

Clark University

Master of Science in Business Analytics

Chapter 2 CardioGood Fitness Case

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Introduction

CardioGood Fitness is a developer of high-quality cardiovascular exercise equipment. It sells wide range of products which includes treadmills, fitness bikes, elliptical machines and e-glides. Since Cardio Good Fitness has variety of products to their customers but they are willing to increase the sales of tread mills. They have three types of treadmill.

- TM195: The TIM195 which costs \$1500 is entry level treadmill with minimal features. This product is suitable for the customers who choices minimal programming and focuses more on their walk or hike.
- TM498: The TM498 which costs \$1750 is suitable for midlevel runners.
- TM798: The TM798 which costs \$2500 is larger and heavier. This model has more features such as a bright blue backlit LCD console, speed and incline keys and heart rate monitor. This is targeted for a power walker or runner.

Business problem

The market research team at AdRight is assigned the task to identify the profile of the typical customer for each treadmill product offered by CardioGood Fitness.

Data description

Product: Product purchased

Age: Age of a customer

Gender: Customer's gender

Education: Education level

Marital status: Relationship status

Usage: Mean number of times the customer plans to use treadmill each week

Fitness: Self-rated fitness on a 1-to-5 scale where 1 is poor and 5 is excellent shape

Income: Annual household income

Miles: mean number of miles the customer expects to walk/run each week

Methodology

I have used Contingency Table and Tree Map to visualize the analysis of the case study. I have imported the graphs from Excel and used MS Word for documentation. In the tables, I have used Excel's COUNTIF function and AVERAGE function for calculation. The COUNTIF function is built-in statistical function which counts the number of cells in a range that meets a given criteria. AVERAGE function returns the average of the numbers.

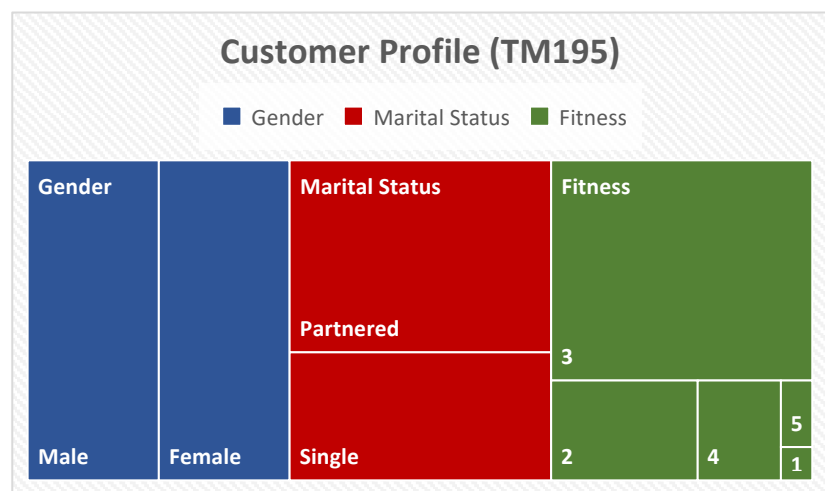
Case Study Questions

1. Create a customer profile for each CardioGood Fitness treadmill product line by developing appropriate tables and charts.
2. Write a report to be presented to the management of CardioGood Fitness detailing your findings.

Data Analyses

1. TM 195

TM195		
Gender	Male	40
	Female	40
Marital Status	Single	32
	Partnered	48
Fitness	1	1
	2	14
	3	55
	4	8
	5	2



Out of total customers who had purchased treadmill (Model: TM195), the numbers of both males and females who preferred and purchased the exercise machine are same. In terms of marital status, mostly the customers who have partners bought the treadmill. This treadmill is most

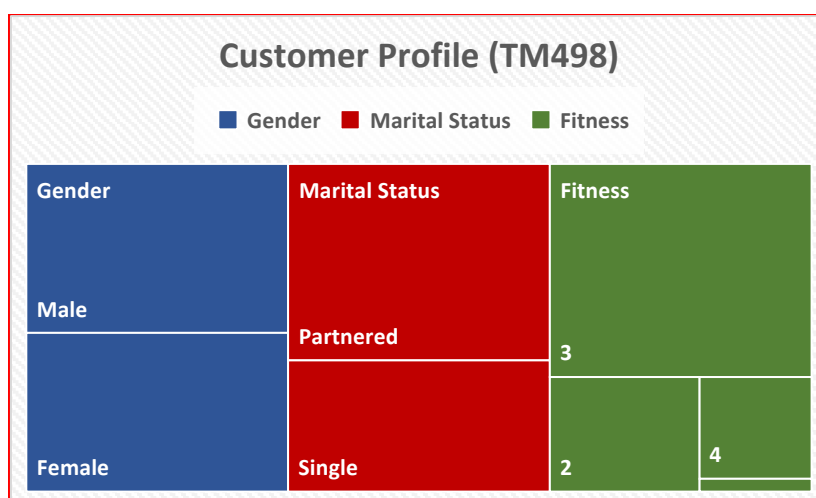
popular among the customers with fitness level 4. Out of 80 customers, 55 customers with fitness level with 3 purchased this treadmill.

