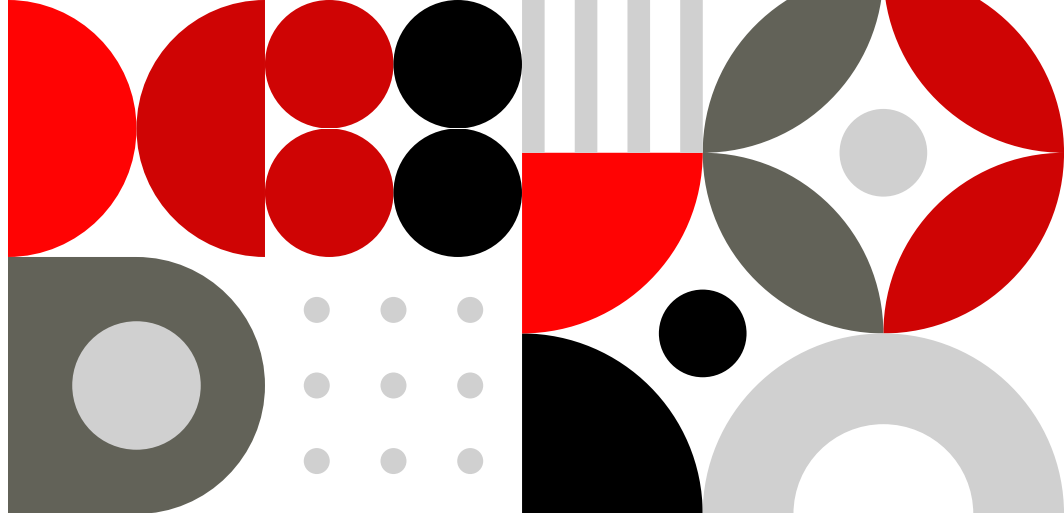


***Special
Olympics***

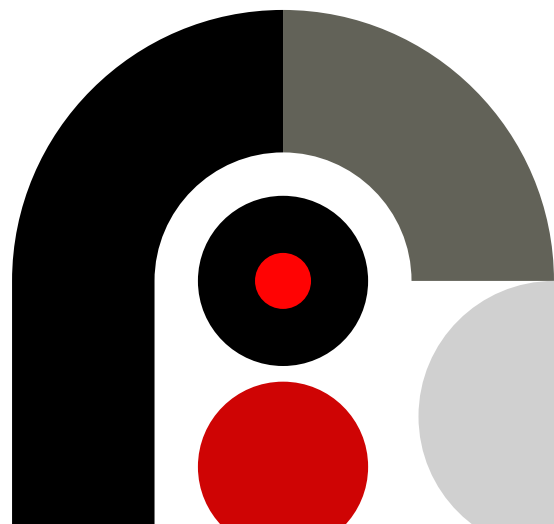


2023

ADULT FITNESS AND HEALTH ASSESSMENT TOOLKIT

EVALUATION REPORT

Fitness and Health Evaluation



EXECUTIVE SUMMARY



Project Overview

Improving the fitness and health of adult athletes with intellectual disabilities (ID) aligns with the mission of Special Olympics (SO). Athletes with ID often encounter barriers to physical activity, resulting in sedentary lifestyles and increased health risks such as obesity. By assessing both physical activity and overall health metrics, SO aims to develop more effective strategies to support the well-being of adult athletes. This project focuses on creating a standardized toolkit to evaluate fitness, health, and physical activity among adult athletes.

Approach

Special Olympics International (SOI), in collaboration with SO Programs, university partners, coaches, and athletes, tested the feasibility of a Fitness and Health Assessment Toolkit. This toolkit included fitness tests, lifestyle survey, and physical activity wearables (i.e., Fitbit) to assess cardiovascular endurance, muscular strength, flexibility, and health behaviors. Data collection occurred during SO events and practices to determine its practicality, ease of use, and effectiveness in measuring outcomes.

Two SO programs and universities participated

- Special Olympics Kansas (SOKS) & University of Kansas Medical Center
- Special Olympics Pennsylvania (SOPA) & University of Pittsburgh



Key Findings

- **Feasibility:** Fitness assessments were effective across diverse settings and implementation, though some tests required minor modifications.
- **Wearables:** Fitbit devices demonstrated good usability and compliance but required improved protocols for syncing and athlete use.
- **Comparison of Data:** Device-measured physical activity was associated with fitness and health metrics, including waist-to-hip ratio, endurance, and strength tests. Device-measured physical activity was not associated to the reported Lifestyle Survey demonstrating difficulty with recall and reporting activity intensity.
- **Implementation Challenges:** Recruitment difficulties, coach engagement, and logistical considerations like volunteer needs were noted.

