

Impact of Mid-day Meals Programme of Akshaya Patra on Children in India**S.R. Sandhya Ran , Research Scholar, Manipal University****Bhavan's Management Research Centre****M P Birla Institute of Management,****No 43, Race Course Road, Bengaluru-560001.****Abstract**

The Study makes an attempt to study the impact of mid-day meals programme in a Not for Profit (NPO) of repute. The Akshaya Patra Foundation (TAPF) in India is serving mid-day meal to children who are studying in Government schools. The study covers 593 children over nine centralized kitchen across six States of India. An instrument was developed covering Demographics in Part I and twenty characteristic variables in part II. The instrument was initially developed in English and was translated to five different languages, Kannada, Hindi, Gujarati, Odia and Telugu and administered to children. The sample size was determined as 551 and actual coverage turned out to be 593. The average age of children is 12.98 years. The class of study of these children is between 5th & 10th standards. The states of the children belong to are Karnataka, Telangana (AP), Orissa, Gujarat, Rajasthan and Uttar Pradesh. The kitchen covered are in following cities: (1) Hyderabad (2) Gandhinagar (3) H K Hill, Bengaluru (4) Ballari (5) Hubballi (6) Vasanthpura, Bengaluru (7) Puri (8) Jaipur & (9) Vrindhavan.

The results of the study have led to rejection of all null hypotheses except one. Children are eating food, curds and sweets. Significant improvement in learning and personnel hygiene was noticed. There is overall improvement performance of students. The children have picked up healthy living habits such as washing hand before food, drinking clean water, washing plates before and after eating food, wearing clean clothes and combing hair every day. The results of multiple regression analysis with age as dependent variable have indicated significance of relationship between response variables and the dependent variable. The children are sharp enough to react that they come to school not for eating food alone as their age grows.

The mid-day meals programme of TAPF is a mega experiment in mass food delivery system in India. The study has revealed some critical points to ponder over as the experiment spreads to several States & Union Territories in India. The programme is all inclusive in its approach & has made its impact on the target group. The hot food served has made positive impact on the learning, health & habits. Some areas of improvement are suggested to make the programme more effective by continuous training in distribution of food & learning of clean habits by children.

Key words: *Not for Profit Organization(NPO), Impact, Mid-day meal, characteristics of interest & personal hygiene.*

Impact of Mid-day Meals Programme of Akshaya Patra on Children in India**The Akshaya Patra Foundation (TAPF)**

The present study is a juxtaposition of the application of basic concepts of TQM and its application in a Not for Profit Organization (NPO) of repute. While profit is not the consideration of an NPO, the goodwill for the society will dictate the use of concepts, tools & techniques which may find application in an organizational environment. The AkshayaPatra Foundation (TAPF) is an NPO which provides mid-day meal to children studying in Government schools. TAPF exists with interdependencies. The linkages which form the inventory base are the backward linkages. That linkage which establishes relationship with the target group is the forward linkage. Apart from perfect match of activities at both ends of the organization, it has to ensure smooth functioning which will impact the target group. Thus, the study design involves those common parameters which will have one way causal impact on the target group. The selection of target group has to be multidimensional from the NPO point of view. The study involves examination of Children (Target Group) linked to the organization. In accordance with the target group, an instrument was developed to meet the study objectives.

Consumption Level

At the consumption level, the respondents are children. The children studying between 5th & 10th Standard form the population of the study. The total number of children or sample size is 593 (Total population is 13.9 lakhs). Given the spread of Akshaya Patra across ten states in the country, language is a barrier in collecting information. As such, the instrument was in English and was translated into appropriate (five) regional languages.

The Selection Process

The AkshayaPatra Foundation (TAPF), established in 2000 in Bengaluru, is selected for the study as it is the best organization in child youth sector according to The Global Journal 2013¹. TAPF has achieved this status in just twelve years.

The year of establishment of AkshayaPatra kitchen selected for study vary from 2000 & 2015. Those units which are serving food for children since last five consecutive years spread across six States have been selected. This is based on the assumption that to initiate Quality process it would require continuous & uninterrupted service of food delivery to under privileged children of Government schools for five years. This criterion is applied across all states to enable selection of number of schools and children.

Type of Kitchen

Two types of kitchen are in operation: (1) Centralized & (2) Decentralized.

