

# Prevalence and Use of Fitness Tracking Devices within a College Community

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## Abstract

**PURPOSE:** Wearable devices for tracking health and fitness related activities are thought to motivate individuals to participate in regular exercise. While there are many reports regarding the reliability and validity of fitness tracking devices, the prevalence and usage is not typically reported, particularly in college communities. The purpose of this study was to examine the frequency of these wearable fitness tracking devices in a college setting. **METHODS:** Students, faculty, administration, and staff of Linfield College were asked to complete a survey that examined the types of fitness tracking devices owned, frequency of use, and application of the device. **RESULTS:** Of 217 participants surveyed (67 males, 150 females), 29.49% own a fitness tracker, with the most common types being a phone app (46.2% of faculty, staff, and administration) and a specific wearable wrist device (44.7% of students). Step count tracking was the most popularly used feature among all participants (86.8% of students and 96.2% of faculty, staff, and administration). 84% of all participants reported that the device encouraged their participation in physical activity. For those not owning a device (70.51% of participants), lack of interest was the most prevalent reason reported against purchasing a device, followed by expense. **CONCLUSION:** Our results suggest that only a small percentage of individuals across a college community own these fitness tracking devices, despite the fact that they are perceived to encourage physical activity.

## Purpose

While many studies have examined the reliability and validity of fitness tracking devices, only a few studies report the usage of wearable devices in small samples (Coorevits, 2016; Choi & Stvilia, 2014) and the prevalence is not typically reported, particularly in college communities. Thus, the purpose of this study was to determine the prevalence and use of fitness activity tracking devices among the Linfield community.

## Introduction

Obesity continues to be a major health concern as more than one-third of U.S. adults are obese. Obesity has been associated with a number of diseases including cardiovascular disease, stroke, type 2 diabetes, and certain types of cancers (CDC, 2015). A significant way to combat obesity is through increasing physical activity. According to the 2008 Physical Activity Guidelines for Americans, U.S. adults are recommended to engage in moderate to vigorously intense aerobic activity for a minimum of 150 minutes each week, which is equivalent to 30 minutes a day for five days per week. In addition, muscle-strengthening activities that work all major muscle groups should be performed 2 days a week. (CDC, 2015). Wearable devices for tracking health and fitness related activities are thought to motivate individuals to participate in regular exercise (Rooney et al., 2003). A 2014 report estimated that one in five Americans own a wearable fitness tracker, but only one in ten wear them daily (Comstock, 2014). With new (e.g. Apple Watch) and updated devices (e.g. Fitbit) on the market this past year, along with the Digital Self theme for the Program for the Liberal Arts and Civic Engagement (PLACE) on our campus, there was a need to examine the prevalence and use of fitness activity tracking devices on the Linfield College, McMinnville, Oregon campus.

