

# Enhanced Breast Cancer Screening among Middle Eastern North African (MENA) American Women: A Pilot Program

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# Introduction: MENA Americans

- There are over 3.7 million MENA, or Middle Eastern North African, Americans in the United States of America.
- MENA Americans come from diverse ethnic and cultural backgrounds from twenty-two countries in the MENA region.
- MENA Americans are classified as ‘*White-non-Hispanic*’ in government documentation (such as US Census and passport documents) and research.
- Due to MENA Americans being misclassified as ‘*White-non-Hispanic*’, there is a lack of data, which leads to disparities in the MENA American population.

(Abuelezam et al., 2017; Abuelezam et al., 2018; Ayyash et al., 2019; Ayyash et al., 2019; Mellon et al., 2013; National Cancer Institute, 2023).





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# Introduction: Breast Cancer

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- Breast cancer is the leading diagnosis and second highest mortality among cancers between women in the United States.
- Increased incidence among MENA American women has been reported in the literature.

(Abuelezam et al., 2017; Abuelezam et al., 2018; Ayyash et al., 2019; Ayyash et al., 2019; Mellon et al., 2013; National Cancer Institute, 2023).



# Background: Breast cancer screening

## Mammograms

- American College of Obstetricians and Gynecologists (2022) = 40 years old
- Category B recommendation for women ages 50 to 74 years old according (USPSTF, 2016)
- Category C recommendation for women ages 40 to 49 years old according to (USPSTF, 2016).

## Self breast exams

- Self breast exams are not recommended by American College of Obstetricians and Gynecologists (2017).
- American Cancer Society (2019) encouraged women to know what is normal and abnormal with their breasts.

## Clinical breast exams

- Recommended for all women, American College of Obstetricians and Gynecologists (2017).



# Background: Breast cancer screening

Only half of MENA women complete mammograms as recommended by American College of Obstetricians and Gynecologists.

Limited discussion about preventative screening for breast cancer.

MENA women prefer providers of MENA origin, same religion and of the same gender.

(Alqufly et al., 2019; Donnelly et al., 2013; Harper et al., 2022; Hasnian et al., 2014).



# Problem Statement

## Problem Statement

- In the MENA American population, there is a gap in breast cancer screening, as well as a lack of culturally sensitive education from community primary care providers about breast cancer screening.

## Target population and stakeholders

- Population: MENA American women in the Detroit Metropolitan area.
- Stakeholders: MENA American women, their spouses, families, religious leaders, community leaders, organizational staff, and primary care providers.

## Aim

- The development and evaluation of a pilot program to provide education and follow up to enhance the uptake of breast cancer screening among MENA American women.





# Clinical Question

*Among 39–75-year-old MENA American women residing in the Detroit Metropolitan area, does a culturally sensitive breast cancer prevention education program in a community setting enhance breast cancer screening?*

# Literature Review

- The literature search was performed by using CINAHL, Cochrane Library, and PubMed databases performed using the following keywords (1) Arab American, (2) Arab, (3) MENA American, (4) Middle Eastern North African, (5) breast screening, (6) breast cancer, (7) mammography, (8) family nurse practitioner, (9) advanced practice registered nurse, (10) barriers to care, (11) cultural competence, and (12) cultural sensitivity.
- Initially, the literature search was limited to peer-reviewed and full-text articles within the last five years (2018-2023), resulting in fewer than twenty relevant articles being found.
- Due to the lack of search results on the MENA population, the literature search was expanded to 10 years.





# Literature Review:

## Risk factors and breast cancer among MENA women

**Increased oral  
contraceptive  
use**

**Not chest  
feeding**

**Nulliparity at  
an advanced  
maternal age**

**Increased  
stress**

**Decreased  
physical  
activity**

**Lack of  
acculturation**

**Low levels of  
self-efficacy**

**Vitamin D  
deficiency**

# Literature Review: Barriers to care

## Patient-provider barriers

- Racial profiling and discrimination in the United States
- Fear of deportation
- Lack trust in health care, fear of providers, and perceived discrimination

## Cultural barriers

- Fear of stigma from other community members
- Diagnosis of cancer
- Perceived damage to marriageability of females in the family
- Cancer perceived as a communicable disease

## Religious barriers

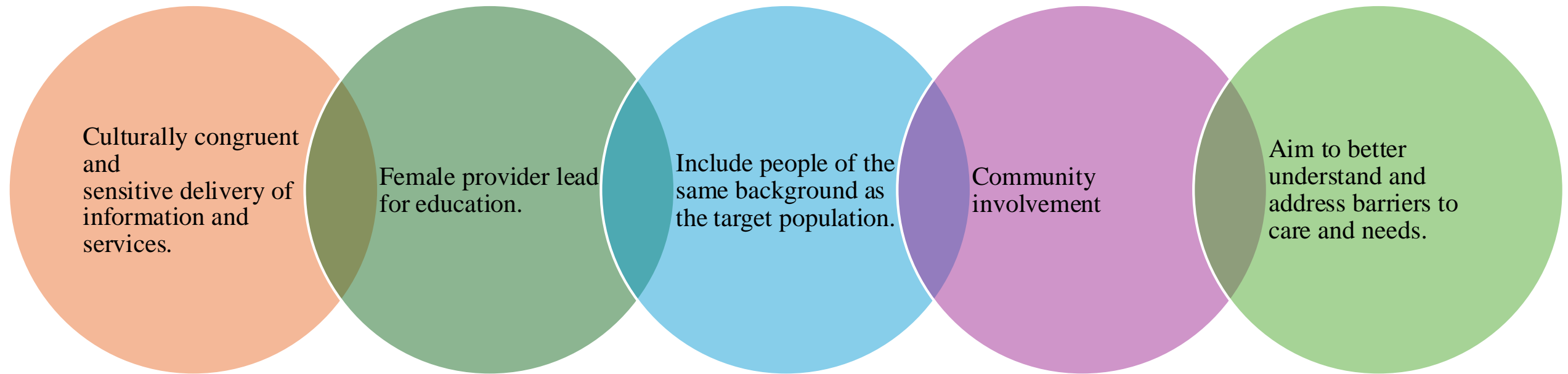
- Fate and death are in the hands of the Higher Power

