

The Impact of Capacity Building on Healthcare Workers' Knowledge, Perception and Competence in Managing Hypertension within HIV Care Settings in Nigeria: A Quasi-Experimental Study Design

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BACKGROUND

The rising burden of non-communicable diseases (NCDs) among People Living with HIV (PLHIV) in Sub-Saharan Africa (SSA) has re-ignited the calls for a reorganization of healthcare services, emphasizing the integration of NCD services within Antiretroviral Therapy (ART) clinics to provide comprehensive care. However, baseline assessments have identified inadequately trained healthcare workers (HCWs) as a significant barrier to successful integration. To address this gap, we implemented a capacity-building exercise aimed at improving HCWs' knowledge, skills, perception, confidence, and competence in managing hypertension (HTN) within HIV care settings, aligning with Nigeria's policy on task shifting and sharing.

METHODS

We conducted a quasi-experimental before-and-after study among a multidisciplinary team of HCWs from selected facilities in 3 South-west and 2 North-central States in Nigeria, who underwent a two-day capacity-building exercise, followed by three months of structured supportive supervision and mentorship. Training curriculum materials were adapted from established guidelines such as Centers for Disease Control and Prevention Hypertension Management Training Curriculum, World Health Organization hypertension treatment guidelines, and Nigeria's hypertension treatment protocol. The training was facilitated by a team of cardiologists, family physicians, nutritionists and HIV program managers using adult learning principles. We assessed HCWs' knowledge, perception, and competence at baseline (pre-test), immediately post-training (post-test), and at three months post-training, using an adapted World Hypertension League Knowledge, Attitude and Practice (KAP) Survey instrument. We present preliminary findings from the pre- and post-training assessment using descriptive statistics, including means, median, standard deviation, and proportions. Inferential statistics employed paired t-tests to compare outcome measures of participants before and after the training.

RESULTS

A total of 173 HCWs comprising 32 doctors, 54 nurses, 30 pharmacists and 47 community health extension workers, were enrolled in the study. Participants had a median age of 37 years and the median number of years in practice was 10 years. Significant improvements were observed in knowledge scores post-training ($P = 0.0000$), with a fivefold increase and a mean knowledge difference of 2.8. Acceptability of HTN management by non-physician HCWs increased threefold ($P = 0.002$), with a mean acceptance difference of 1.2, while confidence levels doubled ($P = 0.03$), with a mean confidence difference of 2.2. However, perceptions of barriers to effective HTN management within ART clinic settings remained unchanged.

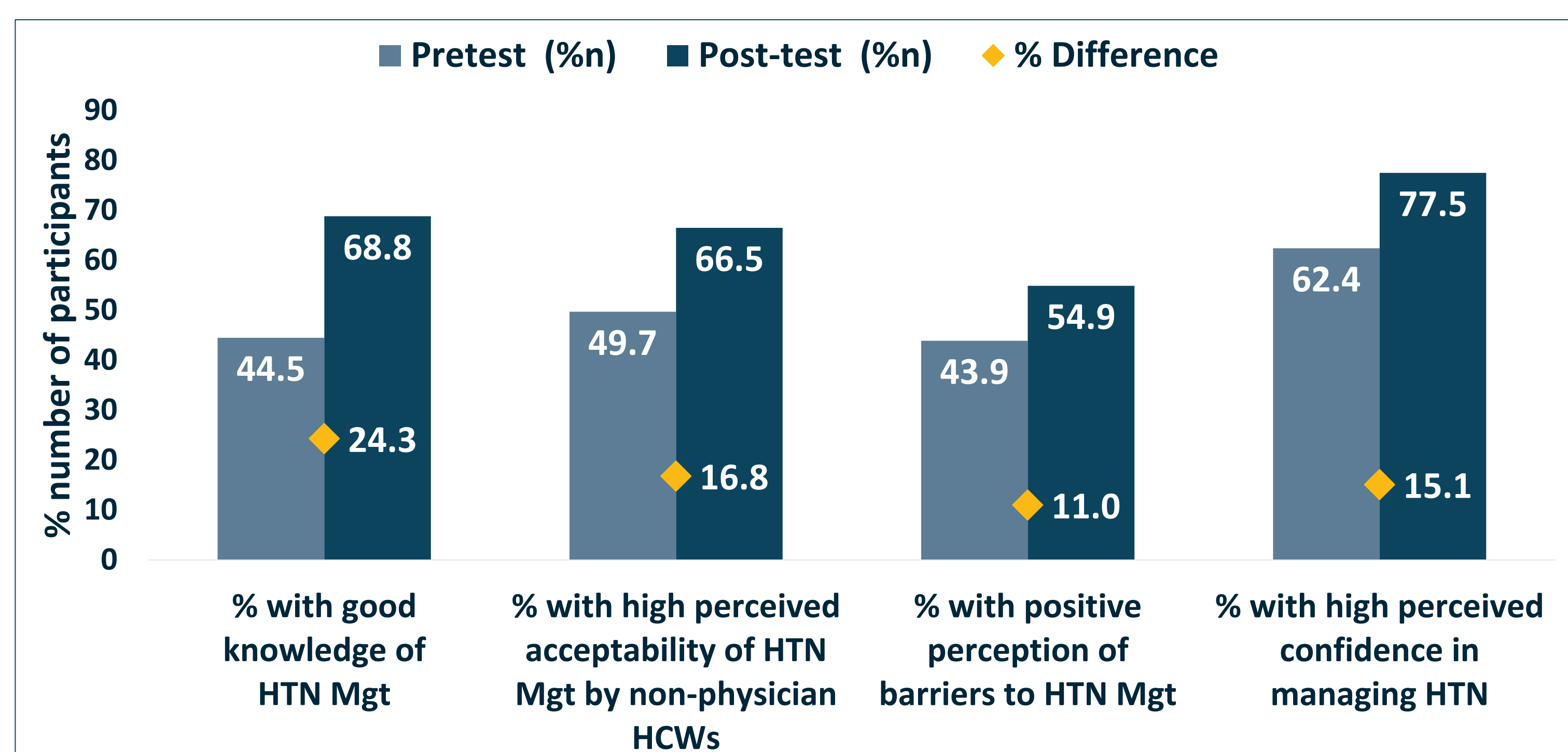


Figure 1: Proportion of participants with high outcome measures at pre- and post-test (N=173)

Outcome Measures	Mean Pre-test Score	Mean Post-test Score	Difference in Mean Score	P-Value
Knowledge of HTN Mgt	31.73	34.55	2.82	0.0000
Acceptability of HTN Mgt by non-physician HCWs	12.74	13.92	1.18	0.002
Perceived Barriers to HTN Mgt	52.38	54.13	1.74	0.06
Perceived Confidence in Managing HTN	40.52	42.73	2.21	0.03

Figure 2: Mean difference in test scores at pre- and post-test

DISCUSSION

The capacity-building workshop effectively enhanced HCWs' knowledge and confidence in managing HTN among clients. Additionally, acceptability of HTN management by non-physician HCWs significantly improved. However, persistent barriers within ART clinic settings call for targeted interventions and support to drive positive changes in HCWs' perceptions.