bellabeat

HOW CAN A WELLNESS TECHNOLOGY COMPANY PLAY IT SMART?

Findings and Business Recomendations

Business Task

Bellabeat products are focussed on collecting data on and inform users about their activity, sleep, stress, and reproductive health, which have allowed the company to empower women with knowledge about their own health and habits.

Bellabeat has a very strong active marketing strategy in several platforms, however the task for this analysis is to identify tendencies in the consumers usage of non-Bellabeat fitness smart devices with relevance to applicable trends for Bellabeat customers, as well as usage and identifiable trends that can help improve Bellabeat products to become a larger player in the global smart device market.

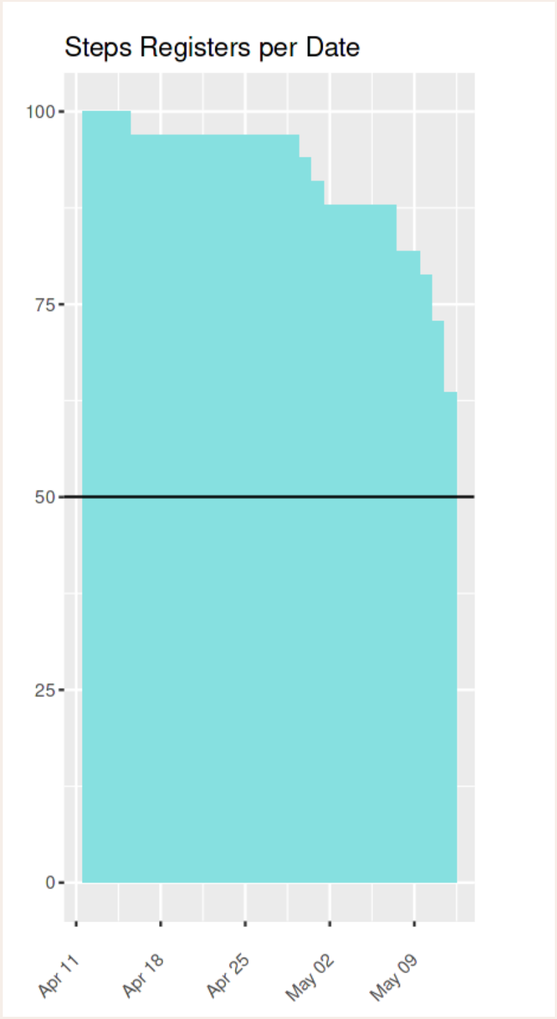
Dataset

DataSet source: Furberg, R., Brinton, J., Keating, M., & Ortiz, A. (2016).
Crowd-sourced Fitbit datasets 03.12.2016-05.12.2016 [Data set]. Zenodo.
https://doi.org/10.5281/zenodo.53894 Obtained through FitBit Fitness Tracker Data (CC0: Public Domain, dataset made available through Mobius).

It's stated that the information was obtained from "thirty eligible Fitbit users", however, they don't clarify the eligibility criteria for these users nor the demography, so this could be a group that include few or no women at all, which are our company's target consumer.