## Psychosocial barriers

- Financial
- Language barriers
- Lack of transportation to health services
- Limited knowledge of or engagement in community health outreach programs/resources

# Literature Review: Themes

## Breast cancer screening education recommendations



(Fung et al., 2021)

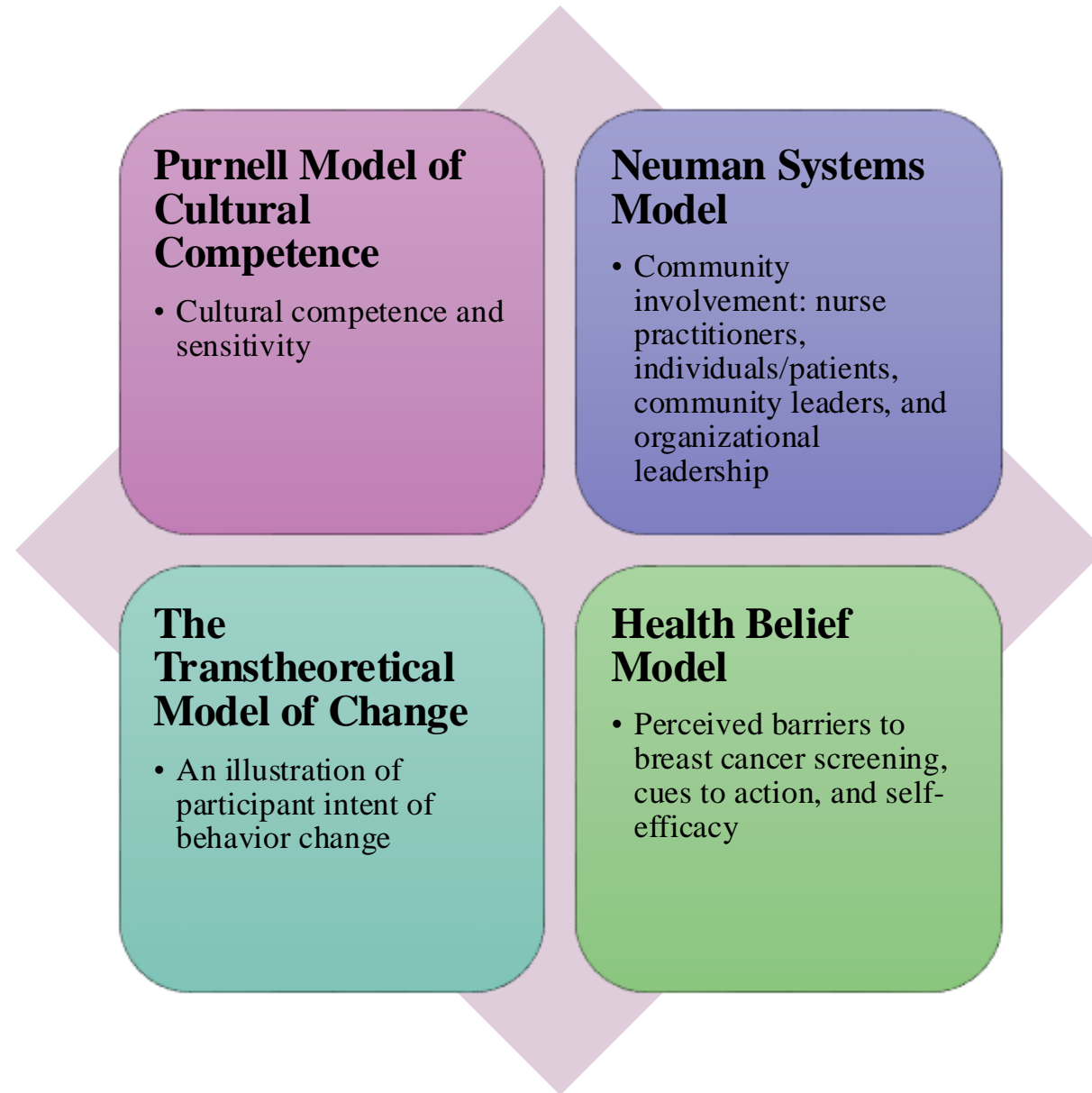


# Literature review: Limitations

*There were little to  
no research articles on  
nurse practitioner involvement among  
the MENA American population.*



# Theoretical Framework



# Organization



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Hype Athletics is a Community Center that offers various fitness and health related services and social programs.

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Hype Athletics serves ten thousand members in a diverse group of communities of all backgrounds. There are 4 locations.

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Hype Athletics is dedicated to improving the health practices of their members and communities they serve.



# Organizational Assessment

## S

- Provides wide variety of services
- Disease prevention driven
- Discounted membership rates
- Empowerment of members to take lead in their health

## W

- Lack of disease prevention education in the MENA community
- Possible lack of understanding of MENA related barriers from staff of non-MENA origin
- Lack of staff awareness of breast cancer guidelines