Centralized kitchen serves food for larger number of children per day as compared with decentralized kitchen. The quality initiatives are rigorously implemented and documented in centralized kitchen. The effort is the same in Decentralized kitchen. However, decentralized kitchen prepare food relatively smaller number of children. Decentralized kitchen are located in rural remote areas to facilitate serving a cluster of schools. These are characterized by food culture prevalent in those areas. These are women empowered operating under self help groups. The food served will meet the standards of nutrition for young children. All the inputs and training required for preparation of food will be given in decentralized kitchen since they are located in access-difficult areas. The study intends to restrict to centralized kitchens.

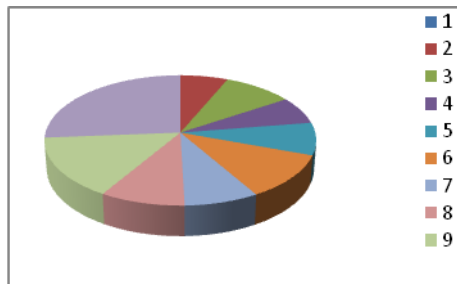
Centralized kitchen

Centralized kitchen normally serves food to about a lakh children. Amongst the centralized kitchen those which are serving more than 50,000 children are considered as large kitchens & included in study. The list of centralized kitchens across different states & their coverage of schools and children are given below:

Table I: Distribution of Schools and Kitchens of AkshayaPatra Foundation in India

| Sl No. | State | Centre | No. of Children | No. of Schools |
|--------|----------------|----------------------|-----------------|----------------|
| 1 | Andhra Pradesh | Hyderabad | 54,849 | 454 |
| 2 | Gujarat | Gandhinagar | 1,21,508 | 666 |
| 3 | Karnataka | H K Hill Bengaluru | 85,204 | 487 |
| 4 | Karnataka | Ballari | 1,15,945 | 575 |
| 5 | Karnataka | Hubballi | 1,26,693 | 789 |
| 6 | Karnataka | VasanthpuraBengaluru | 99,326 | 568 |
| 7 | Orissa | Puri | 55,835 | 648 |
| 8 | Rajasthan | Jaipur | 92,763 | 1081 |
| 9 | Uttar Pradesh | Vrindavan | 1,39,262 | 1874 |

Source: Annual Report of TAPF 2013-2014



Number of samples considered for study

Total No. of States = 6 (66%)

Total Kitchens = 9 (45%)

Total No. of Children = 8,91,685 (66.17%)

Total No. of Schools = 7142 (71.06%)

The study thus intends to cover six out of nine States where AkshayaPatra is in operation. This means covering nine out of twenty kitchens & 66.17% of children & 71.06% of schools for study.

Operational Definitions

Quality: The food product which is fit for human consumption.

Total Quality: That food product which is of high quality prepared under established process of hygiene, nutrition value and acceptable taste.

Personal Hygiene: Refers to individual as well as group hygiene practices which will lead to improvement and sustenance of health.

Menu: That list of items identified and listed as the requirement for the end users.

Children: Includes boys and girls studying in 5th to 10th standard in Government schools.

Class: That child which belongs classes between 5th and 10th Standard both classes inclusive.

Age: Age measured in years of the child.

Gender: A child either a boy or a girl selected for the study.

Parents Occupation: The occupation of father and mother of the child. In case, a child who does not have parent, guardian male or female is considered as parent.

Religion: That religion, the child belongs to.

Sufficiency: Refers to that quantity of food sufficient or required for a child for consumption.

Freshness: That food that is hot is considered fresh.

Variety: That menu which varies every day.

Socialization: That aspect of a child which will help the child to live together, by eating in a group.

Taste: Is that variable of food which distinguishes between good and bad by a child.

Personal Hygiene: That aspect of a child which facilitates improvement of health and learning.

Delivery: That variable which creates time sense in the reach of food.

Aroma: That flavor which creates urge to eat.

Happiness: That reflection of the child after eating food.

Health: That care aspect of a child measured after taking food for at least one year.

Learning and Performance: That aspect to be assessed after taking food for at least one year.

Nutrition: That compositional value of food being served.

Regularity: Consistent, delivery of Mid Day Meals.

Feedback: That response, collected from children periodically.

Purpose of Joining School: That aspect a child would like to reflect after started eating mid day meal.

Serving Food: That aspect of distribution done by teachers/Helpers.

