



## Fat Consumption Pattern Among Affluent Families With Special Emphasis on 6-9 Year Old Children, Ghaziabad Area, Uttar Pradesh

### KEYWORDS

urbanization, food preferences , 6-9 years old children, sedentary lifestyles, fat consumption pattern.

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### ABSTRACT

India is currently undergoing rapid urbanization and modernization. Urbanization involves changes in occupation patterns, life style and family structure and value systems. Due to increasing use of Convenience and fast foods the consumption of fat and carbohydrates is increasing drastically in human beings. There is increasing consumption of fat in developing countries. While a third of India's population still falls below poverty line, there has been steady growth of the relatively affluent urban middle class. Dietary factors and physical activity patterns strongly influence the energy balance equation and can be considered as the major modifiable factors for research. In particular, high fat energy dense diets and sedentary lifestyles are two characteristics strongly associated with the increased prevalence of obesity world-wide (WHO, 2000).

The research takes into account the study of general dietary pattern, food preferences and consumption of foods rich in fat among affluent families to assess the intake of visible fat among the families especially of 6-9 years old children.

The present study will conduct to assess the fat consumption pattern among affluent families residing in Ghaziabad with special emphasis on 6-9 year old children. The study will be conducted in the Ghaziabad convenience sampling will be used to select two public schools. Public school was selected because these schools mostly cater to the affluent sections of the population. The school selected will be

1- Silver Line School Ghaziabad

2- DPS Ghaziabad.

The data interpretations and the analysis of the questionnaire and the interview schedules will be examined for suggestions and further research.

### INTRODUCTION AND BACKGROUND

India like most of the other developing countries is undergoing a state of nutritional transition brought about by rapid urbanization and modernization. Urbanization involves changes in occupation patterns, life style and family structure and value systems. These changes are reflected in dietary practices and in the levels of physical activity. As the population ascends the socio-economic scale, cereal intake declines and intake of sugar and fat generally increasing Convenience foods and fast foods find increasing acceptance, especially in context of globalization. Urbanization is strongly associated with the increasing consumption of fat in developing countries. This is a general phenomenon that is part of overall change of food habits (FAO/WHO 1994). While a third of India's population still falls below poverty line, there has been steady growth of the relatively affluent urban middle class. With more and more development transition, the changes in dietary practices and physical activity levels contribute to increasing prevalence of overweight and other chronic diseases (Couch et al, 2000; NFI, 1998).

#### Dietary Fat and Energy Density

Dietary factors and physical activity patterns strongly influence the energy balance equation and can be considered as the major modifiable factors through which many of the external forces promoting weight gain act (Figure 1). In particular, high fat energy dense diets and sedentary lifestyles are two characteristics strongly associated with the increased prevalence of obesity world-wide (WHO, 2000).

TEF= Thermic effect of food : BMR= Basel metabolic rate:  
CHO= Carbohydrate

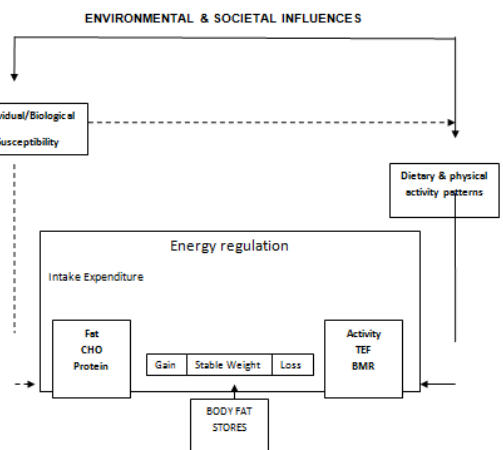


Figure1: Influences on energy balance and energy regulation. (WHO,2000)

### FOOD BEHAVIOUR AND PREFERENCES

The palatability of food has an important influence on food behavior. Food palatability tends to promote consumption and is one of the most powerful influences including a positive rather than a negative energy balance. It increases both rate of eating and sense of hunger during and between meals. The presence of fat in food is particularly enjoyable, and is associated with phenomenon of developing foods of increasing palatability. Moreover pleasurable sensation derived by foods can be viewed as a reward by those consuming them and can condition behavior that favours overconsumption (WHO, 2000).