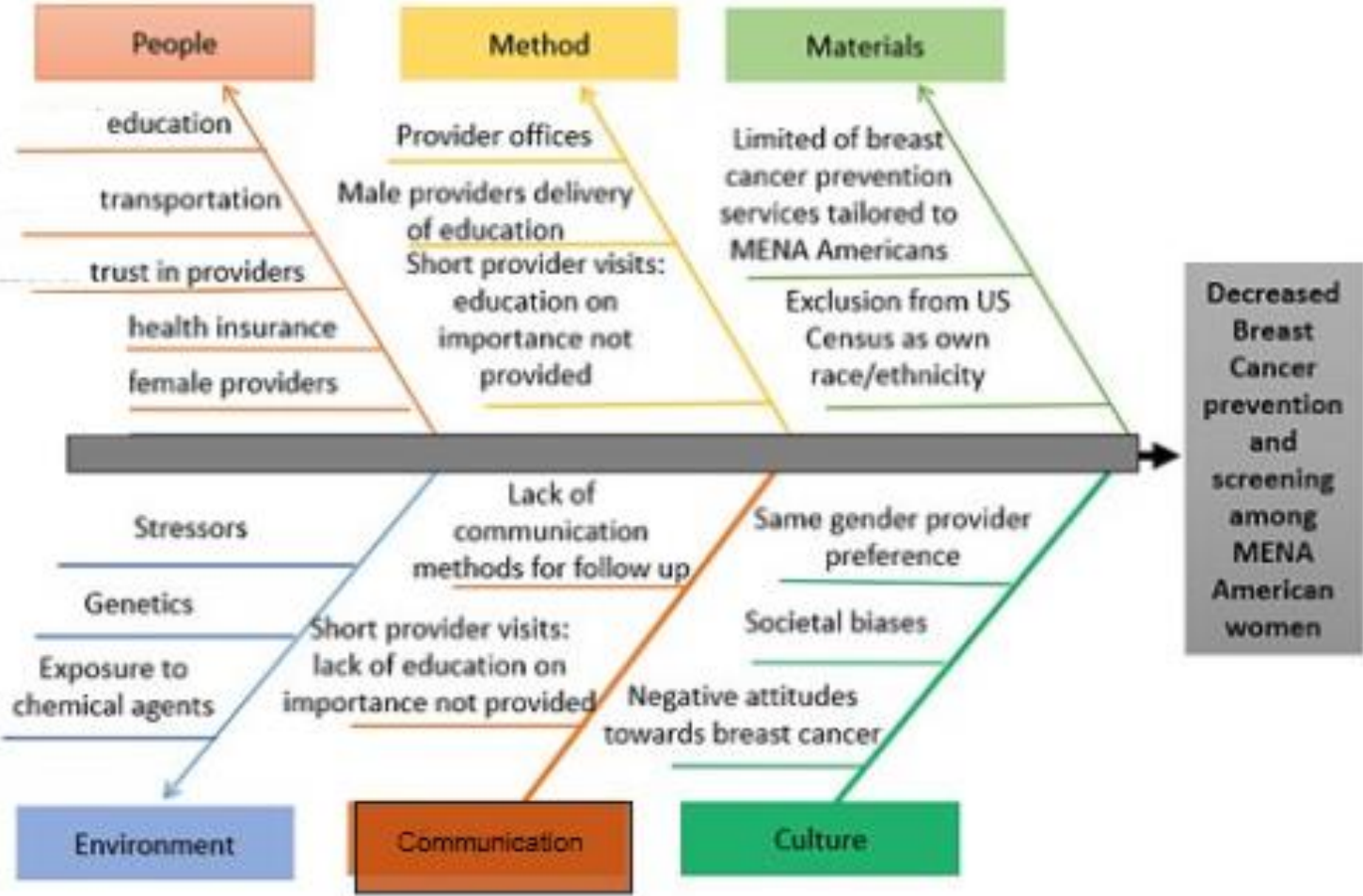
## O

- Establishing disease prevention services
- Disease screening services tailored to women, breast cancer screening and prevention.
- Including more female providers to lead or provide preventative screening education and services to MENA American women.

## T

- Lack of knowledge and cultural acceptability among the MENA American community regarding preventative screenings.

# FISH Diagram



# Methods and Design







# Institutional Review Board [IRB]

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**Institutional Review Board (IRB) approval from the University of Detroit Mercy was submitted, as Hype Athletics does not have an IRB board.**

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**A letter of intent approving the program implementation and evaluation was obtained from the organization, Hype Athletics.**

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**All required collaborative institutional training initiative (CITI) training and modules were completed by the project lead.**

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**Participants were provided with an information sheet regarding the project and their consent was implied based on participation and completion of the survey.**

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**The surveys were anonymous, and the information collected did not include any participant identifiers.**

# Methods and Design: Survey Development

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- The survey tool(s) used for this program development and evaluation program project include online surveys completed on the participant's phone using a QR code at the end of the education session.
- This survey was completed using the Survey Monkey website.
- If participants' phones did not process or scan QR codes, a paper version of the survey was provided.
- There was no need to translate this education session and its materials as the participants needed to have beginner proficiency in English to complete the surveys.



By participating in this breast cancer screening education program and completing the associated surveys, you are giving consent to the investigator to use the results to evaluate the program and characteristics of the participants. There is no anticipated harm that is greater than the risks you encounter in everyday life. Possible benefits will be from the education provided. The surveys are anonymous, and no one will be able to link your responses back to you. Your responses to the survey will not be linked to your computer, email address or other electronic identifiers. Information provided in this survey can only be kept as secure as any other online communication. Information collected for this study will be published and possibly presented at scientific meetings. Your participation is voluntary, and you may opt out (discontinue) at any time.

By continuing with the survey, you consent to participating in the breast cancer screening education project and its surveys.

QR Code to survey to be provided to participants.





## Methods and Design: Setting

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The project was completed at Hype Athletics, a community center in the Detroit Metropolitan area.



# Methods and Design: Participants

Participants were members of the MENA American community, females ages 39-75 years old.

The goal is a minimum of 10 participants, which was surpassed at 15 participants.

Voluntary enrollment was completed in a conference room at Hype Athletics.

Participants were presented with the research information sheet regarding the education and program.

