

An online education intervention increases PCPs' knowledge for risk of skin cancer among patients of all skin tones

Dinah Price, MSN, AGPCNP-C, Valerie T. Cotter, DrNP, AGPCNP-BC, FAANP, FAAN, & Steven Macht, MD



JOHNS HOPKINS
SCHOOL of NURSING

Background & Purpose

- Melanoma comprises 1% of all skin cancers but accounts for 82% of skin cancer mortality
- Annual cost of treating melanoma \$3.3 billion
- Estimated survival rate for patients whose melanoma detected early 99%
- 5-yr. survival rate for Black, Indigenous, and People of Color (BIPOC) population 70%-- significantly lower than White population (92%)
- Literature supports Primary Care Providers (PCPs) may lack knowledge of risk for skin cancer among patients of all skin tones
- **Purpose:** Evaluate effectiveness of 8-session online education intervention, including dark skin images (DSI), to improve PCPs' knowledge of risk for skin cancer among patients of all skin tones

3 Project Aims

- **Aim 1:** Determine effect of intervention on PCPs' knowledge of risk for skin cancer among patients of all skin tones by pre/posttest measures of Disparities in Skin Cancer Quiz (DSCQ)
- **Aim 2:** Determine effect of intervention on PCPs' knowledge increase by post intervention measures of percentage total patients received skin cancer awareness education
- **Aim 3:** Determine effect of intervention on PCPs' knowledge increase by post intervention measures of percentage total patients referred to Dermatology with suspicious lesions

Methods

- **Design & Setting:** Pre/posttest; PC Clinic
- **Samples:** PCPs & Primary Care adult patients
- **Measures:** Disparities in Skin Cancer Quiz (DSKQ); Post intervention measure of percent patients received both referral to Dermatology & received skin cancer awareness education
- **Analyses:** Wilcoxon-signed rank test (evaluate DSCQ); Fishers exact test (evaluate post intervention measure of referrals & education)

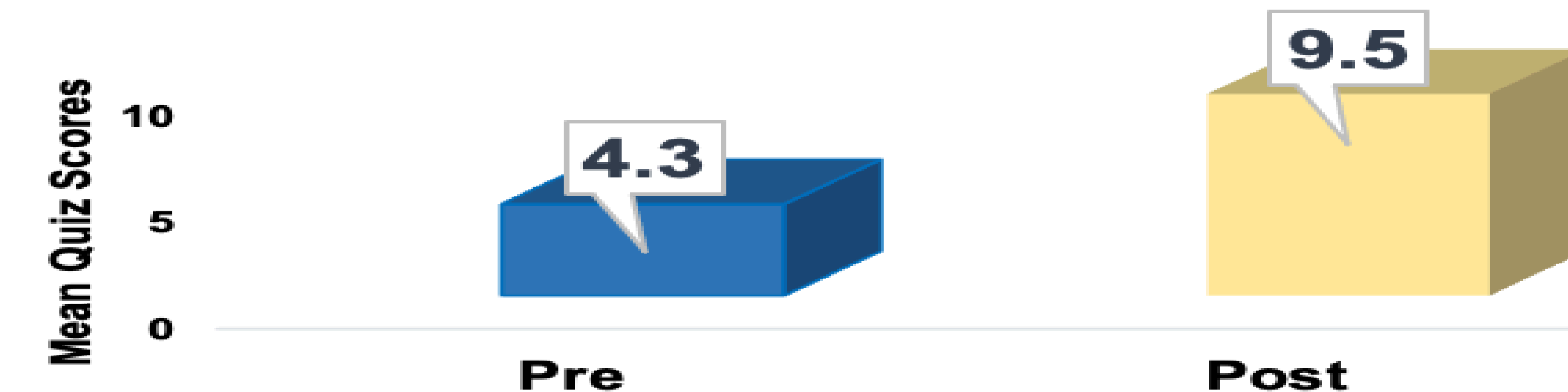
Results: Samples

- PCPs (N = 6), mean age 52.5 years (SD 14.6); 66.6% female & 33.3% male
- Adult Primary Care patients (N = 48) with various skin tones within Primary Care clinic

Aim 1: PCPs' Knowledge

- PCPs' mean posttest score 9.5 (IQR:1) higher compared to mean pretest score 4.83 (IQR:10) for knowledge of risk for skin cancer among patients of all skin tones
- Clinically large effect size (Cohen's $d = 0.879$)

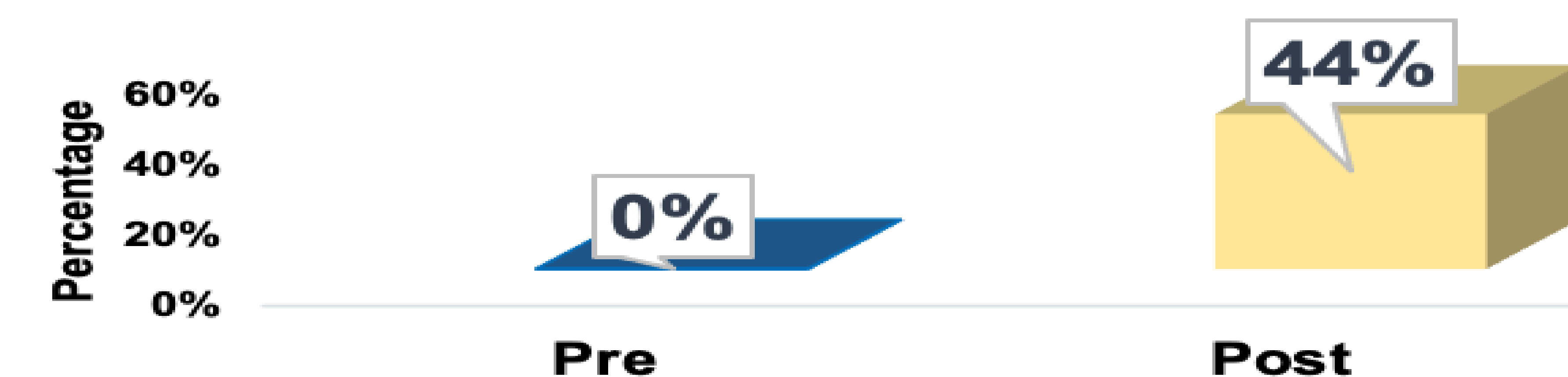
Figure 1. PCPs' Knowledge



Aims 2 & 3: Patients Received Both Referral & Education

- Statistically significant ($p = 0.000$) increase in percentage (44%) total Primary Care adult patients with various skin tones received referrals to Dermatology & skin cancer awareness education

Figure 2. Patients Received Referrals & Skin Cancer Education



Conclusion & Future Direction

- Findings consistent with broader literature of evidence that found online skin cancer education interventions effective in increasing providers' knowledge
- Including DSI may increase total patients with various skin tones who receive referral & skin cancer education
- Intervention may help reduce costs for patients, health centers, taxpayers; and, most importantly, skin cancer outcome disparities and mortality
- More online education intervention including DSI needed to increase PCPs' knowledge and awareness that anyone, regardless of skin tone, can die from melanoma if not detected at an early stage