

Hearing Health Awareness and the Need for Educational Outreach Amongst Teachers in Malawi, Africa

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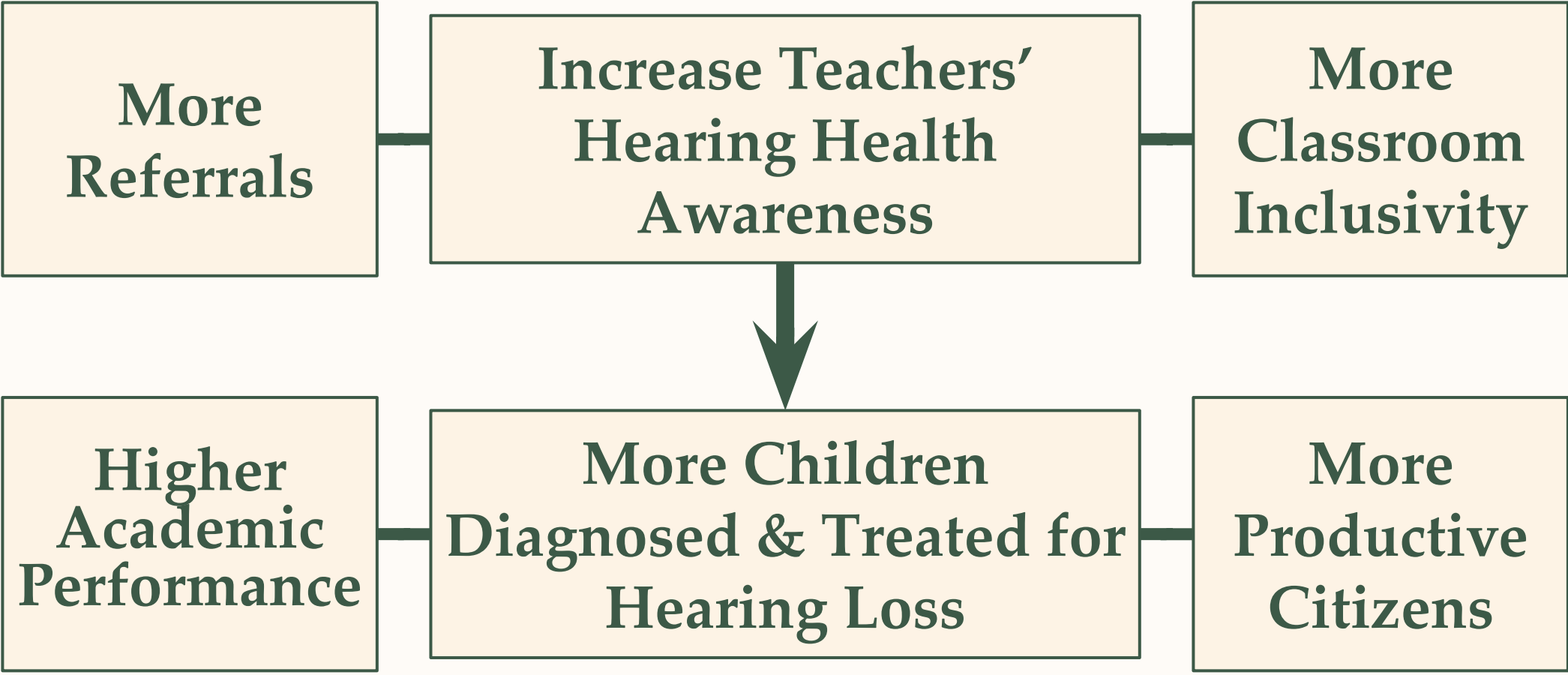
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Malawi is among the poorest countries in the world with 51.5% of the population living under the poverty line and 20.1% living in extreme poverty. The quality of healthcare and the number of healthcare providers are scarce, with access to hearing healthcare even more challenging. There are plenty of unknowns regarding the state of hearing health in Malawi, and generally, there is a lack of public awareness about hearing health. Challenges to hearing health services are numerous, and access to interventions in Malawi are limited. As such, prevention and early detection are two of the most important tools in the effort to combat hearing loss. Increasing awareness and health education are cost-effective ways to address these issues. Health education programs can assist in both raising hearing health awareness of the public, and targeting professionals to aid in appropriate referral and cost-effective intervention.

