Research Brief

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Using a technology app to improve awareness and access of mental health services by adolescents and young people: lessons from an EJAF-Funded Tiko programme in Mombasa and Kilifi counties, Kenya

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This brief highlights the mental health outcomes of the EJAF-funded Tiko programme that targeted adolescents and young people (15–24 years) in Mombasa and Kilifi counties in Kenya. The programme has improved mental health awareness, service access, and resilience among adolescents and young people, offering key insights for scaling up similar interventions.

Background: Evidence suggests increasing rates of mental health (MH) conditions among adolescents and young people (AYP), yet remain among the most neglected areas of health globally. These conditions are further exacerbated by stigma, low awareness of the condition and where to seek services, and inadequate service infrastructure. Untreated mental health conditions increase risks of early sexual activity, STIs, unintended pregnancies, and HIV infections. Additionally, these challenges create barriers to accessing HIV prevention and treatment, leading to poorer health outcomes. This highlights the critical need for integrated mental health interventions.

Evaluation of the Tiko MH programme: Tiko aimed to assess the impact of the programme aimed at increasing awareness of mental health and uptake of MH services. We thus sought to assess the change in AYP's awareness of MH services as well as changes in depression scores using the Patient Health Questionnaire (PHQ-9). We also aimed to evaluate shifts in knowledge and attitudes related to MH, the uptake and accessibility of these services, and changes in service provider perspectives around MH.

Methodology: The evaluation used a quasi-experimental design with a mixed methods approach and a non-equivalent comparison group. It combined four evaluation approaches: (a) client quantitative surveys, (b) analysis of routinely collected HMIS and programme data, (c) primary qualitative data and (d) a health facility survey.

Quantitative Methods: included a survey of AYP in EJAF programme facilities in Mombasa and Kilifi counties and in the comparison group (Kwale county); Government Health Management Information System (HMIS) data on key MH indicators for the programme implementation period (January 2021 to July 2024); a facility survey assessing capacity for integrated services and Tiko model fidelity; and depression scores from the Group Interpersonal Therapy for Depression (IPTG) sessions on PHQ-9, each with a distinct set of tools. The PHQ-9 was selected due to its validity and reliability in assessing depression symptoms among youth populations. Tiko additionally capacity-built non-specialized service providers to integrate and scale up mental health into primary care through the use of WHO's mhGAP programme.

The sample size for the survey at baseline was 1,092 participants, and 1,874 clients at endline (Table 1). Propensity score matching (PSM) was conducted on the endline dataset only using nine refined covariates. The average treatment effect (ATE) for the key outcomes were estimated using the PSM modelling technique.

Qualitative Methods: consisted of 10 Focus Group Discussions (FGDs) and 21 Key Informant Interviews (KIIs) with AYP, healthcare providers, community stakeholders, Tiko implementing team and representatives of special interest groups such as Key Populations (KPs).

Table 1: Sample allocation between participant groups and the counties reached (endline data only)

Participant group	Mombasa	Kwale	Kilifi	Total
Quantitative Surveys				
Client Exit Interviews	756	948	170	1,874
Facility surveys	13	10	12	35
Focus Group Discussions				
FGDs with AYP	6	-	4	10
FGDs with peer mobilisers	1	-	1	2
Key Informant Interviews				
Public health care providers	7	-	3	10
Private facility owners	2	-	1	3
Tiko programme staff	2	-	1	3
Reps from CSOs	1	-	1	2
Reps from special interest groups	2	-	1	3

Results

Participants' Socio-Demographic Profile

	Treatment (n=926)	Control (n=948)
	73.3% Female **26.7%** Male	**64.9%** Female **35.1%** Male
	1.0% Never **30.4%** Primary **57.8%** Secondary **10.8%** Higher	**2.5%** Never **34.2%** Primary **45.6%** Secondary **17.7%** Higher
	17.5% Married **2.2%** Divorced **80.3%** Never in union	**27.5%** Married **6.7%** Divorced **65.8%** Never in union

The evaluation compared socio-demographic characteristics between baseline and endline participants, finding that the endline survey had more males, unmarried participants, KP members, AYP from poor households, and AYP aware of the Tiko platform or applications.

