Welcome to the first newsletter of the AHPRC, also referred to as the ‘PRC (‘park’)! In 2018, Vice President of Research, Dr Jeanne Hossenlopp, appointed yours truly as Planning Director of Research in the AHPRC. The doors to the ‘PRC opened in March 2019, and the commissioning of the AHPRC building and research space occurred on April 29th, 2019. Along with the valuable support of a Marquette AHPRC Advisory Board, we have had the privilege of developing a strategic plan and instigating programming to elevate and establish collaborative human performance research at Marquette. Our global goal at the AHPRC is to facilitate interdisciplinary, collaborative and innovative research to understand and enhance performance in athletic, healthy and clinical populations across the lifespan while providing educational and training opportunities for the Marquette community. This vision embraces all individuals. Several key initiatives are already in motion involving students and faculty across multiple colleges including:

- **AHPRC Pilot Research Grant program**: four $15000 research grants were awarded in 2018 to study the best strategies to enhance human performance in student athletes, people with Type 2 diabetes, stroke survivors and people with concussion.

- **Two summer undergraduate research fellowships (SURF)** were awarded (May-August 2019) to students in exercise physiology and engineering who conducted research on the caregivers of children with autism and adaptive athletes in the research space.

- **Three National Institute of Health affiliated grants** are being conducted in the AHPRC space on people with stroke, fibromyalgia and African American men who are prostate cancer survivors.

Since opening our doors, we have hosted numerous seminars, workshops and tours from groups within and beyond Marquette. We also hosted a 7-week Marquette Summer Research Institute, that supports and develops mid-career research faculty. Other events are highlighted throughout the newsletter.

Finally, we value your input and support. Keep up to date with the exciting opportunities at the AHPRC and the latest findings on human performance and the benefits of exercise by visiting our [web page](#), connecting with us on social media and becoming a member of the AHPRC.

Join the AHPRC research team [see Pg. 2] as we strive to be the difference at Marquette and beyond.

Sincerely,

Sandra Hunter, PhD
AHPRC Planning Director and Professor in Exercise Science
Spotlight on Student Research: Featuring June Wang (EXPH) as recipient of the AHPRC Summer Undergraduate Research Fellowship (SURF)

Caregivers of persons with autism spectrum disorder (ASD) likely experience different barriers and facilitators to regular exercise than most of the general population because of the time, energy, and other resources that are devoted to caregiving. Through an AHPRC Summer Undergraduate Research Fellowship, student June Wang (EXPH) (with the aid of Emily Zint (BISC) who is in the College of Health Sciences Summer Undergraduate Research program) assessed these barriers and facilitators, while evaluating the health of caregivers of persons with ASD. Under the direction of Dr. Norah Johnson (NURS), Dr. Abir Bekhet (NURS), Dr. Alex Ng (EXPH), Dr. Mauricio Garnier-Villarreal (NURS) and Dr. Amy Van Hecke (PSYC), June led an eight-week exercise program for these research volunteers in the AHPRC research exercise laboratory. The student-led sessions included both aerobic exercise and resistance training, such as step aerobics, dance, kick-boxing, cycling, and walking, dumbbell exercises and resistance bands in a circuit-based program. Physical and mental health were assessed before and after the program.

Participants in the exercise program reported improved energy levels and greater confidence about their ability to regularly engage in exercise. Recently, the local CBS affiliate featured the exercise intervention as a part of the exercise intervention. The American College of Sports Medicine (ACSM) and the US government recommend 150 minutes as a weekly ‘dose’ of physical activity. All movement counts and the benefits are far-reaching. Even the smallest increase in physical activity can benefit health, not only long term, but immediately. For example, those with type 2 diabetes can benefit immediately from improved insulin sensitivity. Other benefits, attainable from even a single bout of activity, include reduced anxiety and blood pressure, and improved quality of sleep.

Fun Fact:
HIIT can also help! Haven’t heard of High Intensity Interval Training? It was named the #1 Fitness Trend in 2018. The important idea behind all forms of HIIT is providing an intense phase of exercise followed by a period of recovery. Each phase can range from a few seconds to a few minutes and are conducted across a range of intensities.

Who is currently the Planning Director at the AHPRC. Hunter adds that, “Several of the AHPRC strategic plan objectives are to provide educational and leadership opportunities for the students, as well as engaging the outside community, while enhancing the health, well-being, and physical performance of people of all abilities. This project encompasses all those objectives. The study also represents another major pillar of our strategic plan which is to elevate collaborative team science by bringing together research scholars across several disciplines and colleges to solve problems and create new opportunities that otherwise would not have been possible.”

If you are interested in ways to engage with the AHPRC please connect with us or follow on social media! To schedule a tour, contact us:

(414) 288-5007
research_ahprc@mu.edu
https://www.marquette.edu/innovation/research-ahprc.php