No Waste: That amount of food not wasted on every serving.

Happiness in Learning: That intangible aspect which gets inducted as a part of school program.

Hypotheses on Children

H₀₁: Food is not served on time from Akshaya Patra

H₁₁: Food is served on time from Akshaya Patra

H₀₂: Food served is not sufficient

H₁₂: Food served is sufficient

H₀₃: Food served is not hot

H₁₃: Food served is hot

H₀₄: Children do not get variety of sambar every day

H₁₄: Children get variety of sambar every day

H₀₅: Children do not eat food together

H₁₅: Children eat food together

H₀₆: There is no improvement in children's health

H₁₆: There is improvement in children's health

H₀₇: Children are not happy after taking food

H₁₇: Children are happy after taking food

H₀₈: Children do not get sweet dish on special days

H₁₈: Children get sweet dish on special days

H₀₉: Children do not like curds served to them

H₁₉: Children like curds served to them

H₀₁₀: Children do not like taste of food

H₁₁₀: Children like taste of food

H₀₁₁: Children learning has not improved

H₁₁₁: Children learning has improved

H₀₁₂: Children are not taught hygiene and cleaning habits

H₁₁₂: Children are taught hygiene and cleaning habits

H₀₁₃: Sambar does not contain dhal and vegetables

H₁₁₃: Sambar contains dhal and vegetables

H₀₁₄: Children are not studying well

H₁₁₄: Children are studying well

H₀₁₅: Akshaya Patra food is not missed any day

H₁₁₅: Akshaya Patra food is missed on any day

H₀₁₆: Akshaya Patra does not take feedback regularly

H₁₁₆: Akshaya Patra takes feedback regularly

H₀₁₇: Children come to school not to eat food

H₁₁₇: Children come to school to eat food

H₀₁₈: Children do not like smell of food

H₁₁₈: Children like smell of food

H₀₁₉: Children are not happy to learn in school

H₁₁₉: Children are happy to learn in school

INSTRUMENT DEVELOPMENT

Questionnaire was developed with respect to Children as target group:

Questionnaire development process:

Each Questionnaire is divided into two major parts. Part I is Demographics & Part II is Reflection on statements.

Questionnaire:

The end product is the food delivered to children six days in a week, Monday to Saturday. Food prepared in AkshayaPatra kitchen is delivered in hygienic special stainless steel containers to enable children eat fresh food. The location needs of children in terms of staple and nutritious food is being delivered. The quality aspects with respect to children are encompassed in the characteristics of interest with respect to target group.

The attributes or characteristics of interest are:

1.Taste,2.Sufficiency,3.Variety of menu,4.Time of intake,5.Freshness,6.Preparation for taking food,7.Serving food,8.Cleaning plates,9.Regularity,10.Personal hygiene,11.Improvement in performance,12.Improvement in learning,13.Happiness and satisfaction after consuming food,14.Socialization,15.Improvement in health,16.Feedback,17.Itemized delivery,18.Purpose of joining school,19.Nutritional value of food,20.Flavor/Aroma,21. Do not waste food,22. Sweets&23.Curds.

Some relevant statements were developed using the language of children to enable them to reflect experience. As many as twenty five statements were developed and edited with the help for experts in this field. The refined questionnaire was then replicated for pilot testing. As such the instrument was in English and translated into appropriate regional languages. The instrument was translated to Kannada, Hindi, Gujarati, Odia and Telugu. However, care was taken such that transliteration, wrong interpretation & false image of the statement were avoided, by reviewing the translations by a reviewer of that language.

DETERMINATION OF SAMPLE SIZE

The sample size is spread from the end target group to the inventory in the production process. The determination of children spread across six states in nine kitchens will ensure that each kitchen will form the size variable. The method of probability proportional to size (PPS) sampling has been used. The overall size of sample is restricted to 551 a statistically large number. The sampling plan for the entire study is tabled below:

