



To Access the Linkage Between the Consumption of Dairy Product and Obesity in Children

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ABSTRACT

Dairy has been shown to reduce the risk of obesity in many epidemiological studies. We aimed to investigate the association between dairy consumption and prevalence of obesity in an adult. The change in food intake in Indian populations is characterized by an increase in the consumption of animal protein including dairy products. Distributed worldwide proof generally founded on created or big-time salary nations' insight on dairy utilization and body weight is broad however dubious. Many studies have found a negative association between milk/dairy consumption and body mass index and central adiposity. Obesity, hypertension, dyslipidaemias and hyperglycaemia are all strong contributors to cardio-metabolic diseases, which are the major causes of morbidity and mortality worldwide. Research shows that having sufficient milk, yogurt and cheddar consistently, as a component of a sound eating regimen, isn't connected to weight gain. Globally, 41 million children under the age of 5 years were overweight or obese in 2014; 39 % of adults aged 18 years and over were overweight in 2014, and 13 % were obese. The terms milk, whey, cream, butter, buttermilk, cheese and yogurt are protected and reserved exclusively for dairy products. Margarine is excluded from the dairy nutrition type as it contains no Ca and is viewed as a fat. It's encouraging that schools and universities continue to be the primary locations where people acquire the knowledge they require. Regardless of whether they observe each smart dieting rule, most of understudies have a decent healthful example and a legit viewpoint on their dietary patterns.

Keywords: Dairy Products, Obesity, Children's, Dietary Patterns

INTRODUCTION

According to the definition from the World Health Organization (WHO), overweight and obesity are likely to damage health due to excessive body fat and/or abnormal accumulation. In the centre, weight list (BMI) and midsection boundary (WC) are estimated straight by estimating the outside elements of the body. BMI is the main list for the finding of weight. WC can reflect the degree of accumulation of abdominal fat. Obesity has become a global problem of epidemic proportions in most emerging economies. The latest figures from the World Health Organization (WHO) provide a global estimate of 1.4 billion overweight individuals. Today, a significant concern is the overwhelming financial effect of heftiness and related metabolic aggravations. A developing number of specialists have given themselves to the investigation of the sub-atomic components of weight and heftiness related illnesses, fully intent on discovering the genuine foundation of obesity to develop reasonable and effective therapies. [Yang et al., 2017]

BMI, calculated as weight in kg divided by height in metres squared (kg/m²), has been shown to correlate strongly with adiposity (excess body fat) in adults and children, and in turn with health. We classify a youngster's degree of heftiness by looking at (plotting) their BMI against age-and sex-explicit limits (in light of centiles) got from a reference populace. With regards to the current survey, most investigations involved BMI as their proportion of body largeness, which included BMI, BMI standard deviation score and BMI z score. The leftover investigations utilized the result proportions of rate muscle versus fat, abdomen outline and body weight status. We have used 'obesity and indicators of adiposity' as a collective term to describe these varying outcome measures. [Dougkas et al., 2019]. In the beyond thirty years, youngster overweight and corpulence pervasiveness has risen significantly in most top-level salary nations and, from the scant information accessible, is by all accounts rising quickly in low-pay and middle-income countries. Although the rise in obesity prevalence in several high-pay nations may be arriving at a level, commonness remains generally high and is as yet a purported delayed bomb for future requests on wellbeing administrations. To "halt the rise in diabetes and obesity" in adults and children was one of the global health targets set by the World Health Assembly. [Lobstein et al., 2015]

The National Institutes of Health estimates that 30 million to 50 million American adults are lactose intolerant, including 95% of Asians, 60-80% of African Americans and Ashkenazi Jews, 80-100% of American Indians, and 50-80% of Hispanics. Symptoms, which include upset stomach, diarrhea, and gas, occur because these individuals lack the enzyme lactase, which is needed to digest the milk sugar, lactose. Nursing kids make compounds that separate lactose, yet as we grow up, large numbers of us lose this limit. Subsequently, lactose isn't ingested, however as we grow up, many of us lose this capacity. As a result, lactose is not absorbed, but remains in the intestine.

MATERIAL & METHOD

This is a local area-based cross-sectional review. Students between the ages of 12 & 16 from various communities provided a total of 200 individual samples. The individuals in the sample were gathered from various Hyderabad colleges. A poll was utilized to complete the review.

Materials

A questionnaire was designed and used as a medium for collecting the data. The questionnaire was divided into different parts. Questions about demographic information are included in the first section. The second part includes questions about the social media platforms and the time spent on them. The next part includes questions about the social media influencers they follow and the frequency of consumption of products they recommend followed by the questions about the effect it had on their health whether it be positive or negative.

Statistical Analysis

Interpretation of data was done using Microsoft Excel. T-test was done to compare the means of two groups, male and female. The 5% level of least significance was used to determine any differences in the mean values between male and female respondents. Differences at $p < 0.05$ were considered to be statistically significant. The results are expressed as mean standard deviation.