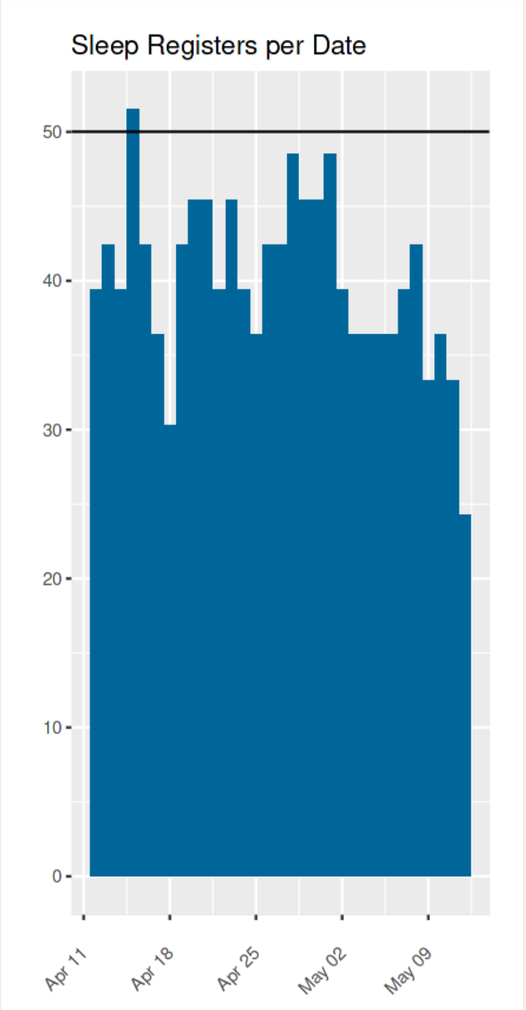
Usage

There are 33 Fitbit Ids for this data collection for 31 days (April 12th to May 12th of 2016).



More than half of this population sample used the devices for the whole month to register Daily Activity (as seen in Steps Registers per Date).

For Daily Sleep records we only have information registered by 24 users and only 15 of them logged at least 15 observations (half of the trial month), for which it doesn't seem to be information that the participants usually log.



