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# Inside Research: An interview with Caprisse Johnson

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# Inside Research: Q & A with Caprisse Johnson



Caprisse Johnson is a senior at Murray State from St. Louis, Missouri. She is graduating in May with a Bachelor of Science in Dietetics. Dietetics is the study of nutrition from a scientific perspective and how it affects the overall health of individuals.

## **You participated in the Posters-at-the-Capitol event this year, can you tell us about that experience?**

Being a part of Posters-at-the-Capitol was a great and surprising experience. I honestly didn't think that my study on gooey butter cakes/ chess bars would attract as many spectators as it did. Though being one of the only two dietetic students present at the showcase was a huge honor!

When we first got to the capitol building, President Davies was there to help guide us to where our posters were being presented in the main capitol building. Once the event started all the participants took pictures and set up their posters all throughout the Rotunda, which was beautiful. Then, we would stand by

our posters and talk to spectators if they expressed interest in the poster and had breaks for lunch and desserts.

Like I said earlier, I was surprised by the amount of interest that others expressed in my research. I thought I was just going to be standing there awkwardly with my orange poster about gooey butter cakes/ chess bars. However, I am glad that they thought my research was worth learning more about and that I was able to be a part of this wonderful event.

## **The research you presented dealt with obesity in modern America. Can you tell us about your rather unique research method?**

Well, the project started as a research project for my NTN 432 course, Experimental Foods, where we had to take a dish and either

substitute or add an ingredient to make it healthier in one nutrient. I'm from the St. Louis area, so gooey butter cake was a treat I looked forward to at home, and I wanted to make the cake healthier without losing out on the taste that many people love about gooey butter cake.

Since cardiovascular disease is the number one killer of Americans at this current moment, I decided to try and lower the fat content of the cake to in turn lower overall fat intake. So, I swapped the cream cheese that is normally used in the batter for non-fat Greek yogurt instead; I made a normal cake and a modified one with the yogurt using a 1:1 ratio. I wanted to check any textural changes with the batter and the baked cake and whether the public would like the modified version. I used a Bostwick consistometer to test the fluidity of

the batters, a penetrometer to test the tenderness of both cakes, and a wettability test to check the moisture of the cakes. Then, I used a 7-member panelist to test each cake and rate the cakes based on tenderness, stickiness, and sweetness. They also specified which cake they preferred and why.

### **What was your hypothesis and what results did you find? How does this translate to dealing with obesity in America?**

My hypothesis was that more people would prefer the modified cake over the original and that the fat content of the cake will be significantly lower. As a result of the lower fat content, I also expected the cholesterol to be lower as well. These hypotheses were supported by conducting nutrient analysis of both cakes, which found the modified cake lowered the total fat content by 6 grams and the saturated fat content by 4 grams. I also found that the sodium content was lowered by about 60 mg, cholesterol was lowered by 20 mg, and the calories were lowered by 53 calories. For the consistency test, I found that the modified batter had a more watery consistency, and so the modified cake was more tender and stickier than the original. This resulted in all the panelists preferring the original cake over the modified. This refuted my hypothesis that the panelists would prefer the modified cake because of the tenderness.

These results translate to obesity and cardiovascular disease because one of the main reasons that people do not like to eat healthier is because

they think that healthy food is flavorless or “rabbit food,” which is not always the case. By conducting this study, I was able to take a well-known dish and modify it so that it was healthier than before without making the dish inedible, as the panelist said that both cakes were pleasing to eat. This research shows that even making small changes, like an ingredient swap, can be beneficial.

### **Your research mentor is Ms. Jessica Paine, RDN, LD, M.S. How has she assisted you throughout the research process?**

She assisted me by helping me submit my project to the IRB and aiding with the overall set up of the experiment. Having done research in our field before, it was nice to have her look over my project and make sure that the set-up made sense and was compliant with the APA citation format that is used in the dietetics field. She also provided general encouragement and pushed me to submit my project to Posters-at-the-Capitol even if the project was not completed until the end of the Fall 2017 semester.

### **What do you plan on doing after leaving Murray State?**

After graduating from Murray State this upcoming May, I hope to be a dietetic intern within the Midwestern region. I have applied to different dietetic internship programs, which uses a matching system like doctoral residencies, and will find out in early April where I will be going after graduating. I hope that I can go

back to St. Louis and do my dietetic internship there, but if not, I will accept where ever I am placed with joy anyway.



To learn more about Caprisse’s research, view her paper on Murray State’s Digital Commons Website:

<http://digitalcommons.murraystate.edu/postersatthecapitol/2018/Murray/2/>