Interview with Hannah Koerten, M.A.
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We recently had a chance to talk to Hannah Koerten, a 5th year grad student in Clinical Psychology at Bowling Green State University, and the lead author of a recent study that has made considerable waves after its publication in Psychophysiology. In this interview, Hannah explains her fascinating results in detail, and chats with us about what it’s like to have your research reported on the national news.

You’ve recently published a very interesting article in Psychophysiology as a lead author, titled “Cardiovascular effects of brief mindfulness meditation among perfectionists experiencing failure.” Can you tell us in your own words what you were looking for, and what you’ve found?

Our study explored whether mindfulness with a nonjudgment focus was effective for perfectionists recovering from perceived failure. This project was inspired by a very interesting study by Azam and colleagues (2015), which found that mindfulness was only effective in helping nonperfectionists, and not perfectionists, recover from failure (as measured by high-frequency heart rate variability, or HF-HRV). However, the mindfulness meditation in the previous study was described as "emphasizing attention to breathing sensations and a reorientation to breathing sensations once there was an awareness of thoughts, emotions, bodily sensations, and/or external stimuli." We felt that it was important to explore whether mindfulness with a nonjudgment component would be effective for perfectionists. During the first wave of recruitment, we had students randomly assigned to two meditation groups: nonjudgment mindfulness and general mindfulness (i.e., attentional awareness without a nonjudgment component). We later added progressive muscle relaxation and "nothing" as additional comparison groups.
Our heart rate results showed that both mindfulness conditions and the “nothing”
condition encouraged cardiovascular recovery, but that the mindfulness conditions
showed even further recovery during the last five minutes of the meditations. HF-HRV
results indicated that participants in the nonjudgment mindfulness condition had
marginally higher HF-HRV during the last five minutes of the meditation than at
baseline, while participants in the other conditions did not. This provides some support
for the effectiveness of nonjudgment mindfulness for perfectionists recovering from
perceived failure, although this finding should certainly be interpreted with caution until
replicated in future studies.

**What implications, if any, do you think your findings will have both for other
researchers and for people in general?**

If replicated in future studies, our findings could provide some guidance for people
struggling with perfectionism and perceived failure. While many people and
organizations are becoming more aware of the benefits of mindfulness meditation, there
is less discussion about what types of mindfulness meditations are most effective for
individual people or situations. It would be important for individuals who struggle with
perfectionistic thoughts to look for meditations that remind them to observe without
judgment, especially given that these individuals may have more self-critical thoughts
throughout the meditation.

For future researchers, it would be important to replicate these findings, especially given
the marginal HF-HRV findings for the nonjudgment mindfulness condition. Additionally,
we found some surprising findings for progressive muscle relaxation – students
randomly assigned to this group showed lower HF-HRV during recovery than during the
stressor and did not show sustained heart rate recovery. We hypothesize that this could
be explained by the instructions to tense muscle groups, which may have promoted
sympathetic activation and parasympathetic withdrawal. Future studies should explore
this interesting finding further by continuously recording cardiac data before, during, and
after the muscle relaxation exercise.

**Is there any particular thing that you yourself have learned during the study that
you would like to share?**

This was my first study using physiological data. It was both an exciting and frustrating
experience! We spent many hours troubleshooting issues in the lab, inspecting and
cleaning data, and learning how to use software. I was so lucky to have two amazing
co-authors (Tanya Watford and Dr. Bill O’Brien) who have expertise in using the cardiac
equipment and interpreting data, a supportive advisor (Dr. Eric Dubow) who was willing
to let me take on this ambitious project for my master's thesis, and two wonderful
undergraduate researchers (Bret Williamson and Rowan Wicks) who helped me run
participants for many hours over several semesters. I learned that a big project like this
requires a lot of help and support, and I was lucky to have such an amazing team. I am
also really appreciative of the advice and materials I received from Abid Azam, the first
author of the 2015 paper. He was very willing to share resources, making it possible to replicate the methods used in his study as much as possible.

Your study has been reported on in local newspapers and mass media (such as on CNN.com). What has this experience been like for you?

It was very exciting! I was not expecting to have the opportunity to interview with a reporter from CNN Health. The reporter was very kind, and seemed to have done a lot of her own research on the subject.

Presenting scientific findings to a mass audience can be a difficult balancing act. Do you think the media overall did a good job presenting your findings? Was there anything in particular that they did that made the communication of your study easier or harder for you?

It was most difficult for me to explain the difference between our heart rate and HF-HRV findings. When the CNN article was published, they reported that our heart rate results were not statistically significant. That was incorrect - our heart rate results were all significant, but our HF-HRV results for the nonjudgment mindfulness condition were only marginally significant.

It’s very impressive that you conducted this sophisticated study and wrote this important paper, all as a graduate student. Do you already know what the next steps in your career will be?

Thank you! I am currently in my fifth year in the clinical psychology program at Bowling Green State University and will be starting my year-long clinical internship this summer at The University of Wisconsin School of Medicine and Public Health. I am hoping to continue to conduct research while on my internship and throughout my career. Right now, I am working on several research projects with my advisor (Dr. Eric Dubow) and fellow students in our lab. I am also currently working on my dissertation, which explores domain-specific perfectionism in high school students.

Thank you very much for this interview, and a lot of success for your future studies!