Niku Tabatabai

Mr. Speice

Independent Study and Mentorship- 3A

13 April 2018

It's Quite Abstract

Mentor Visit Assessment #4

Mentor: Dr. Marius Meintjes

Profession: Reproductive Endocrinology and Infertility

Location: Frisco Institute of Reproductive Medicine, 8380 Warren Pkwy #201, Frisco, TX 75034

Date: 6 April 2018

Time: 12:00 pm- 1:00 pm

Assessment:

My mentor, Dr. Meintjes, and I have officially entered into the final phase of our final product. After months of combing through patient records and organizing statistical data, it is finally time to begin the writing process. Although the many factors analyzed throughout my research of Prenatal Genetic Screening (PGS) was quite simple to conduct independently, combining these results into a general consensus is not as simple. Therefore, Dr. Meintjes and I have begun writing many drafts of the abstract we are going to submit to the American Society for Reproductive Medicine.

Although I am confined to a 250 word limit, trying to figure out a way to fit all of the necessary information is quite challenging. In fact, one of my biggest struggles of the school year

has been being concise in my writing and not rambling. Therefore, I hope that these abstract drafts can help me become a better writer in general. Once my mentor and I conducted two-tailed chi squared tests to determine the p-values of our data, we discovered that many of the statistics that we thought were going to be significant actually were quite large in their p-values. As I have recently learned, a p-value of over 0.05 signals no significant difference in values.

Normally, my mentor visits consist of work on the computer as I go through patient records and statistics from different years and tests. However, ever since my mentor and I have begun our abstracts, our visits are much more conversational and geared towards improving our writing. There are five main parts that go into an abstract, which includes the objective, experimental design, materials and methods, results, and discussion. Initially, I was quite unsure about what to focus on in each section, but my mentor quickly explained proper formatting to me and stressed the importance of not repeating yourself. The objective begins with mainly stating the problem at hand, which in my case was the percentage of no reads the lab had on PGS biopsies. Furthermore, the experimental design introduces our retrospective research, meaning that my mentor and I looked back on patient records, and clarifies that the samples were all sent to the same laboratory. The materials and methods and results were quite self-explanatory, with the results being a repeat of our data analysis and the materials and methods listing how we obtained our results. Lastly, the discussion is where our connections are made and a little bit more thought has to be put into the wording. A large observation my mentor and I made was that there was a small p-value between 2016-2017. The improvement in 2017 indicated an increase in program experience.

Initially, Dr. Meintjes and I had hypothesized a large difference between physicians, for he believed physician 1 was using too much trigger medication. However, I found it interesting and surprising to see that the p-value of physician 1 was not under 0.05 and not even a trend at below 0.10. This shows that even the simplest of research can present unexpected results. The only exposure to lab work and research I have previously had is high school course labs in class. These labs have a given result that is to be expected. Even if your results vary, the teacher typically tells you that you most likely did something incorrectly or that you need to look off another group's data. However, my experience with my mentor has shown me that unexpected results are not something to be discouraged by and that it does not indicate an error. This information will be necessary when I enter college and begin to work on research with unknown results. Up to this point I have been sheltered in my approach to scientific research, but now I know to expect the unexpected and know that it is just a part of higher level research.

As I continue to progress on my final product, I realize that this is only the beginning. Once I submit my abstract I will possibly be given the opportunity to travel to Denver, Colorado and speak in front of the American Society for Reproductive Medicine. Furthermore, this upcoming fall is going to mark the beginning of my participation in the Freshman Research Initiative offered at The University of Texas at Austin. All the work I have been doing and my consistent efforts to learn about the world of scientific research will be utilized in the next phase of my life and after the end of my secondary education.