Effect of honey mixture therapy on obesity among adolescent girls residing in selected hostels

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ABSTRACT

The present study was conducted to assess the effect of honey mixture therapy on obesity among adolescent girls. Objectives: Assess the degree of obesity among adolescent girls, Assess the effectiveness of honey mixture therapy on obesity among adolescent girls, Find the association between obesity and selected demographic variables of adolescent girls. Methodology: Quantitative approach was used for the study and pre experimental one group pre test post test design was selected. This study was based on Penders health promotion model. Data was collected from 30 obese adolescent girls residing in selected hostels at Perinthalmanna using non probability purposive sampling technique. Semistructured interview schedule on sociodemographic data and biophysiological methods were used to obtain baseline pre test measurements. Honey mixture therapy was administered for 45 days and post test measurements were also collected. The data were analyzed and interpreted by using descriptive and inferential statistics. Results; the mean post BMI score (27.79) is less than the mean pretest score(28.20). The obtained t value is 0.85 and the p value is 0.40. The mean difference is not statistically significant. The study also revealed that there is significant association of obesity with availability of pocket money. Conclusion; the study concluded that there is non significant reduction in BMI followed by administration of honey mixture therapy for a period of 45 days.

Keywords: Honey Mixture Therapy, Obesity, Adolescent Girls, BMI

1. INTRODUCTION

Prosperity of a nation depends upon the quality of human resources. Overweight and obesity fastens a person's risk of getting Non communicable diseases rapidly. They kill more people than all other causes combined and is an independent risk factor for cardiovascular diseases among children and adolescents irrespective of age, sex or ethinicity. Childhood and adolescent obesity is one of the most serious public health challenges of the 21st century. Obesity is defined as abnormal or excessive fat accumulation that may impair health. Body mass index (BMI) or Quetelet index is a simple index of weight in kg for height in m^2 that is commonly used to classify overweight and obesity.[5] As per WHO classification, BMI $>25kg/m^2$ is considered to be preobese(overweight) and BMI $>30kg/m^2$ is obesity. The problem is global and is steadily affecting many low- and middle-income countries, particularly in urban settings. It has more than doubled in children and quadrupled in adolescents in the past 30 years. . From existing data it has been projected that by the year 2030 levels of obesity could be as high as 50-80% in the USA, between 30-40% in Australia, England and Mauritius and over 20% in some developing countries. Once it occurs it is difficult to treat. Prevention of weight gain offers the most effective means of controlling obesity. This means we need to start with children and young people. There are many major diseases associated with obesity like hypertension, atherosclerosis, and diabetes, as well as certain types of cancer. Less well-known complications include hepatic steatosis, gallbladder disease, pulmonary function impairment, endocrine abnormalities, obstetric complications, trauma to the weight-bearing joints, gout, cutaneous disease, proteinuria, increased hemoglobin concentration, and possibly immunologic impairment. This information underlines the importance to take necessary action to prevent obesity. There are a number of ways to manage obesity. They range from preventive measures such as dietary modification, physical activity, behavioral therapy to drug therapy, combined therapy and surgery. Among them Honey mixture therapy is simple and easy to administer.

2.MATERIALS AND METHODS

The research approach used by the investigator is quantitative approach. A pre experimental one group pre test post test design was used to assess the effectiveness of honey mixture therapy on obesity among adolescent girls and to find the association between obesity and selected demographic variables of adolescent girls. . Non probability purposive sampling technique was

adopted with a sample size of 30. Semistructured interview schedule used to collect the characteristics of the samples.Calibrated weighing machine and staturemeter were used to measure weight and height.

2.1 Ethical Clearance
The initial permission for carrying out the study was obtained from institutional ethical committee of Alshifa College of Nursing. Permission was also obtained from concerned authority of selected hostels and individual consent is obtained from the subjects.

2.2 Procedure of data collection
Formal permission was obtained from Principal, Al Shifa College of Nursing. 30 obese adolescent girls were selected from college hostels under Shifa Institute of Medical Sciences on the basis of inclusion criteria by using non probability purposive sampling technique.Informed consent was obtained from the subjects prior to the study. On the 1st day investigator assessed the socio demographic data by a semistructured interview schedule and biophysiological measurements were obtained. Honey mixture therapy (Combination of 5ml of honey and 2.5ml of lemon juice dissolved in 200ml of lukewarm water and which is administered in the early morning on empty stomach) started from the next day of pre test and continued upto45 days and post test measurements were obtained on 47th day to check the effectiveness of treatment.

3.RESULTS AND INTERPRETATION
3.1 Distribution of demographic characteristics of adolescent girls
In the present study 40% of adolescent girls are with 19 years, 33.34% are with 20 years, 13.33% of adolescent girls are with 18 years and 21 years of age. 96.67% of adolescent girls are non vegetarians and 3.33% are eggetarians and53.33% of obese adolescent girls have habit of skipping meals.With regard to religion 50% of adolescent girls are muslims, 26.67% are hindus and 23.33% are Christians. 66.67% perform exercise occasionally and 33.33% perform exercise 3-4 days per week.80% of the adolescent girls are from nuclear family, 13.33% are from joint family and 6.67% are from extended family.43.33% of adolescent girls are having monthly family income of Rs.10001-20000, 36.67% are having between Rs.5001-10000, 16.67% are above Rs.20001 and 3.33% are having less than Rs. 5000. Majority (36.67%) are getting pocket money within range of Rs.251-500, 16.67% are getting Rs.<250 and the percentage of adolescent girls getting pocket money between Rs.501-750 and Rs. 751-1000 are equal(23.33%).30% of adolescent girls have family history of obesity and 70% have no family history of obesity.53.33% are taking junk foods three to four times a week , 33.33% are taking once in a week and the 6.67% of adolescent girls are taking junk food more than four times a week and another 6.67% not at all taking junk foods. Regarding sleeping pattern,80% of adolescent girls are sleeping for 5-7 hours, 13.33% are sleeping for <5hours and 6.77% are sleeping more than 7 hours per day.

3.2 Analysis of degree of obesity.

Table 1: Frequency and percentage distribution of adolescent girls based on degree of obesity (n=30)

Variable	Category	Frequency (f)	Percentage (%)
Obesity (BMI>25)	Preobese	22	73.33
	Obese	8	26.67

73.33% are preobese and 26.67% are obese

3.3 Analysis of effectiveness of honey mixture therapy on obesity among adolescent girls.

Table 2: Significance of difference in mean pre test and mean post test scores of obesity.(n = 30)

Variable	Test	mean	Confidence interval (95%)	SD	Paired t value	p value
Obesity	Pre	28.20	27.49-28.91	1.91	0.85	0.40
	Post	27.79	27.11-28.47	1.82		

Table 2 depicts that the mean post test score (27.79) of obesity among adolescent girls is less than the mean pretest score (28.20). The obtained 't' value is 0.85 and the p value is 0.40 . Difference in the mean pre test and post test scores of obesity is not statistically significant.

3.4 Association between obesity and selected demographic variables of adolescent girls.
This section indicates that there was significant association of obesity with availability of pocket money and no significant association with other demographic variables like age, dietary pattern, religion, marital status, exercise pattern, type of family, monthly family income, family history, pattern of junk food consumption, pattern of sleeping hours and skipping of meals and research hypothesis is accepted in terms of availability of pocket money and null hypothesis is accepted in terms of other variables.

4. CONCLUSION
The findings of the present study reveals that the mean post BMI score (27.79) was less than the mean pretest score(28.20). The obtained t value was 0.85 and the p value was 0.40. The mean difference was not statistically significant, might be due to small amount of honey mixture, shorter time period or small sample size.

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