## DIETARY GUIDELINES ON FAT CONSUMPTION

WHO(2000), has recommended a fat intake of around 20-25% of energy in sedentary adults. According to American guidelines, the child after age of 2 years should gradually adopt a diet that by 5 year contains no more than 30% calories from fat (Bier et al,2000).To meet the energy requirement of growing children, their diet should contain a minimum of 20-25% fat calories and in well to do Indian pre-school children with satisfactory growth ,the mean intake of fats and oils in 14%, which is adequate to ensure both energy density of diet and meet the daily essential fatty acid requirements (Ghafoorunissa,1998).

## PREVENTION OF HIGH FAT CONSUMPTION

Dietary fat in child's diet should be low. In this respect 'Behaviour Modification' seems to be promising approach, especially in young children (Birch,1998;Dietz, 1993; Epstein et al.1990; Brownell and kaye,1982).Behaviour includes identification and modification of eating patterns of individuals or families. This can be achieved through the following strategies:

- I. Health education programmes: There must be an intensive programme of health education beamed to the new rich highlighting the dangers of excessive consumption of fat. This must be part of health education programme in school, which cater to the children of affluent, because dietary habits in childhood can be modified but are hard to change in adults.
- II. Fat intake in Indian population is highly skewed with about 5% of population consuming nearly 40% fat available (NEI,1989). These current glaring inequalities with respect to availability and consumption of fat should be reduced. Awareness amongst the parents should be raised regarding the food selection in their daily diet. Fair price shops should become functional and edible oil should be available to poor ration card holders.

## OBJECTIVES

1. To study the general dietary pattern, food preferences and consumption of foods rich in fat among affluent families.
2. To assess the intake of visible fat among the families.
3. To study the fat consumption pattern among a random sub sample of families in relation to their visible fat intake.
4. To assess the dietary intake of 6-9 years old children with emphasis on their fat intake.
5. To determine the association between the preferences of parents and their children for foods rich in fat.

## METHODOLOGY

The present study was conduct to assess the fat consumption pattern among affluent families residing in Ghaziabad with special emphasis on 6-9 year old children.

## STUDY DESIGN

**Setting:** The study was conducted in the Ghaziabad Convenience sampling was used to select two public schools. Public school were selected because these schools mostly cater to the affluent sections of the population. It was found that most of the children studying in these schools were belong to affluent families. The school selected was-

- 1- Silver Line School Ghaziabad
- 2- DPS Ghaziabad.

## Criteria for selection of schools:-

- Homogeneity of Sample: Most of the children studying in the public schools were expected to be from a similar socio-economic background.
- Easy accessibility: The schools selected were easy to reach by the researcher. This will be desirable as the time available to complete the study was limited.
- Assurance of maximum co-operation from school authorities in data collection.

**Subjects:** A list of children in the age range of 6-9 years will be prepared from the class registers of the schools.

**Sample Size:** A total of 100 families with children in this age range will be identified.

## Tools and Techniques:

The following methods of data collection would be used:

- Questionnaire
- Interview schedule

## Questionnaire:

The questionnaire will used in the study to obtain general information about the family and to assess the fat consumption pattern among the families.

## Interview schedule:

Interview schedule will be used to collect information related to fat consumption among the families. Both open and close ended questions will be used.s

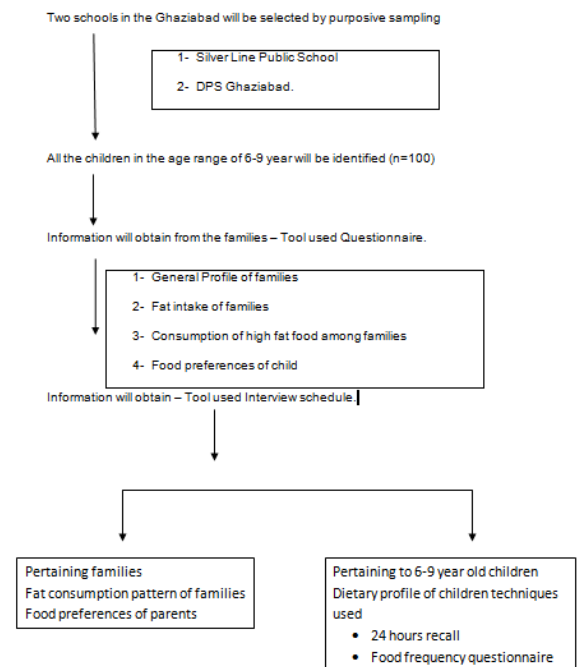
The techniques used for assessment of fat intake among the children will be 24 hour recall and food frequency questionnaire.