RESULTS & DISCUSSION

Age & Gender

Table 1: Age wise Gender wise Percentage of Children's

Variable	Frequency	Percentage
12 - 13	14	7%
13 - 14	22	11.10%
14 - 15	20	10.10%
15 - 16	143	71.90%
Male	100	45.70%
Female	100	48.50%
MEAN	49.75	
Standard Mean	62.2595374	

Out of total subjects, 14 respondents are in the age group of 12-13 years (7%), 22 are in the age group of 13-14 years (11.1%), 20 are in the age group of 14-15 years (10.1%), 143 are in the age group of 15-16 years (71.9%). The equivalent frequency and percentage of gender of the respondents, 100 (50%) for male and 100 (50%) for the female.

Importance of dairy products in a diet and consumption of dairy product in a week

Table 2: Dairy Products Consumption in Diet

Variables	Frequency	Percentage
75%	38	18.30%
50%	75	36.10%
25%	56	26.90%
10%	22	10.60%
less than 5%	17	8.20%
Mean	41.6	
Standard deviation	24.11	

Table 3: Consumption Frequency of Dairy Products in Diet

Variables	Frequency	Percentage
Never	5	2.40%
Rarely (1-2 times a week)	68	32.70%
Sometimes (3-4 times a week)	62	29.80%
Often (5-6 times a week)	39	18.80%
Very often (7 or more times a week)	34	16.30%
Mean	41.6	
Standard deviation	25.085	

Out of all subjects, 38 respondents are in the 75% level (18.3%) , 75 respondents are in the 50% level (36.1%), 56 respondents are in the 25% level (26.9%), 22 respondents are in the 10% level (10.6%), 17 respondents are in the less than 5%(8.2%). The percentage of consumption of dairy products by the respondents, where 68 (32.7%) consume 1-2 times a week, 62 (29.8%) consume 3-4 times a week, 39 (18.8%) consume 5-6 times a week, 34(16.3%) consume 7 or more times a week and 5(2.4%) consume never.

In your opinion, do you think there is a link between consumption of dairy products and obesity & have you ever been diagnosed with obesity or are you currently considered as overweight?

Table 4: link between consumption of dairy products

Variable	Frequency	Percentage
Strongly agree	25	12.10%
Agree	84	40.80%
Neither agree nor disagree	54	26.20%
Disagree	24	11.70%
Strongly disagree	19	9.20%
Mean	41.2	
Standard Mean	27.5989	

Variables	Frequency	Percentage
Yes	53	25.70%
No	153	74.30%
Mean	103	
Standard Mean	70.7106	

The recurrence and level of heftiness analyzed or right now analyzed by corpulence respondents, 53 (25.7%) were analyzed as stoutness and 153 (74.3%) were not analyzed by the stoutness and represent an assessment of every respondent concerning the linkage b/w utilization of dairy items and heftiness where 25(12.1%) emphatically concur, 80(40.8%) simply concur, 54(26.2%) never concur nor deviate, 24(11.7%) differ for the above assertion and keep going 19(9.2%) firmly differ on the above explanation about the linkage.

How often do you consume other high-fat or high-calorie foods (e.g. fried foods, sugary drinks, processed snacks) in a typical week & Do you believe that reducing dairy product consumption can lead to weight loss ?

Variable	Frequency	Percentage
Strongly agree	23	11.10%
Agree	86	41.50%
Neither agree nor disagree	57	27.50%
Disagree	29	14.00%
Strongly disagree	12	5.80%
Mean	41.4	
Standard mean	29.9	

Variables	Frequency	Percentage
Never	5	2.40%
Rarely (1-2 times a week)	77	37.20%
Sometimes (3-4 times a week)	66	31.90%
Often (5-6 times a week)	38	18.40%
Very often (7 or more times a week)	21	10.10%
Mean	41.4	
Standard Mean	30.01	

The utilization of unhealthy food with the respondents, 5(2.4%) which never devour fatty admission , 77(37.2%) which eat 1 - 2 times each week, 66(31.9%) eats 3 - 4 times each week , 38(18.4%) devours 5 - 6 times each week, 21(10.1%) are frequently who eat high fat and the degree of recurrence and level of respondent that lessening dairy item can prompt weight reduction, where 23(11.1%) emphatically concur, 86(41.5%) are settled on above

articulation, 57(27.5%) are neither concurred nor deviate, 29(14.0%) are differ and endure however not the most un-12(5.8%) are firmly differ on the above proclamation.

A high intake of dairy products is associated with an increased risk of obesity & how often do you eat meals that are prepared at home, rather than eating out at restaurants or ordering takeout?

Variables	Frequency	Percentage
Never	7	3.40%
Rarely (1-2 times a week)	62	30.40%
Sometimes (3-4 times a week)	55	27.00%
Often (5-6 times a week)	34	16.70%
Very often (7 or more times a week)	46	22.50%
Mean	40.8	
Standard Mean	21.603	

Variable	Frequency	Percentage
Strongly agree	25	12.10%
Agree	90	43.70%
Neither agree nor disagree	56	27.20%
Disagree	24	11.70%
Strongly disagree	11	5.30%
Mean	41.7	
Standard Mean	31.901	

The pie-outline portrays the percent for high admission of dairy items is related with an expanded gamble of corpulence, where 25(12.1%) respondents are emphatically concurred, 90(43.7%) are concurred, 56(27.2%) respondents are neither concurred nor dissented, 24(11.7%) respondents are differ and the percent with firmly concurred is 11(5.3%). Here are some percent of respondents where 7(3.4%) shows never, 62(30.4%) shows 1 - 2 times each week, 55(27.0%) shows 3 - 4 times each week, 34(16.7%) shows 5 - 6 times each week and the last percent shows frequently i;e 46(22.5%).

