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FOOD SAFETY AND ITS IMPACT ON HEALTH STATUS OF PRESCHOOL CHILDREN OF BEED DISTRICT

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Abstract

Children are high risk population interms of food born illnesses. Food safety &security are the most important factors for the success of midday meal programmes. Improper holding temperatures, cross contamination and poor personal hygiene of food handlers are the main causes for prevalence of pathogenic microbes in the food servicing areas. Two hundred and fifty preschool children in the age of 3 to 6 years from urban and rural anganwadies (pre school center) of Beed district were selected. Nutritional status of preschool children were assessed by anthropometrical &Clinical measurement. The study assessed the food safety and security with the help of personal hygiene and other safety measures maintained by the food personnel working for midday meal programme, supplying mid meals to children at govt. anganwadies (pre school center). The hygiene level, sanitary condition and microbial quality of food & water, pathological health examination of food handlers were assessed with the help of checklist. A questionnaire was designed to evaluate knowledge, attitude and practices of food handlers. Results of the study show that the nutritional and health status of rural and urban preschool children was very poor. Many of the food handlers were not aware of general knowledge and hygiene practices to be followed during food preparation areas. An intervention progrramme of education and importing training at work places have shown a positive impact on the outcome of safety & security practices and safe hygienic practices of food handlers at work place and it may improve the health status of preschoolers.

Keywords *: Food, Health, Preschool Children ,Safety, Security*.

Introduction:

Children are the valuable asset of a nation**.** Food safety is an important public health issue to prevent or control food-borne illnesses. In response to the increasing number of food-borne illnesses, governments all over the world are intensifying their efforts to improve food safety [Subba et al 2007]. According to the WHO [Henson &Reardon 2005], contaminated food contributes to 1.5 billion cases of diarrhoea in

children each year, resulting in over three million premature deaths. However, these deaths and illnesses are shared by both developed and developing nations. he transmission of food-borne diseases is aggravated by unsafe food handling practices of food handlers. Approximately 10 to 20% of food-borne diseases outbreaks are because of contamination by food handlers [Mundey et al 2010]. Data about food-borne diseases in African region are still scarce [Wagacha &Muthoni2008, Sclmidt &Tiado 2001]. The role of food handlers in homes, usually mothers, in ensuring food safety at the household level is well accepted but an understanding of the status of their food handling knowledge and practices is needed [Chekolet et al 2019]. It is very important to understand the interaction of the prevailing food safety, knowledge, and practices of food handlers in reducing food born outbreak (Abdulla & et al 2016)

Most of the studies showed that food handlers were directly involved some stage of food processing (Ragini 2004) and food contamination can reduced drastically by wash their hands.

A study documented that education and training the personal hygiene practices brought a greater awareness among the workers, which in turn improved canteen. (Vasanthakalaam and Mininegali 2000)

Malnutrition is the most divesting problem among preschool children, to combat this problem Government school children are provided free of cost breakfast midday meal on all working days. These midday meal programmes are to encourage the student in daily attendance as well as improve health status of preschools Children. But safety and security are crucial aspect for success of midday meal programmes of rural & urban areas of Beed district. Beed is one of the backward area of Maharashtra. The rural and urban population of Beed districts is not aware about the food safety & security measures, therefore a study was planned to asses food safety and security measures maintained by food makers at personal level at different government anganwadies and primary schools of Beed district.

Objective

- To study the impact of nutrition education and training programmes of food safety & security on food handlers.
- To know the dietary pattern of preschool children of selected anganwadies of Beed district.
- To study the health problems of anganwadies Children of Beed District.
- To observe the food safety and security rules at work place of selected anganwadies of Beed district.

Methodology:

To assess the dietary consumption pattern of preschool children a diet survey was carried out, with the help of 24 hrs. Recall method. For the above survey fifteen government anganwadies from rural urban areas of Beed were selected randomly. Clinical health's of pre-schoolers were assessed with the help of Physician.

For conducting education and training intervention programmes 80 (Eighty) food handlers were selected randomly from the different anganwadies centres of Beed district. Questionnaire and check lists were used to elicit the data. A data was collected on knowledge, attitude and practices in two phases, before and after imparting education and training on food safety and security to food handlers.

Result and Discussion:

The Dietary pattern of rural preschool children revealed that the intake of cereals and pulses were quite satisfactory, but their diet were lacking green and other vegetables, i.e. 63% and 53.42% deficient respectively. Therefore the mean nutrient in take were lacking in protein, calcium nutrient.

A majority of the rural preschool children had clinical signs, which may attributed to protein energy malnutrition (PCM), i.e. luster less skin and B complex deficiencies. Moreover majority of children facing diarrhoea and digestion problem. i.e. 24% and 12% respectively.

Table No 1 Health problems in preschool children:

Health Problems	Total No. Of Preschool children	Percentage.
Normal	80	32
Diarrhoea	60	24
Viral fever	30	12
Digestion problem	30	12
Gastric problem	28	11.2
Skin infection	20	8.0

