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# Prevalence of Obesity Among Children, Their Parents and to Assess the Practices Related to Restraining and Promoting Factors for Childhood Obesity

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## ABSTRACT

**Objective:** To assess the prevalence of obesity among children and parents and to assess the restraining and promoting factors for childhood obesity.

**Methods:** A multi-method research study was carried out over two months on 100 children of Class VIII, IX and X and their parents.

**Results:** Results of the study revealed that 10 (10%) children were underweight, 81 (81%) children were normal, 8 (8%)children were overweight and 1 (1%) child was obese. In parents 2 (2%) were underweight, 68 (68%) were normal, 25 (25%) were overweight and 5(1%) were obese. Regarding the children and parents practices about childhood obesity, it was found that only 4( 4%) children practices were satisfactory. 71(71%) children practices were moderately satisfactory and 25(25 %) children practices were not satisfactory and in parents 30(30%) were satisfactory, 62(62%) were moderately satisfactory and 8(8%) were not satisfactory.

**Conclusion:** Prevalence of obesity is a major concern in children as well as parents. Awareness through Structured teaching program about restraining and promoting factors for childhood obesity is needed to prevent and control the effects of obesity.

**Key Words:** Childhood obesity, Prevalence, Underweight, Overweight, Restraining, Promoting factors

## INTRODUCTION

The westernization of the life-style and eating pattern has become a solid reason for causing the metabolic disorder called 'obesity'. It is defined as the abnormal accumulation of fat which causes health disorders. Unfortunately, obesity doesn't take account of the age group; it is seen in all age groups and gender even in childhood with co-existing morbidity as the age advances. Despite all the advancements in clinical practices and recent developments in the pharmaceuticals, still, obesity remains the global threat. Thus, the present study focused on various factors that contribute to childhood obesity, as from the review of literature it was obtained that, obesity is not a single-factor disease rather it is a multifactorial disorder. This study was conducted to address the problem in the selected urban school students at Gokak Karnataka. The study also includes the assessment of various childhood obesity factors, the effectiveness of childhood obesity prevention interventions and the imperative role of parents and teachers. Parents and teachers can play a vital role in regulating the repercussions in childhood obese individuals.[1]

BMI is used as a measure of the crude population where an Individual's weight (Kg) divided by the square of their height (m). In general an individual with a BMI, more than 30 is obese, while the individual with a BMI of 25 and more is termed as overweight.[1] Studies suggest that bodyweight 20 per cent more than the optimum tends to be associated with obesity.[2] A school is a place where a major part of the time per day is spent learning. The children who obtain habits in school that leave a long term impact on one's health, which is the direct reflection of their current well-being. Habits attained like consuming junk foods and gulping processed foods lead to putting on weight, which causes harmful effects on health. India treasures a superabundant amount of

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different cultures and food. It can also be said that India has a rich heritage of recipes and foods.[3] A study was centred on BMI and body fat percentage and was conducted among adolescent girls in the Bangalore city. it was found that there were around 13.1% overweight cases and around 5.0% of obese adolescent school girls in Bangalore. The higher rate of BMI and body fat per cent was observed during the pubertal period between the age group of 10-12 years old on average.[4] A study on fast food consumption and snacks revealed that The most professed fried Indian snack is 'Samosa' most of them preferred samosa over pizza. pizza is the least preferred. Chaat items are also preferred mostly by 99.2% population. But, 73.2% of them occasionally consume fast food. 32.5% of them had a favourable attitude towards fast food items. Around 20.3% of them were aware of the post-consumption consequences. A total of 63% had the opinion that these foods consumption has harmful effects.[3]

The major stakeholders in reducing childhood obesity not only consist of children and adolescents. There is a need for contribution from parents, school, health care professions, community and business leaders, and state and local area officials and in terms of wholeness 'society'.[5]

## MATERIALS AND METHODS

This study was conducted in 4 schools of Gokak, Karnataka for two months, Approval was taken the respective head of schools and The study was approved by the institutional research committee (Ref. No. SVU/Ph.D/RDC/2017)

The tool used for the data collection consisted of the self-administered semi-structured questionnaire to assess the practices in school children and parents regarding restraining and promoting factors for childhood obesity. The first stage which includes descriptive research which is designed to conduct a large scale survey regarding childhood obesity among school children, parents and, teachers. A simple random sampling technique was used.

### Section I: Findings of Demographic data of children

Concerning the age majority, 80 (80%) were 13 years, 14 (14%) were 12 years, 4 (4%) were 14 years and 2 (2%) were 11 years. About the gender, 59 (59%) were females and 41 (41%) were males. Majority 78 (78%) children's residence was in a rural area and 22 (22%) were from urban.

About the travel to school, 37 (37%) used of the public transport, 23 (23%) used bicycle, 20 (20%) go to school by walking, 17 (17%) travel by school bus and 3 (3%) use bike or auto.

### Findings of Demographic data of Parents

Concerning the age of parents, majority 75 (75%) were above 40 years, 13 (13%) were between 36-40 years, 9 (9%) were of 30-35 years age and 3 (3%) were less than 30 years. Concerning relation, 58 (58%) were mothers, 42 (42%) were fathers. In the aspect of education, 47 (47%) had completed PUC, 27 (27%) had completed S.S.L.C, 17 (17%) were graduates and above and 9 (9%) were uneducated. Majority of parents 49 (49%) had jobs, 22 (22%) were doing Business, 20 (20%) were unemployed or housewives and 9 (9%) were doing agriculture.

