

# **The Calmpak Study: A Reflection of My Internship and the Study I Got to Run On**

## **Campus**

**Authors: Amber Lopez, Melissa M. Root Ph.D.**

Since I began studying at Mitchell I became interested in research psychology. As a sophomore I decided I wanted to pursue a career in research and examine why and how things happen. Since part of completing my degree included an internship I saw it as a chance to do research outside of the classroom. I was connected to Dr. Melissa Root of Root Success Solutions by Paul Dunn. My interest was piqued as soon as Mr. Dunn mentioned Dr. Root and her Calmpak invention, which delivers effective mind-body-health recordings using NFC technology. I jumped at the chance to work with her, and we began brainstorming an on-campus study with a variation of her Calmpak invention. Instead of using NFC technology delivered through a keyfob, the access to the Calmpak recordings was instead given through a QR code printed on a placard. We opted to use the QR codes because they were easy to use and likely familiar to students. To access the Calmpak website all students needed to do was point their camera at the QR square to scan the code. As we wanted the Calmpak to be as accessible as possible to new users we believed this would be a viable method of delivery.

The aim of our study was to examine how different placements of the calmpak placard would affect use. Additionally, we wanted to examine how an introduction could encourage new users. A total of 54 Calmpak placards were hung in Mitchell College's upper campus dorms. Simpson and Matteson, which were designated as direct exposure dorms, received 24 placards each. Placards were hung in the bathroom stalls, dorm halls and bulletin boards on the first and second floors of the two direct exposure dorms. On the other hand, Saunders and Mariner were general exposure dorms and had 3 placards each. One placard was hung in the laundry room,

while the other two were displayed in the lobby for both dorms. Matteson and Mariner received an introduction to the placards in the form of a flyer that was slid under residents' doors on floors one and two. The placards were hung for a total of two weeks starting on March 23rd and ending on April 5th. Participation was kept completely anonymous and the only data that was collected included which dorm the placard was being accessed from, the time and a few digits of each IP address that accessed the calmpak website to allow us to account for repeat users. Data was logged on a Google Spreadsheet that was only accessible to researchers.

Our study lasted a total of 10 weeks from planning to completion. First, in order to even be allowed to apply to complete a study I had to complete a course through the CITI program. The program outlines the necessary steps for completing a research application and teaches users how to conduct a study with humans safely and ethically. In order to streamline our study and increase the likelihood we could get it approved and completed in 10 weeks, we opted not to collect any identifiable data on students in our study. This meant we could minimize confidentiality risks and potentially gain approval from the college's Institutional Review Board (IRB) sooner. Our study was eligible for this expedited approval because collecting personal data on students was purposefully not included in our research design. Instead, we elected to observe public behavior (in this case how placement of the placard influenced use). However, conducting a study during a pandemic while not collecting any personal data on participants posed a greater challenge than I had initially expected.

Because of COVID restrictions set in place by the college, only residents are allowed in the dorms. This meant that we were unable to enter the dorms and hang posters or distribute flyers ourselves. In order to move forward with the study, I contacted Katrina Feyerherm, Director of Residence Life, and asked if she would be willing to help. Katrina was very receptive

and more than willing to help with everything I needed. Since Dr. Root and I couldn't enter the dorms we instead had the placards and flyers given to the Residence Life team with instructions for distribution. Packets were made up for each dorm with necessary materials based on the different categories: general exposure with no introduction, general exposure with an introduction, direct exposure with no introduction and direct exposure with an introduction. While the contributions of the Residence Life team played a key role in the study, it also created a limitation for the study. Although the Residence Life team was given instructions on where and how the placards should be placed, we were not able to independently confirm fidelity to the study design.

We hypothesized that the introductory flyer would make someone more likely to use the placard and that the direct exposure dorms would result in the the most hits to the calmpak website. While Matteson, the direct exposure dorm with an introductory flyer, did see the most hits, it was the only dorm to see any hits. Three hits from Matteson were logged between the night of March 23rd and the morning of March 24th. The other three dorms did not see any hits despite a campus wide quarantine that began on April 1st. During the quarantine, campus activities were canceled, the library was not open for in-person visits, and classes had moved to online only. Students were essentially confined to their dorms.

Although in theory a quarantine means students are confined to their dorms with nothing else to do but be on campus, in practice many students opted to instead ride out the quarantine at home. With all activities being suspended and all classes being moved online, there was very little incentive to stay on campus. During the quarantine period there were notably fewer students on campus and even the dining hall saw less patronage than usual.

The lack of uses might also be attributed to a number of additional factors. First, due to campus COVID-19 restrictions, only residents were allowed in the dorms. As such it was not possible to do an in-person introduction of the Calmpak placard. Thus, many students only saw new placards hung in their dorms without any explanation about what they were. Second, as part of our IRB approval, we decided to not to collect any identifying information on students. This severely limited the way we could do an introduction as we could not email students an introduction since that would tell us the identity of students in the dorms. Third, while an introduction could be held outside of the dorms, there was no guarantee that students would be interested in attending. As such the flyer was chosen as a way to anonymously inform students of the Calmpak placard. Unfortunately, this introduction method is rather impersonal and makes it impossible to gauge whether or not students were interested in the placard. Lastly, because flyers involved no contact between students and researchers at all, we were unable to address any potential questions or concerns users may have had.

The introduction was a vital part of the study, as not all students may have been familiar with QR code technology. Compared to NFC, where users simply hold their phone in close proximity to an NFC tag, QR codes require more steps. In order to scan a QR code users must use their phone's camera to read the code. This requires a working smartphone camera, which not everyone may have. Second, users have to ensure they have the right lighting and angle in order for their phone to read the code. This may be difficult in some scenarios and could deter a potential user if they are struggling to scan the code. While we did relay all the necessary steps for scanning a QR code on the flyer, an in-person introduction would have been more informative and could have better served those who are visual or hands-on learners.

Another possible reason the Calmpak placard did not garner more hits was its fixed location. Despite the study design requiring some placards to be hung right outside of dorm rooms, the placards only garnered 3 hits in two weeks. It may not be that students are not interested in relaxation methods, but that the placard wasn't accessible at the time they were ready to relax. Compared to the Calmpak keyfob, which can be carried anywhere and is accessible as long as users have it on hand, the placard was in a fixed location. As such, while students would pass the placards en route to or from class or the dining hall, they might not be receptive to relaxation techniques at that time.

Based on the data we gathered and assuming that the study protocol was followed with fidelity, it appears that location does not influence how likely someone is to use the Calmpak placard. This could be due in part to the placard being fixed and potentially inaccessible when students do have the time to relax. Further while introductions had no effect on usage, this could be a limit of the delivery method. Due to COVID restrictions we had to opt for an impersonal introduction rather than being able to hold an in-person introduction that could have been more informative. While the flyers were delivered to students there is no guarantee everyone who received an introduction read the flyer.

In closing, my internship was a great opportunity for personal and professional growth. I learned more than I expected to about the research side of psychology and even got to take part in planning and organizing a study, which has always been a career goal of mine. Thanks to Mitchell College's internship program and Dr. Root I feel as though I am better equipped for pursuing a career in research psychology. More than that, through this internship I was able to network and connect with amazing people such as Katrina Feyerherm and Michael Shepard of the Residence Life Department whose contributions made this study possible. Additionally,

through the internship program I learned a lot about working with an IRB. Mitchell College's IRB was very helpful and board members provided great feedback and guidance through several steps of the process. Dr. Root was a great mentor throughout the program and I'm grateful I had the opportunity to work with her. I learned much more than I expected and with this new knowledge I feel better equipped for the future.