Do you believe that dairy products are an important source of nutrients, such as calcium and vitamin D, that are necessary for overall health & Have you at any point got counsel from a medical care proficient about the connection between dairy item utilization and weight?

Variable	Frequency	Percentage
Strongly agree	64	30.90%
Agree	91	44.00%
Neither agree nor disagree	29	14.00%
Disagree	10	4.80%
Strongly disagree	13	6.30%
Mean	41.4	
Standard Mean	35.06	

Variables	Frequency	Percentage
Yes	76	36.90%
No	130	63.10%

The above table and the pie graph portrays a few regions where dairy items are a significant wellspring of supplements, like calcium and vitamin D, that are essential for generally wellbeing which gives the recurrence and rate, where 64(30.9%) respondents are emphatically concur, 91(44%) respondents are concur, 29(14%) respondents are neither concur nor dissent, 10(4.8%) respondents are dissent, 13(6.3%) respondents are firmly differ and the bar outline shows the level about the counsel from a medical services proficient about the association between dairy item utilization and weight.

Do you typically consume low-fat or non-fat dairy products, or do you opt for full-fat versions & also Do you have any dietary restrictions or food allergies that limit your consumption of dairy products?

Variable	Frequency	Percentage
Low fat or No fat	43	21.00%
Full- fat	33	16.10%
Both	129	62.90%
Yes	43	20.70%

No	165	79.30%
Mean	68.33	
Standard Mean	57.7	

Out of all subjects, where 43(21%) shows low fat or no fat, 33(16.1%) time shows the full - fat rendition last yet not the least adaptation which is both low fat and full - fat is about a period with 129(62.9%) and the structured presentation portrays that do any respondents have any dietary limitations or food sensitivities that limit their utilization of dairy items, where 43(20.7%) suggests as Yes and 165(79.3%) respondents infers as No.

STATISTICAL ANALYSIS:

Interpretation of data was done using Microsoft excel. T-test was done to compare the means of two groups, male and female. The 5% level of least significance was used to determine any differences in the mean values between male and female respondents. Differences at $p < 0.05$ was considered to be statistically significant. The results are expressed as mean standard deviation

Parameter	T- STATISTICS	DEGREE OF FREEDOM (df)	p VALUE
Age & Gender	1.59	3	0.2
Importance of dairy products & consumption of dairy products	3.78	4	1
Linkage between consumption of dairy products with the diagnosis of over weight	3.33	1	0.4
Consumption of high calorie diet & reducing dairy product can lead to weight loss	3.07	4	1
High intake of dairy products associated with the risk of obesity & homemade v / s restaurants meal	3.42	4	0.9
Dairy products are an important nutrient sources & medical care opinion on dairy item utilization	2.64	1	0.2
Consumption of low fat or non - fat version with dietary restriction or food allergy	1.704	1	0.6

The study examined the link between consumption of dairy products and obesity among respondents of different age groups. The results showed that the majority of respondents fell within the age group of 15-16 years, indicating a focus on adolescents. In terms of gender distribution, an equal number of male and female respondents participated in the study. Regarding the consumption of dairy products, the data revealed that a significant proportion of respondents consumed dairy products 1-2 times a week. However, a considerable number of participants also reported consuming dairy products 3-4 times a week. The consumption pattern varied among individuals, with a small percentage indicating no consumption of dairy products.

The study explored the respondents' opinions on the linkage between dairy product consumption and obesity. While a significant portion agreed or strongly agreed with the statement, a notable proportion neither agreed nor disagreed. A smaller percentage disagreed or strongly disagreed, suggesting some skepticism about the connection. Furthermore, the study examined respondents' attempts to lose weight in the past and their beliefs about reducing dairy product consumption for weight loss. A significant number of respondents reported attempting to lose weight, and a considerable portion agreed that reducing dairy product consumption could lead to weight loss. However, some respondents expressed different opinions or were unsure about this relationship.

Regarding the perception of the health benefits of dairy products, a majority of respondents believed that dairy products, either low-fat or full-fat, were an important source of nutrients such as calcium and vitamin D. Additionally, the study explored if respondents had dietary restrictions or food allergies that limited their consumption of dairy products, with the majority indicating no such limitations.

Conclusion

This study provided insights into the consumption patterns of dairy products and the perceptions surrounding their link to obesity. While there was a general consensus on the importance of dairy products as a nutrient source, opinions varied regarding the association between dairy product consumption and weight gain. These findings highlight the need for further research and education on the topic to better understand the complex relationship between dairy

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