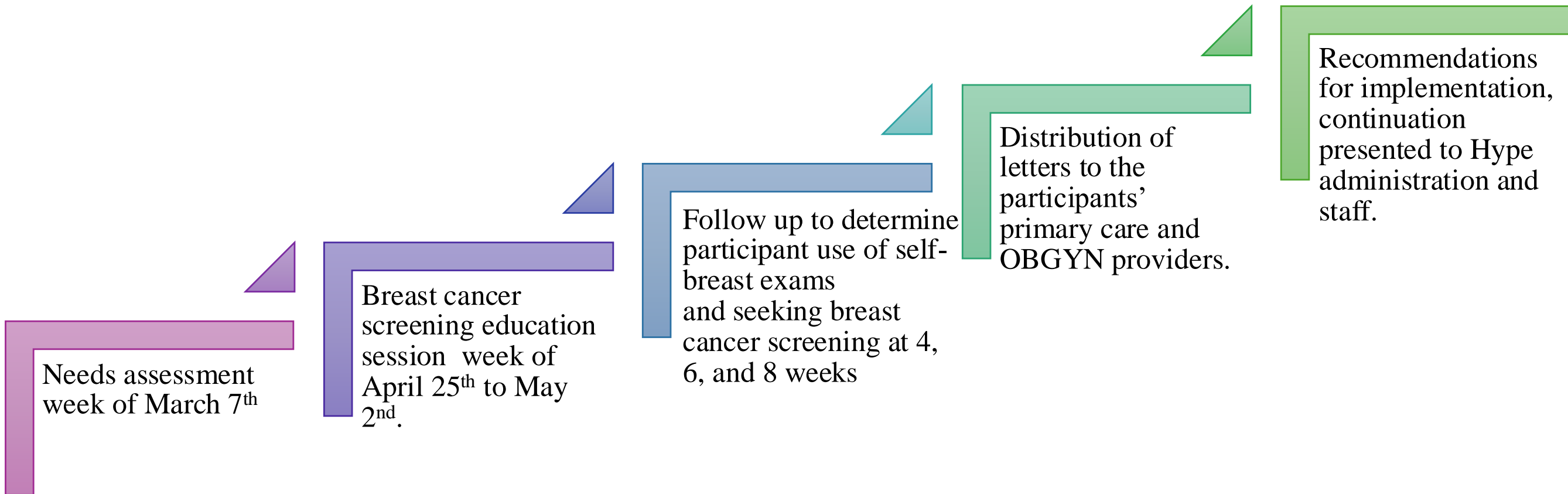
Informational flyers were displayed throughout center.

Participants were recruited in person and encouraged to invite others to join.



# Methods and Design

- This pilot program included the following components:



# Needs assessment

- A needs assessment was completed in two sessions which lasted between 45 minutes and one hour.
- This was done through a group setting and in-person.
- The health belief model constructs were used to identify categories for the needs assessment.

## BREAST CANCER EDUCATION SESSION & SURVEY

CLASSROOM A

This survey is part of a quality improvement and Doctor of Nursing Project for Noor Khalil who is studying at the University of Detroit Mercy.

*March 7@*

*2:30*

REFRESHMENTS OFFERED!

For more information, please contact Noor Khalil at (313)451-3452

# Needs assessment results

## Perceived attitudes (susceptibility and severity of breast cancer)

- Breast cancer diagnosis are the MENA community, including younger women.
- Diagnosis regardless of exceptional health status.
- Not being familiar with family history
- Belief of low risk of breast cancer

## Perceived behavioral norms

- Living a healthy lifestyle and completing labs at primary care provider as preventative measures.
- Strong belief in fate and the higher power.
- Not many did self-breast exams.
- Did not get preventative screening if they feel fine.
- Avoiding mammograms due to fear of radiation.



# Needs assessment results: Perceived social/cultural/religious norms

**Taboo and unaccepted diagnosis**

**Not wanting petty reactions**

**Fear of lessened desire for female for marriage**

**Breast cancer is not contagious.**

**Women are becoming brave and are sometimes talking about their experiences.**

**Breast cancer may make a woman less desirable.**

**Desirability of the female's partner is on an individualized basis.**

**Perception of MENA women regarding MENA men preferences.**

**Test of faith.**

**Not usually seen as a punishment from the Higher Power but is fate.**

# Needs assessment results

## Practices regarding breast cancer prevention

- Mammography is not necessary.
- Painful testing
- Did not know all signs and symptoms of breast cancer.
- Did not feel comfortable looking and touching breasts in self-breast exam.

## Perceived barriers

- Lack of spousal support
- Discrimination
- Negative previous experiences
- \*Note: *No concern with financial or health insurance was identified.*

# Pilot program: Education Session

- The original goal was 10 participants for both sessions combined or whatever is achieved at the end of the week time span.
- A total of 15 participants participated.
- The presentation was offered in English.
- Pretest and post-test surveys were completed by the participants during this educational session.
- Participants were given a letter of completion to take to their primary care provider informing them of the breast cancer screening education session's attendance.
- Primary care providers in the community were sent a letter that participant had attended the session with the list of topics covered.



**GROUP DISCUSSION:  
BREAST CANCER & THE  
ARAB-AMERICAN COMMUNITY**

Are you interested in learning more about breast cancer screening and prevention, and meet the following criteria?

- Biologically female
- 35-75 years old
- Arab American
- Live in the Detroit Metropolitan area

**Thursday May 2nd**  
10:00 am - 11:00 am  
Classroom 210

Hosted by Noor Khalil - Doctoral Student at  
University of Detroit Mercy for her Doctor of Nursing Practice Project

*Refreshments Offered!\**  
**COUPON FOR ONE FREE SHAKE  
FROM HYPE NUTRITION**  
\*Cupcakes, donuts, and coffee

For more information, please contact Noor Khalil at (313) 451-3452

The flyer features a dark purple background with pink butterflies and a pink ribbon. It includes a logo for 'HYPE NUTRITION' in the top right corner and an illustration of four hands of different skin tones holding a pink ribbon in the middle right. At the bottom left, there is an illustration of a pink and orange shake in a blue cup with a straw.