Next Steps

1. **Refinement:** Simplify and tailor assessments to specific sports, ensuring they are meaningful for athletes and coaches. Simplify survey questions and reduce time of recall.
2. **Training:** Provide coaches with standardized training materials, including protocols and videos, to enhance implementation and buy-in.
3. **Wearable Use:** Develop clear protocols for athlete adherence.
4. **Future Integration:** Incorporate the toolkit in goal setting and fitness program evaluation. Develop evaluation tools for younger athletes (8–21 years).



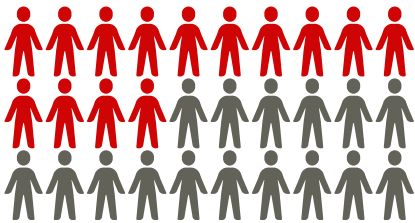
HEALTH RESULTS SUMMARY

Demographics of SOKS Athletes

- 83% of the sample was white, and 41% were females

**30 athletes
participated**

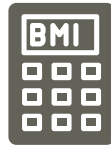
**The average
age was 28**



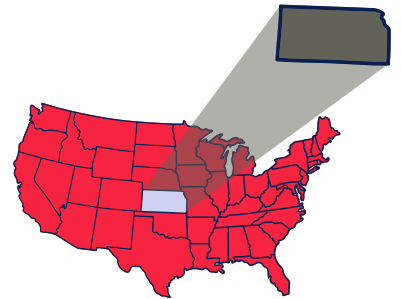
**46% HAD
DOWN
SYNDROME**



**28% had
hypertension**



**The average
BMI was 33.2**

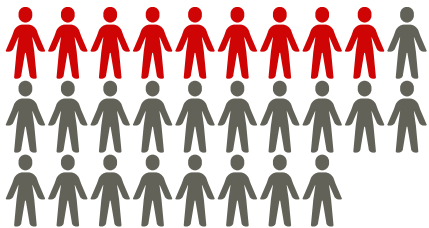


Demographics of SOPA Athletes

- 79% of the sample was white, and 39% were female.