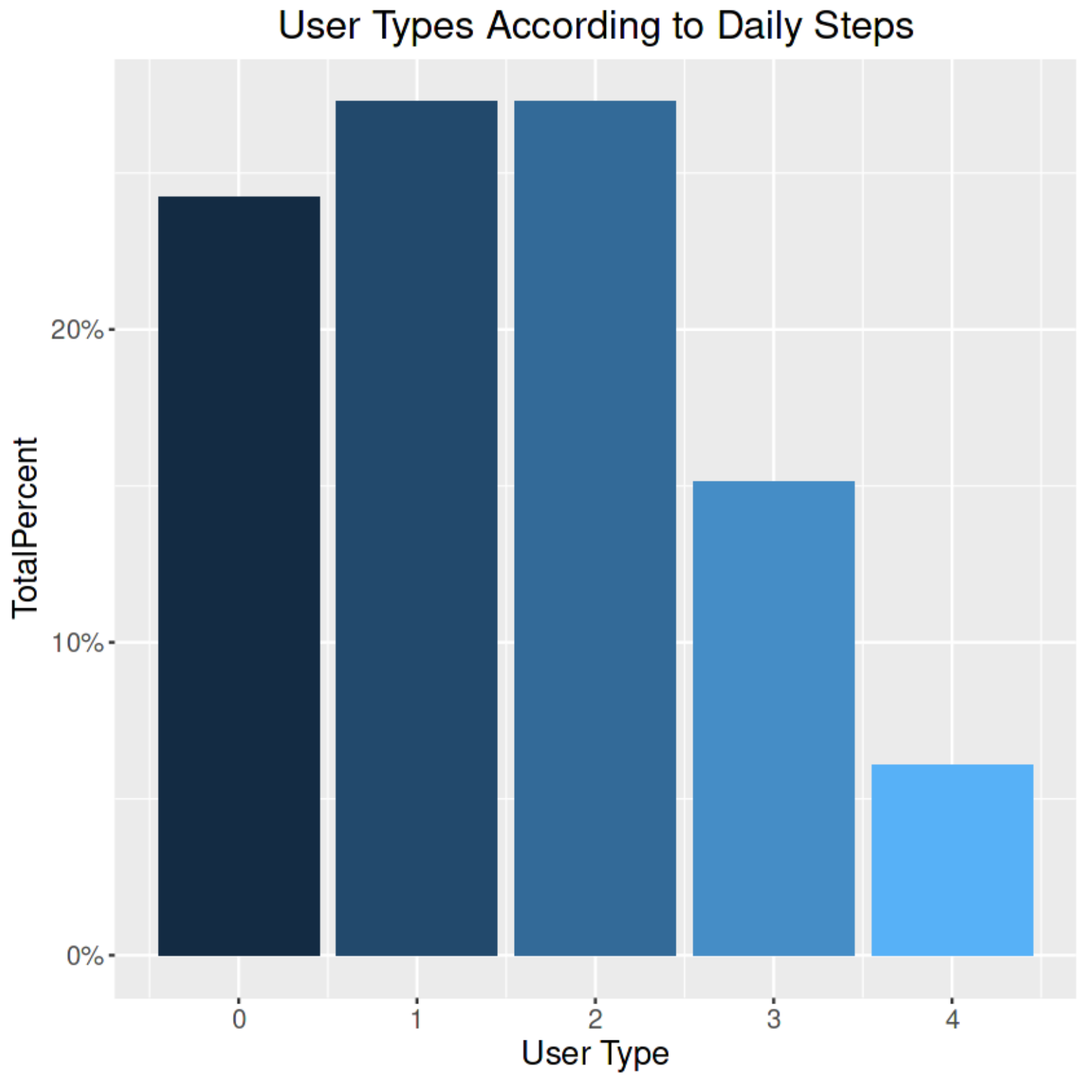
User Types

- Sedentary: <5,000 steps daily = "0"
- Low active: 5,000 - 7,499 steps daily = "1"
- Somewhat active: 7,500 - 9,999 steps daily = "2"
- Active: 10,000-12,500 steps daily = "3"
- Highly active: > 12,500 steps daily = "4"

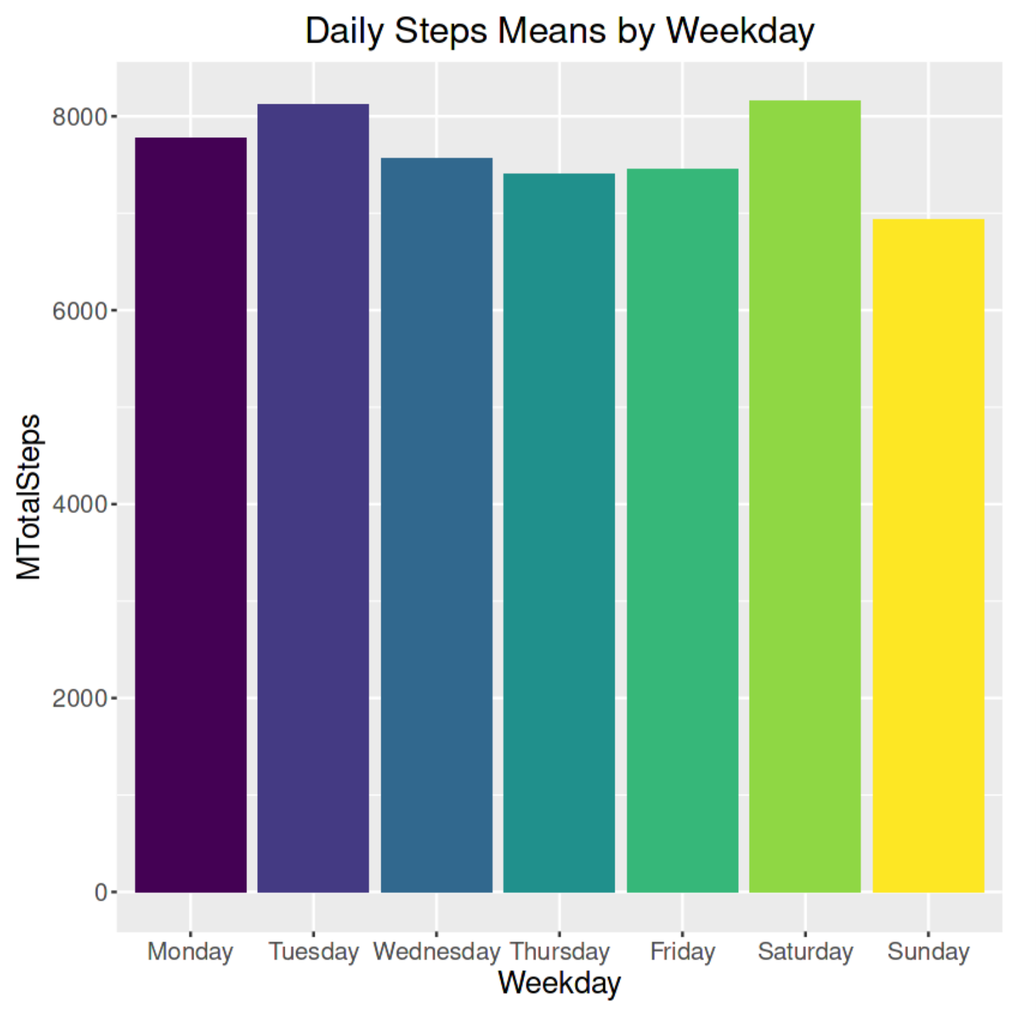
Recommended: 7,500 - 10,000 steps

More than half of the Fitbit users in this sample fit in "Low active" and "Somewhat active" categories (more than 25% of users in each category), followed by "Sedentary", "Active" and "Highly active" users.