# Pilot program : Education Session

- The main topics
  - (1) Breast cancer risk factors
  - (2) Breast cancer signs
  - (3) The importance of preventative screening
  - (4) How to perform self-breast exam
  - (5) The importance of faith for optimal wellness,
  - (6) Importance of family/community for overall health.





# Education materials



**GROUP DISCUSSION:**   
**BREAST CANCER & THE ARAB-AMERICAN COMMUNITY**

Are you interested in learning more about breast cancer screening and prevention, and meet the following criteria?

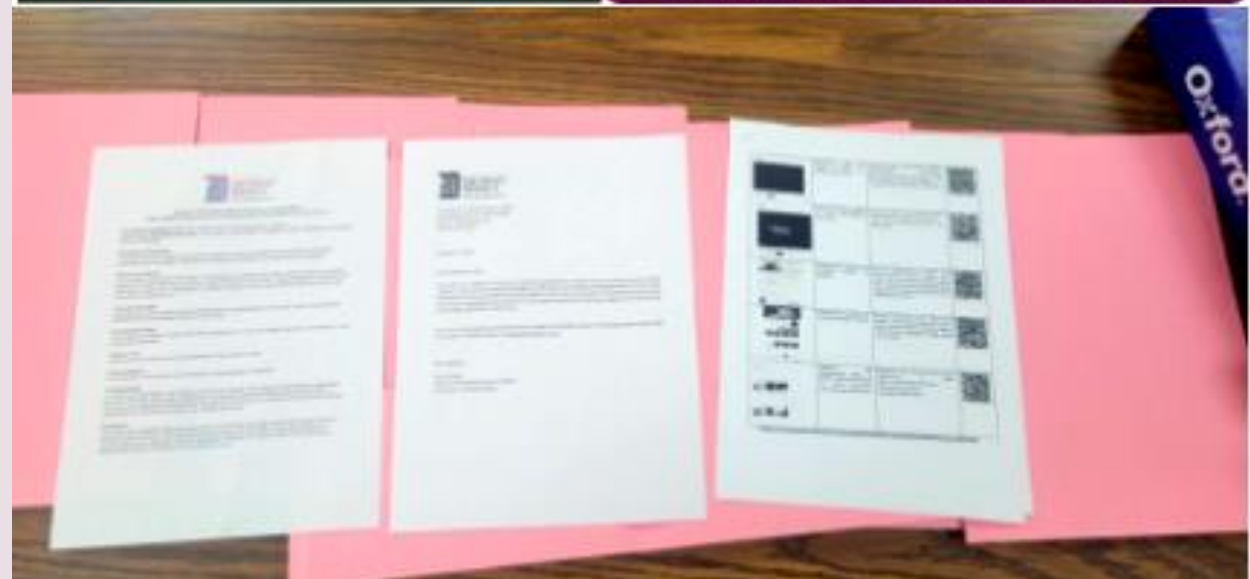
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# Results: Demographics

## Age

- 30 to 69 years old (40%)

## Educational level

- Some College Education (26.67%)

## Religion

- Muslim (93.33%)

## Marital status

- Married 60%

## Employment

- Yes (50%)

## Ethnic background

- Lebanon (57.14%)

## Health insurance

- Yes (93.33%)

## Residing county

- 100% Wayne county

## Personal history of breast cancer

- No (86.67%)

## Family history of breast cancer

- No (60%)

## Being established with a primary care provider

- Yes (85%)

## Primary care provider ethnic background

- Yes (60%)

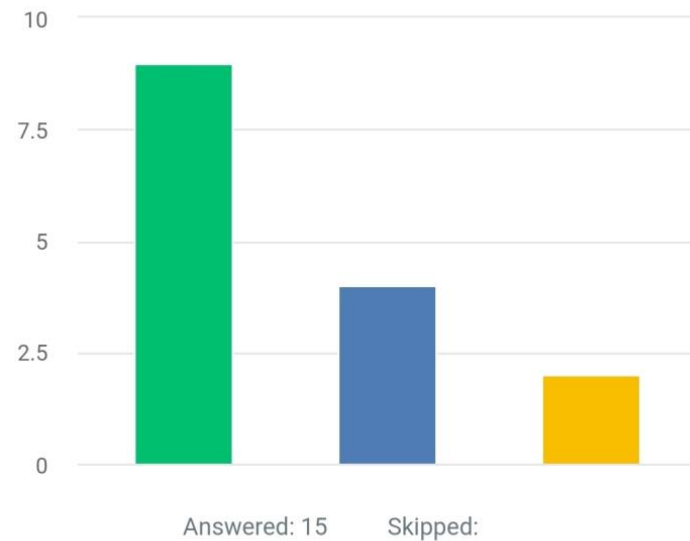
## Gender of primary care provider

- Female (73.33%)

# Perceived Benefit: Clinical breast examinations

## Pretest

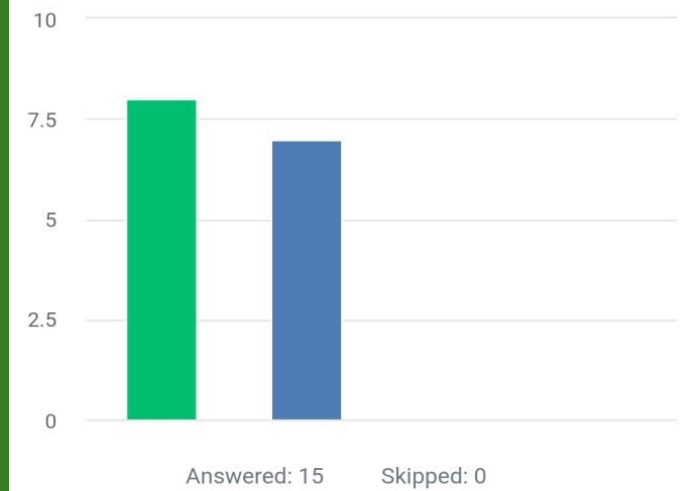
16. My last annual wellness exam included a breast exam performed by my primary care provider.