**28 athletes
participated**

**The average
age was 34**



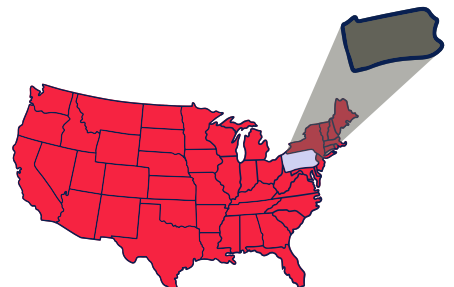
**32% HAD
DOWN
SYNDROME**



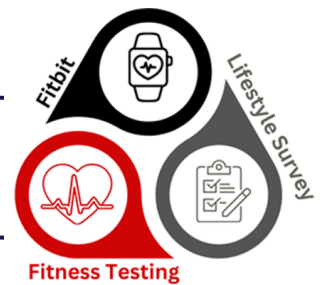
**37% had
hypertension**



**The average
BMI was 30.6**

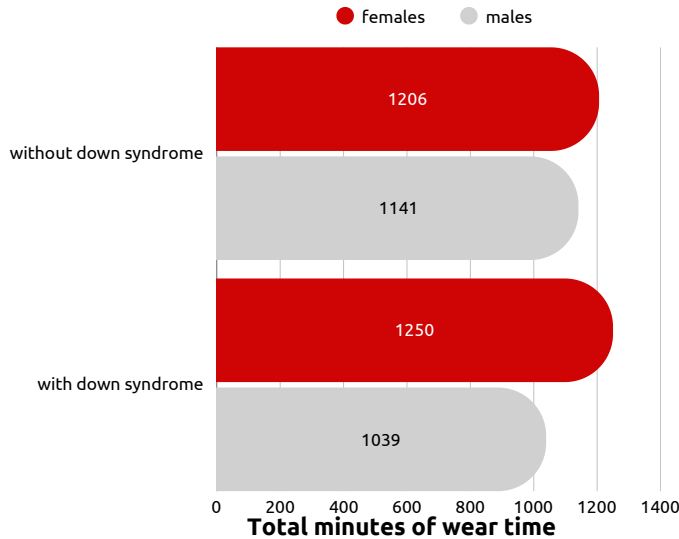


FITNESS TESTING SUMMARY

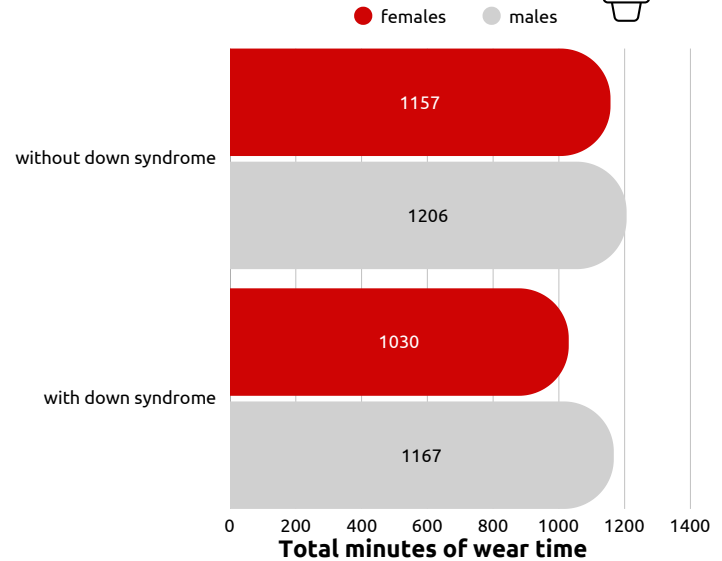


Device wear time

SOKS average = 1137 minutes



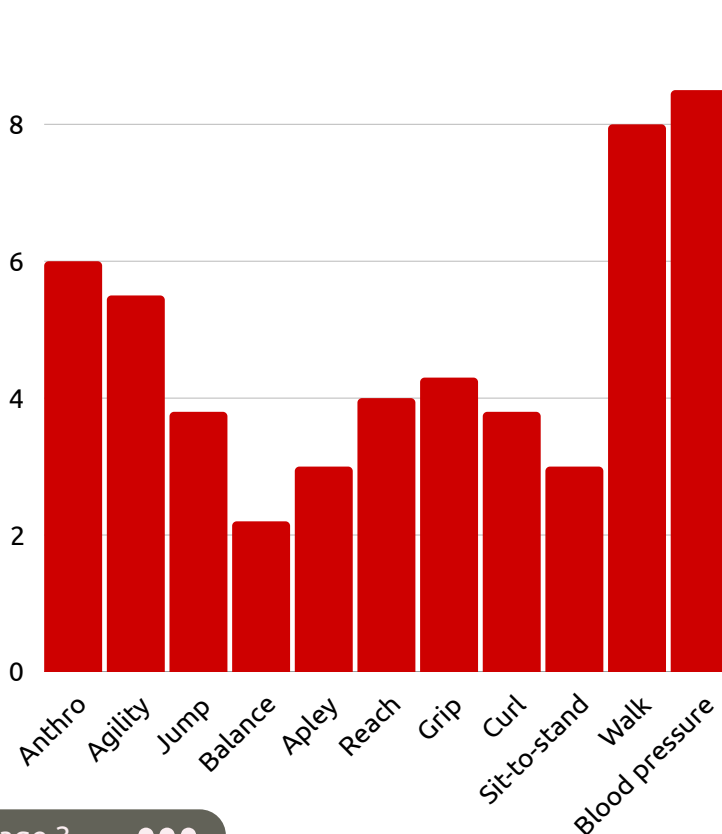
SOPA average = 1157 minutes



- Wear time was similar across sites. ~19 hours, on average this is good compliance.
- Some athletes did not wear the device during sleeping and had syncing issues that were noted.

Time to complete fitness tests in minutes

10



Testing Feasibility

- Average testing time ranged from 40 to 49 minutes.
- Fitness assessments were feasible with minor modifications.
- Lifestyle surveys benefited from a flexible, modular structure.

Comparing Wearable and Lifestyle survey data

- Associations were seen between device-measured physical activity and health metrics (e.g., waist-to-hip ratio, fitness measures).
- Minimal associations were seen between survey and device-based physical activity, except for walking.
- Demonstrating potential reporting issues for activity intensity and weekly recall of physical activity.



NEXT STEPS



Fitness assessment

- Tests were feasible across formats (i.e., SO event and practice)
- Test modifications needed for sit and reach and push up
- Strategies needed to increase athlete motivation during testing
- Determine 'meaning'
 - What does the score mean to an athlete? Is it good bad?
 - Need for fitness norms for those with ID
- Develop instructional packet for Program use
- Disseminate revised fitness manual and instructional videos



Wearable devices

- Challenges with syncing and compliance
- Prioritize wearables to assess physical activity since reporting of intensity and time may be difficult.
- Create wearable protocol for athletes and caregivers
 - Include- How do I wear the device, why should I wear it, and how do I use it to support behavior change?



Lifestyle survey

- Flexible Survey Structure (short form with 'add on' modules of questions')
- Inclusion of support-level questions
- Simplify & obtain athlete feedback
- Quick questions about daily physical activity may provide better data instead of weekly recall



SO WHAT?



Evaluate Special Olympics Fitness programming

- Use fitness assessment, wearable devices, and the Lifestyle Survey before and after your program to evaluate its effectiveness.

Goal Setting

- What areas of fitness do your athletes need to improve? Conduct fitness tests at the start of your season to focus your sport training to enhance skills.
- Use data from these evaluation tools to develop specific goals for athletes and encourage health improvements over time.