## Data collection & Procedure:

The data will be analyzed both quantitatively and qualitatively. Questionnaire will be helpful in quantitative analysis and interview in qualitative analysis.

The present study will be conducted in two phases. In first phase permission from the schools will be taken. The families will be contacted through schools by a questionnaire distribution to the children to be filled by the parents based on the information that will gather in first phase, a detail interview schedule will be conducted by visiting the families in their houses.

## PROCEDURE



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## Statistical considerations:

The statistical Package for the Social Science (SPSS) will be used for the analysis of data.

**Ethical consideration:**

The completed questionnaires will be collected personally to avoid leakage of personal information of the subjects. Participation in the study will voluntary.

**RESULTS AND DISCUSSIONS**

The present study was undertaken with the objective of determining the fat consumption pattern among affluent families with special emphasis on 6-9 year old children. The findings were explained in the following format:

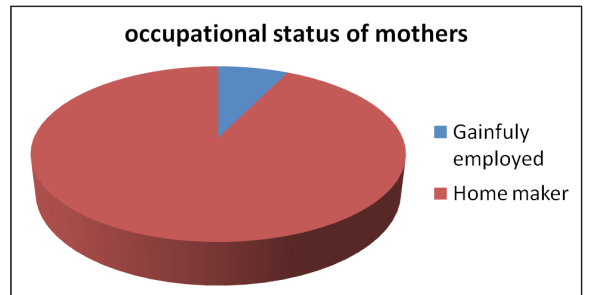
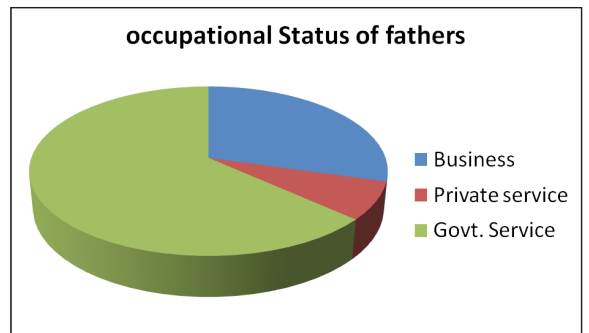
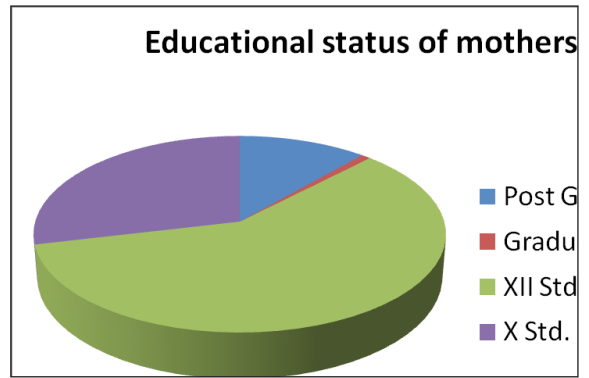
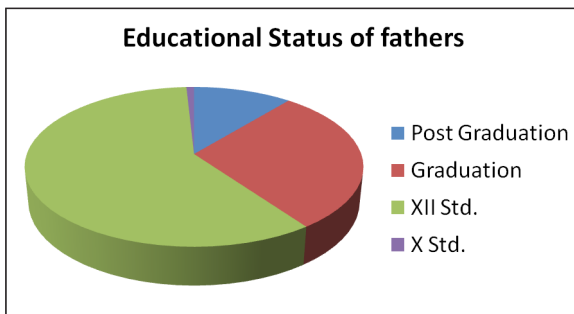
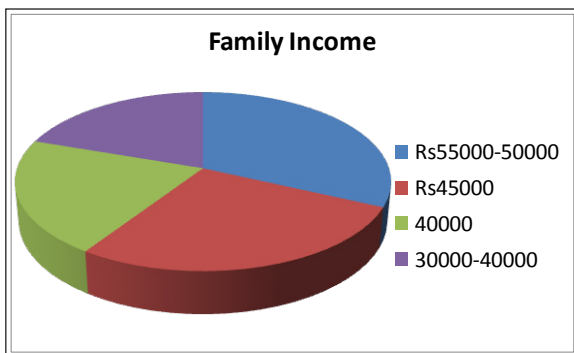
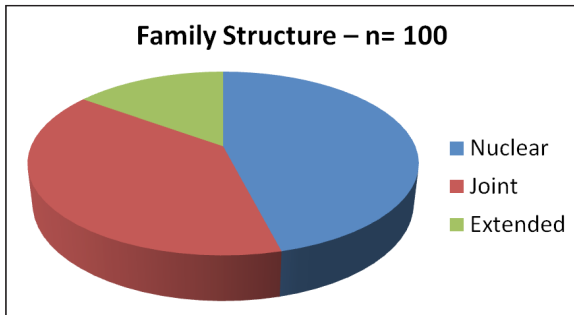
- ❖ General profile of the sample
- ❖ Fat consumption pattern among affluent families
- ❖ Dietary profile of children with special emphasis on fat intake.

