

Wearable Device Use and Health Outcomes Among Older Adults with Multiple Chronic Conditions (MCC): Findings from HINTS 6

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BACKGROUND

- The U.S. faces a growing healthcare challenge: **~60% of adults aged 65+ live with ≥2 chronic conditions (MCC)**, creating high demand for ongoing care management.
- Wearable devices offer potential support for monitoring, symptom tracking, and daily health decisions.
- Gap:** Most studies focus on single disease process (cancer, RA, diabetes), but not MCC.

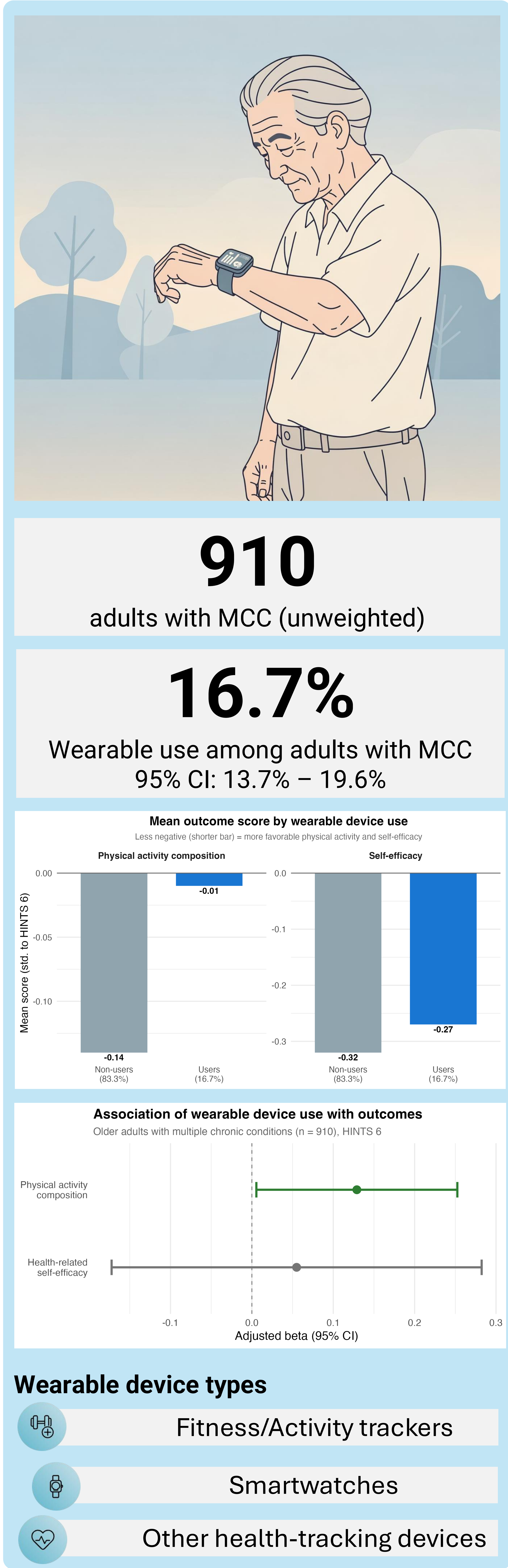
OBJECTIVES

- Examine the association between wearable device use and physical activity composition in older adults with MCC.
- Examine the association between wearable device use and health-related self-efficacy in older adults with MCC.

METHODS

- Design:** Cross-sectional secondary data analysis of HINTS 6 (2022–2023).
- Sample:** 910 adults aged 65+ with ≥2 chronic conditions (diabetes, hypertension, heart disease, lung disease, or depression).
- Standardized composite scores of:
 - Physical activity** (frequency + duration of moderate exercise, strength training and sedentary time). Higher score = more favorable
 - Self-efficacy** (self rated general health + confidence in managing one’s health). Lower score = worse self-efficacy
- Covariates:** age, gender, race/ethnicity, education, marital status, household income, BMI, smoking status, insurance status, internet use, employment status, talking about health with family/friends
- Data Analysis:** Adjusted survey-weighted multivariable linear regression

KEY RESULTS



DISCUSSION

- Physical Activity ✓**
Wearables modestly support more favorable activity patterns (less sedentary time, more exercise engagement)
- Self-Efficacy ✗**
No significant effect detected; condition burden, measurement method, or social factors may dominate
- Contextual Gap**
Findings differ from cancer survivor literature; population heterogeneity matters in digital health research
- Device use alone, without structured coaching, feedback loops or clinical integration, may be insufficient to shift patients’ confidence in managing their own health.

CONCLUSION

Wearable devices show promise for supporting physical activity in older adults with MCC, but comprehensive, patient-centered strategies are needed to address health-related self-efficacy

FUTURE PLANS

- Examine longitudinal trajectories of wearable use
- Explore mediating mechanisms such as perceived health competence
- Evaluate device-integrated interventions and AI combining real-time feedback