Table II : Determined Sample Design and Frame

| Sl No. | State | Kitchen | No. of Children | Percentage of children total | Sample size determined | Actual Sample covered |
|--------|------------------------------|-----------------------|-----------------|------------------------------|------------------------|-----------------------|
| 1 | Telangana (Andra Pradesh) | Hyderabad | 54,849 | 6.15 | 34 | 40 |
| 2 | Gujarat | Gandhinagar | 1,21,508 | 13.63 | 75 | 85 |
| 3 | Karnataka | Bangalore HK Hill | 85,204 | 9.56 | 53 | 64 |
| 4 | Karnataka | Bellary | 1,15,945 | 13.00 | 72 | 82 |
| 5 | Karnataka | Hubballi | 1,26,693 | 14.22 | 78 | 80 |
| 6 | Karnataka | Bangalore Vasanthpura | 99,326 | 11.15 | 61 | 66 |
| 7 | Orissa | Puri | 55,835 | 6.26 | 35 | 40 |
| 8 | Rajasthan | Jaipur | 92,763 | 10.40 | 57 | 54 |
| 9 | Uttar Pradesh | Vrindavan | 1,39,262 | 15.63 | 86 | 82 |
| | | TOTAL | 8,91,685 | 100.00 | 551 | 593 |

SAMPLE DESIGN

The sampling plan has aimed at convergence of centers kitchens children. The sampling plan has envisaged proportional weights with respect to children. The sampling plan has envisaged proportional weights with two children covered. The determination of sample size(n) is done by sampling variance of a parameter 'x' i.e. $n = S^2 (N-n) / s_x^2 (N-1)$ wherein N= Population Size, n=Sample Size, S^2 =Population Standard Deviation & s_x^2 = sample variance.

Here, $N = 891685; S^2 = N \times 1/2 \times 1/2 = 222921.25; s_x^2 = 405$ & hence $n = 550.08 \approx 551$.

Sampling Measures

The overall population size of different target groups under TAPF is finite. The domain of population of children covered in 6 States is 8,91,685 (out of 13,47,513 – 66.17%). The number of States covered is six (66.7% of 9 States). The number of kitchens covered is 9 out of 20 (45%).

The total number of schools covered as population is 7142 (out of 10050 – 71.06%). The domain of population under the study is in general 2/3rds (67% of the total). The number of kitchen covered is nine (out of 20, i.e. 45%).

The following are the statistical measures used:

Finite Population Correction (FPC) is = 0.999384311.

Demographics: The analysis of demographics is based on measures of central tendency, dispersion, skewness and kurtosis. Mean, Median, Mode, Standard Deviation, Pearson's measures of skewness and Kurtosis were used.

Reliability of data Cronbach's Alpha is used as measure to assess the reliability of the instrument, for standardized items and (Statement batteries) demographic variables.

One sample test: One sample 't' test is used for testing, significance of demographics and quality variables.

Correlation analysis

The relationships between demographic variables and response variables (statements) have been attempted across the target group. The least significance level is fixed at 5%.

Regression analysis

Step wise regression analysis have been attempted to examine the relationship between predicted variables and regressors. The significance of coefficients of regressions has been tested using T statistic the powers of regression equation are tested by R^2 and \bar{R}^2 . The component of autocorrelation is tested by D-W statistic.

ANOVA model for fixed linear effects has been used with the F statistic value, the significance of which is tested by 'p' value.

Limitations of the Study

1. The present study is limited to examine the impact the mid-day meal programme on children.
2. The impact is assessed at the aggregate level.
3. Age is the only dependent variable used in the multiple regression analysis.
4. Total Quality Management (TQM) is in the back drop of efforts of TAPFi.e., at the inventory level & at the production & distribution of food. No analysis of TQM has been attempted in this study.

TABULAR ANALYSIS

The profiles of 593 children covering six states and nine kitchens have been studied. The average age of children is 12.98 years. The class of study of these children is between 5th & 10th standards. The states of the children belong to are Karnataka, Telangana (AP), Orissa, Gujarat, Rajasthan and Uttar Pradesh. The kitchen covered are in following cities: (1) Hyderabad (2) Gandhinagar (3) H K Hill, Bengaluru (4) Ballari (5) Hubballi (6) Vasanthpura, Bengaluru (7) Puri (8) Jaipur & (9) Vrindhavan.

The Father of the children have coolie or farming as their occupation and the Mother are house maids or home makers. As many as 48.9% are boys and 51.1% are girls of the total children covered under the study. The religions to which children belong are – Hindu (88.9%), Muslim (8.1%), Christian (1.7%) and others which includes Jains (1.3%).