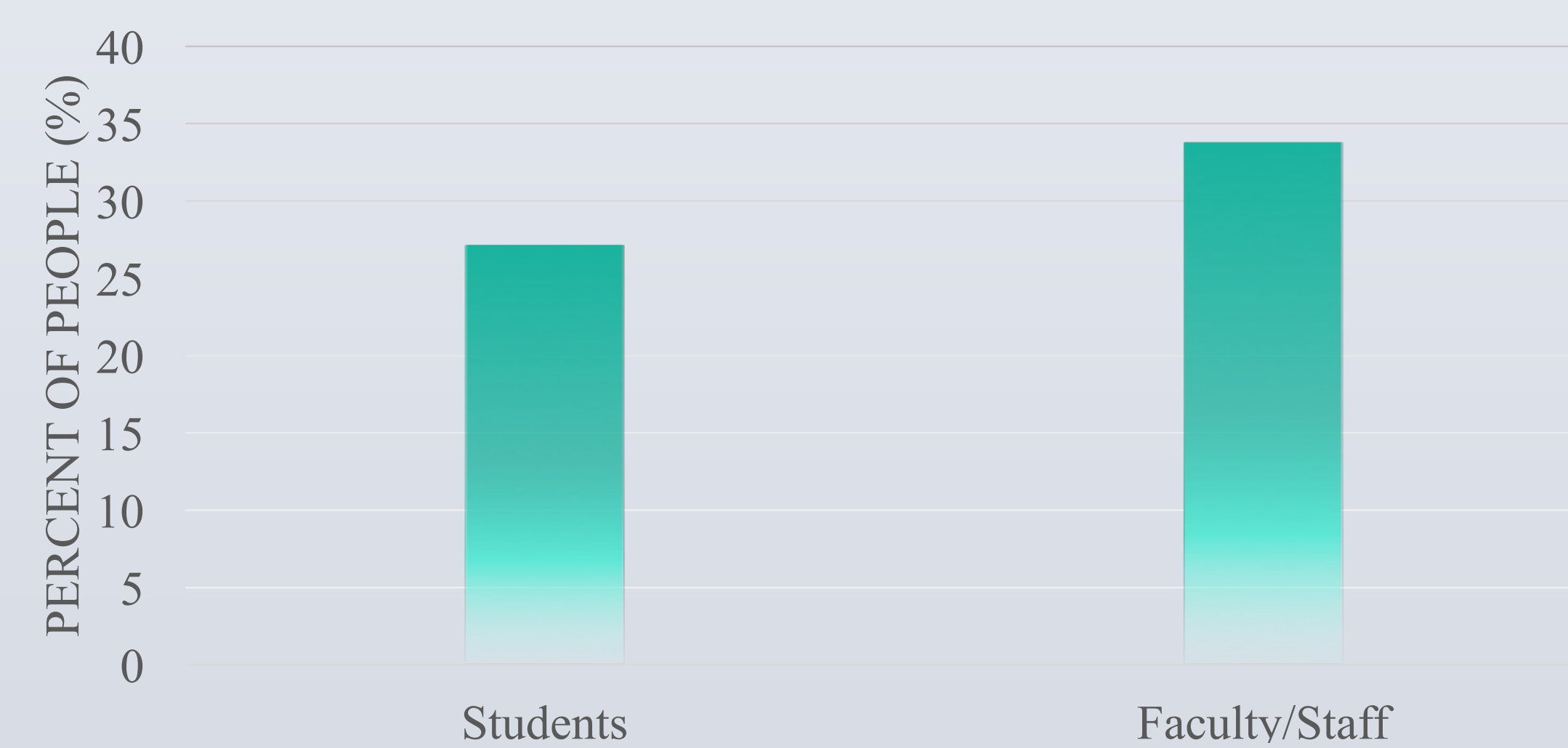
## Materials and Methods

We sought to recruit a broad sample of students, faculty and staff from the Linfield College community. Surveys were administered at recruitment tables in high traffic places on campus such as the student dining hall, campus coffee shops and the library. Surveys were administered to students in some classroom settings with instructor permission. Researchers visited faculty and staff offices on campus to solicit participation. Participants were asked to complete the survey onsite. To begin the survey process, participants were questioned whether or not they owned a fitness activity tracker. If they answered yes, survey form A was given. If they said no, survey form B was given. For data analysis, students were separated from faculty and staff. Frequency data were calculated for each group.