Awareness of MH Services

AYP in intervention areas demonstrated higher awareness of MH services, attributed to the EJAF programme (Figure 1).

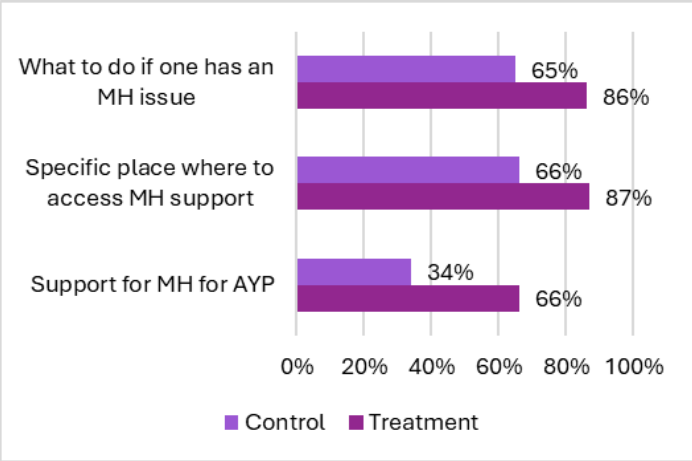


Figure 1: Awareness of MH services

The programme positively impacted awareness of available MH support (p-value=0.003), knowledge of where to seek MH support (p-value=0.001), and understanding of what to do in case of an MH issue (p-value<0.001).

Depression Symptoms and Mental Health Outcomes

PHQ-9 scores showed significant improvements - a 74.5% reduction in depression symptoms after IPTG sessions. Qualitative data supported these findings, with AYP expressing resilience and stress reduction.

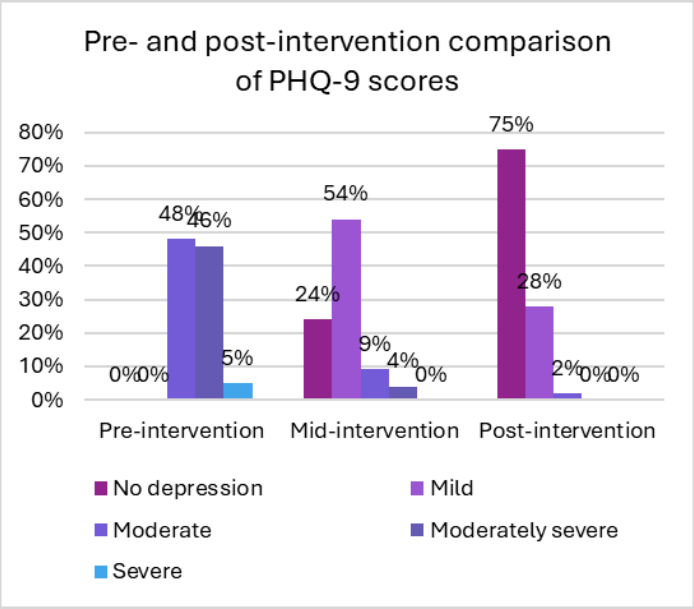


Figure 2: A change in MH post counselling sessions

The Sankey diagram (Figure 3) illustrates a strong shift from moderate or severe depression to mild or no depression among AYP by session end, though some remained mildly or moderately depressed, suggesting the need for further support. This highlights the programme's effectiveness in reducing depression.

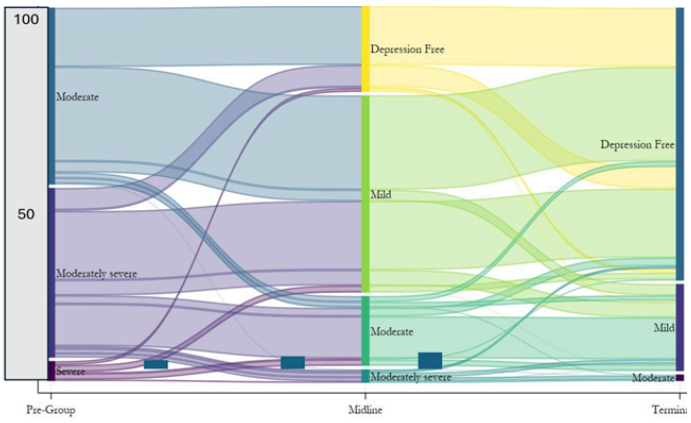


Figure 3: Trajectory of depression states among AYP across programme sessions

The EJAF-funded Tiko programme improved MH (p-value<0.005). Positive impacts were seen in MH empowerment, self-reported MH well-being, and self-esteem, with intervention group's AYP being 6-11% more likely to report MH empowerment and high self-esteem than those in the control group.