This may indicate that the users that are trying to be more active are the ones that are making more use of the devices.



Active days

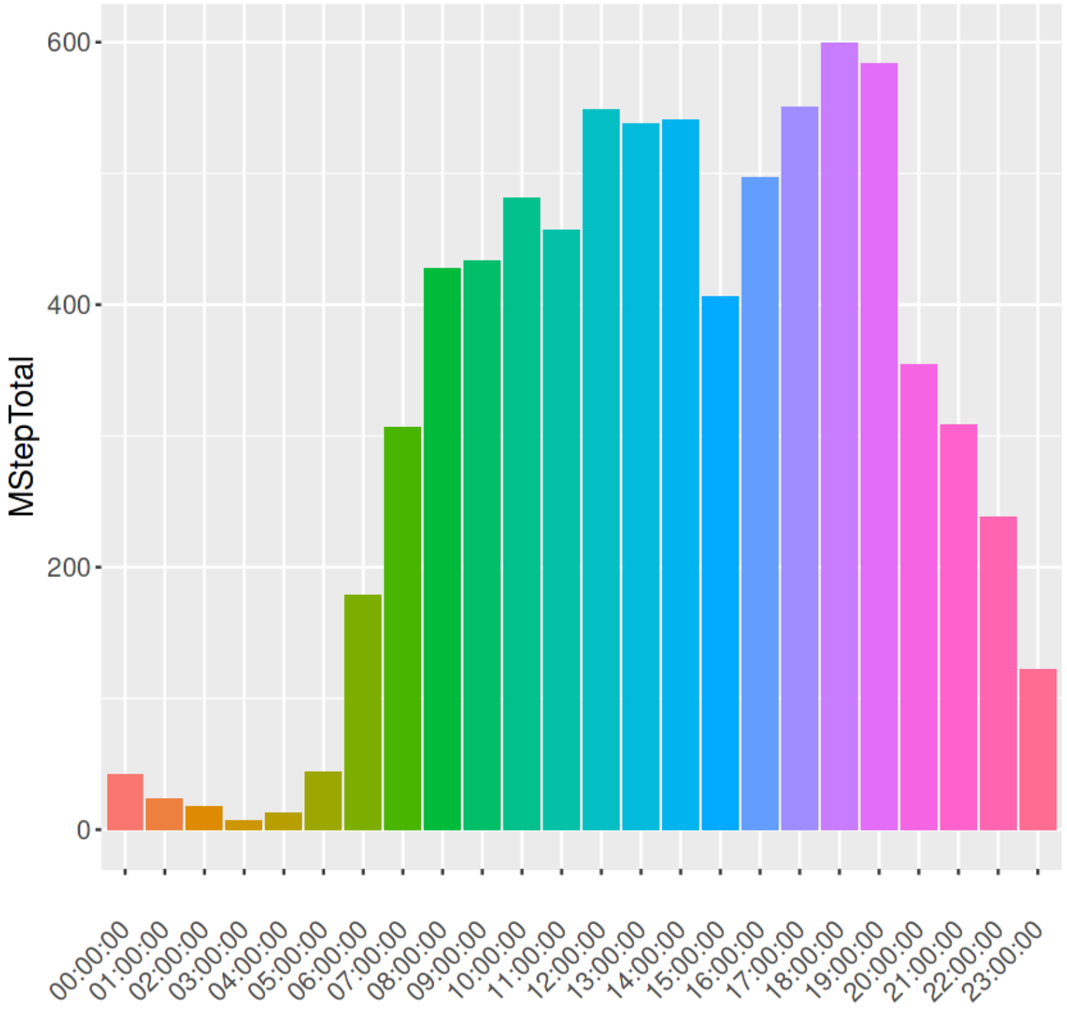


Although Tuesdays and Saturdays seems to have a slightly higher TotalSteps mean and Sundays are a bit lower, there is no significant different among days of the week.