Objective

Assess primary school teachers’ knowledge of hearing health, audiology services, and management of hearing issues before and after a hearing health focused educational intervention. Teachers were selected because of: 1. the burden of likely undiagnosed hearing loss in school-aged children in Malawi, 2. the significant challenges in identifying these individuals, and 3. the potential cost-effective benefit of increasing awareness among the individuals who are most engaged in the care of large numbers of children in Malawi.

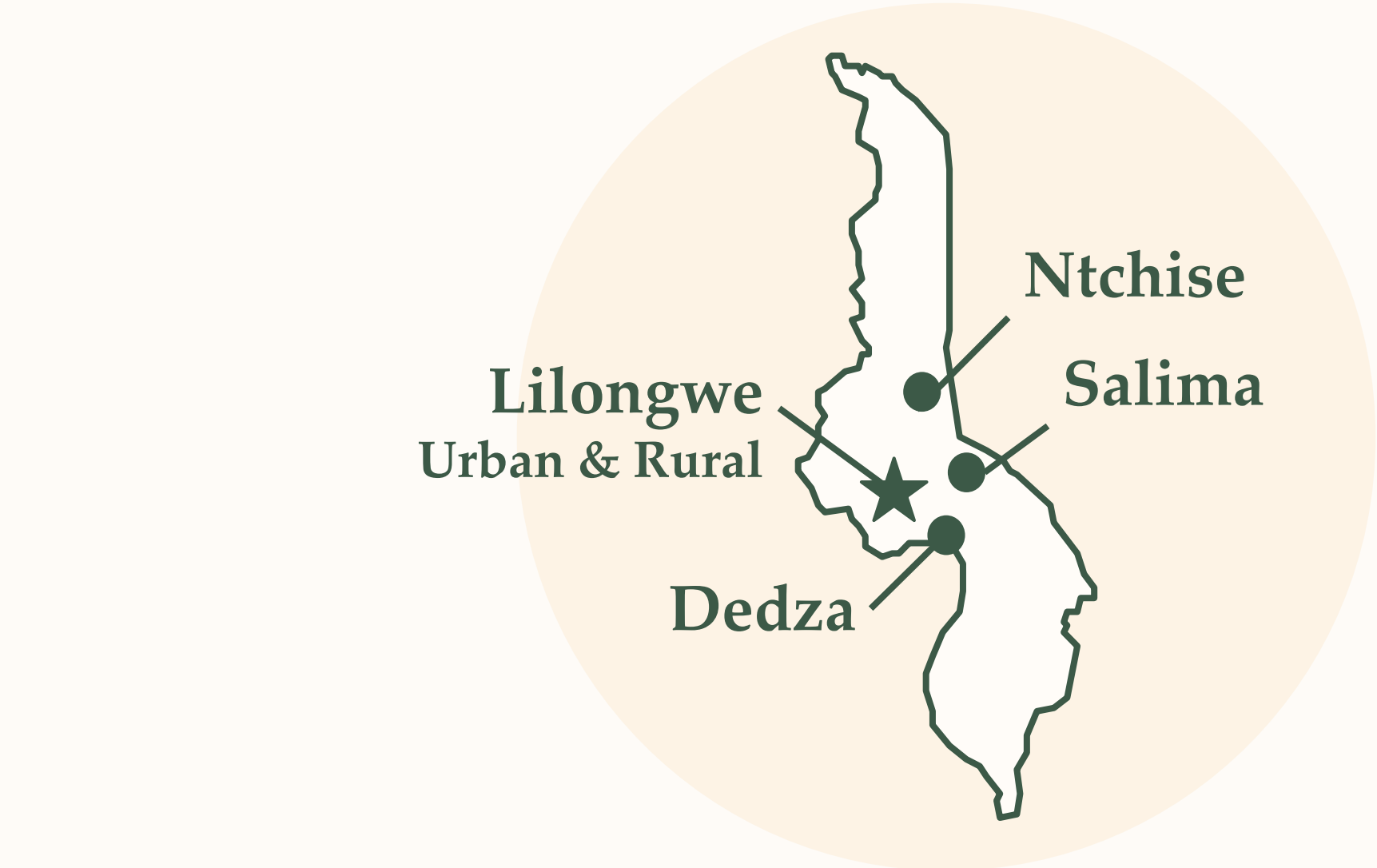


Hypothesis: primary school teachers’ level of understanding of hearing health, audiology, and management is minimal but will improve following an educational program.

