

What We've Found in Our Studies

The Exercise is Medicine organization at the University of Arkansas has a total of **8 research articles** (5 published articles) about physical activity, health, and other physical outcomes.

We wanted to share with you what we have found so far with your help, so we have provided **summaries of our research papers!**

We are constantly working on new research and expanding our knowledge about physical activity, so be on the lookout for more updates to come.

Relationships between grit, physical activity, and academic success in university students: Domains of physical activity matter.

Bryce T. Daniels, Ashton E. Human, Kaitlin M. Gallagher, & Erin K. Howie

Published in the Journal of American College Health on July 9th, 2021

Findings:

- **Perseverance of effort** = the ability to continue to work hard despite experiencing setbacks
- **High perseverance of effort** is associated with:
 - Higher totals of physical activity
 - Higher amounts of walking, active transport, domestic, and leisure-time physical activity
 - Higher GPAs

59.0% of participants reported poor sleep

28.5% of participants reported NO leisure-time physical activity

25.3% of participants reported good sleep AND any leisure-time physical activity

Associations between physical activity, sleep, and self-reported health with burnout of medical students, faculty, and staff in an academic health center.

Erin K. Howie, Natalie Cannady, Erick L. Messias, Ashley McNatt, & Christopher S. Walter

Published in Sport Sciences for Health on January 16th, 2022

Findings:

- Majority of participants were physically inactive and lacked good sleep
- Reporting **no leisure-time physical activity** and **poor sleep** were associated with:
 - Higher rates of poor physical health
 - Higher rates of mental health conditions
 - Higher rates of personal-, work-, and client-related burnout
- Reporting **any leisure-time physical activity** and **good sleep** were associated with:
 - Lower rates of poor physical health
 - Lower rates of mental health conditions
 - Lower rates of burnout

What We've Found in Our Research

Effectiveness and implementation of a virtual versus in-person walking program among employees on physical activity, fitness, and cognition.

Erin K. Howie, Bryce T. Daniels, Ashton Human, Michelle Gray, & Jamie I. Baum

Published in Health and Technology on April 13th, 2021

Findings:

- Group breakdown:
 - One group was encouraged to attend five 30-minute walking sessions in person
 - One group walked on their own but shared their walks on a virtual platform
- Both groups improved physical activity levels over 4 weeks
- Participants expressed that having social support was enjoyable
- The virtual walking group performed significantly more physical activity than the in-person group
 - more flexibility to choose when they walked

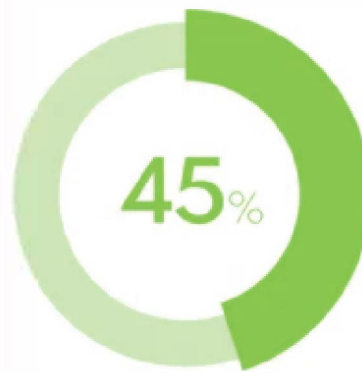
Accelerometer measurement differences between the preferred and non-preferred wrist.

Bryce T. Daniels, Kaitlin M. Gallagher, Michelle Gray, & Erin K. Howie

Published in Health and Technology on October 25th, 2021

Findings:

- Accelerometers = devices that measure physical activity
- Participants wore accelerometers on both wrists to see if one wrist recorded more physical activity than the other
- Accelerometers worn on the participant's dominant wrist recorded higher physical activity than the non-dominant wrist



of UARK students, faculty, and staff had **poor or very poor cardiorespiratory fitness**

Relationships between physical fitness, health behaviors, and occupational outcomes in students, faculty, and staff of an American University.

Bryce T. Daniels & Erin K. Howie

Published in the Journal of American College Health on August 5th, 2022

Findings:

- Almost half of participants had poor or very poor cardiorespiratory fitness
- Poor cardiorespiratory fitness was associated with:
 - low physical activity
 - poor sleep
- High muscular endurance was associated with:
 - higher GPAs among students
 - lower job satisfaction among faculty and staff
- No other associations between the components of fitness and occupational outcomes
- No associations between physical fitness and happiness

What We've Found in Our Research

Physical activity as a potential tool in therapeutic works of university mental health professionals.

Bryce T. Daniels, Robert E. Davis, & Erin K. Howie Hickey

Under Review

Findings:

- **Mental health professionals** from a variety of universities were interviewed about physical activity within their practice
- **Almost all** clinicians believed that patients could benefit from physical activity
- Clinicians were supportive of **encouraging** patients to **increase physical activity**
- Majority of clinicians expressed that they did not feel comfortable prescribing physical activity themselves
 - However, **all clinicians** indicated that they would **refer patients to a physical activity specialist** as they saw fit

Relationships between personality traits, high school sports participation, and physical activity students at an American University.

Bryce T. Daniels, Samantha E. Robinson, & Erin K. Howie

Under Review

Findings:

- **Conscientiousness** and **Neuroticism** were significantly and positively related to physical activity levels
- **Participation in high school sports** was positively associated with vigorous physical activity and leisure-time physical activity
- Of the 26 factors examined, **Conscientiousness** was the only predictor of physical inactivity and was considered the most important

The following studies are in the process of being published, but we wanted to share with you what we found from them!

Exercise is Medicine On Campus: The implementation and effects of an exercise referral scheme using physical activity counseling.

Bryce T. Daniels, Kaitlin M. Gallagher, Samantha E. Robinson, Robert E. Davis, Michelle Gray, & Erin K. Howie

Under Review

Findings:

- Participants were originally referred to a **physical activity specialist** by their CAPS provider using the **Physical Activity Vital Sign**
 - However, low recruitment rates opened recruitment to the general student body
- Participants in the experimental group received weekly **motivational interviewing (MI)** sessions over 4 weeks
 - **All MI group participants** attended all MI sessions (100% adherence)
- The MI group had **significant improvements** in their **fitness and mental health** measurements compared to the control group
 - The most intriguing improvement of the MI group was in **cardiorespiratory fitness**
- Participants mentioned that their **favorite parts of their MI sessions** were being held **accountable** for increasing physical activity and **feeling encouraged** that they could it