

RESEARCH PAPER ON WORKOUT TIME OF VARIOUS AGE GROUPS

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ABSTRACT

The fitness industry too has evolved rapidly from its nascent unstructured beginning in the early 90s to a comprehensive ecosystem today including consumers, providers, adjacent industries, facilitators and government. While fitness — or rather, wellness — has always been part of the Indian culture, as is apparent with the existence of village akhadas , yoga and Ayurveda practices in the country, changing lifestyles and new demands by people have outpaced traditional wisdom to a certain extent. Against, just one akhada in small towns, today there are dozens of fitness centres.

The wellness market in India registered a growth rate of 18–20 percent during 2012, to touch a market size of USD700bn. According to a Deloitte India report, fitness industry in India.

OBJECTIVE

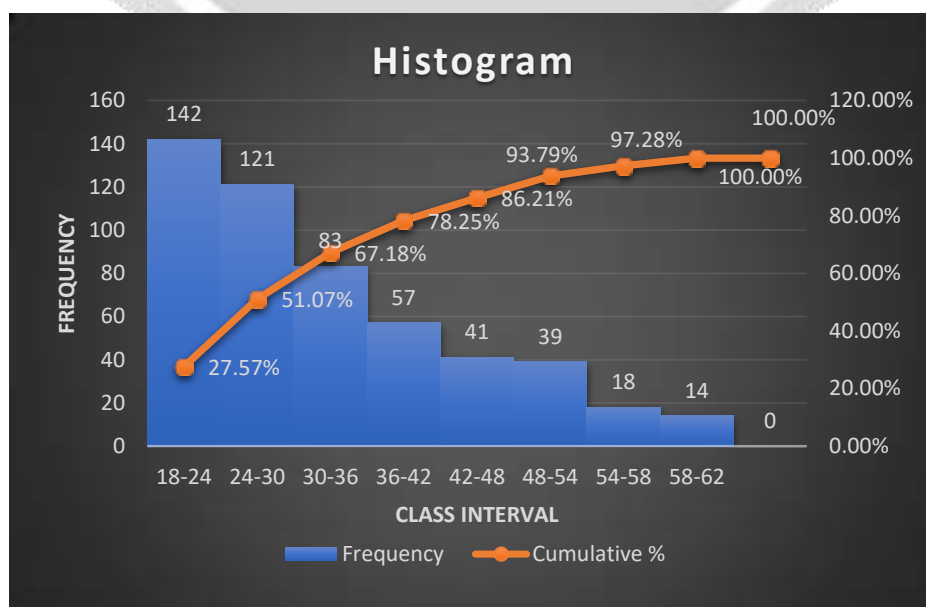
To work out patterns of different age group people and number of hours people of various age groups work out in the gym.

SUMMARY

The data was collected from a survey conducted by me which includes responses from people of various age groups. The survey aims at knowing how a person’s age affects his/her workout pattern and how much time he/she spends in the gym.

HISTOGRAM

Class Interval	Bin	Frequency	Cumulative %
18-24	23	142	27.57%
24-30	29	121	51.07%
30-36	35	83	67.18%
36-42	41	57	78.25%
42-48	47	41	86.21%
48-54	53	39	93.79%
54-58	57	18	97.28%
58-62	63	14	100.00%



DESCRIPTIVE STATISTICS

<i>AGE</i>		
Mean	32.262 14	THE AVERAGE AGE IS 32.26 YEARS
Standard Error	0.5023 9	
Median	29	50% OF THE DATA LIES BETWEEN 29
Mode	23	MOST PEOPLE WHO ATTEND GYM ARE OF AGE 23
Standard Deviation	11.401 04	ON AN AVERAGE DEVIATION BETWEEN EVERY PERSONS AGE AND ITS MEAN IS 11.40
Sample Variance	129.98 37	
	- 0.4679 6	
Kurtosis		
	0.7421 37	
Skewness		
Range	42	THE DIFFERENCE BETWEEN THE HIGHEST AGE AND THE LOWEST AGE IS 42 YEARS
Minimum	18	THE LOWEST AGE IS 18
Maximum	60	THE HIGHEST AGE IS 60
Sum	16615	
Count	515	TOTAL NUMBER OF PEOPLE SURVEYED IS 515

