S.A.F.E. TASTE & SMELL TRAINING FOR STUDENTS IN SPEECH LANGUAGE PATHOLOGY

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ABSTRACT:

Significant physiologic changes such as hearing, vision, smell, and taste occur in our bodies as a part of normal aging. While the literature is replete with information on normal aging changes, there is a paucity of literature on normal aging changes in the African American population, specifically, African American females. The purposes of this research were to investigate the aforementioned senses in community dwelling African American females in Valdosta/Lowndes areas and to engage undergraduate students in student-centered research.

INTRODUCTION/RESEARCH QUESTION

Swallowing is an intricate and complex sensorimotor task. Understanding the normal aspects of swallowing is a must for speech-language pathologists in order to diagnose what is physiologically wrong with a person's swallow and therefore, be able to develop a treatment plan to address those swallowing problems.

"Smell determines the flavor of foods and beverages and provides an early warning system for detection of such hazards as fire, leaking natural gas, and spoiled food." (Hawkes & Doty, 2009).

Williams et al (2016) explored ethnic differences in taste perception on different parts of the tongue. They found that there was no significant difference in taste responsiveness into PROP tasting.

In order to address the paucity of literature concerning special senses in African American female, the following question was posed: Does swallowing, smell, and taste decline as age increases across the life span of African American community dwelling females?

METHOD:

This research was approved by the Valdosta State University Institutional Review Board.

Participants
Thirty community dwelling African American females ages 22-83 participated in the study.

Hearing:
To assess hearing, participants responded to pure tones presented via an audiometer at 1000, 2000, 4000 Hz at 25db in both left and right ears by raising their hands each time their heard the tone.

Oral Mechanism Exam and Swallowing
An oral peripheral examination was conducted to assess the structure and integrity of the oral cavity.

To test swallowing participants were required to eat 5 mL of applesauce, pudding, mixed fruits, and a ¼ of a cracker and drink 3 oz. of water.

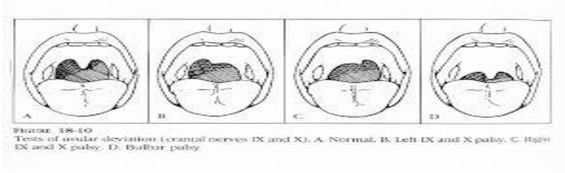

FIGURE 18-10
Tests of ocular deviation (cranial nerves IX and X). A. Normal. B. Left IX and X palsy. C. Right IX and X palsy. D. Bulbar palsy.

Smell:
Participants completed the 4-item National Health and Nutrition Examination Survey (NHANES) Pocket Smell Test by scratching off each scent and circling which scent resembled the 4 choices given.

Taste:
To assess if participants were supertasters, medium tasters, or no tasters, they were required to place the PROP taste strip in the anterior 2/3 of the tongue and circle whether it tasted strongly bitter, bitter, no taste.

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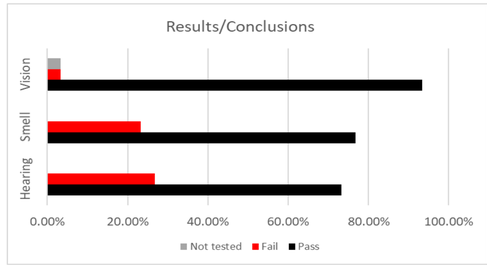
RESULTS/CONCLUSIONS

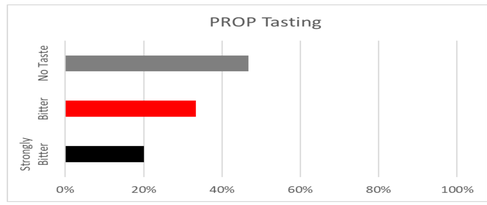
Hearing screening:
26.7% failed, 73.3% passed

Smell:
23.3% failed, 76.7% passed



Vision screening:
3.3% failed, 93.3% passed, 3.3% NT

PROP tasting:
Strongly bitter = 20%
Bitter = 33.3%
No taste = 46.7%



LIMITATIONS

Small sample size
One ethnic group
Limited time to collect data

CONCLUSION

Results of the study revealed no correlation of oral and pharyngeal phases of the swallow.
Forty-six point seven were no tasters, 33.3% bitter tasters, and 20% super tasters.
Seventy-six-point seven percent of participants passes the NHANES Pocket Smell Test.

REFERENCES

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Williams, J.A., Bartoshuk, L.M., Filligum, R.B. & Dotson, C.D. (2016). Exploring ethnic differences in taste perception.
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