



IMPACT OF NUTRITION, DIETARY HABITS AND EXERCISE ON ADOLESCENT HEALTH

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Abstract : Adolescence is considered to be the period of stress and storm as in this period children undergo a lot of physical and psychological changes. These years are also formative years for the adolescents. Childhood obesity is considered to be one of the serious problems in the 21st century according to “World Health Organization” (WHO) and is considered to be a well-known cause of non communicable disease in adults. So proper nutrition, dietary habits and physical activity are considered to be the key components of health in adolescence. Inspire having lot of information regarding the importance of healthy eating during these years the adolescents but due to their busy schedule and conscious eating they avoid healthy food . This paper attempts to find out the nutritional problems, eating habits and activity pattern during adolescence.

IndexTerms Adolescence, Nutrition, Dietary Habits, Activity Pattern

I. INTRODUCTION

Adolescence is the phase of life between childhood and adulthood, from ages 10 to 19. According to WHO, adolescence is a unique stage of human development and an important time for laying the foundations of good health. The period of Adolescence is most important part of human physical, mental and psychological growth. It is marked with rapid physical, cognitive and psychosocial growth of a kid. It being a crucial phase of health improvisation, with deep impact on the health in later ages. . Adolescents have a lot of information regarding the positive impact of nutrition, Dietary habits and physical exercise on their health, but still the study results are not encouraging. Despite the scientific and economic revolution in the world and with the advancement of technology we were supposed to get better utilization of resources, improvement of health and immune system of adolescents. However, studies had shown that the trend is being reversed; today's teenagers are in poorer health and more chronic to diseases than compared with their parents were at the same age despite being more connected, aware and informed. The advent of smart phones, high speed internet, mobile and online gaming had undoubtedly impacted the physical movement of adolescents, and also hampered their mental health with their physical health.

NUTRITIONAL NEEDS AND EATING HABITS DURING ADOLESCENCE –

Adolescents need diets of higher quality and greater quantity, compared with children or adult's. The growth spurt requires a greater supply of energy and other important nutrients required for proper growth and development. Puberty-related changes in physiological function alter the nutritional needs, such as the greater requirement for iron after menarche in girls and boys require more energy and proteins for muscle development. So the need for healthy eating habits during adolescence increases. Natural, fresh and nutritive eating should be a part of the daily routine of the adolescents. To control weight, it is a common practice among adolescents to develop a habit of skipping meals. These dietary patterns increase nutritional risk and unwanted weight gain. Consumption of junk foods and ready to eat foods lead to unhealthy eating

ACTIVITY PATTERNS AND FITNESS IN ADOLESCENCE:

During adolescence the activity pattern of children changes drastically. The type of physical activity and exercise have an impact on the Body Composition, Physical Capacity, during adolescence, physical activity influences growth and development of skeletal bone, muscle, and fat. Activity patterns developed during these years carry over to later life and affect morbidity and longevity. The capacity for physical exercise increases with puberty, as strength, skill, and endurance increase. Physical activity helps in increasing the linear growth, body mass, and physiological changes, such as greater control of body temperature, that improve athletic ability

Review of Literature:

A similar study was done by Giontella et alⁱⁱ in 2019 and found that the prevalence of overweight and obesity were 21.3% and 13%, respectively, while the prevalence of normal-high BP and HBP were 17.6% and 21.7%, respectively. Among obese children, the prevalence of HBP was 30.8%, whereas among overweight children, the prevalence of HBP was 20.3%. Moreover, 150 (50%) and 121 children (41.3%) were found to have cSBP higher than either the 90th or 95th percentile for height, respectively. Among the 55 (18.3%) children classified as HBP by brachial SBP, 45 (81.8%) and 41 (78.8%) present cSBP over either the 90th or 95th percentile for height, respectively. They also found that found higher consumption of vegetables in children categorized as normal weight group, compared to the overweight and obese group.

Another study done by Herrera et al in 2021ⁱⁱⁱ found in their study that before the hospital admission, patients with obesity were less compliant with the basic rules of healthy eating, engaged in more emotional eating, and practiced less physical exercise in comparison to those with overweight. There was also a close-to-significant tendency for a higher frequency of anti-anxiety medication in patients with obesity versus overweight. Greater efforts are warranted to prevent an increase in the BMI of patients, paying special attention to their state of mind.

Objectives of the study:

The present study was undertaken with the following objectives

- To assess the weight status of adolescents.
- To analyze the nutrient intake of adolescents
- To assess the type of physical activity and exercise status of adolescents

Materials and Methods:

The present study was conducted on 50 adolescent girls of Ajmer city belonging aged 16-19 years. All the adolescents' girls were investigated on a special Performa which was specially designed for the present study. The anthropometric profile of the adolescent girls was also assessed for the calculation of BMI in order to see their weight status. The eating habits and dietary pattern and the type and pattern of exercise of the adolescent girls was also analyzed in the present study.

Results and discussions:

The present study was undertaken to see the impact of nutrition, dietary habits and exercise on the adolescent health and the results of the study are discussed below:

On the basis of the anthropometric profile of the adolescent girls they were categorized into various grades of obesity given by WHO. 18(36%) of the girls were underweight,22(44%) had normal weight ,6(12%) were overweight and 4(8%) gad Grade I obesity. Overweight and obesity status in girls can be related to poor eating habits and lack of exercise while underweight status can be associated with poor eating habits and less consumption of essential nutrients in the diet. Table 4.1 shows the categorization of girls into various grades of obesity according to WHO.

Table 4.2 shows the food consumption pattern of adolescent girls of the present study. Cereals was consumed by 100% of the adolescent girls , milk and milk products were also consumed by most of them daily. The other food products were also consumed by the adolescent girls in adequate amounts which are needed for healthy living.