The children have responded to the statements very positively. The average number of their response is generally 4.5 + on a 5 point scale. This means they have consumed sufficient quantity of fresh food on time. They are ensured a variety of food according to an approved menu six days a week. Children are getting socialized and generally have experienced improvement in health, satisfaction, learning and happiness.

The children are provided a tasty food with curds and sweets. Sweets are served once in a week. There is significant improvement in learning and personal hygiene noticed. The nutrition aspect of food is taken care by serving dhal/sambar and vegetables. There is improvement in performance. There is regularity in food served. The feedback by Akshaya Patra is taken from children regularly. The children do not waste food, and they like its flavor/aroma. The children are happy learning in schools.

The children are categorical in making statement that 'they come to school not to eat food' and 'teachers train children to serve food'.

The reliability of data set for standardized items (i.e. 25 statements) is 0.839 (Cronbach's Alpha). There is significant difference between statements at 0.000% level. ($F=12930.186$). The age of children is significantly associated with the statements they have made ($F=3.85$ at $P=0.00\%$).

As many as nineteen hypotheses have been tested for children. It is noticed that the correlation analysis has led to acceptance of alternate hypotheses for all the statements except one. The results indicate to us that the children are getting sufficient quantity of food on time, always hot and of different tastes of sambar/dhal every day. Children enjoy eating food with friends and have perceived that their health has improved. They like the sweets and curds served and very much like the taste of food.

The children perceive that their learning has improved. The children have picked up healthy living habits such as washing hands before eating food, drinking clean water, washing plates before and after eating food, wear clean clothes, and comb hair every day. Such healthy habits are further supplemented by eating dhal and vegetables which are nutritious. Children are scoring well in the examination and perceive there is some improvement in learning. The children claim they have not missed food from TAPF. They have recollected the feedback taken by Akshaya Patra about the quality of food served. They like the aroma of food served and are happy to learn in school. These are alternate hypotheses accepted at 5% or at 1% level of significance. Interesting fact is, all children claim that, they do not come to school to eat food (null hypothesis accepted). There is a clear signal that children are learning, acquiring good habits and are happy in general, about the food served. The most interesting part is they come to school not to eat food alone. The number of children interviewed across nine locations in India is 593 ($n=593$).

Table III: Distribution of children by age

| SL No | Age of Children | Frequency | Percentage |
|-------|-----------------|-----------|------------|
| 1 | 9 | 3 | 0.5 |
| 2 | 10 | 31 | 5.3 |
| 3 | 11 | 44 | 7.4 |
| 4 | 12 | 147 | 24.8 |
| 5 | 13 | 162 | 27.3 |
| 6 | 14 | 117 | 19.7 |
| 7 | 15 | 52 | 8.8 |
| 8 | 16 | 34 | 5.7 |
| 9 | 17 | 3 | 0.5 |
| | Total | 593 | 100.0 |

Table IV: Distribution of children by religion they belong to

| SL No | Religion | Frequency | Percentage |
|-------|------------|-----------|------------|
| 1 | Hindu | 527 | 88.9 % |
| 2 | Muslims | 48 | 8.1 % |
| 3 | Christians | 10 | 1.7 % |
| 4 | Others | 8 | 1.3 % |
| | Total | 593 | 100 % |

Table V: Reliability statistics

| Reliability Statistics | | |
|------------------------|--|-----------------|
| Cronbach's Alpha | Cronbach's Alpha Based on Standardized Items | Number of Items |
| 0.499 | 0.839 | 34 |

Regression Analysis

Regression analysis was carried out with age as predictand (dependent) variable. The regression is clear about significance of eleven predictor variables influencing age. The significance at 0.00% level is clear of the fact that children are getting enough food to eat, happy after eating food, like the sweet and curds served and have picked up good hygiene habits. The negative beta value for the predictor variable that "I come to school to eat food" is suggestive of children's maturity levels. The regression equation is statistically significant with $F=3.850$ at 0.000% levels of significance.

