Overcoming interpretation Bias - Culturally Adapting Anxiety Interventions with AI and Lived Experience (LENS study)

What is interpretation bias?

- **Interpretation Bias = The way we perceive neutral or unclear situations**
- **Negative Interpretation Bias = seeing neutral or unclear situations as threatening.**
- Anxiety often involves negative interpretation bias
- **Interpretation Training (IT): helps people reframe ambiguous situations in more positive/neutral ways.**
- IT has been shown to reduce anxiety and depression within groups of mainly white backgrounds, but current materials may not fully reflect the experiences of diverse ethnic groups. (Hirsch et al, 2020)

Project Aims

- **Identifying trends** in outcomes of anxiety interventions by considering ethnicity
- Help participants overcome negative interpretation bias through use of **internet delivered IT**
- Tailor IT scenarios to **better reflect diverse cultural perspectives**.
- Ensure that people with lived experience of anxiety help shape the research at every stage (**PPIE**).
- **Create an app** where IT sessions will be delivered over a timeframe for the participants of the study

Method

Participants + Procedure

- Participants were volunteers over the age of 18
- Eligible participants identified from screening survey to find individuals from **Black, South Asian, or Mixed backgrounds with high-anxiety levels**
- Interviews conducted to identify key themes for scenarios
- AI models used to generate culturally relevant scenarios.
- Collaborated with a PPIE group (patients + public) for continuous feedback.
- Drew from qualitative data to refine training materials.

Analysis

- Qualitative Analysis - **Framework Method**

Discussion

- Making interventions culturally relevant is essential for fairer, more effective mental health care.
- Combining AI + lived experience offers an innovative way to adapt psychological treatments.
- PPIE engagement has highlighted that the use of digital treatments can help improve accessibility
- Initial feedback from PPIE members highlights the importance of using everyday situations that feel **relatable**.
- Early piloting suggests culturally adapted IT materials may improve engagement across diverse groups.

Scenario Example:

Lately you have been sleeping badly and waking up very early in the morning. You had planned to have lunch with your friend but send a message to say you're too tired. When you read their response, it is clear that they are understanding.

Was your friend annoyed at you for cancelling?

What I gained as an intern

- ***Hands-on experience in AI*** for health research.
- Skills in patient and public involvement (***PPIE***).
- Understanding of how to make interventions more inclusive.
- ***Mentorship*** from clinical psychologists and experts in genetics and cognition.
- Involvement in ***developing recruitment strategies and materials***
- Learnt more about ***qualitative analysis***

Further Research & Project Next Steps

Overall study, Treatment Outcome Prediction Study (TOPS) aims to predict outcomes of anxiety interventions by considering genetic and cognitive factors.

By Rachael Ikotun
Rachael.ikotun1@gmail.com
www.linkedin.com/in/rachael-ikotun-9b5652247