
Findings (Based on SQL, Tableau):

There were a total of 33 participants in this study who recorded their daily activity. Only 24 participants logged their sleep and 8 participants logged their weight.

Sleep, Distance & Calories Burned:

- There is a positive correlation between “Calories Burned” and “Total Distance Travelled” with a coefficient of 0.6. Participants that travelled the most tend to burn more calories but is not the case all the time.
- On average, participants had an adequate amount of sleep with a total of ~6.97 hours a day.
- Sleep Deficit/Less than 6 Hours: did not burn as many calories as counterparts that slept longer
- Adequate Sleep/6-8 Hours: burned the most calories and travel more distance
- Overslept/More than 8 Hours: did not burn as many calories as people with adequate sleep

Not all participants who travel the most burn the most calories. It is important to consider that there are other variables that contribute to amount of calories burned such as “Sleep Time”. Person with adequate amount of sleep but travel less distance can still burn more calories than those with the highest amount of sleep or most distance.

Activity:

- Participants start off active at the beginning of the week and then slow down as the week progresses until Friday. The most active day is Saturday and the least active day is Sunday.
- Throughout the day, participants most active between the hours of 12:00 p.m. and 7:00 p.m. with peak intensity at 6:00 p.m.
- On average, participants spend a little over 15 hours sedentary. There is a negative correlation between sedentary minutes and calories burnt.
- The majority of the workouts of participants is light activity.
- Most of the participants spend 25 to 30 minutes in active workouts daily with a few individuals who workout more than 200 minutes on the weekends.

Important to recognize that participants burn more calories doing lighter activity. The intensity of the workout does not necessarily mean more calories burned.

Recommendations:

Using this data and the insights we found, we can help Bellabeat better understand their customers and deliver a better experience with their products. These trends reflect the daily habits lifestyle changes of the customers.

1. People who have an adequate amount of sleep (6-8 hours) tend to burn the most calories. These individuals also happen to be the most active. Bellabeat should look into providing more sleep tracking features for their device and help their customers better understand the importance of getting a proper amount of sleep. Encourage users to log their weight and sleep. Currently only ~73% of participants log their sleep and ~24% log their weight. If the process is manual for this data, Bellabeat could try to better integrate that process into the fitness tracking experience. Bellabeat can also come up with strategies to better inform their customers about the benefits of tracking this data.

2. Bellabeat should promote more regular exercise. Participants spend the majority of their day sedentary which has a negative correlation with calories burned. Bellabeat could set up more reminders in their app to get moving, increase step count especially outside of hours 12:00 to 7:00 when users tend to be most active. The majority of calories burned were from light activity so Bellabeat can emphasize having more casual activities throughout the day rather than high intensity workouts.
3. Provide some of these findings to their customers on a more personal level. Bellabeat should create personalized activity recommendations based on key user habits. This will help customers make better lifestyle choices regarding their activity, sleep and weight.
4. Some areas of the data is lacking such as in sleep or weight and Bellabeat should consider using third party data to supplement the current data. Data may not be representative of Bellabeat customers specifically but may provide broader insights to behavioral and lifestyle habits as a whole.