Poster # 6

ADVANCING BREAST CANCER SCREENING EQUITY: A PILOT RANDOMIZED TRIAL OF LANGUAGE-CONCORDANT EDUCATION

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Background

Breast Cancer:
- Most diagnosed cancer among USA women since 2016.[1]
- #1 deadliest cancer among Hispanic women since 2000.[2]

Screening Mammographies:
- Associated with ↓ breast cancer-related mortality.[3]
- USPSTF: Every 2 years for all women aged 40-75.
- Hispanics vs. Non-Hispanics:
  - ↑ breast cancer mortality[4]
  - ↓ mammogram completion[4]
  - Language barriers for Spanish-speakers

Educational Outreach Efforts:
- Spanish-language breast cancer education successful in community settings.[5,6]
- The impact of breast cancer screening education in the emergency department has not yet been investigated.

Methods

- Pilot RCT: Large urban teaching hospital with adult ED
- Approached 297 women, enrolled 95 women.
- Block randomization to 1:1 education or pamphlet in preferred language.
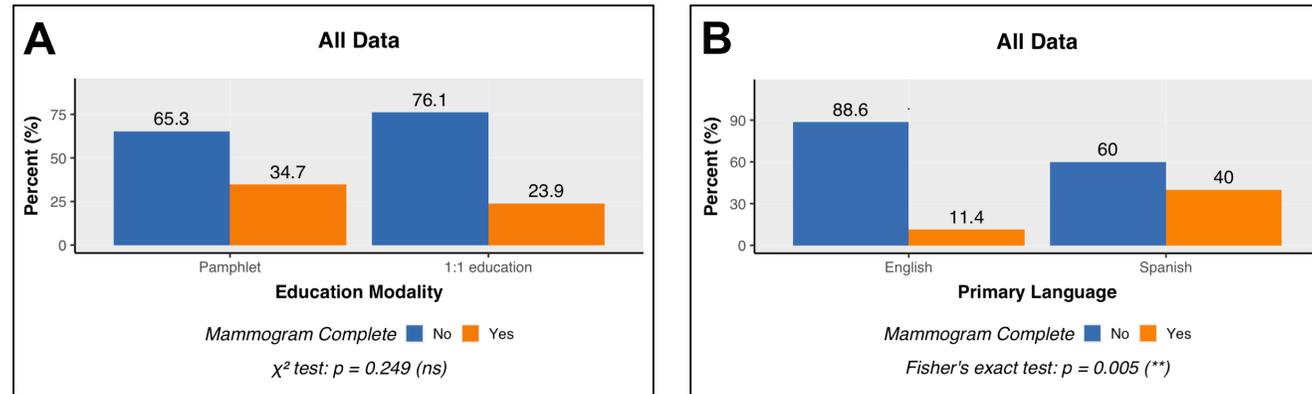- Screening mammography order and follow-up call 1-2 months after enrollment

Results

Figure 1. Post-ED mammography follow-up rates are significantly higher for Spanish-speaking women compared to English-speaking women.
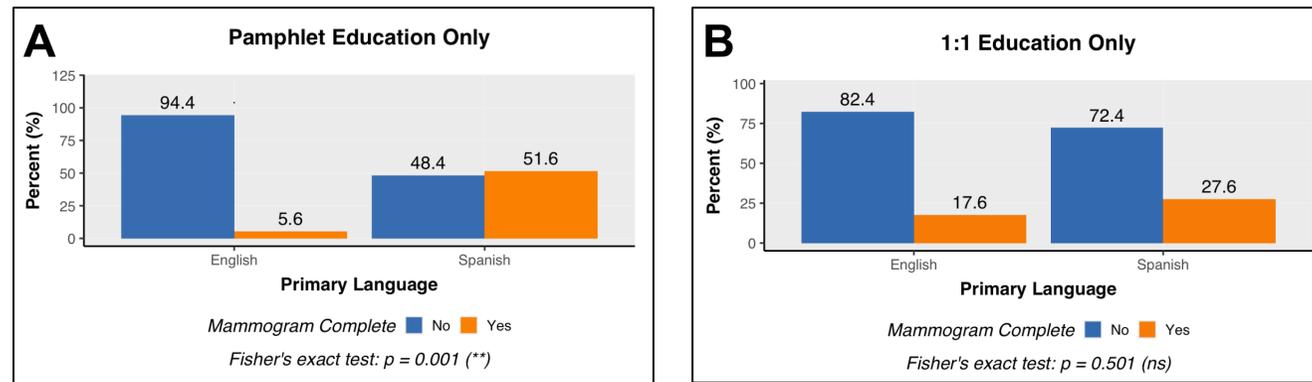

Figure 2. Post-ED mammography follow-up rates are significantly higher in Spanish-speaking patients educated using written pamphlets compared to a conversational 1:1 intervention.

Table 1. Baseline characteristics of patients enrolled stratified by education type.

