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A STUDY TO ASSESS THE KNOWLEDGE AND LIFESTYLE PRACTICES ON PREVENTION AND CONTROL OF OVERWEIGHT AMONG SCHOOL CHILDREN.

Tamilselvi .D^{1*}, Dr. Sathiyalatha Sarathi², Dr. V. Hemavathy³

^{1*}Ph.D. Scholar, Sree Balaji college of Nursing, Bharath institute of Higher Education and Research, Chennai, Tamil Nadu, India.

²Supervisor, Vice Principal, Department of Obstetrics and Gynecology Nursing, Sree Balaji College of Nursing, Bharath institute of Higher Education and Research, Chennai, Tamil Nadu, India.

³Principal, Department of Psychiatric Nursing, Sree Balaji college of Nursing, Bharath Institute of Higher Education and Research, Chennai, Tamil Nadu, India.

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ABSTRACT:

Background: Obesity is a prevalent health issue that presents complex challenges, encompassing serious medical, social, and psychological dimensions affecting people of all ages and socioeconomic backgrounds. **Aim:** The aim of the study to assess the Knowledge and Lifestyle Practices on Prevention and Control of Overweight among school children. **Methods:** The present study was adopted a cross-sectional design. The required sample size was determined to be 380. All 380 school children were screened for overweight and obesity. 69 school children were confirmed of overweight and obesity. Using a convenient sampling technique was used for the study. **Finding:** The study result indicated that 7% of the school children is classified as overweight (BMI 23 - 24.9 Kg/m²), and 8.4% are categorized as obese (BMI >25 Kg/m²). The analysis of the population's knowledge scores reveals a notable distribution. 33.3% fell into the 'Good' category (20-29), and 66.7% were classified as 'Average' (10-19). There were no scores in the 'Poor' range (1-9). **Conclusion:** The study concluded that lifestyle practices highlights moderate dietary habits, low engagement in regular physical activity, and moderate variability in sleep patterns, indicating areas that require attention for overall improvement in health and well- being.

Keywords: Obesity, Overweight, Life style practices, Prevention

1. INTRODUCTION

Obesity is a prevalent health issue that presents complex challenges, encompassing serious medical, social, and psychological dimensions affecting people of all ages and socioeconomic backgrounds. Recognized as a significant risk factor for non-communicable diseases worldwide, obesity has become a critical concern in public health. The global prevalence of obesity has escalated to epidemic levels, marking it as a significant public health challenge. Recent statistics show that 2.1 billion individuals, accounting for 30% of the global population, are either obese or overweight. Furthermore, 25% of premature global deaths are associated with obesity-related conditions. Obesity substantially increases the risk of cardiovascular disease-related deaths, tripling the likelihood. There has been a notable rise in the rates of overweight and obesity among adolescents globally. Over the past 25 years, the prevalence of overweight and obesity has doubled among children aged 6-11 and tripled among adolescents aged 12-17. India is now the third most obese country in the world, with the prevalence of overweight and obesity among Indian adolescents ranging from 10% to 30%.[1]

As reported by the World Health Organization (WHO), the rate of overweight and obesity among children and adolescents aged 5-19 years has surged from 4% in 1976 to more than 18% in 2016. This increase was consistent for both genders, with 18% of girls and 19% of boys classified as overweight. [2]

Childhood overweight and obesity can lead to significant short-term and long-term health issues. In the short term, children with excess weight are at higher risk for psychological problems like depression, anxiety, low self-esteem, and various emotional and behavioral disorders. They are also more likely to experience asthma, systemic inflammation, liver issues, and musculoskeletal problems, especially in the lower limbs. These children often have increased metabolic and cardiovascular risk factors, such as high blood pressure, dyslipidemia, type 2 diabetes, and other cardiovascular system abnormalities. In the long term, being overweight or obese in childhood increases the likelihood of developing cardiovascular diseases, diabetes, certain types of cancer, and musculoskeletal disorders in adulthood, which can lead to disability and early mortality.[3]

Schools are crucial settings for educating students about healthy lifestyles and implementing interventions to promote their well-being. They provide an environment where children can learn about nutrition, physical activity, and mental health. Additionally, schools can create supportive communities that encourage healthy behaviors and habits from a young age.[4]

AIM OF THE STUDY

The aim of the study to assess the Knowledge and Lifestyle Practices on Prevention and Control of Overweight among school children.

2. MATERIAL AND METHODS

The present study was adopted a cross-sectional design. The required sample size was determined to be 380. All 380 school children were screened for overweight and obesity. 69 school children were confirmed of overweight and obesity. Using a convenient sampling technique was used for the study. The study was conducted in selected schools, Chennai. Overweight and obesity was calculated by Body Mass Index.

After obtaining written consent from the parents of school children. Life style practice questionnaires and Knowledge questionnaire were administered. The data was collected

using excel spread sheet. SPSS version 26 software was used to analyse the data. The results were presented in terms of frequency and percentage.

