



*University of Utah*

UNDERGRADUATE RESEARCH JOURNAL

**PRENATAL EDUCATION ON CONGENITAL CYTOMEGALOVIRUS (CCMV)  
IMPROVES KNOWLEDGE ON CCMV**

**Habibo Haji Abdi (Marissa Lynn Diener)  
Department of Social & Behavioral Science**

**Background:**

I did a research study on prenatal education on Congenital Cytomegalovirus. Cytomegalovirus (CMV) is a common infection that most people really aren't aware of. The virus is harmless for children and adults, but it can cause serious health problems if babies are infected while they are in the womb. Common symptoms for CMV include vision/hearing loss, rash, seizures, and intellectual disability. Ways to prevent CMV include not putting baby utensils in your mouth, washing your hands after feeding/changing your baby and to even not share food with your baby.

**Purpose, research question(s) and /or hypothesis:**

The purpose of my research study is to figure out how to best educate pregnant women about cytomegalovirus and how they can prevent transmission to their babies. Congenital CMV is also the one we focused on in this study. Congenital CMV is when a pregnant mother gets CMV and passes it to her unborn baby. This leads to why our target is pregnant women in their first trimester. The earlier we educate them in the beginning of their pregnancy the more precautions they will take to prevent CMV from both themselves and their baby.

**Methodology:**

Our target for the study is women at their first prenatal visit at approximately 8-10 weeks' gestation. We went over to the women's health clinic up at the University of Utah main hospital and enrolled potential participants. Those that agreed to participate were asked to review a consent form. The consent form ensures the participant is aware that the study is totally voluntarily and there is minimal to no risk to participants or their unborn child. Participants are assigned randomized ID numbers. These ID numbers helped us decide whether the participant would view print educational materials or a five-minute educational video. Both methods helped our participants gain more knowledge on cytomegalovirus. The point of the two different educational materials were to see which method is easier for people to understand and comprehend the information better. Participants were also asked to fill out two surveys. First survey is a pre-test questionnaire to see what they know about CMV before we have them view educational materials. After we have the participant view educational material, we have them answer 5 questions answering, "how easy/difficult it was to understand the educational material they were assigned". The post-test survey, on the other hand, is completed in their follow up visit at 18-20 weeks' gestation. This survey evaluates what they have learned about CMV at their first visit.

**Remote Enrollment:**

Any participant missed in clinic, we contacted remotely. We would call the participant, introduce ourselves and let them know what our study is about. We would then gain consent from the participant and get an email address to send the survey. We used a website called "Qualtrics" to conduct the study remotely. This website allowed us to track whether the participant has started or completed the survey we sent them. Since we can track the surveys we send out, if a participant doesn't complete the survey within 24-48 hours, we follow up with a reminder text to complete the survey. We then follow up at the participants 18-20 weeks' gestation by calling them. In the case that a participant doesn't answer when we call them, we leave a voicemail & text them. We then email the post survey or if someone is available to see the participant in clinic, we can follow up that way as well.

**Results:**

We are still enrolling participants and completing follow up visits. We have noticed most people are glad to have taken those 15 minutes of their time to view the educational material about CMV. We have also noticed that women's knowledge on CMV is increasing and uncertainty of CMV is decreasing. Our research study is planned to go on into summer 2021, until we enroll 100 participants who have completed their pre- and post-survey. As of right now, we have enrolled about 80 participants who have completed both surveys.

**Conclusions:**

My study does have limitations, that include being in your first gestational period (8-10weeks). The pregnant women must be English speaking. Another limitation to the study is that it must be a healthy pregnancy. As mentioned above, our study will be continuing into summer semester. We're hoping to have enrolled 100 participants, that have completed their pre & post survey. Women's knowledge on CMV is increasing and sometimes in more areas than other, but either way, progress is being made. Familiarity of CMV increased after educational materials. Uncertainty of CMV is decreasing between our participants first time visit and their follow up visit.