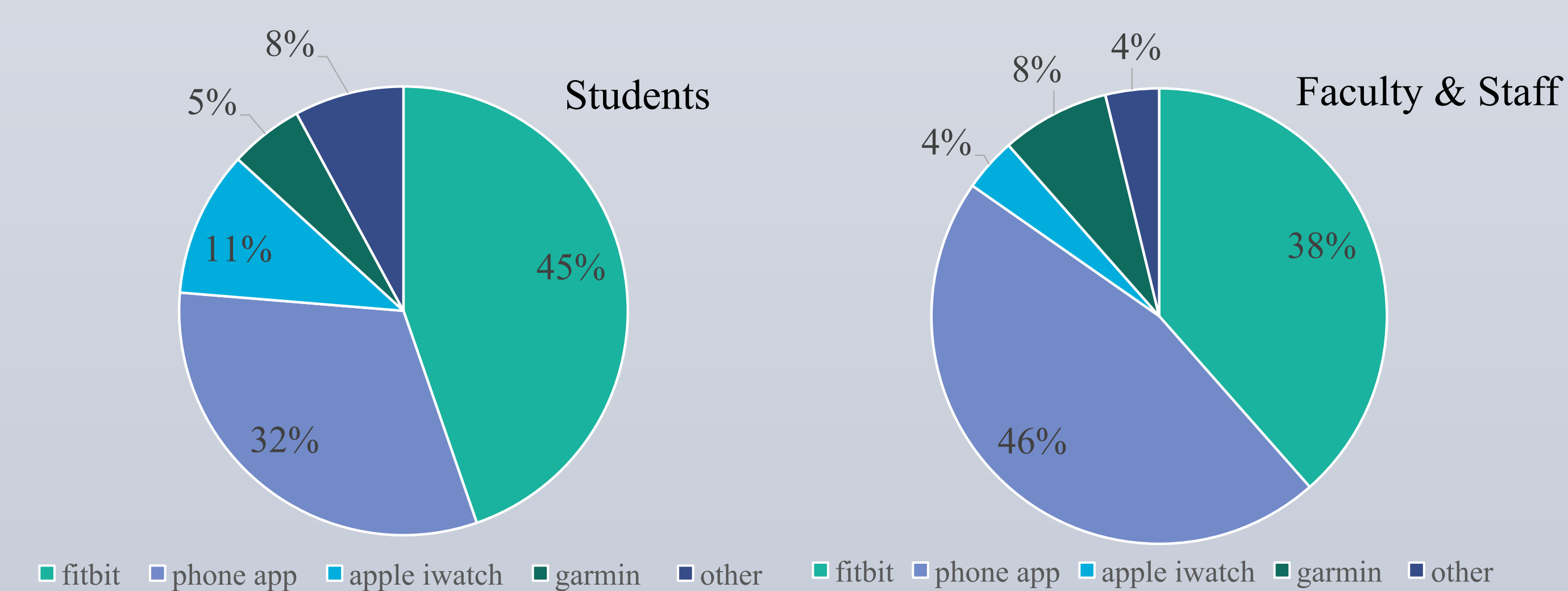
## Results

	Number of Participants
Total Participants	217
Students	149
Faculty and Staff	77
Females	150
Males	67

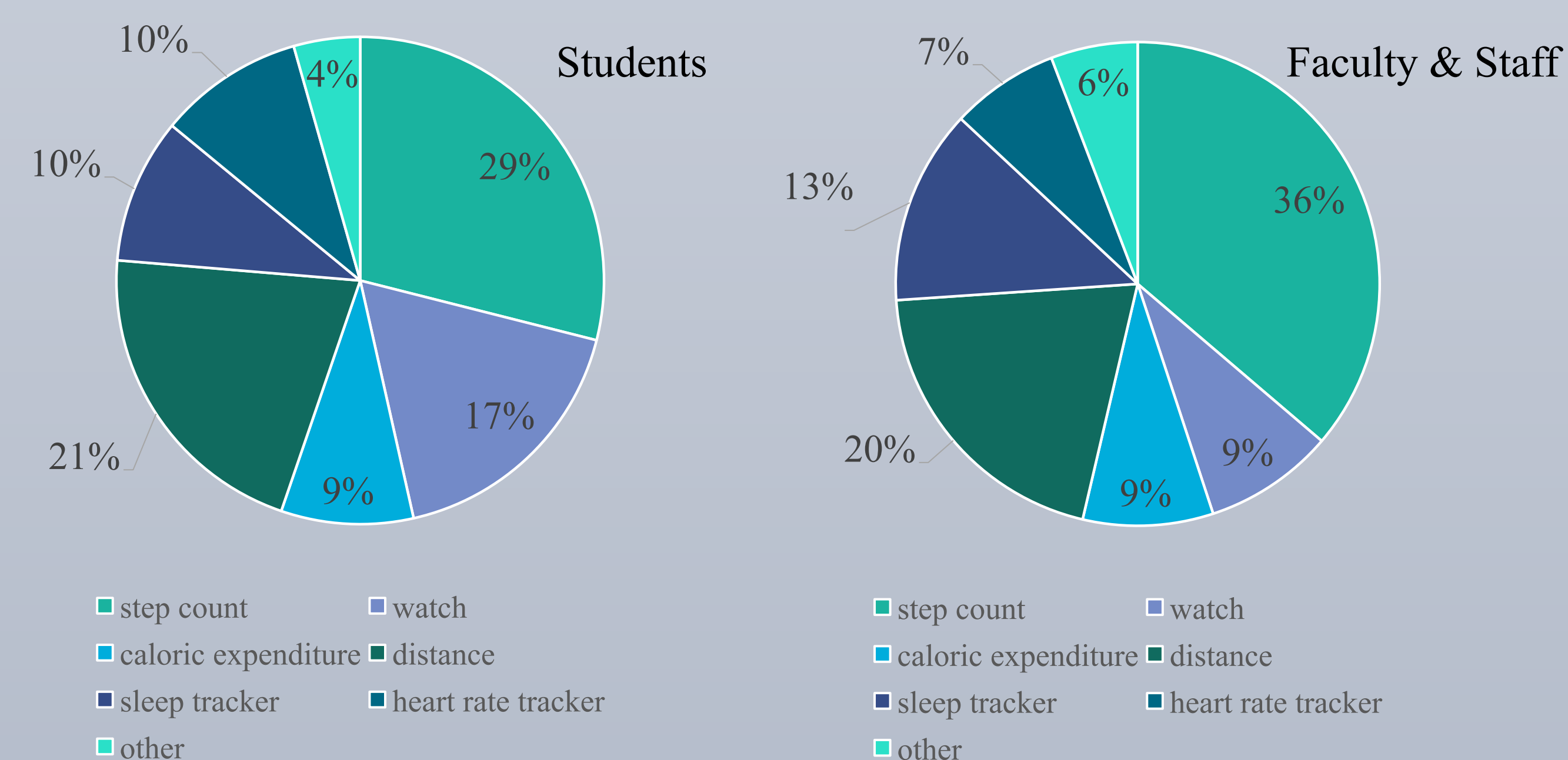
**Figure 1.** Of Participants Surveyed, 33.77% of Faculty and Staff and 27.14% of Students Own a Fitness Tracking Device



