

Background

Audiologists work with a wide range of individuals presenting with various health impairments and disabilities, one of which is Cytomegalovirus.

Cytomegalovirus, or CMV, is a common virus that is related to other viruses such as chickenpox and herpes. In most cases, a healthy immune system will prevent CMV illness.

Congenital Cytomegalovirus, or cCMV, is of greater concern, as it is when an infant is born with CMV. cCMV infection in children can lead to various intellectual and developmental disabilities.

In particular, cCMV is one of the leading causes of hearing loss in children in the United States and roughly 1 in 5 babies born with cCMV will develop severe long-term health complications.

Overview of Research

Two research projects were designed to:

- gain a better understanding of the impact that CMV and cCMV may have on a child's hearing
- assess the knowledge of parents and health care providers on cCMV.

Hearing loss can have profound impacts on a child's speech and language development.

Rapid and successful screening for hearing impairments and other health complications such as cCMV will improve intervention and management of a child's hearing loss.

Effective training and education on CMV and cCMV for parents, childcare workers, and pediatricians can lead to increased awareness of cCMV.

References

- Audiology Frequently Asked Questions. (2020). Retrieved from https://www.asha.org/aud/faq_aud/
- Batshaw, M. L., Roizen, N. J., & Pellegrino, L. (2019). Children with disabilities. Baltimore: Paul H. Brookes Publishing Co.
- Cytomegalovirus (CMV) and Congenital CMV Infection. (2019, May 31). Retrieved from <https://www.cdc.gov/cmV/index.html>
- Cytomegalovirus (CMV) infection. (2020). Retrieved from <https://www.mayoclinic.org/diseasesconditions/cmV/symptoms-causes/svc-20353538>
- National CMV Foundation. (2020). Retrieved from <https://www.nationalcmv.org/>

Acknowledgements

The development of this paper was supported, in part, by funding from the U.S. Department of Health and Human Services, Health Resources and Services Administration (Award #T73MC30115) and the U.S. Department of Health and Human Services, Administration for Community Living, Administration on Intellectual and Developmental Disabilities (AIDD) (Award #90DDUC0071) awarded to the University of Connecticut Center for Excellence in Developmental Disabilities Education, Research, and Service. The opinions expressed, however, are those of the authors and do not necessarily reflect the official position of the Departments.

Modifications to The Cytomegalovirus Training Module for Childcare Providers

A previous CT LEND research project designed a CMV training module for childcare providers. The training module provides basic information on CMV and congenital CMV at a level that is easy to understand. It reviews what CMV is, common signs and symptoms, prevention recommendations, statistics, and resources for individuals.