The adolescent girls of the present study were also asked about their physical activity pattern in which 32(64%) were doing some regular exercise/Physical activity like yoga , gymming, walking, cycling etc to keep themselves fit but the others were not involved in any type of physical activity or exercise.

Table 4.1 Classification of subjects into various Grades of Obesity according to WHO

Weight Status	Age Group 16-19 years (n=50)		
	No.	%	Mean BMI
Underweight	18	36	15.4
Normal	22	44	18.5
Overweight	6	12	25.6
Grade I Obesity	4	8	30.2
Grade II Obesity	0	0	0
Grade III Obesity	0	0	0

Weight Status of adolescent Girls %

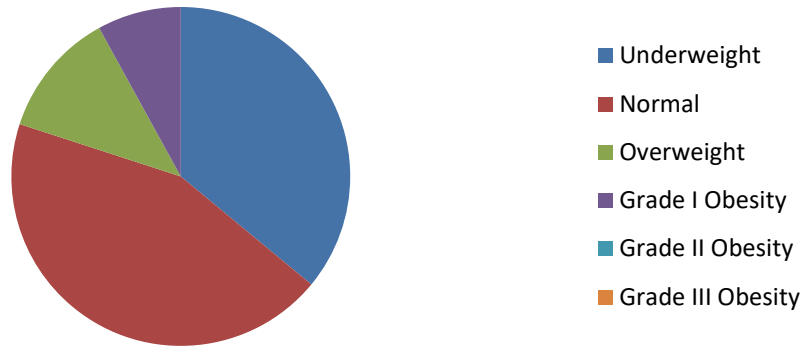
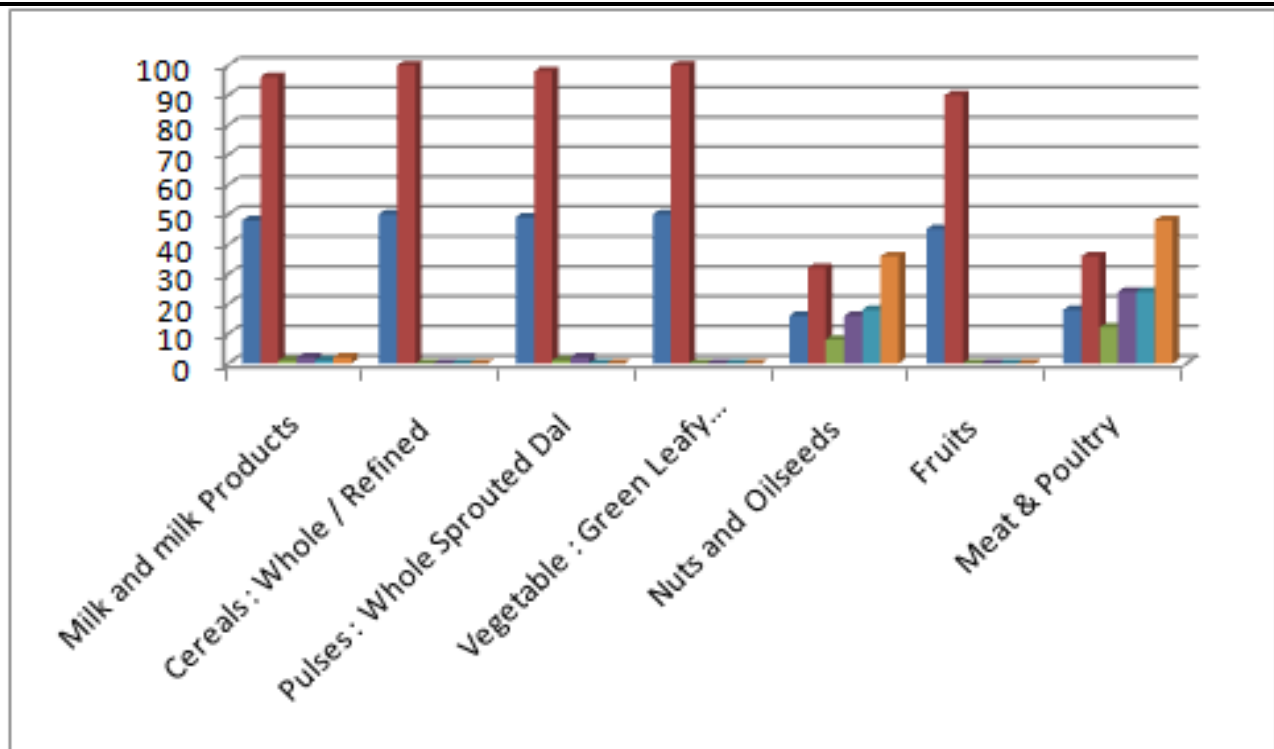


Table 4.2 Shows the Food Consumption Pattern of Adolescent Girls

	Daily		Weekly		Monthly	
	Number of Subjects	%	Number of Subjects	%	Number of Subjects	%
Milk and milk Products	48	96	1	2	1	2
Cereals : Whole / Refined	50	100	0	0	0	0
Pulses : Whole Sprouted Dal	49	98	1	2	0	0
Vegetable : Green Leafy Roots and Tubers Others	50	100	0	0	0	0
Nuts and Oilseeds	16	32	8	16	18	36
Fruits	45	90	0	0	0	0
Meat & Poultry	18	36	12	24	24	48



Conclusion:

From the present study it can be concluded that in spite of most of the adolescent girls being aware of the healthy eating pattern and importance of nutrients and physical activity in the maintenance of a healthy lifestyle, some were underweight and a few were overweight and obese. Therefore, proper nutritional education and counseling are required for these adolescent children for their healthier living. The importance of physical activity must be emphasized for the maintenance of health in adolescent children.

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