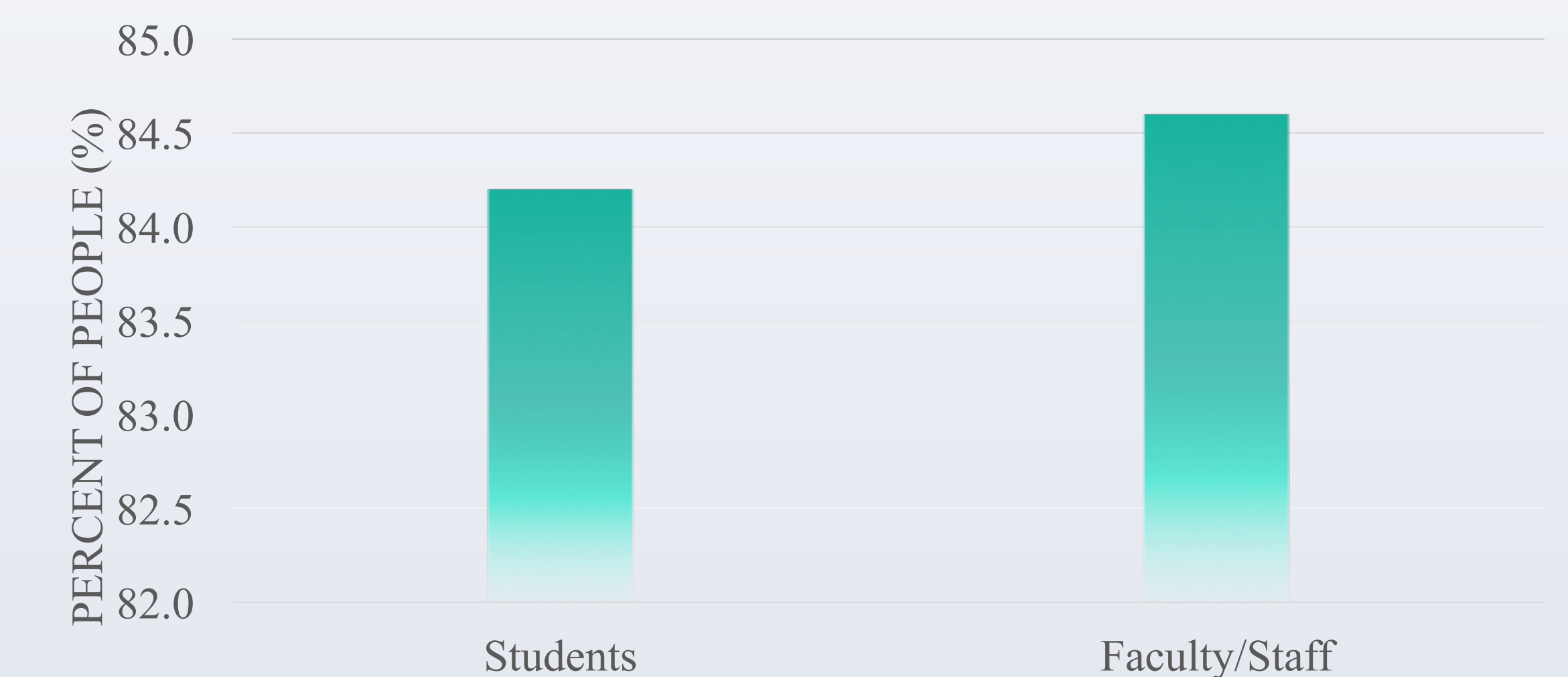
**Figure 2.** Types of Fitness Tracking Devices Used