TM195 (In Average)	Age	Education	Usage	Income	Miles
	28.55	15.0375	3.0875	46418.03	83

The average age of the customers who used this treadmill is about 29 years old. The education level is about 15. The customers have used this treadmill 3 times in average in a week. The average annual salary of the customer is approximately \$46418. In average, the customers have ran/walked 83 miles in a week in this treadmill.

2. TM 498

TM498		
Gender	Male	31
	Female	29
Marital Status	Single	24
	Partnered	36
Fitness	1	1
	2	12
	3	39
	4	8
	5	0



Out of total customers who had purchased treadmill (Model: TM498), the number of male (31) is slightly more than female (29). I think there is no such significant difference in terms of gender. In terms of marital status, the customers who have partners preferred and bought the treadmill than single ones. However, there is no big difference. This treadmill is most popular among the customers with fitness level 3. Out of 60 customers, 39 customers with fitness level with 4 purchased this treadmill. Unfortunately, the fitness level with 5 didn't prefer this product at all.

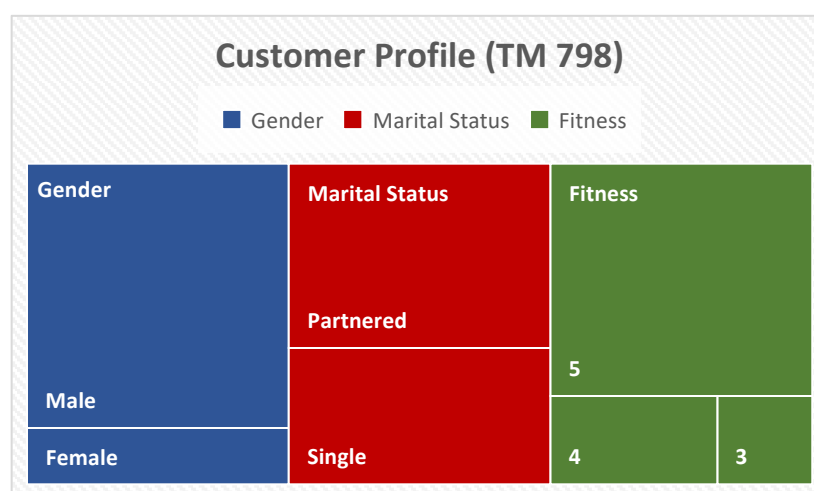
TM498 (In Average)	Age	Education	Usage	Income	Miles
	28.9	15.11667	3.066667	48973.65	88

The average age of the customers who used this treadmill is about 29 years old. The education level is about 15. The customers have used this treadmill 3 times in average in a week. The

average annual salary of the customer is approximately \$48973. In average, the customers have ran/walked 88 miles in a week in this treadmill.

3. TM 798

TM798		
Gender	Male	33
	Female	7
Marital Status	Single	17
	Partnered	23
Fitness	1	0
	2	0
	3	4
	4	7
	5	29



There is significant difference between the male users and the female users. Out of total customers, the number of male users is 33 which is the highest if you compare to the female group; the user number is just 7. In terms of marital status, the customers who have partners preferred and bought the treadmill than single ones. This treadmill is most popular among the customers with fitness level 5. It is understandable this treadmill with advanced features have become very helpful and effective to such power walker or runner. Out of 40 customers, 29 customers with fitness level with 5 purchased this treadmill. Unfortunately, the fitness level with 1 and 2 didn't prefer this product at all.

TM798 (In Average)	Age	Education	Usage	Income	Miles
	29.1	17.325	4.775	75441.58	167

The average age of the customers who used this treadmill is about 29 years old. The education level is about 17. The customers have used this treadmill 4 times in average in a week. The average annual salary of the customer is approximately \$75441. In average, the customers have ran/walked 167 miles in a week in this treadmill.

Conclusion

- **Finding 1:**

CardioGood Fitness should target both male and female having partnered status with fitness level 3. The average age is about 29 years old and education level of 15 with average annual income of \$46418.

- **Finding 2:**

CardioGood Fitness should target both male and female with fitness level 3. The marital status will have no such significant difference. So, both single and partnered can also be targeted. The average age should be about 29 years old and education level of 15 with average annual income of \$48973. It is understandable this model is expensive than model TM195. The possible buyers of TM 498 may also have high purchasing power than those who purchases TM 195.

- **Finding 3:**

CardioGood Fitness should target male group with fitness level 5. The marital status will have no such significant difference. So, both single and partnered can also be targeted. The average age should be about 29 years old and education level of 17 with average annual income of \$75442. With high level of education, this group seems to be more aware and focused on physical activities and overall health condition. They expect to run 167 miles in average in a week. They do have highest level of income compare to those who purchased simple machines like TM195. It is understandable this model is expensive than model TM195 and TM498 because of its advanced features which enhances the user's fitness program effectively. The possible buyers of TM 798 have high purchasing power than those who purchases TM 195.