All hypotheses are statistically significant either at 5 or 1% level, except the hypotheses on children coming to school to eat food alone. The fact reminds us of the maturity of children in recognizing food as well as learning. The results indicate that the children are getting hot food on time and get enough to eat (significant @6.8%) but negatively significant. Some training efforts are needed to facilitate more effective serving of food by teachers. The different taste that they get everyday will make them enjoy and happy after eating it (negatively significant @3.1%). There is an indication of differentials in the menu served which may have caused dislike of children. Along with nutrition supplement in food, some efforts could lead to positive significance. This, however, has resulted in improvement of health. The children eat sweets and curds whenever served and like the taste of food. Introduction of curds have made positive impact on children liking. This must be continued to sustain the best efforts of TAPF. Their learning has improved (significant @0.0%). The children have learned hygiene practices such as washing hands before eating food, drinking clean water and washing of plates before and after eating food. The children wear clean clothes (positively significant @1.8%), comb hair and are scoring well in examination. This is sign of hope of building better social capital. Personal hygiene practices in the early

age enable a society to look ahead with pride. They have generally not missed food. The teacher is training them to serve food and as such they do not waste food (negatively significant @1.0%). This is suggestive of concerted efforts in making children not waste food. TAPF can think of continuous training programs for long term positive results. The children like the flavor or aroma of food (positively significant @11.6%). The children enjoy eating food with their friends. This needs to be maintained consistently as always!

Table VI: Regression Analysis of Relationship between Age of Children & Response Variables

| Model Summary ^b | | | | | | | | | | |
|---|--------------------|----------|-------------------|----------------------------|-------------------|----------|-----|-----|---------------|---------------|
| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | Change Statistics | | | | | Durbin-Watson |
| | | | | | R Square Change | F Change | df1 | df2 | Sig. F Change | |
| 1 | 0.374 ^a | 0.140 | 0.104 | 1.48980 | 0.140 | 3.850 | 24 | 568 | 0.000 | 1.066 |
| a. Predictors: (Constant), S25, S21, S9, S22, S7, S23, S8, S19, S17, S14, S2, S18, S1, S4, S20, S24, S16, S3, S12, S10, S5, S15, S11, S13 | | | | | | | | | | |
| b. Dependent Variable: AGE | | | | | | | | | | |

Table VII : ANOVA Table

| ANOVA ^b | | | | | | |
|---|------------|----------------|-----|-------------|-------|-------------------|
| Model | | Sum of Squares | df | Mean Square | F | Sig. |
| 1 | Regression | 205.084 | 24 | 8.545 | 3.850 | .000 ^a |
| | Residual | 1260.673 | 568 | 2.219 | | |
| | Total | 1465.757 | 592 | | | |
| a. Predictors: (Constant), S25, S21, S9, S22, S7, S23, S8, S19, S17, S14, S2, S18, S1, S4, S20, S24, S16, S3, S12, S10, S5, S15, S11, S13 | | | | | | |
| b. Dependent Variable: AGE | | | | | | |

Table VIII: Regression coefficients with Age as Dependent Variable

| Coefficients ^a | | | | | | | | | |
|---------------------------|-----------------------------|------------|---------------------------|--------|------|-------------------------------|-------------|-------------------------|-------|
| Model | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. | 95% Confidence Interval for B | | Collinearity Statistics | |
| | B | Std. Error | Beta | | | Lower Bound | Upper Bound | Tolerance | VIF |
| 1 (Constant) | 12.539 | .833 | | 15.053 | .000 | 10.903 | 14.175 | | |
| S1 | -0.195 | .144 | -.069 | -1.355 | .176 | -.477 | .088 | .588 | 1.700 |
| S2 | -0.259 | .142 | -.095 | -1.826 | .068 | -.538 | .020 | .557 | 1.794 |
| S3 | 0.065 | .137 | .025 | .478 | .633 | -.204 | .335 | .532 | 1.880 |
| S4 | 0.028 | .111 | .013 | .249 | .803 | -.190 | .246 | .546 | 1.833 |
| S5 | 0.009 | .149 | .003 | .059 | .953 | -.285 | .302 | .498 | 2.009 |
| S7 | -0.283 | .131 | -.112 | -2.163 | .031 | -.540 | -.026 | .562 | 1.779 |
| S8 | 0.002 | .054 | .002 | .035 | .972 | -.103 | .107 | .708 | 1.412 |
| S9 | -0.122 | .031 | -.193 | -3.977 | .000 | -.182 | -.062 | .643 | 1.556 |
| S10 | 0.083 | .128 | .036 | .650 | .516 | -.168 | .334 | .495 | 2.019 |
| S11 | 0.485 | .138 | .195 | 3.526 | .000 | .215 | .755 | .494 | 2.026 |
| S12 | 0.090 | .176 | .029 | .514 | .607 | -.255 | .436 | .474 | 2.111 |
| S13 | 0.045 | .139 | .018 | .328 | .743 | -.227 | .318 | .479 | 2.086 |
| S14 | 0.050 | .137 | .020 | .365 | .715 | -.219 | .320 | .519 | 1.925 |
| S15 | 0.379 | .159 | .131 | 2.375 | .018 | .066 | .691 | .495 | 2.019 |
| S16 | -0.071 | .138 | -.026 | -.513 | .608 | -.342 | .200 | .578 | 1.731 |
| S17 | 0.125 | .114 | .055 | 1.095 | .274 | -.099 | .348 | .606 | 1.651 |
| S18 | 0.087 | .115 | .037 | .759 | .448 | -.138 | .312 | .645 | 1.549 |
| S19 | 0.028 | .085 | .016 | .328 | .743 | -.139 | .195 | .667 | 1.500 |
| S20 | -0.049 | .090 | -.027 | -.549 | .583 | -.226 | .127 | .634 | 1.578 |