Methods

Administered across five school districts, the study included a Pre-Survey questionnaire, an educational intervention, followed by a Post-Survey questionnaire.

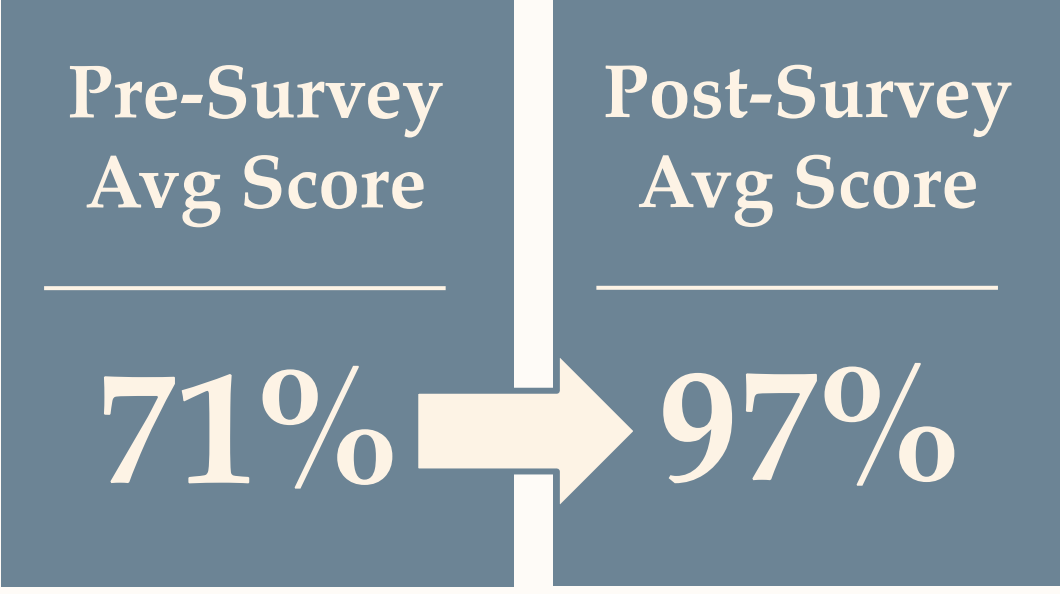
- Pre-Survey** components:
 - **Opinion Survey** - teachers point of view on Likert-scale
 - **Knowledge Survey** - assessment of teachers’ knowledge of hearing health and audiology
 - **WHO Hearing Knowledge Assessment**
- Eductionational Intervention**
- Post-Survey** components:
 - **Opinion Survey** - opinions and confidence in their hearing health knowledge.
 - **Knowledge Survey** - same as Pre-Survey



Map of Malawi and the five school districts surveyed.