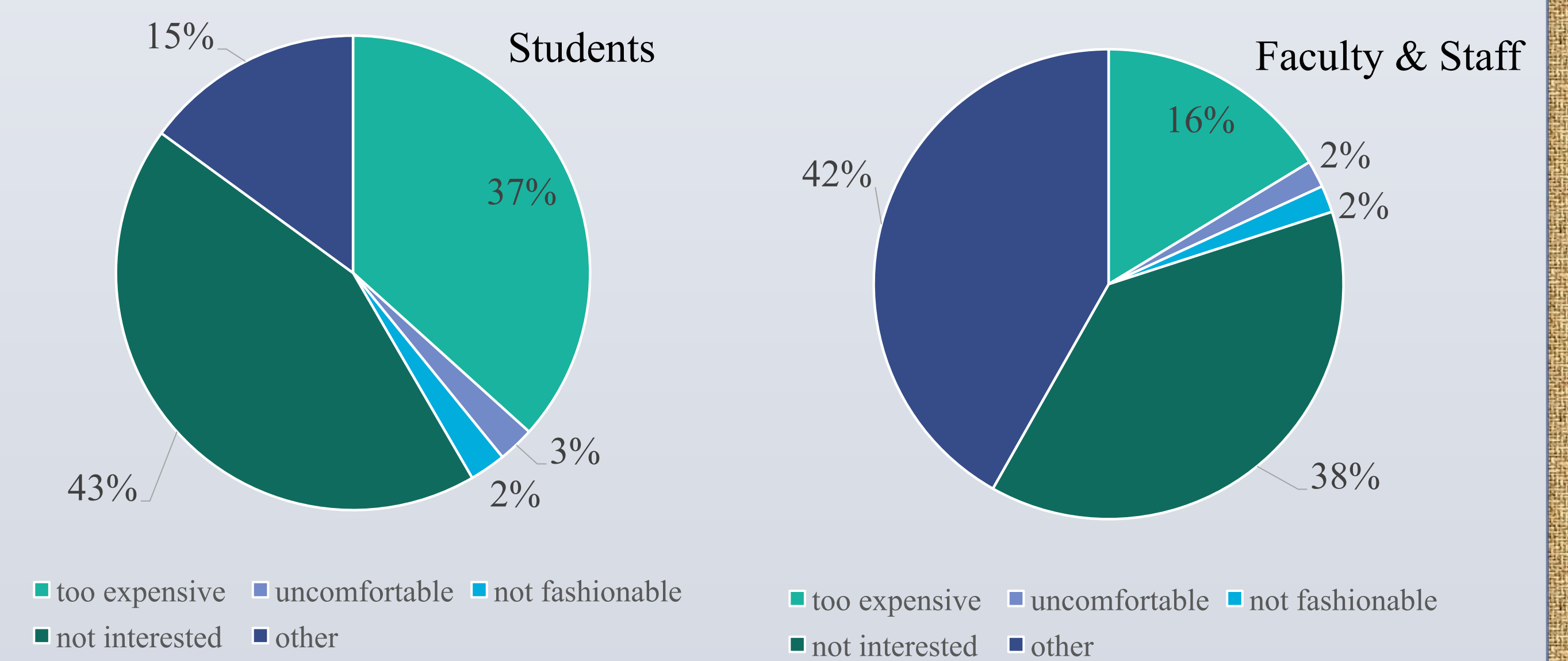
**Figure 3.** Primary Use of Fitness Tracking Devices



**Figure 4.** Students, Faculty, and Staff who Own Fitness Tracking Devices report the devices Encourage Physical Activity



**Figure 5.** Reasons for Not Owning a Fitness Tracking Device



## Summary and Conclusion

- Our results show that only a small percentage of Linfield College community members own fitness tracking devices; 27.14% of students and 33.77% of faculty and staff. Lack of interest and expense were the primary reasons for not owning a device.
- We found that fitness tracking devices are primarily used to track step counts.
- A high percentage of users, 84.6% of faculty and staff and 84.2% of students felt that the devices encouraged their physical activity.
- One limitation of our study is a relatively small sample size of our college population. We surveyed only 217 participants, so the generalizability of the study may be lower than hoped.

## References

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