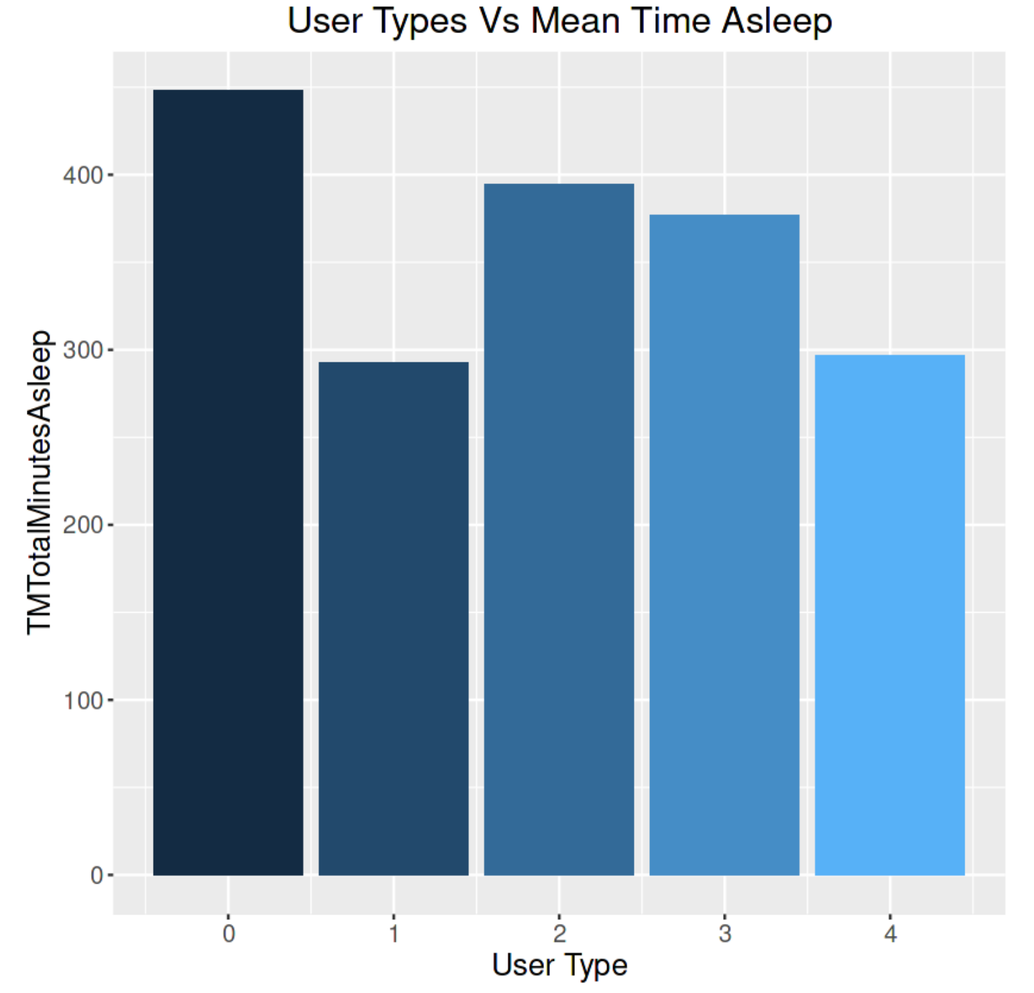
In this graphic we can also see how the mean of each day is around the minimum recommended 7,500 daily steps, except by Sundays.

Active hours

There are times were we can see a slightly elevated mean in the Steps/hour, which match the usual hours for lunch (12:00 - 14:00) and work exit times (17:00 - 19:00), dropping at 20:00 when users are probably home.