3. RESULTS

The Table 1 shows the distribution of BMI categories among the population indicates that 41.3% of individuals are underweight (BMI <18.5 Kg/m²), while 40.5% fall within the normal weight or lean range (BMI 18.5 - 22.9 Kg/m²). Additionally, 9.7% of the population is classified as overweight (BMI 23 - 24.9 Kg/m²), and 8.4% are categorized as obese (BMI >25 Kg/m²).

Table 2 shows the majority are 13 years old (92.8%), with a smaller proportion being 14 years old (7.2%). Gender distribution shows a predominance of females (94.2%) compared to males (5.8%). Dietary habits indicate that a vast majority have a diverse diet including meat and vegetables (92.8%), with a small portion following a vegetarian diet (7.2%).

Table 3 shows the lifestyle practices of the population are categorized based on a scoring system, with scores ≤64 indicating an unhealthy lifestyle and scores ≥65 indicating a healthy lifestyle. The data reveals that 87.0% of the population falls into the unhealthy lifestyle category, while only 13.0% are categorized as having a healthy lifestyle.

Table 4 shows the knowledge scores of the population are distributed across different grades, with no individuals scoring in the 'Excellent' range (30-34), resulting in 0.0%. A total of 33.3% of individuals fall into the 'Good' category (20-29), while the majority, 66.7%, are in the 'Average' category (10-19). There are no individuals with 'Poor' knowledge scores (1-9), resulting in 0.0%.

Figure 1 shows the area wise distribution of the lifestyle practices of the population have been analysed across various areas, revealing notable patterns. For nutritional habits, with a maximum score of 70, the mean score is 35.80 and the standard deviation is 5.60, indicating moderate variability in dietary practices. In terms of exercise routine, out of a possible score of 35, the mean score is 7.50 with a standard deviation of 2.00, suggesting low engagement in regular physical activity and relatively low variability. Regarding sleep quality, with a maximum score of 20, the mean score is 12.10 and the standard deviation is 3.15, reflecting moderate variability in sleep patterns. These results provide a comprehensive view of the population's lifestyle practices, highlighting areas needing improvement.

Table 1: School children based on BMI category (N=380)

| BMI Category (Kg/m ²) | Description | Frequency (n) | Percentage (%) |
|-----------------------------------|--------------------|---------------|----------------|
| <18.5 | Underweight | 157 | 41.3 |
| 18.5 - 22.9 | Normal weight/Lean | 154 | 40.5 |
| 23 - 24.9 | Overweight | 37 | 9.7 |
| >25 | Obese | 32 | 8.4 |

Table 2: Demographic variables of School children (N=69)

| Demographic variables | Frequency | Percentage |
|---|------------------|-------------------|
| Age Group (Years) | | |
| 13 years old | 64 | 92.8% |
| 14 years old | 5 | 7.2% |
| Gender Distribution | | |
| Males | 4 | 5.8% |
| Females | 65 | 94.2% |
| Family Structure | | |
| Single-Parent Family | 62 | 89.9% |
| Extended Family | 7 | 10.1% |
| Current Living Arrangement | | |
| Living with Parents | 69 | 100% |
| Sibling Count | | |
| No Siblings | 15 | 21.7% |
| One Sibling | 40 | 58.0% |
| More than Two Siblings | 14 | 20.3% |
| Dietary Habits | | |
| Vegetarian Diet | 5 | 7.2% |
| Diverse Diet (Including Meat and Vegetables) | 64 | 92.8% |
| History of Overweight or Obesity in Family | | |
| Present | 55 | 79.7% |

| | | |
|---|----|-------|
| Absent | 14 | 20.3% |
| School Physical Activities | | |
| Participates in Physical Education/Sports Classes | 69 | 100% |
| Extracurricular Physical Involvement | | |
| Engaged in Sports/Dance | 65 | 94.2% |
| Not Engaged in Sports/Dance | 4 | 5.8% |

