

## **Mental health and skin Neglected Tropical Diseases (NTDs) – A participatory mixed method evaluation of integrated mental health and NTDs in Liberia**

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### **Background**

Skin Neglected Tropical Diseases (NTDs) cause preventable morbidity, disfigurement and disability due to inability to access timely appropriate care, often related to under-resourced health systems. Persons affected are predisposed to poor mental wellbeing, physical health and stigmatisation; this is often influenced by social dimensions and norms, including gender, poverty and misconceptions about the cause of conditions. REDRESS used participatory mixed-methods approaches to evaluate the integration of mental health support within case management for persons affected by skin NTDs in Liberia, led by the Ministry of Health and co-developed by healthcare staff, informal health providers and persons affected. This intervention included training health workers in mhGAP, training health workers at facility and community levels, informal providers and patient advocates in 'look listen link' to support identification and referral of persons needing mental health support, and establishment of peer support groups for persons affected to share experiences and provide mutual support.

### **Methods**

Mixed-methods were applied to evaluate the intervention processes and outcomes, utilising quantitative and participatory creative methods. Baseline surveys were conducted between October 2022 and January 2023 with a 3-month follow-up survey. Outcome variables, depression and anxiety were assessed using a Patient Health Questionnaires (PHQ-9) and Generalised Anxiety Disorder Assessment (GAD-7), respectively. Linear regression models were conducted to assess individual changes in outcome variables, reporting odds ratios (OR) and p-values. Additionally, photovoice (narratives through photography) and body-mapping (illustrations) documented the impact on mental wellbeing and stigma amongst persons affected pre and post intervention.

### **Results**

Persons affected by skin NTDs illustrated experiences of pervasive stigma and discrimination and the psychosocial impact of this through photovoice and body mapping at baseline, describing feelings of sadness, isolation and in some cases, suicidal ideation. Of 150 baseline surveys, 38.7% (95% Confidence Intervals (CI) 30.9 to 47.0) reported moderate depressive symptoms or above (PHQ-9 $\geq$ 10). For anxiety, 22.7% (95% Confidence Intervals (CI) 16.2 to 30.2) reported moderate or severe symptoms of anxiety (GAD-7 $\geq$ 10). Post-intervention, persons affected expressed improvements in self-confidence, increased community participation and improved mental wellbeing through joining peer support groups; many

also described experiencing less stigma within their communities. This is also reflected in the quantitative data through significant reductions in individual depression and anxiety scores compared with three-month follow-up (OR = 4.2, 2.4, p-value = 0.028, 0.048).

### **Conclusion**

To achieve Universal Health Coverage targets, active case finding, and holistic person-centred care is crucial to addressing the physical and psychosocial impacts of skin-NTDs. Delivering mental health and NTD services together through the primary health care system and in collaboration with communities presents a critical opportunity for improved availability, acceptability, and adherence to care, whilst supporting health systems strengthening and promoting equity in healthcare access.