Yes	60%	9
No	26.67%	4
Unsure	13.33%	2

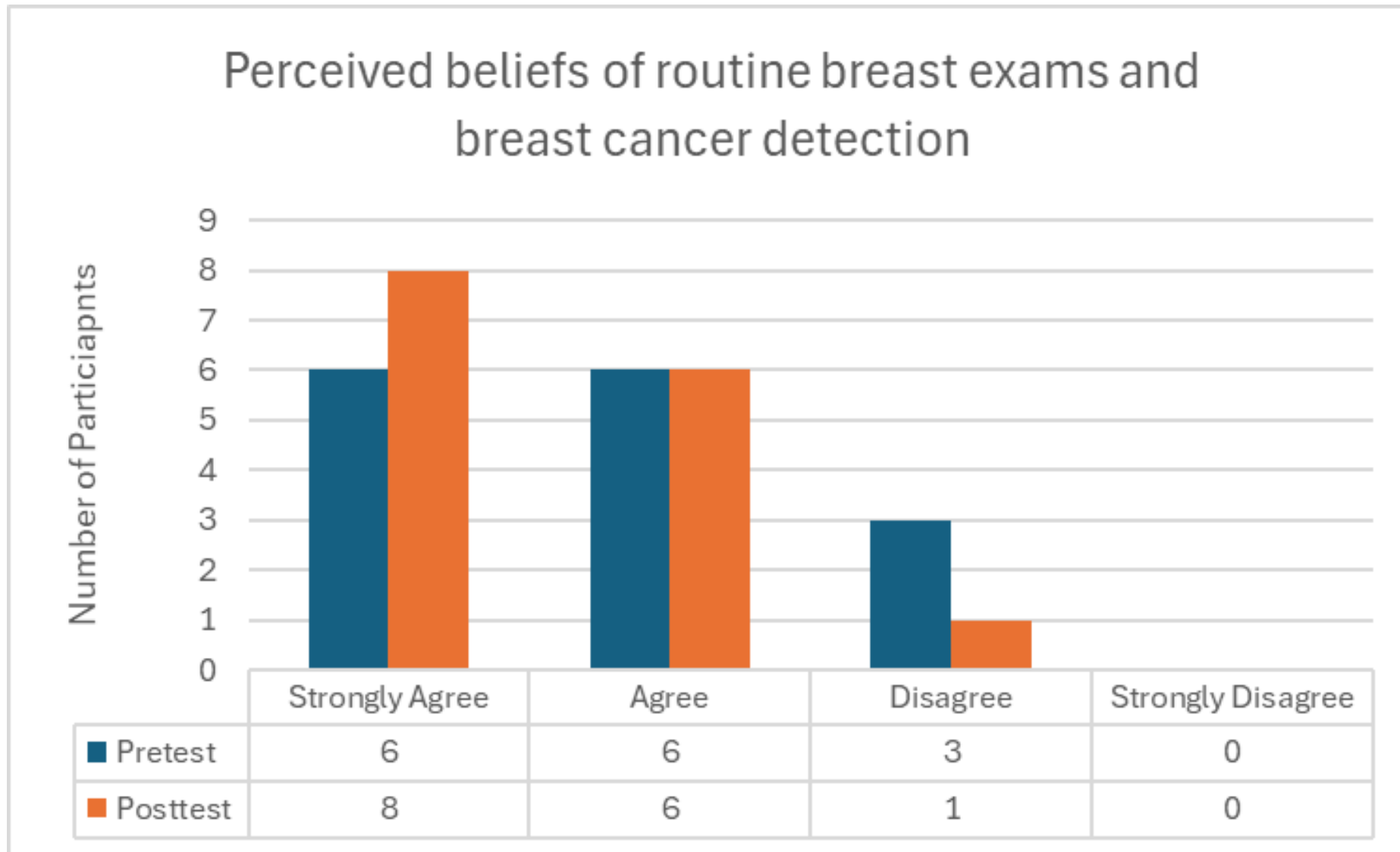
## Posttest

6. I will be comfortable when my health care provider does a breast exam during my annual wellness exam.



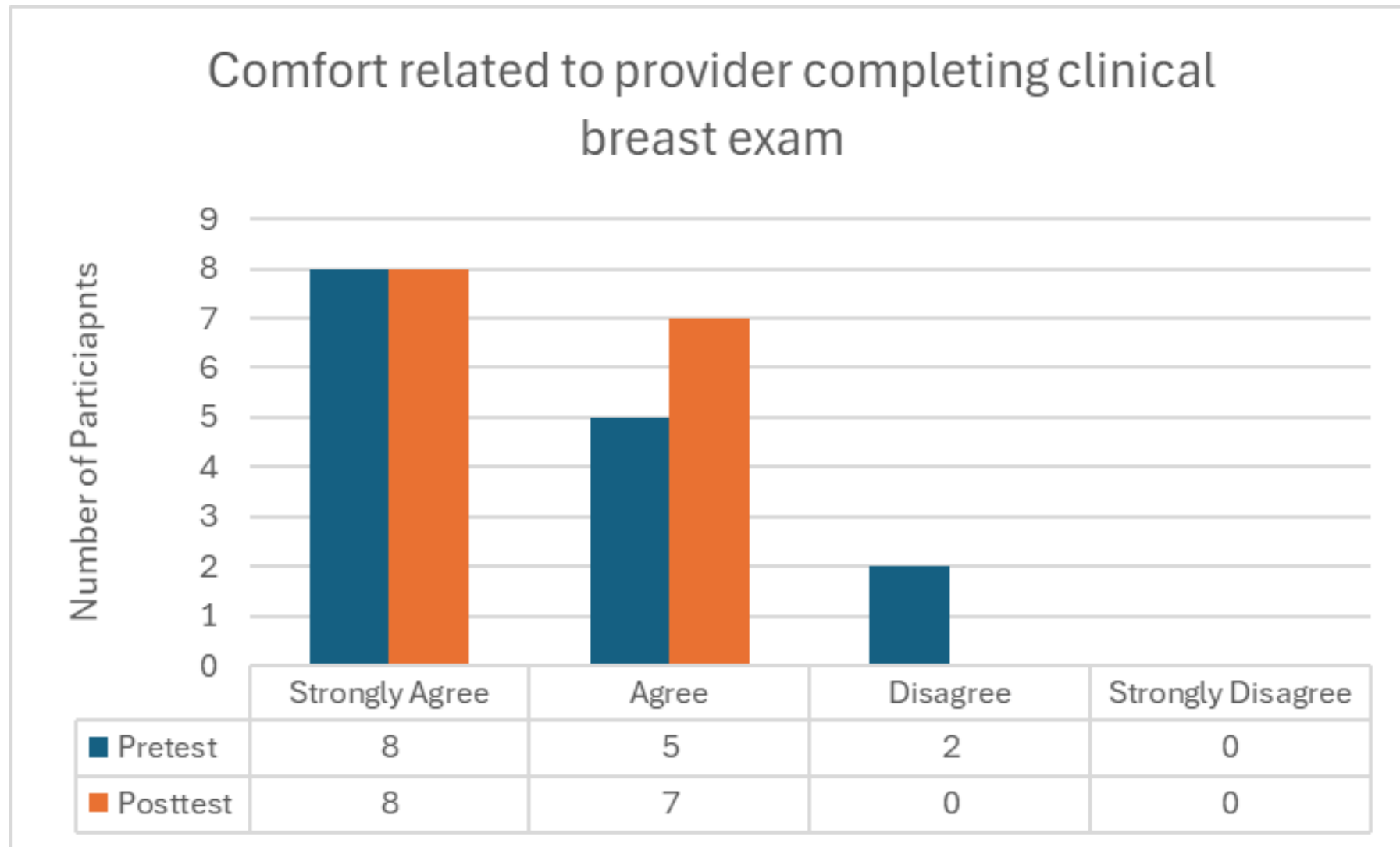
Strongly agree	53.33%	8
Agree	46.67%	7
Disagree	0%	0
Strongly Disagree	0%	0