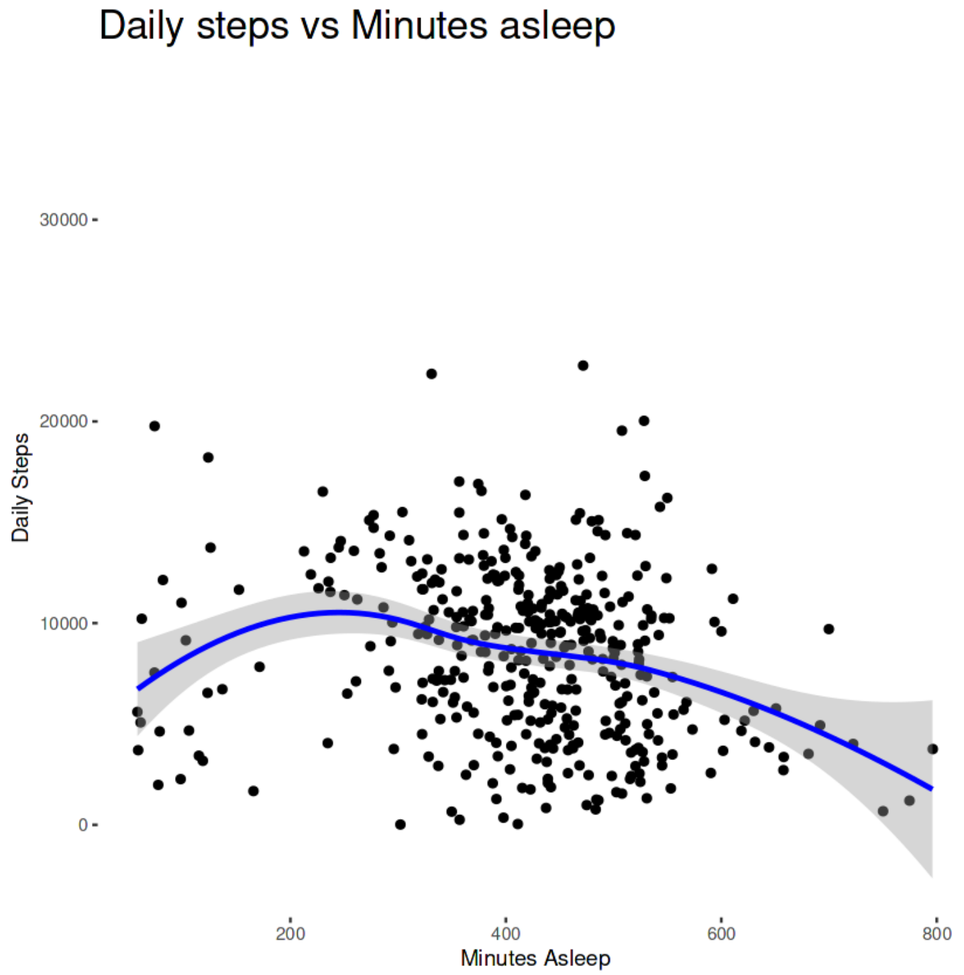
Activity (total minutes) vs Sleep (total minutes)