| | | | | | | | | | |
|----------------------------|--------|------|-------|--------|------|-------|-------|------|-------|
| S21 | -0.102 | .048 | -.097 | -2.101 | .036 | -.197 | -.007 | .714 | 1.400 |
| S22 | -0.065 | .060 | -.047 | -1.083 | .279 | -.183 | .053 | .817 | 1.224 |
| S23 | -0.243 | .094 | -.117 | -2.572 | .010 | -.428 | -.057 | .733 | 1.364 |
| S24 | 0.179 | .114 | .081 | 1.573 | .116 | -.045 | .403 | .571 | 1.753 |
| S25 | -0.192 | .179 | -.058 | -1.071 | .285 | -.543 | .160 | .512 | 1.954 |
| a. Dependent Variable: AGE | | | | | | | | | |

I. Findings

As many as 593 children covering six states 9 kitchens studying between 5th & 10th standard have an average age of 12.98 (13) years are included in the study. The father of children is mostly coolie or farming as their occupation. The mothers of these children are mostly house maids or home makers.

The gender ratio of the children is 48.9% boys and 51.1% girls. The children belong to Hindu (88.9%), Muslim (8.1%), Christians (1.7%) and others (including Jains is 1.3%). The children have responded positively and have rated 4.5 + out of 5 for the parameters in the instrument. The children are delivered food in accordance with an approved menu for 6 days in a week. The children are getting sufficient food, on time, always, hot and with different taste of sambar every day. They enjoy eating food with friends and have perceived an improvement in their health. They like sweets and curds, when served, and like very much the taste of food.

They have picked up learning, healthy living habits such as washing hands before eating food, drinking clean water, washing plates before and after eating food, wear clean clothes and comb hair every day. These are supplemented by food of high nutrition value contained in dhal and vegetables consumed by them. They are scoring well in the examination which indicates an improvement in learning. The aroma and taste of food are liked by children. Having said this there is awareness amongst children that they do not come to school to eat food alone (null hypothesis accepted)!

Conclusion

The mid-day meals programme of TAPF is a mega experiment in mass food delivery system in India. The programme has spread across nine States in India covering 13.9 lakh children studying in Government schools whose average is 12.98 years. The study has revealed some critical points to ponder over as the experiment spreads to several States & Union Territories in India. The programme is all inclusive in its approach & has made its impact on the target group. The hot food served has made positive impact on the learning, health & habits. The children, however, do not come to school to eat food alone! Some areas of improvement are suggested to make the programme more effective by continuous training in distribution of food & learning of clean habits by children.

Reference

1. The Global journal 2013-Top 100 NGOs in the World Special Issue.

Webliography

1. www.akshayapatra.org

Annexure
INSTRUMENT FOR CHILDREN

I am doing Ph.D on topic "**Total Quality Management in Not for Profit Organization with special reference to Akshaya Patra Foundation in India**". I would request you to fill up the questionnaire which will help me in my study. ***The information given is for study purpose only & will be kept confidential & not revealed to anyone else.***
Thank you.

