



Emily Bechke credits her professors and the resources at KSU for her academic success.

STUDYING HEART RATE VARIABILITY

By Emily Deibler

Emily Bechke graduated from Kennesaw State University in December 2018 with several accomplishments under her belt, including earning a master's degree in applied exercise and health science.

While Bechke had already been interested in physiology and exercise health because of her experiences playing soccer, she fell in love with her studies after she received research opportunities, specifically chances to work in the Exercise Physiology and Biomarkers Laboratory at KSU. She ultimately wants to help others through her research.

After graduating from KSU with her undergraduate degree in exercise physiology in 2016, Bechke worked as a graduate research assistant and conducted studies on heart rate variability (HRV). HRV involves the change in time between heartbeats, and she looked into how it affects someone's exercise routine.

For example, Bechke wanted to know how a normal heart rate and a "stressed" heart rate variability (caused by health concerns, situational anxiety, caffeine intake, etc.) change the outcome of a workout, as well as what this means about an individual's overall health.

With this knowledge, those who wish to exercise to improve their health can know what to do before and after exercise with their possible limitations in mind. They can also take steps to work on whatever concerns—physical, emotional and habitual—impact their routines.

To learn more about HRV and what it indicates, Bechke

has conducted studies in the University's applied lab that emphasize activity and collaboration during research. For her 16-week study, she asked nine women to come into the lab for four visits where their heart rates were taken to determine their HRV.

The participants underwent high-intensity exercise on the fourth visit in which Bechke monitored their heart rates before and after to determine their readiness for exercise and how their hearts recovered five minutes after working out.

If Bechke can identify the external factors of HRV, she can help people from different populations improve their exercise routine, assist their overall health and predict the possibility of various diseases. She hopes to expand her research through continuing her education with a Ph.D. in kinesiology.

Bechke's work has been published in *The Journal of Physical Activity and Health*. During her undergraduate career, she also presented at the KSU Symposium of Student Scholars and the 2016 annual meeting of the American College of Sports Medicine.

After the completion of her education, Bechke's goal is to become a professor and help other students just as her professors guided her in her studies. As she continues her research, Bechke's dedication and need to help others will influence her. In the end, she credits KSU's resources and her professors' willingness to start her on the path to discovering invaluable findings regarding health.