Expert voices on non- epilepsy specialist paediatric EEG training

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Introduction

There is a limited number of child neurology specialists in sub-Saharan African (SSA) compared to the burden of neurological disease in the continent. Children with epilepsy are seen by healthcare professionals who are not always equipped to read paediatric electroencephalograms (EEGs). We aim to develop a pedagogical model to improve and increase EEG interpretation skills for those treating child with epilepsy in SSA as well as in other low middle income countries.

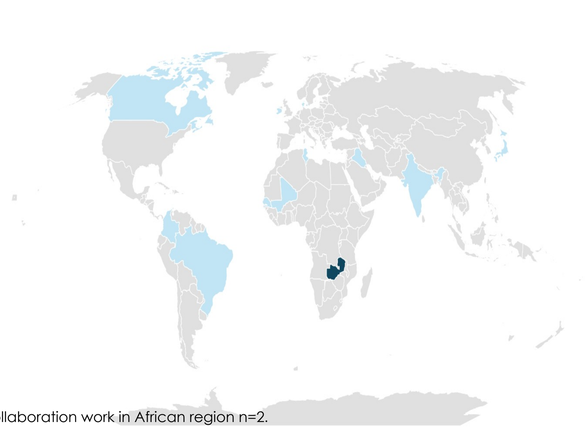
Aim

To obtain views from experts to train non- epilepsy specialists in EEG interpretation and support safe practice for EEG training.

Methodology

A qualitative, case study design was developed, with input from an adult education specialist, consisting of 11 questions on paediatric EEG training needs. Data was collected via interviews between May-June 2023 from 15 epilepsy experts with training experience across high to low-income settings. Thematic analysis was used to identify sub-themes. The key statements were put to the group as a one-round Delphi to ascertain consensus. Contributors critiqued the project analysis and contributed to the report.

Results



Results

Of the 15 experts n=7 (47%) were paediatric neurologists, n=4 (27%) epileptologist, n=5 (33%) adult neurologists and n=1(7%) clinical physiologist (neurophysiologist). Twelve (80%) were involved in teaching of electrophysiology and n=3 (20%) were advocates on the subject. Twelve aspects on paediatric EEG training were categorized thematically

THEMES	SUB-THEMES
Q1. RELEVANCE	Lack of training Neurophysiologists Lack of experts
Q2. EXPOSURE TO PAEDIATRICS	Lack of training EEG interpretation Collaboration Neurophysiologists
Q3. FOCUS ON PAEDIATRICS	Lack of training EEG interpretation
Q4. BARRIERS	Lack of experts Lack of training/exposure Non-specialists
Q5. RESOURCE LIMITED SETTING	Non-specialist Epileptologist Lack of experts Neurophysiologist Technician/telemedicine
Q6. ENTRY SKILLS	Non-specialists Epileptologist Misuse EEG
Q7. BEST PEDAGOGY	Apprenticeship Both
Q8. ASSESSMENT	Continuous assessment Both Collaboration
Q9. CRITICAL SKILLS	EEG interpretation Lack of experts
Q10. RE-INFORCEMENT OF SKILLS	Continuous assessment Collaboration
Q11. TRAINING MODEL	Lack of training Misuse EEG Apprenticeship Collaboration Continuous assessment
Q12. RECOMMENDATIONS	EEG interpretation Misuse EEG

Results

Delphi process:

The key findings from these themes were collated into a series of statements which were put back to the experts to assess consensus across the group for each statement. In total 22 statements were extracted and consensus (>80% agreement) was reached on the first round for 21(Brady, 2015) . The one statement which did not reach consensus (73%) related to entry skills and ability to train.

Conclusion

There is a dearth of paediatric EEG skilled specialists in sub-Saharan Africa. To address this issue, the experts supported adapting training for non-epilepsy specialists with a focus on paediatrics. The findings of this study address this gap and promotes continuous teaching collaborations as well as being innovative in developing such programs. The consensus-based Delphi percentages was successfully reached, except for one question on the entry skills. These training recommendations are being worked into the EEG training arm of the African Paediatric Fellowship training program which aims to provide sustainability to qualified paediatric neurologists and non-epilepsy specialists training in EEG.

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