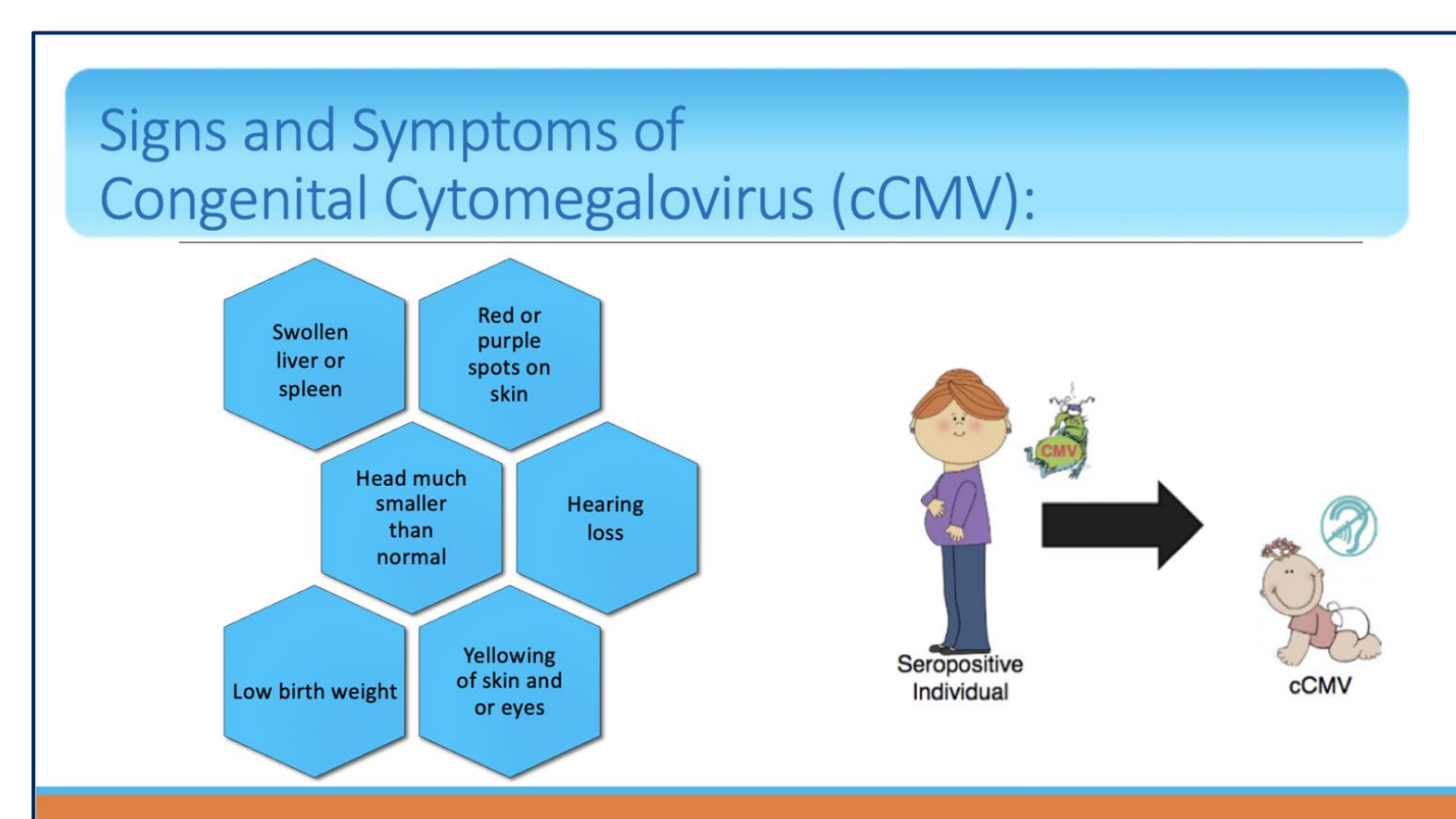
The purpose of the present research project was to make improvements to the current CMV training module based on feedback from childcare providers who received training from the current module.

