



## Effects of Lifestyle Habits on Biological Age, of 20-25 Years of Age in Gujarati and Punjabi Communities in Mumbai City

## KEYWORDS

Gujarati, Punjabi, Biological age, Chronological age, Lifestyle habits

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**ABSTRACT** Mumbai being a diverse capital of religion and traditions; have varied dietary practices but identical lifestyle habits resulting in similar body composition. About 200 individuals with mean age  $32 \pm 9.1$ , were studied i.e. 100 from each community (50 males and 50 females) respectively. A purposive sampling technique was used to collect the samples. A pre-tested questionnaire (Annexure 1) were used along with body composition analyzer (Tanita BC541) was used to assess biological age. Faulty eating practices, lack of physical activities and stressful life is leading today's young population towards lifestyle disorders. Emotional and mental stress was also observed ( $p=0.05$ ).

**Summary and Conclusion:** The male subjects from both the communities were seen to be significant correlated with the age and biological age ( $p=0.609$ ). Both Gujarati and Punjabi communities was found to have positive correlation in junk food consumption and anthropometric measurements. To some extent physical activities and sleeping patterns has greater influence on health when it came it social and emotional well being.

**Introduction:**

The world health organization defines health as "A state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity" (www.who.org). Therefore mere absence of any diseases in an individual should not be considered as a healthy individual. According to literature the age groups of people who are most prone to health issues are from either the age group of young children i.e. 3-13 years of age or the geriatric population i.e. those above 60 years of age. The most ignored age group while assessing the health issues is the youth i.e. young adults falling in the age group of 20-25 years. Currently, due to high stress levels and distorted eating patterns and lack of physical activities in the youth, there are many health hazards associated with the kind of lifestyle the youth of a developing country and urban cities follow. The biological age in youths was high as compared to chronological age.

The objective of present study was to see the effects of lifestyle habits on biological age in Gujarati and Punjabi community.

**Methodology:**

The data for research was collected from educational complexes and local food joints in Mahalaxmi, Parel, Matunga, Chinchpokhli, Bandra, Lower parel, Sion, Nerul, Goregoan areas. A total of 50 males and 50 females from both the communities belonging to high socioeconomic group, aged between 20-25 years either working or studying i.e. Bachelor's / post graduates were selected for data collection. A purposive sampling technique was used.

A questionnaire comprising of questions related to background information, physical activity and anthropometric measurements was used to collect the data. Young adults with chronic illness and Gujarati non-vegetarians were excluded from the study.

Anthropometric measurements included in the study were Height, weight, Body mass index, Mid upper arm circumference and body composition i.e. fat mass, muscle mass,

bone density, total body water, basal metabolic rate, visceral fat and biological age. Dietary habits were assessed by taking 24 Hour dietary recall and food frequency questionnaire. Assessment of Physical activity was done by intensity, frequency and type of activity conducted by the subjects. Sleeping patterns were assessed by amount and type of sleep i.e. sound and disturbed.

**Results and Discussions:**

The aim of the present study was to evaluate the lifestyle practices and biological age in Gujarati and Punjabi communities in Mumbai. There were a total of 200 subjects taken for the study with 100 from both the Gujarati and Punjabi communities; out of which there were 50 males and 50 females respectively. The entire subjects were either working or studying or doing both the things simultaneously. Subjects belonged to upper medium socio-economic group.

The subjects were taken with mean age of  $32 \pm 9.1$  years in Gujarati and Punjabi communities. The biological age and actual age was also correlated using the Spearman's correlation. Table no. 1 shows the correlation results for both the communities divided across the genders. The male subjects from both the communities were seen to be significantly correlated with the age and biological age. Whereas, females from both the communities were not seen to report any correlation.

**Table no. 1: Correlation between biological age and age in Gujarati and Punjabi Communities**

Characteristics	Biological age			
	Gujarati		Punjabi	
	Males	Females	Males	Females
Age	0.645	0.278	0.573	0.209

The previous studies reported that, the biological age greater than chronological age tends to increased risk of metabolic syndrome. Also in current study, the male subjects from both the population were seen to be associated

with the increase in biological age with increase in age and thus are more susceptible to such adverse health effects of increase in biological age than the chronological age.

The subjects were also checked for the family history of existence of metabolic diseases. It was found that diabetes mellitus was in the family of 40. 5% Gujarati subjects and 59.5% Punjabi subjects. Percentage of Gujarati (Punjabi) subjects with hypertension was 40% (60%), Cardiovascular diseases was 41.7 % (58.3 %), obesity was prevalent with 50 % in both the populations and cancer and osteoporosis was 60% (40%) with both the communities.

#### Comparison of body composition parameters of Gujarati and Punjabi communities and ideal values.

The present study compared the body composition parameters of the Gujarati community and Punjabi community subjects separately with the ideal values as mentioned in WHO standards for these parameters. The comparison helped to assess the abnormalities in these communities and give an overview of the same with respect to the urban lifestyle problems prevalent currently.

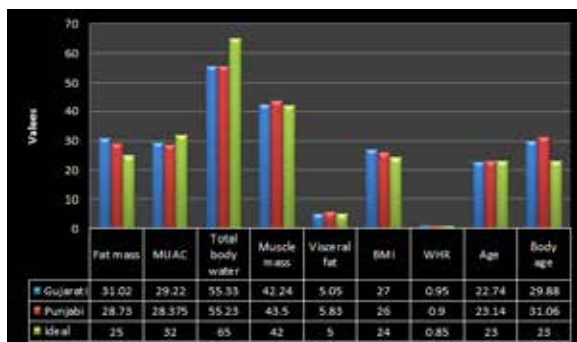


Figure no. 1: Comparison of body composition parameters of Gujarati and Punjabi communities and ideal values

\*P value = 0.087 \*Source: RDA, 2010 and Tanita, 2015.

The body composition parameters so assessed were fat mass, MUAC, Total body water, muscle mass, visceral fat, BMI, WHR and body age i.e biological age of the subjects.

As observed in the above figure none of the parameters were near to the ideal values in both the communities. The abnormalities seen were more in the Gujarati subjects than the Punjabi subjects. The Fat mass was seen to be much more than the ideal value, as the ideal value being 25 and that of the Gujarati subjects was 31 and Punjabi was 28.73. On the contrary the ideal visceral fat values were seen to be near to the ideal value of 5 in both the communities.

Owing to such abnormal values, the body age of the subjects was seen to be much higher than the actual age of the subjects. The increased body age denoted that the subjects were aging and showing signs of degeneration quite early in their life. This also indicated that the risk of degenerative diseases was high in these subjects from both the communities.

Abnormal body composition was seen due to unhealthy dietary practices such as increased consumption of Carbohydrates, fat and sodium and decreased consumption of protein, water and calcium etc. Both the communities significantly correlated with consumption and junk food and body composition ( $p=0.75$ ).

Along with dietary habits physical activities ( $p=0.87$ ) and sleeping patterns ( $p=0.54$ ) were studied which majorly contributed on altered body composition thereby, increased biological age leading to degenerative disorders.

#### Conclusion:

The body composition and anthropometric parameters were not appropriate and very much abnormally distributed in both the communities. The biological age was observed quite higher than chronological age hence, it concludes that based on these results and cited references both the communities were at equal risk of metabolic and degenerative diseases. The modifications in lifestyle and dietary patterns shall be considered as possible solutions to decrease such risks.

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