Characteristic	Pamphlet (n = 49)†	1:1 Education (n = 46)†	Total (n = 95)†
Age	47 (43 – 53)	50 (45 – 59)	48 (43 – 56)
Primary Language			
English	18 / 49 (37%)	17 / 46 (37%)	35 / 95 (37%)
Spanish	31 / 49 (63%)	29 / 46 (63%)	60 / 95 (63%)
Ethnicity			
NOT Hispanic or Latino	12 / 49 (24%)	15 / 46 (33%)	27 / 95 (28%)
Hispanic or Latino	37 / 49 (76%)	31 / 46 (67%)	68 / 95 (72%)
Race			
White	36 / 42 (86%)	29 / 41 (71%)	65 / 83 (78%)
Black or African American	6 / 42 (14%)	12 / 41 (29%)	18 / 83 (22%)
Missing	7	5	12
Future unstable housing concerns			
No	38 / 49 (78%)	36 / 46 (78%)	74 / 95 (78%)
Yes	11 / 49 (22%)	10 / 46 (22%)	21 / 95 (22%)
Food insecurity			
No	33 / 49 (67%)	28 / 46 (61%)	61 / 95 (64%)
Yes	16 / 49 (33%)	18 / 46 (39%)	34 / 95 (36%)
Financial strain			
No	18 / 49 (37%)	20 / 46 (43%)	38 / 95 (40%)
Yes	31 / 49 (63%)	26 / 46 (57%)	57 / 95 (60%)
Transportation barrier			
No	30 / 49 (61%)	25 / 46 (54%)	55 / 95 (58%)
Yes	19 / 49 (39%)	21 / 46 (46%)	40 / 95 (42%)
Needs help reading hospital materials			
No	27 / 48 (56%)	23 / 46 (50%)	50 / 94 (53%)
Yes	21 / 48 (44%)	23 / 46 (50%)	44 / 94 (47%)
Missing	1	0	1
PCP visit in last 12 months			
Yes	29 / 49 (59%)	22 / 46 (48%)	51 / 95 (54%)
No	20 / 49 (41%)	24 / 46 (52%)	44 / 95 (46%)

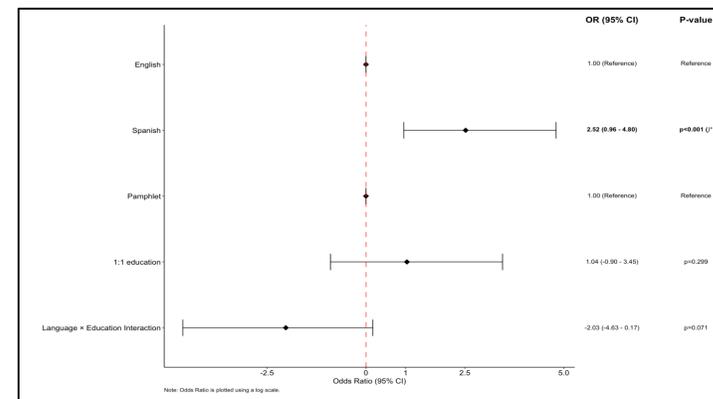† Age presented as median (IQR). Categorical variables presented as n / N (%).

Figure 3. The odds ratio for post-ED mammography follow-up is significantly higher for Spanish-speaking women compared to English-speaking women.

Conclusions

- Mammogram follow-up in Spanish-speaking women was significantly higher than English-speaking women.
- The odds of post-ED mammogram completion was significantly higher in Spanish-speaking women compared to English-speaking women.
- The 1:1 educational intervention did not significantly improve post-ED mammogram follow-up rates.
- ED-based identification and linkage of Spanish-speaking patients to outpatient breast cancer screening resources represents a critical strategy to improve equitable access to preventive care.

Acknowledgements

References

1) Cancer of the Breast (Female) - Cancer Stat Facts. SEER https://seer.cancer.gov/statfacts/html/breast.html.
2) Pompa IR, Ghosh A, Bhat S, et al. US Cancer Mortality Trends Among Hispanic Populations From 1999 to 2020. JAMA Oncology. 2023;doi:10.1001/jamaoncol.2023.1993
3) Duffy SW, Tabár L, Yen AMF, et al. Mammography screening reduces rates of advanced and fatal breast cancers: Results in 549,091 women. Cancer. 2020;126(13):2971-2979. doi:10.1002/cncr.32859.
4) Miller KD, Goding Sauer A, Ortiz AP, et al. Cancer Statistics for Hispanics/Latinos, 2018. CA: A Cancer Journal for Clinicians. 2018;68(6):425-445. doi:10.3322/caac.21494
5) Almeida R, Lopez-Macha A, Dugatkin T, et al. Community research collaboration to develop a promotores-based hereditary breast cancer education program for Spanish-speaking Latinas. Health Education Research. 2021;36(3):319-336. doi:10.1093/her/cyab011
6) Sudarsan NR, Jandorf L, Erwin DO. Multi-Site Implementation of Health Education Programs for Latinas. Journal of Community Health. 2011;36(2):193-203. doi:10.1007/s10900-010-9297-7.