Proposed Changes

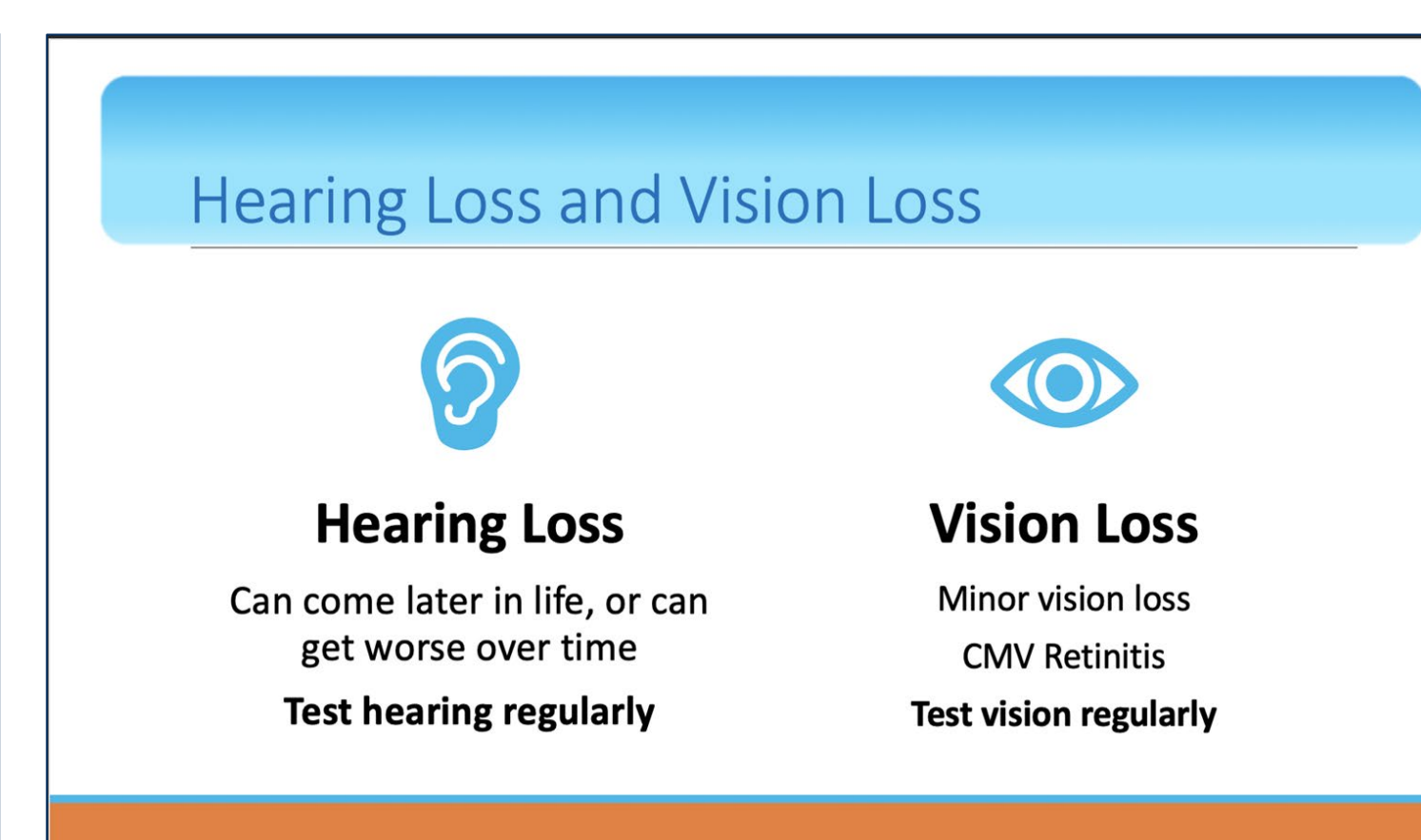
1. Improved information on the effects of CMV on hearing loss.
2. Improved information on the effects of CMV on vision loss.
3. Closed captioning was requested to improve accessibility of the training module.
4. A module in Spanish was requested to improve accessibility to other languages.

Modifications Made

- Information was added to the current CMV training module on the impacts of CMV and cCMV on the hearing and visual systems.
- The CMV module was reconfigured to include dedicated sections on hearing and visual systems. (Information was gathered from the Center for Disease Control and National CMV Foundation)
- A transcript of the CMV training module was produced in English and Spanish to improve accessibility of the information.



Screenshots from training module



Future Directions

Additional modifications can be made to the CMV training module.

- The CMV training module can be adapted in various ways to provide education to various groups
 - o specific professions, languages, etc.
- Updated CMV training modules should be tested with their target population using pre- and post-testing to determine the quality of training that individuals receive from the information.

Assessing the Usability of the Cytomegalovirus Training Module in Educating Women of Childbearing Age about cCMV

A previous CT LEND research project designed a CMV training module for childcare providers. The training module provides basic information on CMV and congenital CMV at a level that is easy to understand.

The purpose of the present research project was to determine the effectiveness of a cCMV training module in educating women of childbearing age about cCMV and to receive feedback on how to improve the module.

Materials

- Pilot group of 15 women, 19-26 years old
- Pre-test and Post-test (10 Multiple Choice Questions)
- ~10-minute CMV training module