About the income per month, 44 (44%) had an income of above Rs. 20000, 33 (33%) parents income was between Rs. 10000-20000, 17(17%) parents income was between Rs. 5001-10000/- and 6 (6%) parents had less than RS. 5000/- per month income. Concerning the source of information, 30 (30%) got information from television, 29 (29%) got it from a newspaper, 19(19%) got from social media, 19 (19%) got from friends and 03 (03%) were not having any information. Concerning the diet, 74 (74%) were vegetarian and 26 (26%) non-vegetarian.[4,5]

About the number of children, 50 (50%) parents had two children, 23 (23%) had three children, 21 (21%) had one child and 6 (6%) had four and above.

### Section II: Findings related to BMI and Restraining, promoting factors

#### *BMI*

About the body mass index BMI, 81(81%) had normal BMI, 10(10%) were underweight, 08(08%) were overweight and 01(01%) was obese. Majority of the parents classified based on BMI, 68(68%) had normal weight, 25(25%) had overweight, 05(05%) were obese and 02(02%) had underweight.

#### *Restraining and promoting factors*

Questionnaire for children includes,

1. Frequently consume Soft drinks
2. Frequently consume Snacks/Crisps
3. Frequently consume sweets
4. Watch TV while having food
5. Prefer Junk foods over fruits
6. Play video games
7. Time-consuming homework
8. Daily follow routine exercises
9. Prefer playing games over watching TV
10. Likes to play outdoor games
11. Limit meals outside the home
12. Monitor Height/Weight regularly
13. H/E is provided in school on obesity
14. Daily separate timing for exercises

Children were asked to respond Yes/No to above questions

Questionnaire for parents includes,

1. Frequency of purchasing sweet beverages
2. Frequency of purchasing crispy snacks

3. Frequency of purchasing sweets (Parents were asked to choose between Never/Rarely/Frequently)
4. Restrict child to watch TV while mealtime
5. Did the meal routine set for the child?
6. Were the children encouraged to eat vegetables?
7. Were limits set on the types of food they can snack on regularly?
8. Were limits set on types of soft drinks children can drink regularly?
9. Were the children reminded to drink water?
10. Were the children encouraged to play outdoors?
11. Were limits set on the number of time children can watch TV
12. Did adult family members walk/cycle to get to or from places?

Parents were asked to respond Yes/No to No. 4-12 questions

According to the below table 1 When the questionnaire was administered on children, only 8 children responses were satisfactory, 67 children responses were moderately satisfactory and 25 children responses were not satisfactory. In parents, 30 responses were satisfactory, 57 parent responses were moderately satisfactory and 13 children responses were not satisfactory.

**Table 1: Responses of children and parents**

| Sr. No | Aspects | Children | | Parents | |
|---|---|---|---|---|---|
| | | F | % | F | % |
| 1 | Satisfactory >75% | 08 | 08 | 30 | 30 |
| 2 | Moderately satisfactory-50-75% | 67 | 67 | 57 | 57 |
| 3 | Not satisfactory-<50% | 25 | 25 | 13 | 13 |

## RESULTS AND DISCUSSION

### Prevalence of overweight/Obesity

In the present study the overall prevalence of obesity in children was observed (1%) and overweight (8%) in a total of 100 children. BMI: When assessed for BMI in children only one (1%) was obese and 5 (5%) parents were obese.

A similar study conducted in Ahmedabad which revealed the obesity and overweight prevalence of 14% in that overweight was (11.8%) and obesity (2.2%). Findings of a similar study in Latur shows the overall prevalence of overweight and obesity was 9.98% in that 8.54% were overweight and 1.44% were obese. Study in Karnataka shows 9.63% of overweight/obese children in that 4.50% were overweight and 5.13% were obese.[6]

A study in Tamilnadu revealed that the prevalence of overweight/obesity was 27% in that 20% were overweight and 7% were obese. Prevalence of obesity and overweight was comparatively less in a study conducted in Dakshina Kannada and Udupi districts, overall it was 5.60%in that 3% overweight and 2.60% were obese.[6]

### Restraining and promoting factors

The majority (67%) of the children practices were moderately satisfactory, 25% of children practices were not satisfactory and 8% of children practices were satisfactory. In parents majority (57%) of them had moderately satisfactory practices, 30% of parents practices were not satisfactory and only 13% of parents practices were satisfactory.

Findings of a similar study in School of the central part of Bangalore shows that 87.78% of parents monitor the diet of their child, 81.78% of parents feel that their child has adequate activity. Parents feel excessive academic activity and TV watching for lack of physical activity.[7]

A similar study on Attitude of mother on Childhood obesity and its prevention was carried out in Puducherry, India. Findings revealed that mothers agreed with faulty food habits (40.83%), unhealthy lifestyle practices (55.83%), and parent dietary behaviour (39.17%) is associated with obesity. Mothers agreed with high intake of sweet (41.67%) and chocolates (49.17%) ice creams (50%), fried foods (53.33%) induces obesity. 35% of mother accepted that media influence the child eating behaviour.[8]

## CONCLUSION

Findings of the study revealed that overweight and obesity is very prevalent in children as well as parents and its growing numbers is a major concern. Results of Practices related to childhood obesity in children as well as parents show it is satisfactory in only a few respondents. A teaching program on childhood obesity will be helpful to improve the practices in children and parents which will, in turn, prevent the consequences like coronary artery diseases, diabetes, hypertension and chronic illnesses in their later life. Collective efforts from leaders of the society, school teachers, health professionals and parents are must to achieve a normal BMI in children and help them lead a normal healthy life. The government should include activities related to obesity prevention in the school health program.

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