<i>WORKOUT TIME</i>		
Mean	1.639 806	THE AVERAGE WORKOUT TIME IS 1.63
Standard Error	0.027 722	
Median	2	50% OF THE DATA LIES BETWEEN 2 HOURS
Mode	1	MAJORITY OF THE PEOPLE WORKOUT FOR 1 HOUR
Standard Deviation	0.629 115	ON AVERAGE DEVIATION BETWEEN EVERY WORKOUT AND ITS MEAN IS 0.62
Sample Variance	0.395 786	
	- 1.596 46	
Kurtosis		
	0.160 95	
Skewness		
Range	2	THE DIFFERENCE BETWEEN HIGHEST WORKOUT TIME AND LOWEST WORKOUT TIME IS 2
Minimum	1	LOWEST WORKOUT TIME IS 1 HOUR
Maximum	3	HIGHEST WORKOUT TIME IS 3 HOURS
Sum	844.5	THE TOTAL WORKOUT TIME IS 844.5 HOURS
Count	515	TOTAL NUMBER OF PEOPLE SURVVEYED IS 515

CORRELATION

	AGE	WORKOUT TIME
AGE	1	
WORKOUT TIME	-0.166374778	1

INTERPRETATION

Imperfect Negative Correlation

Since there imperfect negative correlation it means there is inverse relation between the two variables, that is, as the age increases, the workout time decreases but since it is imperfect, the relation may not be proportional.

REGRESSION

SUMMARY OUTPUT

<i>Regression Statistics</i>	
Multiple R	0.166374778
R Square	0.027680567
Adjusted R Square	0.025785207
Standard Error	0.620951312
Observations	515

ANOVA					
	df	SS	MS	F	Significance F
Regression	1	5.631167885	5.631167885	14.60438851	0.000148876
Residual	513	197.8028127	0.385580532		
Total	514	203.4339806			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	1.935993089	0.082192372	23.55441326	1.05785E-83	1.774518035	2.097468144	1.774518035	2.097468144
AGE	-0.00918065	0.002402324	-3.821568854	0.000148876	-0.01390025	-0.004461043	-0.01390025	-0.004461043

Y ESTIMATE EQUATION

$$y = a+bx$$

$$y=1.93+(-0.009)x$$

INTERPRETATION

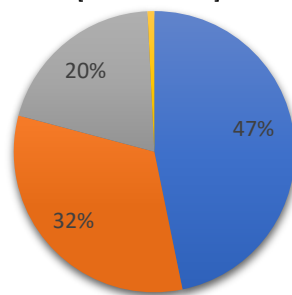
If age changes by -0.009 then 1 unit of number of hours of workout increases with a constant value of 1.93. So it is found that younger people have a tendency to work out for longer hours if compared to those of a higher age group. The people of age < 30 generally prefer to spend 1-2 hours in the gym whereas the people above the age 30 spend 1-1.5 hours in the gym. So a conclusion could be made that lower the age higher is the tendency to workout more in the gym.

ANALYSIS

S. No.	Workout Time	Frequency
1	1	240
2	2	166
3	2.5	103
4	3	4

Frequency

[PERCENTAGE]



■ 1 ■ 2 ■ 3 ■ 4

INTERPRETATION

*47% of the people workout for 1 hour.
 32% of the people work out for 2 hours.
 20% of the people work out for 2.5 hours.
 1% of the people work out for 3 hours.
 So it is deduced that majority of the people work out for 1 hour.*

APPENDIX

SR NO.	NAME	AGE	GENDER	WORKOUT TIME
1	Ishita Kapur	18	Female	1
2	Smit Modi	18	Male	2.5
3	Dylan	19	Male	2.5
4	Nidhaan Singh Gandhi	19	Male	1
5	Kewairam	26	Male	1
6	Rushabh	18	Male	2
7	Sharaf	18	Male	1
8	Alicia Samuel	18	Female	1
9	Kashish	22	Female	1
10	Armaan	18	Male	2.5
11	Reuben D'Souza	17	Male	3
12	Vinit Jain	19	Male	1
13	Saksham Agrawal	18	Male	2.5
14	Rochak Kapur	47	Male	2
15	Rochak Kapur	55	Male	1
16	Sanya	22	Female	2
17	Riya Pahuja	15	Female	1
18	Shivanichoudhary	51	Female	2.5
19	Hiinaa jain	35	Female	2
20	Neerja Sachdeva	40	Female	2.5
21	Praagya Shandilya	19	Male	2.5
22	Sarita Pahuja	59	Female	1
23	Sneha	27	Female	1
24	Ved	25	Male	1
25	Zeba siddiqui	44	Female	1

ALL THE DATA IS ORIGINAL AND IS COLLECTED BY ME USING GOOGLE FORMS.