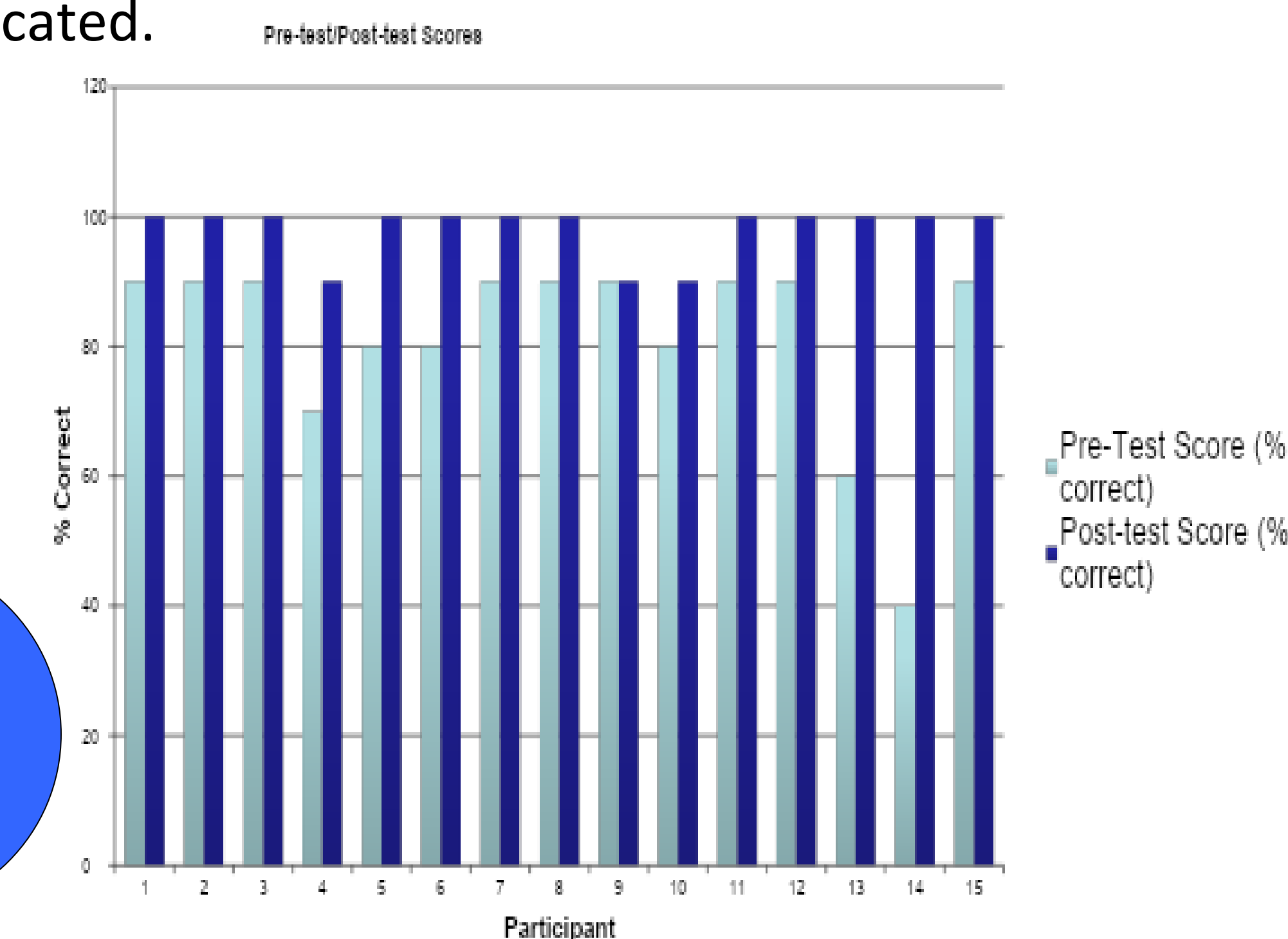
Procedure

- Each participant took the pre-test, watched the module, completed the post-test, and then provided feedback on the module.
- The pre-test and post-test were the same questions.
- The pilot group included 14 Caucasian women and 1 Black woman, and every group member was college educated.

Results

Mean Improvement for participants that did not score 90% on pre-test:

28.8%



Discussion

- 14 out of 15 participants scored better on the post-test than the pre-test.
- The pre-test/post-test measures may have been too easy for this pilot group, which all had a college education.
- In the future, the pilot group should have emulated childcare worker demographics better
- The pilot group did provide positive feedback and productive changes that could be made in the future.

Future Directions

- The module should be tested on larger sample groups to further assess its effectiveness in increasing knowledge on CMV and cCMV.
- Ensure greater diversity and broader representation in sample group
- Consider the feedback from this pilot group and make future modifications such as making certain aspects more clear and including a personal story.