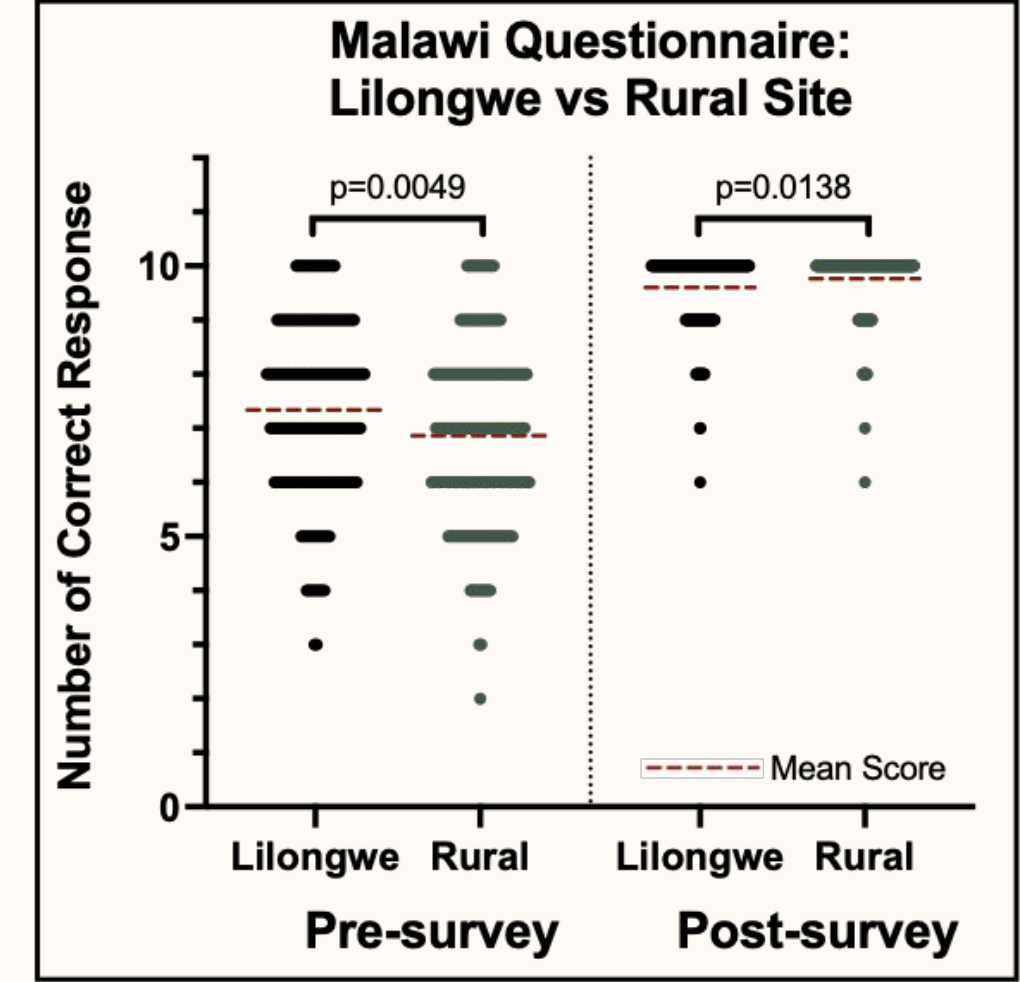
Results

A total of 387 teachers across 25 schools completed the surveys and educational intervention. The average score on the Knowledge Pre-Survey was 71%, which increased to an average score of 97% on the Post-Survey ($t = -30.951$; $p < 0.001$); a 37% overall average increase.



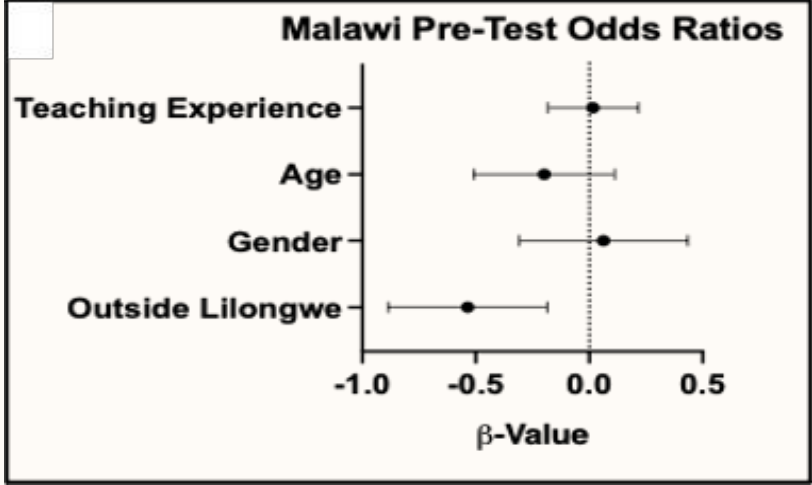
- **Opinion Pre-Survey** - 97% of teachers agreed more hearing training is necessary; 59% felt they did not have enough support for hearing health issues.
- **Opinion Post-Survey** - 99% of teachers agreed the educational intervention was helpful and they need more training; 95% knew what audiologists do; and 88% agreed that they could easily access audiology services.