**GENERAL PROFILE**

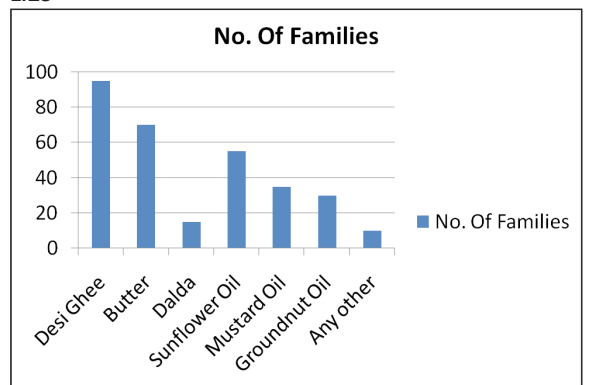
The sample size comprised 100 families. Majority of families (46%) were nuclear, however joint family structure was also common with 33% living in joint families and the remaining 15% were living in extended families.

Information obtained on the monthly income of the families is presented in a figure below. Income of a majority of the families 64% was above Rs.55000. The average monthly expenditure on food by the families was Rs.20,000..

Occupational status of parents revealed that in 30% of the families both the parents were gainfully employed. While 60% of the fathers were running their own business, 24% were employed in the private sector and 16% were in government service.



**MEAN INTAKE OF FATS AND OILS IN AFFLUENT FAMILIES**



**RESEARCH PROJECT SIGNIFICANCE**

With the increase in urbanization and affluence the children in India are in a state of nutrition transition. Western diets are becoming more and more popular and fast food consumption is in vogue (compiled/complied) with decreased physical activity. These lifestyle make them more prone to disease like obesity, and CVD associated with greater morbidity.

Children's behaviour can be suitably modified, as they are more receptive and less resistant to change. The existence of critical periods for development of obesity may serve to focus preventive and therapeutic efforts on the developmental stages when they are likely to be cost effective. Amongst these, one of the important periods is the period of adiposity rebound or early childhood. This is the period when teachers and parents influence children. This is the formative period when children develop behaviour pattern. Thus early childhood should be

focal for inculcating healthy dietary habits and lifestyle so as to prevent the risk of chronic diseases.

The present study was taken up to assess the fat consumption pattern among families with special emphasis on 6-9 year old children. The study thus aims to assess the consumption of dietary fat among the affluent families and its association with food preferences and behaviour and cooking practices. The information generated in the present study can serve, as the basis to develop suitable strategies can be developed so as to modify the diet-related habits of affluent class especially of the young children to promote healthy dietary habits among them.

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