

Comparison of Physical Activity Participation, age group differences and fitness tracking technology among MU Extension

physical activity participants over a three-year period.

Maggie Hillmann¹, Kelsey Weitzel², Kristin Miller²

¹ Department of Nutrition and Exercise Physiology ² Department of Physical Therapy



Introduction

- Americans can stay healthy by aiming to meet the physical guidelines for Americans, 150+ minutes of moderate aerobic exercise and 2+ days of strength training exercises per week.
- For this study we sought to find (Aim 1) the change in cardiovascular and strength training activities over a three-year period, among current and previous physical activity program participants and (Aim 2) if fitness tracking technology impacted overall physical activity levels in program participants.

Methods and Participants

- Data was collected through an electronic survey sent to all previous (within the last 5 years) and current participants of Stay Strong, Stay Healthy (SSSH), Walk with Ease (WWE), Matter of Balance (MOB), and Tai Chi (TC) in Missouri
- Statistics** – Logistic regression was conducted to predict if participants would meet physical activity guidelines based on age and fitness tracking technology.
- Participants were grouped separate if they met the recommend physical activity guidelines.

Results and Conclusions

Average Cardio Participation 2019-2021

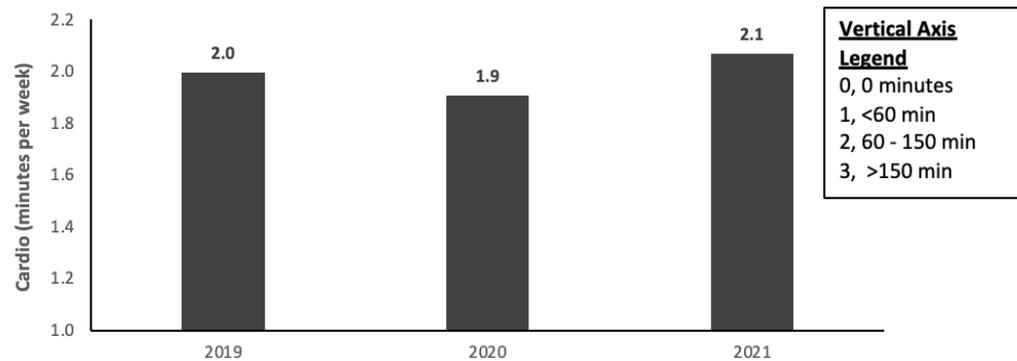


Figure 1. Aerobic Exercise

Average strength days performed 2019-2021

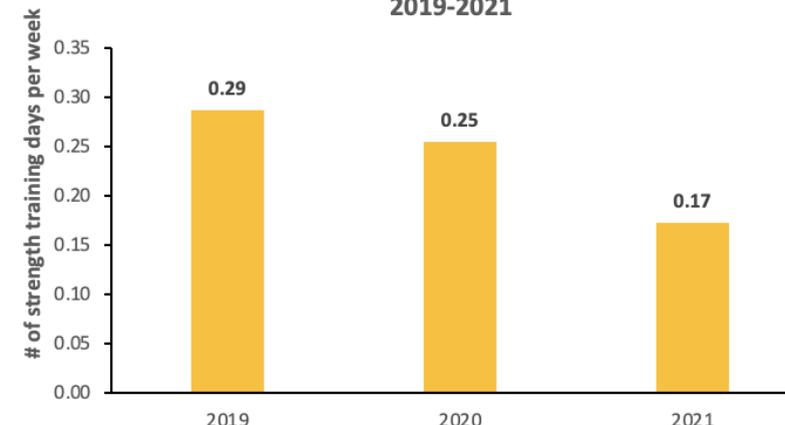


Figure 2. Strength training

Aim 1: Determine the change in participation of both cardiovascular and strength training among participants in MU Extension programs. Averages of cardiovascular activity more consistently met the physical activity guideline suggestions over the three-year period when compared to strength training averages. We found that the average number of days that participants engaged in strength training exercises each week has decreased every year since 2019.

Aim 2: Determine if fitness tracking technology impacted physical activity levels over the three years measured.

2.1X
More likely to meet aerobic activity guidelines



Compared to adults reporting no step tracking technology use in 2019, those reporting consistent step tracking technology use (OR = 2.1, 95% CI 1.06 – 4.24) were significantly more likely to report meeting the 2018 PA recommendations (≥ 150 min/wk of moderate intensity or vigorous intensity equivalent) compared to those reporting no step tracking/technology use. A significant ($p < 0.05$) relationship was observed between step tracking and meeting the PA guidelines. In 2020 and 2021 no significant difference was found between step tracking technology use and meeting the PA guidelines.

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- Aerobic exercise (walking, biking, running) had a decrease in 2020 but has increased to be higher in 2021 than two years ago, 2019.
- The number of days that program participants engaged in strength exercise has continually decreased from 2019 until now.
- In 2019, Step tracking was predictive of meeting the cardiovascular exercise guidelines. Those who tracked their steps were 2.1 times more likely to meet the cardiovascular exercise guidelines of 150 minutes (moderate intensity) physical activity each week.
- Fitness tracking was not predictive of meeting the strength training guidelines.
- Age was not a predictor of meeting physical activity guidelines in any year.
- Initial data from this study has warranted future research to investigate which extension programs influence consistent and continued exercise after program completion.
- Further data collection is necessary to more fully understand the relationship comparing physical activity levels to 2021 as the year is not complete. Current data only includes habits for the last 7 months.
- Limitations:
 - A larger sample size (211 responses)
 - Not collecting data from a full calendar year
 - Formatting survey questions to get specified data