Multivariable analysis – knowledge base was not affected by age, gender, nor teaching experience.

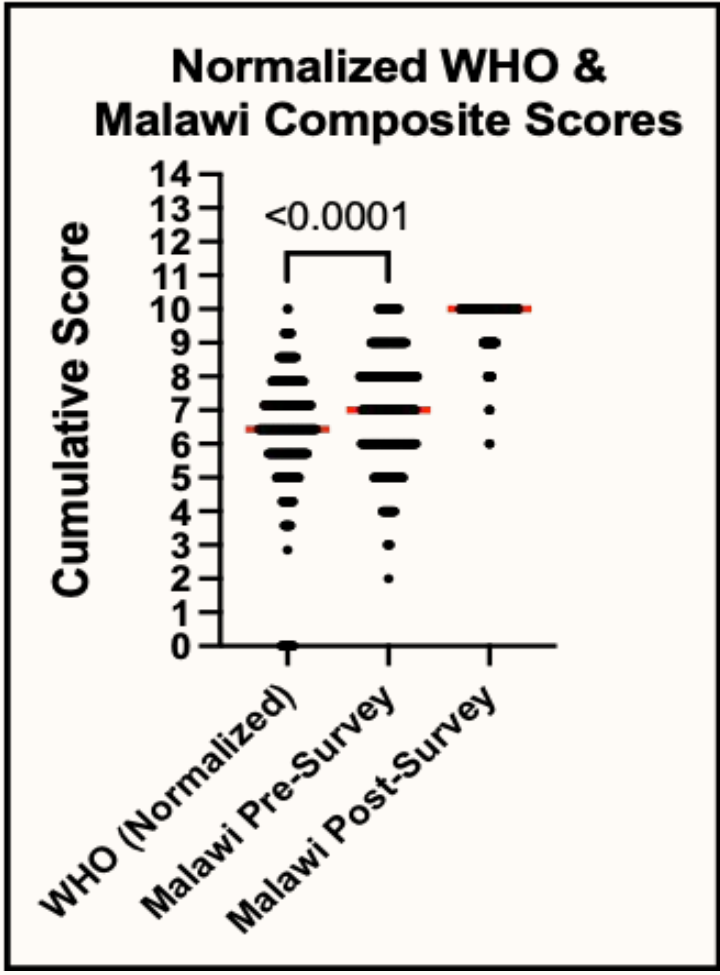


WHO Assessment Comparison – There was a correlation between the Knowledge Pre-Surveys and the WHO knowledge assessment tool.

- Malawian teachers scored poorer overall compared to general populations in Saudi Arabia and rural USA.



Disparities in Hearing Knowledge – Teachers in the capital city Lilongwe had a significantly higher average score (73.4%) on the Pre-Survey than those in more rural areas (68.6%).



Discussion

- Teachers’ baseline knowledge of hearing health was minimal, but improved following an educational intervention ($p < 0.001$).
- This study highlights the value of educational awareness in improving hearing health literacy.
- Health education programs raise audiology awareness of the public and target professionals to aid in appropriate referral and cost-effective intervention.
- Education outreach campaigns are critical, especially in rural settings, as evidenced by the disparity in knowledge between teachers in Lilongwe and outlying sites.
- Educating teachers about hearing loss allows for task shifting of detection and potential referral.

Conclusion

Childhood hearing loss can be catastrophic to the success of a child’s academic and future career development. Increased hearing loss awareness, identification, and intervention connects children with hearing loss to appropriate medical and audiologic care. Teachers, as a vital role for the success of Malawi’s children, are a key target for prevention and early identification of hearing loss.

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