Part - 1

- 1.Name: _____ 2. Class: _____
 3.Age: _____ 4.Gender (Boy or Girl) : _____
 5. Name of School: _____
 6. Place of School: _____ 7. State: _____
 8.Father's Occupation: _____
 9.Mother's Occupation: _____
 10. Religion: Hindu / Muslim / Christian / Others: _____
 11. Since how many years you are eating food from Akshaya Patra: _____

Part II

Please tick right answer

| | | | | | |
|---|-------------------------------|----------------------|---------------------|-------------------|----------------------------|
| 1.I am getting food on time from Akshaya Patra. | Strongly Disagree 1 | Disagree 2 | Neutral 3 | Agree 4 | Strongly Agree 5 |
| 2.I get enough food to eat | Strongly Disagree 1 | Disagree 2 | Neutral 3 | Agree 4 | Strongly Agree 5 |
| 3. The food I get is hot always. | Strongly Disagree 1 | Disagree 2 | Neutral 3 | Agree 4 | Strongly Agree 5 |
| 4. Every day get a different taste of sambar. | Strongly Disagree 1 | Disagree 2 | Neutral 3 | Agree 4 | Strongly Agree 5 |
| 5. I enjoy eating food with my friends. | Strongly Disagree 1 | Disagree 2 | Neutral 3 | Agree 4 | Strongly Agree 5 |
| 6. My health has improved after taking food from Akshaya Patra. | Strongly Disagree 1 | Disagree 2 | Neutral 3 | Agree 4 | Strongly Agree 5 |
| 7. I feel happy after eating food. | Strongly Disagree 1 | Disagree 2 | Neutral 3 | Agree 4 | Strongly Agree 5 |
| 8.I like the sweets served. | Strongly Disagree 1 | Disagree 2 | Neutral 3 | Agree 4 | Strongly Agree 5 |
| 9. I eat curds whenever served. | Strongly Disagree 1 | Disagree 2 | Neutral 3 | Agree 4 | Strongly Agree 5 |
| 10.I like the taste of food. | Strongly Disagree 1 | Disagree 2 | Neutral 3 | Agree 4 | Strongly Agree 5 |

| | 1 | | | | 5 |
|--|-------------------------------|----------------------|---------------------|-------------------|----------------------------|
| 11. My learning has improved. | Strongly Disagree 1 | Disagree 2 | Neutral 3 | Agree 4 | Strongly Agree 5 |
| 12. I wash my hands before eating. | Strongly Disagree 1 | Disagree 2 | Neutral 3 | Agree 4 | Strongly Agree 5 |
| 13. I drink clean water | Strongly Disagree 1 | Disagree 2 | Neutral 3 | Agree 4 | Strongly Agree 5 |
| 14. I wash plates before & after eating food. | Strongly Disagree 1 | Disagree 2 | Neutral 3 | Agree 4 | Strongly Agree 5 |
| 15. I wear clean clothes every day. | Strongly Disagree 1 | Disagree 2 | Neutral 3 | Agree 4 | Strongly Agree 5 |
| 16. I comb my hair every day. | Strongly Disagree 1 | Disagree 2 | Neutral 3 | Agree 4 | Strongly Agree 5 |
| 17. Sambar contains dhal and vegetables. | Strongly Disagree 1 | Disagree 2 | Neutral 3 | Agree 4 | Strongly Agree 5 |
| 18. I score well in examination. | Strongly Disagree 1 | Disagree 2 | Neutral 3 | Agree 4 | Strongly Agree 5 |
| 19. I have not missed food from Akshaya Patra. | Strongly Disagree 1 | Disagree 2 | Neutral 3 | Agree 4 | Strongly Agree 5 |
| 20. Akshaya Patra Uncle enquires me about food served. | Strongly Disagree 1 | Disagree 2 | Neutral 3 | Agree 4 | Strongly Agree 5 |
| 21. I come to school to eat food. | Strongly Disagree 1 | Disagree 2 | Neutral 3 | Agree 4 | Strongly Agree 5 |
| 22. My teacher has trained me to serve food. | Strongly Disagree 1 | Disagree 2 | Neutral 3 | Agree 4 | Strongly Agree 5 |
| 23. I don't waste the food served. | Strongly Disagree 1 | Disagree 2 | Neutral 3 | Agree 4 | Strongly Agree 5 |
| 24. I like the smell of food. | Strongly Disagree 1 | Disagree 2 | Neutral 3 | Agree 4 | Strongly Agree 5 |
| 25. I am happy to learn in school | Strongly Disagree 1 | Disagree 2 | Neutral 3 | Agree 4 | Strongly Agree 5 |