2.68^{NS}$ at $P > 0.05$ for knowledge and $X^2 = 0.33^{NS}$ at $P > 0.05$ for attitude). It is clearly indicated that there is non-significant association between knowledge and attitude level and sex of the respondents on mid day meal program. The findings are in agreement with Al-Jundi SH, Al-Waeili H, Khairallah K (2005), (Mansour, 2002). Religion- The data subjected for statistical test indicates that the association is statistically non-significant ($X^2 = 5.36^{NS}$ at $P > 0.05$ for knowledge and $X^2 = 1.91^{NS}$ at $P > 0.05$ for attitude). It is clearly indicated that there is no significant association between knowledge and attitude level and religion of the respondents on mid day meal program. Type of school- The X^2 value was found to be non significant. It indicates that there is no significant association between knowledge level and the type of the school to which they belong ($X^2 = 0.028^{NS}$, $P > 0.05$ for knowledge and $X^2 = 0.09^{NS}$, $P > 0.05$ for attitude). There is a positive significant relationship between knowledge and attitude of respondents on mid day meal program i.e., higher the knowledge score better is the attitude of respondents. The value of the correlation coefficient ($r = +0.696$) indicates positive correlation between knowledge and attitude of respondents. The study is supported by the study conducted by Soliah LA, Newell GK, Vaden AG, Dayton AD (2005) conducted a study on Elementary teachers' nutrition knowledge, attitudes, and practices (Soliah, 2005).

Implications of the Study

Nursing Practice

Education program with effective teaching strategies will help primary school teachers to improve their knowledge in prevention of food borne disease, nutritional assessment of

children etc. Various Teaching strategies can be used to improve in their knowledge and attitude in significance and implementation of mid-day meal program in order to promote health of the children in schools.

Nursing Education

Nurses at the post-graduate level need to develop skills in preparing health teaching material in various health aspects in mid day meal program, newer techniques have to be used for motivating staff participation. Emphasis should be made on in service education and training programs in the department to increase the knowledge and attitude of school teachers.

Nursing Administration

As a part of school health service, the nurse administrator should plan and organize continuing education program for primary school teachers to motivate them in conducting teaching programs on mid day meal and other nutritional programs in schools. School teachers can also teach to students about the same. She/he should be able to plan and organize program taking in to consideration the cost effectiveness and carry out successful educational program. The nurse administrators should explore their potentials and encourage innovative ideas in preparation of appropriate teaching material. She should organize to see that sufficient manpower, money and material for disseminating health information.

Nursing Research

Various studies conducted by researchers showed that the food borne diseases among school children are increasing. There is need for extensive research in school health. Research should focus on improvement of knowledge, attitude and practice of school teachers regarding health and nutritional aspects. Research should be done on new methods of teaching to enable school teachers to improve knowledge. Research also should focus on emergency treatment and care of food borne diseases among school children to enable children to have a better quality of life in school period. Thus, the present investigation offer infinite scope and potential implications for nursing practice, training and research aspects of school children.

Limitations

- Small number of respondents and purposive sampling limits the generalization of the study.
- The sample was limited to 50 only.
- Long-term follow-up could not be carried out due to time constraints.
- Samples were only from the selected Schools of gokaktaluk.

Suggestions

- Community health nurse should organize programs to educate the school teachers regarding health and nutritional aspects and various nutritional programs.
- Awareness programs can be arranged for the school personnel and parents regarding mid day meal program.

- A planned teaching program can be conducted on knowledge, attitude and practice regarding mid day meal program.

Recommendations

Based on the findings of the study the following recommendations are made.

- A similar study may be conducted on a larger sample for wider generalization.
- A similar study can be conducted among parents and public.
- A similar study may be conducted in other back ward districts, taluks, villages etc.,
- Manuals, information booklets and self-instruction module may be developed.
- The comparative study can be conducted on urban schools and rural schools.
- The similar study may be replicated among private school teachers.
- An experimental study can be conducted with structured teaching program on knowledge, attitude and practice of school teachers regarding mid day meal program.

Conclusion

The study was conducted to Knowledge And Attitude Of School Teachers Regarding The Significance And Implementation Of Food At Midday Meal Program At Selected Schools Of Gokak Taluk .In the present study 50 school teachers as respondents were selected using convenient sampling method procedures. The research approach adapted to the present Study is a descriptive survey design with a view to Knowledge and attitude of school teachers regarding the significance and implementation of food at midday meal programThe data was collected by a structured questionnaire. The data was Interpreted with suitable application of statistical Methods

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