ABSTRACT

Evaluating Educational Interventions for Community Pharmacists on Hypertension Self-Care and Medication Adherence: A Controlled Pre-Post Study across Rivers and Ogun States, Nigeria

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Background: Hypertension remains a foremost global public health challenge and a principal driver of cardiovascular morbidity and mortality. Community pharmacists occupy a strategically advantageous position in hypertension management, given their accessibility and the frequency of patient interactions they sustain. Yet gaps in knowledge, clinical competence, and counselling confidence constrain their effectiveness in practice. This study evaluated the impact of a structured educational intervention on the capacity of community pharmacists to deliver hypertension self-care counselling and medication adherence support in Nigeria.

Methods: A controlled pre-post intervention study was conducted among community pharmacists in Rivers and Ogun States, Nigeria. Twenty-two pharmacists (11 intervention, 11 control) completed matched baseline and post-intervention assessments. The intervention comprised a 2-hour virtual training programme covering WHO HEARTS recommendations, hypertension self-care strategies, blood pressure self-monitoring, motivational interviewing, and medication adherence support. Primary outcomes were knowledge (scored 0–100%), clinical competence (scored 0–100%), and confidence (5-point Likert scale). Analyses employed descriptive statistics, analysis of covariance (ANCOVA) adjusting for baseline scores and state of practice, within-group paired comparisons, and Cohen's d effect size estimation.

Results: The intervention produced large, clinically meaningful improvements across all outcome domains among participants who received the training. Knowledge scores rose from 70.9% to 84.8% ($p=0.002$), and confidence scores from 4.04 to 4.57 on the Likert scale ($p=0.007$). Competence scores also improved from 73.3% to 81.8%, with a large effect size (Cohen's d estimated from adjusted data). ANCOVA-adjusted between-group comparisons favoured the intervention group across all domains: knowledge (+10.5 percentage points), competence (+13.1 percentage points), and confidence (+0.33 units). No meaningful improvements were observed in the control group over the same period.

Conclusion: A brief virtual educational intervention produced statistically significant and large-effect improvements in community pharmacists' knowledge and confidence in hypertension self-care counselling and medication adherence support. Effect sizes across all domains were large, underscoring the practical significance of the findings independent of sample size constraints. These results provide compelling preliminary evidence for the integration of structured pharmacist-focused educational programmes into continuing professional development frameworks in Nigeria and justify a fully powered multicenter trial to confirm effectiveness and evaluate downstream patient outcomes.

Keywords: Hypertension; Community Pharmacists; Medication Adherence; Self-Care; Educational Intervention; Continuing Professional Development; Nigeria.