Access to MH Services

The intervention led to more MH check-ups among AYP. At the endline, **26.2% of AYP had ever accessed a mental health check**: 43.2% in the intervention group and 9.5% in the control group. The ATE was 0.208, indicating that AYP in the intervention group were, on average, 21 percentage points more likely to have received a mental health check than those in the control group.

In addition, **42.2% of AYP had ever needed MH services**, with more in the intervention group (51.3%) than in the control group (33.2%; p<.001). AYP in the intervention group were 23 percentage points more likely to access needed MH services, with slightly easier access (99.1% vs. 95.1%; p=.018). This confirms that the Tiko platform with funding from EJAF, increased demand and access to MH services when needed.

Private facilities were the main providers of MH services in this programme (see Figure 4).

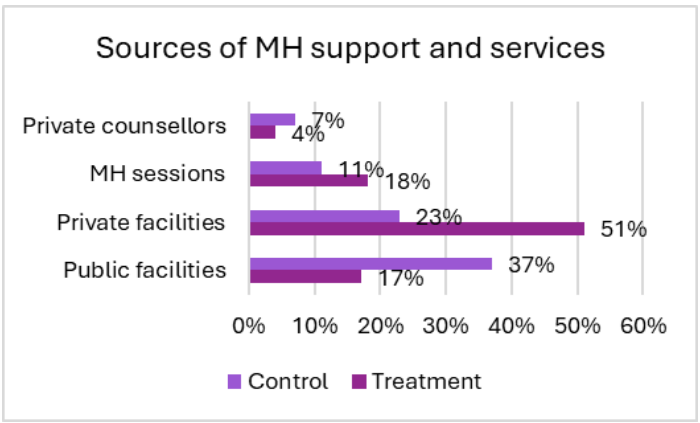


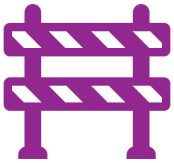
Figure 4: Sources of MH services

Assessment of change in Knowledge, Attitudes, and Behavior related to MH

Service Accessibility and Quality

Service Quality Ratings: Both groups received high ratings for accessibility, user-friendliness, privacy, and provider judgment. However, privacy and confidentiality ratings were lower in the intervention group, likely due to higher client expectations in private facilities.

MH Service Ratings: AYP in the intervention group rated accessibility and privacy for MH services lower than the control group, potentially due to higher quality expectations in intervention sites.



Barriers to Tiko Programme Implementation

The EJAF programme's positive impact on awareness, mental health, and service uptake suggest scalable potential.

	HIV stigma, religious opposition to SRH, and local leader influence deterred AYP from accessing services.
	Privacy concerns (e.g., voice recording) and non-youth-friendly communication caused mistrust.
	Long travel distances, overcrowded facilities, and limited space restricted access, especially in rural areas.
	Stockouts, inadequate youth spaces, limited provider training, and poor network connectivity disrupted services.

Conclusions and Recommendations

Key Conclusions

- The EJAF-funded Tiko programme improved MH awareness and reduced depression symptoms.
- Increased resilience and stress management highlight the value of IPTG sessions.
- High service accessibility ratings underscore the programme's impact despite identified barriers.

- Scale up depression screening and counseling services.
- Strengthen provider training through continuous MH-focused training.
- Enhance privacy measures by ensuring youth-friendly, confidential service delivery to improve trust.
- Expand MH screening and consider adding economic empowerment components to address systemic challenges.

Future Implications

- The EJAF programme's positive impacts on awareness, mental health, and service uptake suggest scalable potential. Continued collaboration with county governments and strategic partners can ensure long-term programme sustainability and impact for AYP across more counties.
- Further, Tiko's MH screening approach provides insights for a potential tracker to map trends across countries on adolescent and young people's needs and enhance mental health care.

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For further information or assistance, contact Tiko at evidence@tiko.org