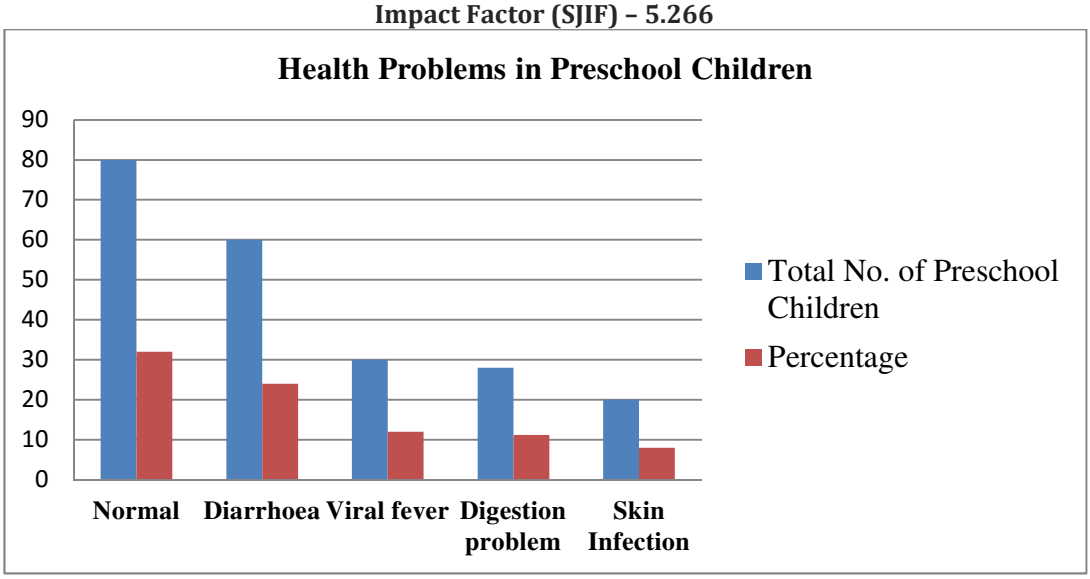
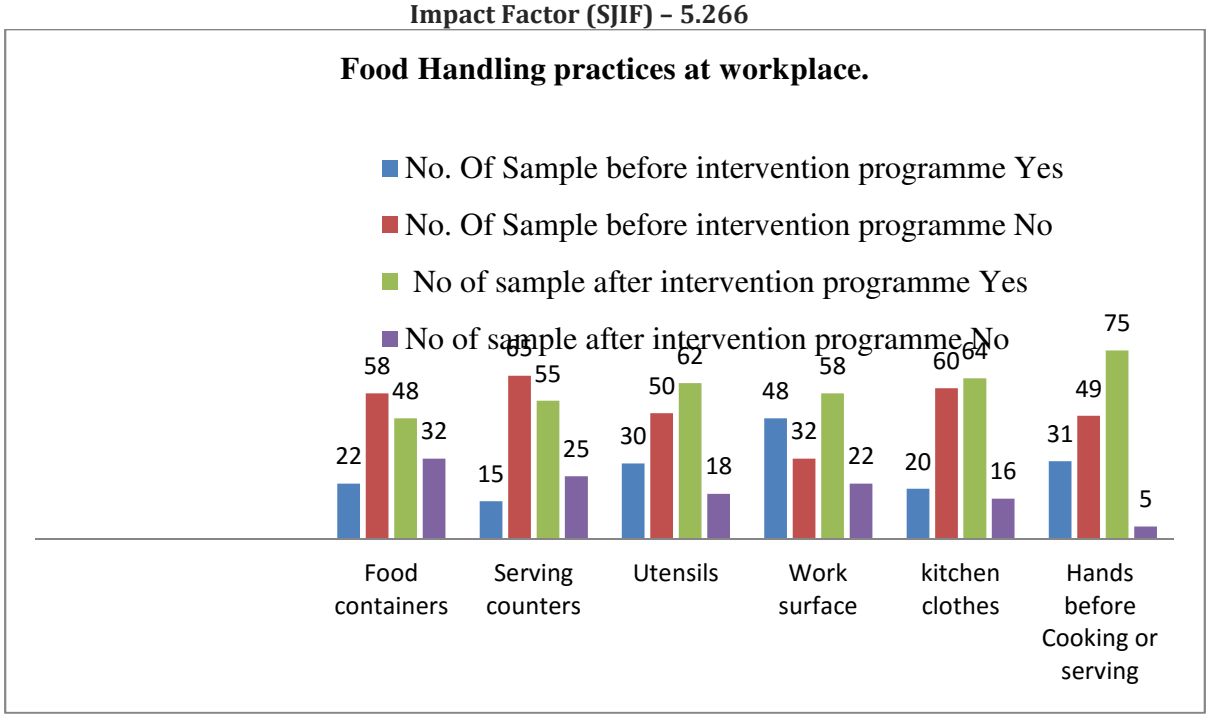


Table No 2 Food Handling practices at workplace.

Sr. No.	Activity (Washing)	No. of Sample before intervention programmes		No of sample ofter intervention programmes	
		Yes	No.	Yes	No
1	Food containers	22 (11%)	58 (29%)	48 (24%)	32 (16%)
2	Serving counters	15 (7.5%)	65 (37.5%)	55 (37.5%)	25 (17.5%)
3	Utensils	30 (15%)	50 (55%)	62 (31%)	18 (9%)
4	Work surface	48 (24%)	32 (16%)	58 (29%)	22 (11.0%)
5	kitchen clothes	20 (10%)	60 (30%)	64 (32%)	16 (8.0%)
6	Hands before Cooking or serving	31 (15.5%)	49 (24.5%)	75 (37.5%)	5 (2.5%)



The above study result shows that there was a positive impact of education and training on aspect of personal hygiene and safe food handling practices of the food personnel/workers. The result showed that many of food handlers were not aware of general knowledge and hygiene practices to be followed during food preparation areas. An intervention programme of education and imparting training at work places has shown a positive impact on the outcome of the practices of food safety & security.

Conclusion:

It was concluded that Nutrition education &intervention programmes has a positive impact on food safety &security practices of food handlers at work place. Before intervention programme most of the children were facing many health problems but after training to food handlers it may improve the health status of preschool children.

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