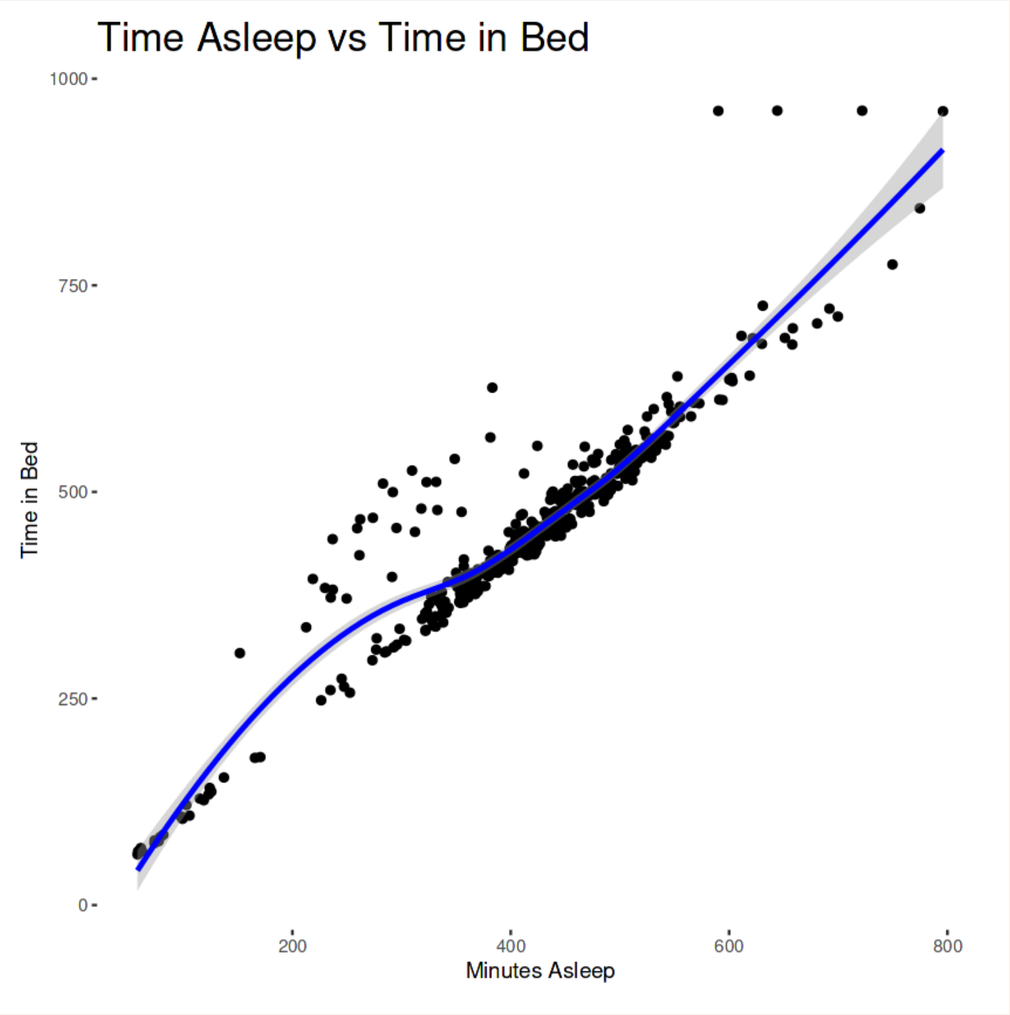
It seems that Sedentary users sleep about 50 min more than the rest of the groups, however, according to this, in average no User Type have the recommended amount of sleep (8hours as per 8h x 60min = 480min), which can be caused for the lack of sleep registers.

Activity (total minutes) vs Sleep (total minutes)

There seems to be a slightly negative correlation between the amount of Daily Steps taken and Minutes Asleep, so it seems that less activity (measured as Daily Steps) equals less amount of sleep, however, data is very scattered and we lost a bit more than half of the Daily Steps data (530 out of 940 observations) due to the lack of Sleep registers per user, so this is inconclusive.



Time Asleep vs Time in Bed



Here we can see a clearly linear positive correlation between these two variables, as expected. We can also note a slightly higher inclination towards Time in Bed, and according to the Fitabase dictionary this time is collected as the Total minutes spent in bed, including asleep, restless, and awake, that occurred during a defined sleep record, so people expend some time in bed without sleeping and/or may have a bad quality of sleep.

Business Recommendations

- Promote motivation helping users to establish their initial user type and a target user type with a minimum target on "Somewhat active" for people to reach a minimum healthy amount of activity. Users could receive congratulatory notifications when goals are reached.

- Establish a special notification on Sundays to motive all users to move and have a walk or some exercise.

- Allow users to select their preferred time of activity and receive a reminder to exercise 0,5-1h after this set time if no activity had been register before that, and again at 18:00, in the middle of the second activity peak identified according to this data.

- Establish reminders to active pause for 5min when sedentary time surpass a 1h threshold.

Business Recommendations

- Make recommendations regarding sleep time when a low sleep quality is detected.

- Make all goals sharable, specially as a game and competition to themselfs or other users, as the best marketing is the one made person by person, the more a person share about their great experiences with a device and the goals their are reaching because of it, the company will caught the attention of more possible consumers.

- Explore further by obtaining more data with better parameters, targeted questions and a bigger sample from current Bellabeat users to obtain future more adapted suggestions.

Bellabeat Empowering Women to Unlock Their Full Potential