Impact of a social media peer support group on ART adherence, self-efficacy and medical independence skills among Kenyan youth living with HIV: the mPACT pilot study

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Background

- Digital health approaches have potential to improve HIV care self-management among youth living with HIV (YLWH).
- We conducted a pilot cluster randomized trial of a facilitated social media peer group for YLWH in Kenya.

**Figure 1. Example WhatsApp/Telegram message from group facilitator**

> Hello! This is our weekly mPACT message! Having trouble taking medicine 💊💊 daily? What can help us remember? Let us share our experiences. As we transition to adulthood we need to make sure we remind ourselves to take our medicines.

> **The mPACT study enrolled YLWH (ages 16-24) attending HIV services in 8 public sector clinics in Nairobi, Kenya**

Methods

- YLWH were offered usual care (control) or interactive support groups (N=10-20 per group)
- Support groups used WhatsApp or Telegram with weekly scheduled messages by peer facilitators for 6 months (intervention group)
- Groups remained open but without scheduled messaged for months 6-12
- Study visits were: enrollment, 6- and 12-months
- Questionnaires assessed: depression, anxiety, self-efficacy to take daily medication, social support, stigma, HIV/ART knowledge, ART adherence, and readiness to self-manage HIV care.

Figure 1. mPACT social support theoretical framework
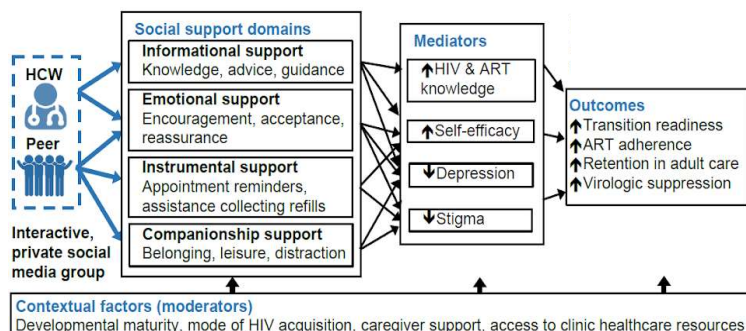
Results

- We enrolled 138 YLWH.
- Among 134 (intervention:68, control:66) who completed 12-month follow-up (97%):
  - Median age was 21 years (IQR:18-23)
  - 59% were female
  - 51% were in school
  - 62% lived with a parent/caregiver
  - Median time on ART was 6 years (IQR:1-12)

> **The mPACT social media intervention was associated with better ART adherence and medication management**

Table 1. Factors associated with mPACT intervention (n=134)

Factor	β	95% CI	p-value
6-months follow-up			
Self-efficacy score	3.5	-0.12-7.10	p=0.058
ART adherence score	4.4	0.75-8.03	p=0.018
12-month follow-up			
Medication management score	0.09	0.03-0.16	p=0.003
Stigma prevalence enrollment to 12 months	25.2	14.2-36.2	p<0.001

Coefficient (β); Confidence Interval (CI)
Factors associated with mPACT were identified using generalized linear regression models, with clustered by facility.

> **Stigma was lower by 12-months vs enrollment in both groups (p<0.05)**

Table 2. Association between mediators and outcomes (n=134)

Factor (6 months)	β	95% CI	p-value
Transition readiness 12-months follow-up			
Self-efficacy score	0.004	0.001-0.006	p<0.001
ART adherence 12-month follow-up			
Self-efficacy score	0.04	0.002-0.09	p=0.039
HIV/ART knowledge	0.08	-0.004-0.17	p=0.062
Anger	-4.59	-8.53- -0.65	p=0.022
Depression	-3.06	-6.60-0.49	p=0.092
Anxiety	-2.33	-4.92-0.26	p=0.078

Coefficient (β); Confidence Interval (CI). Associations between intermediate and mPACT outcomes were identified using generalized linear regression models, with clustered by facility.

Conclusion

Kenyan YLWH receiving the peer-led social media mPACT intervention had higher self-efficacy, ART adherence, and care transition readiness compared to those receiving usual care. Associations between self-efficacy, IMB, and mental health with ART adherence and transition readiness highlight potential mechanisms for interventions supporting youth HIV care.

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