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Whose words count?

Why culturally grounded mental health screening in multilingual Nigeria requires more than translation

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Translation changes words. Cultural adaptation changes whose knowledge shapes the tool.

94.5%
accuracy predicting PHQ-9 severity from Nigerian Pidgin speech (fine-tuned GPT-4.1, pilot)

INTRODUCTION

Distress is not expressed in words alone

Idioms, slang, tone and cultural meaning change how symptoms are described. Translated tools risk being **linguistically available but culturally misaligned**.

OBJECTIVE

A different approach: build screening through collaboration

We examine **GENSCORE**: mental health screening built through collaboration among people with lived experience, language experts, clinicians and AI researchers.

METHODOLOGY · PILOT STUDY

From real Pidgin speech to a screening model

432
audio responses
Nigerian Pidgin English, adults aged 18–40, mapped to PHQ-9 severity items

→

Annotate
transcribed and annotated
for semantic meaning, slang and idiomatic expression

→

3
LLMs fine-tuned
Phi-3-mini-4k-instruct, Gemma-3-4B-it and GPT-4.1

→

Evaluate
accuracy and ratings
PHQ-9 severity prediction, plus qualitative ratings with clinical and linguistic review

Shaped throughout by: People with lived experience · Language experts · Clinicians · AI researchers, with human oversight

RESULTS

GPT-4.1 achieved the strongest pilot performance

94.5% accuracy predicting PHQ-9 severity scores

Highest qualitative ratings of the three models for

- ✓ Clarity
- ✓ Relevance
- ✓ Cultural appropriateness

DISCUSSION

The more important lesson was methodological

1. Language adaptation could not be reduced to word-for-word translation.
2. Meaning, context and clinical significance were decisions **no single discipline could make alone**.
3. Communities and language expertise shaped how data were represented **before** modelling, not consulted after a tool was built.

CONCLUSION

If communities only enter after translation, they enter too late.

Culturally grounded screening requires cooperation that redistributes interpretive authority across lived experience, linguistic knowledge, clinical expertise and technical development.

NEXT STEP

GENSCORE provides early evidence this approach is feasible. Broader validation across Nigerian languages and populations is required before any clinical or community deployment.

Nigerian Pidgin · piloted · More languages · More populations

SRHIN Slum and Rural Health Initiative | ALPHA CENTRE AI for Low-Resource Public Health Application Centre

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