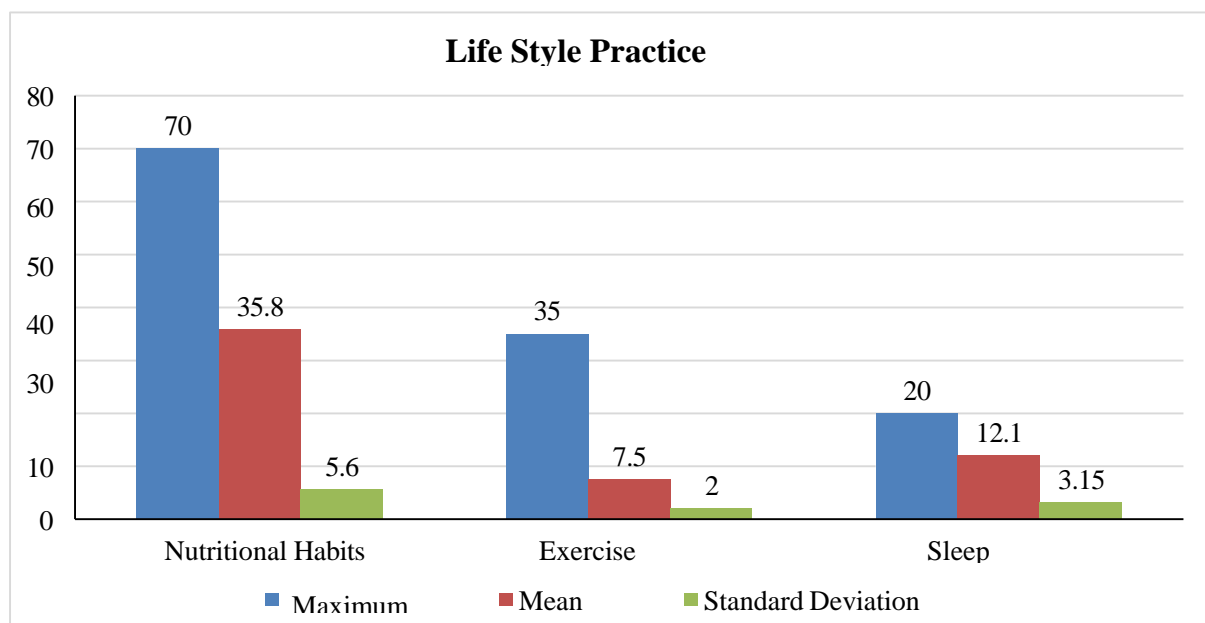
Table :3 Frequency and percentage distribution of Lifestyle practice score. (N=69)

| Lifestyle practices Score | Lifestyle Practices | Frequency (n) | Percentage (%) |
|---------------------------|---------------------|---------------|----------------|
| ≤64 | Unhealthy lifestyle | 60 | 87.0 |
| ≥65 | Healthy lifestyle | 9 | 13.0 |

Table: 4 Frequency and percentage distribution of school children based on the Knowledge score. (N=69)

| Knowledge Score | Grade | Frequency (n) | Percentage (%) |
|-----------------|-----------|---------------|----------------|
| 30-34 | Excellent | 0 | 0.0 |
| 20-29 | Good | 23 | 33.3 |
| 10-19 | Average | 46 | 66.7 |
| 1-9 | Poor | 0 | 0.0 |

Figure: 1 Area wise distribution of the lifestyle practices (N=69)



4. DISCUSSION

The study result indicated that 7% of the school children is classified as overweight (BMI 23 - 24.9 Kg/m²), and 8.4% are categorized as obese (BMI >25 Kg/m²). The analysis of the population's knowledge scores reveals a notable distribution. No individuals scored in the 'Excellent' range (30-34), 33.3% fell into the 'Good' category (20-29), and 66.7% were classified as 'Average' (10-19). There were no scores in the 'Poor' range (1-9). This indicates a need for improved educational efforts to raise knowledge levels from average to good or higher.

This result supported by the study by Pedapudi AD et al. (2020) found that the prevalence of overweight and obesity among school-going adolescents in Bengaluru, India, was 27.8%. Adolescents from higher-income families had an odds ratio (OR) of 2.35 (1.43–3.85) for being overweight or obese. Similarly, students with a family history of obesity had an odds ratio (OR) of 2.4 (1.72–3.33) for being overweight or obese. [5]

Similar, study by Patnaik L et al. compared the prevalence of overweight and obesity among adolescents in government and private schools. The overall prevalence was 27.8%, with private schools showing a higher rate (45.2%) compared to government schools (10.5%). Moreover, students in private schools had significantly higher Body Mass Index (BMI), Waist Circumference (WC), Neck Circumference (NC), and Waist-Hip Ratio. [6]

5. CONCLUSION

In conclusion, the study concluded that BMI categories indicate a significant prevalence of both underweight and normal weight individuals, with smaller proportions classified as overweight and obese. The age and gender distribution shows a predominance of 13-year-olds and a higher number of females. Dietary habits are predominantly diverse, with most individuals consuming both meat and vegetables. Lifestyle practices reveal that a vast majority of the population leads an unhealthy lifestyle. Knowledge scores are primarily in the 'Average' category, with no individuals achieving 'Excellent' or 'Poor' scores. The evaluation of lifestyle practices highlights moderate dietary habits, low engagement in regular physical activity, and moderate variability in sleep patterns, indicating areas that require attention for overall improvement in health and well-being. Study suggest that implement nutritional education programs to address the high prevalence of underweight individuals and promote healthy weight gain. Encourage balanced diets rich in essential nutrients to support individuals in maintaining normal weight and preventing obesity. Develop community-based exercise programs to increase engagement in regular physical activity. Introduce physical education and sports activities in schools to promote an active lifestyle among adolescents.

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