# Perceived Benefits



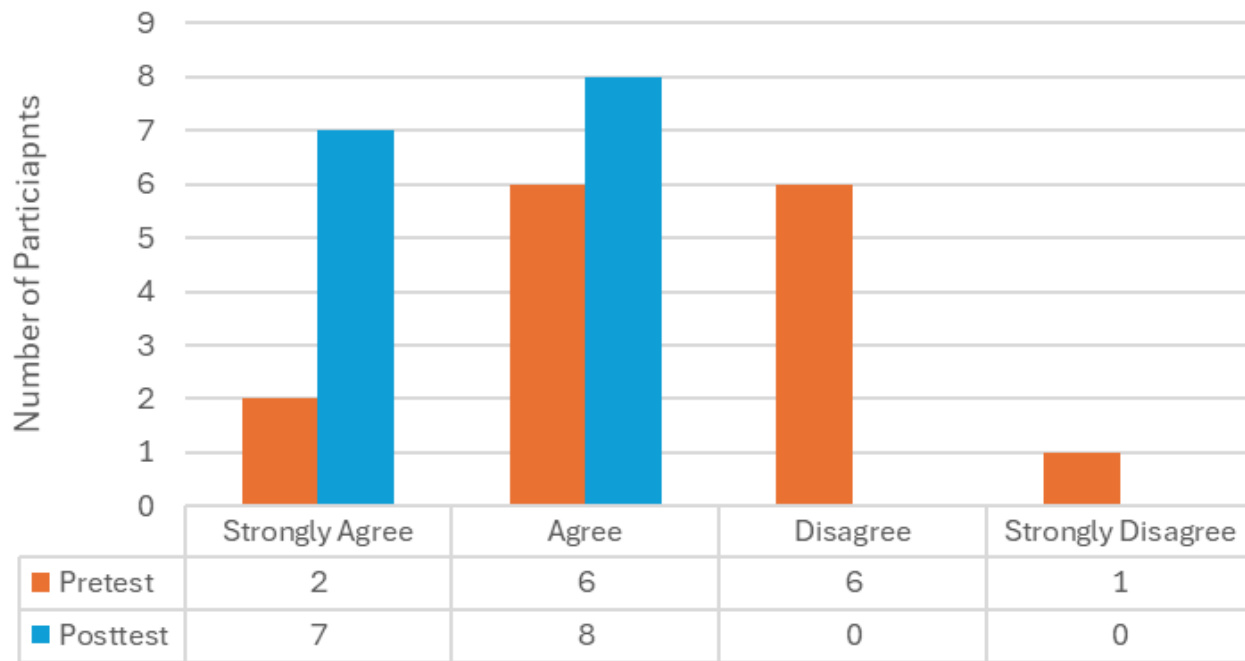


# Perceived Barriers

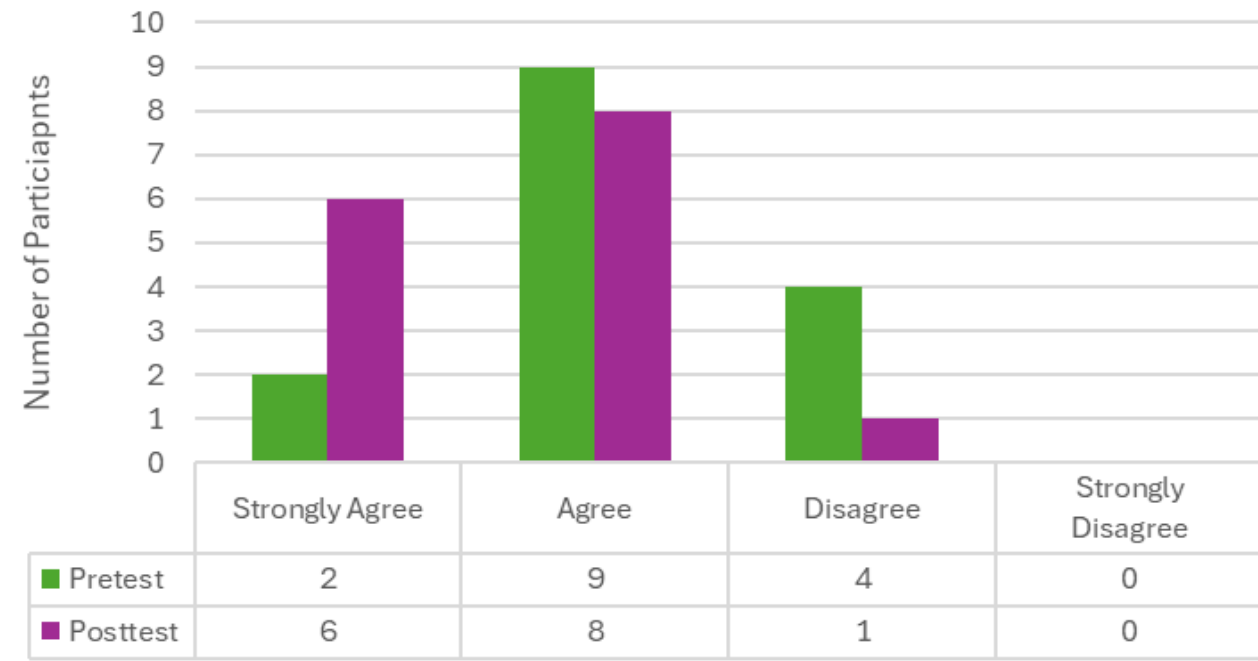


# Self-efficacy

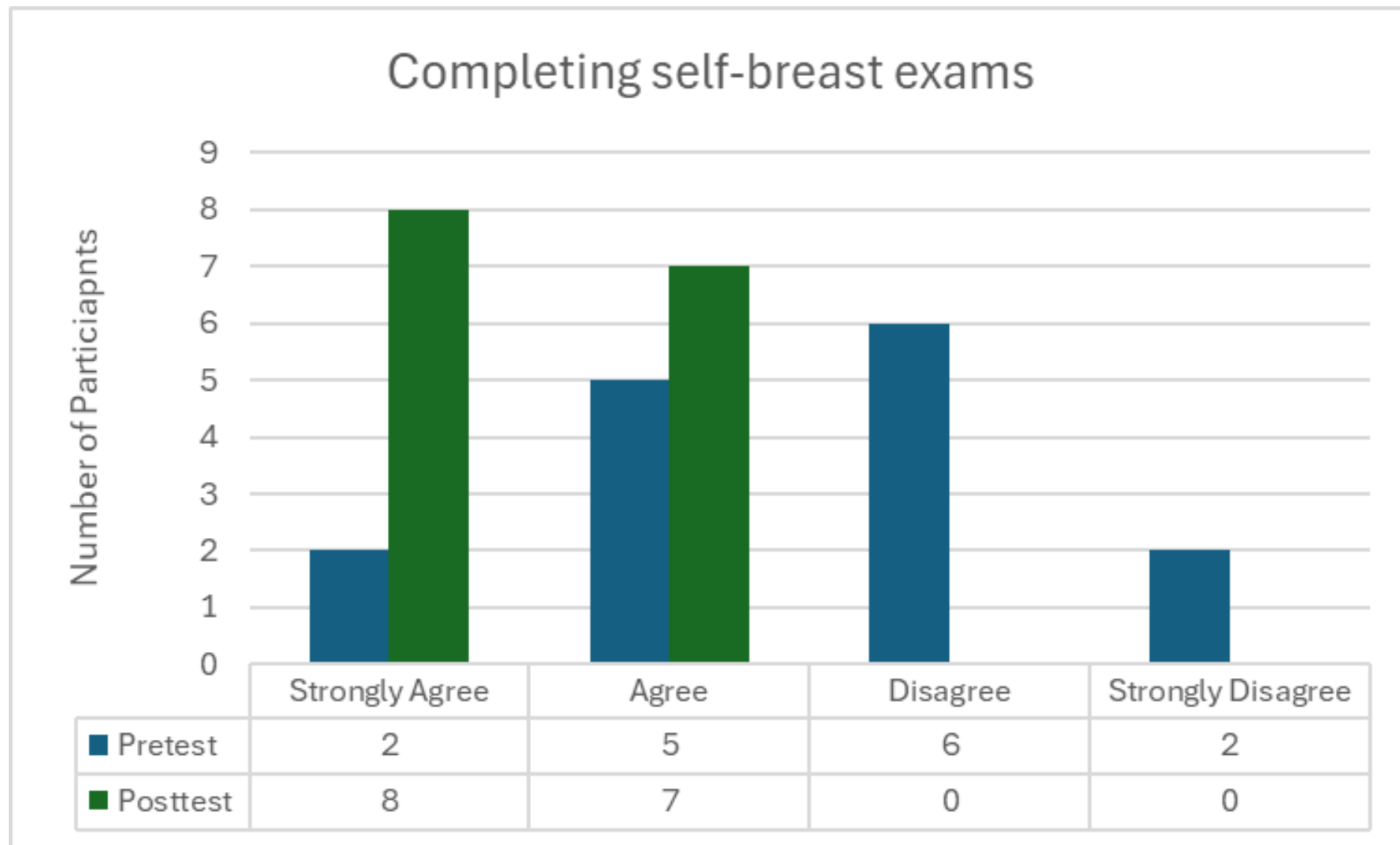
## Identifying an abnormal lump on self-breast exam



## Comfort of completing self-breast examinations



# Behavior change: Self-breast exams

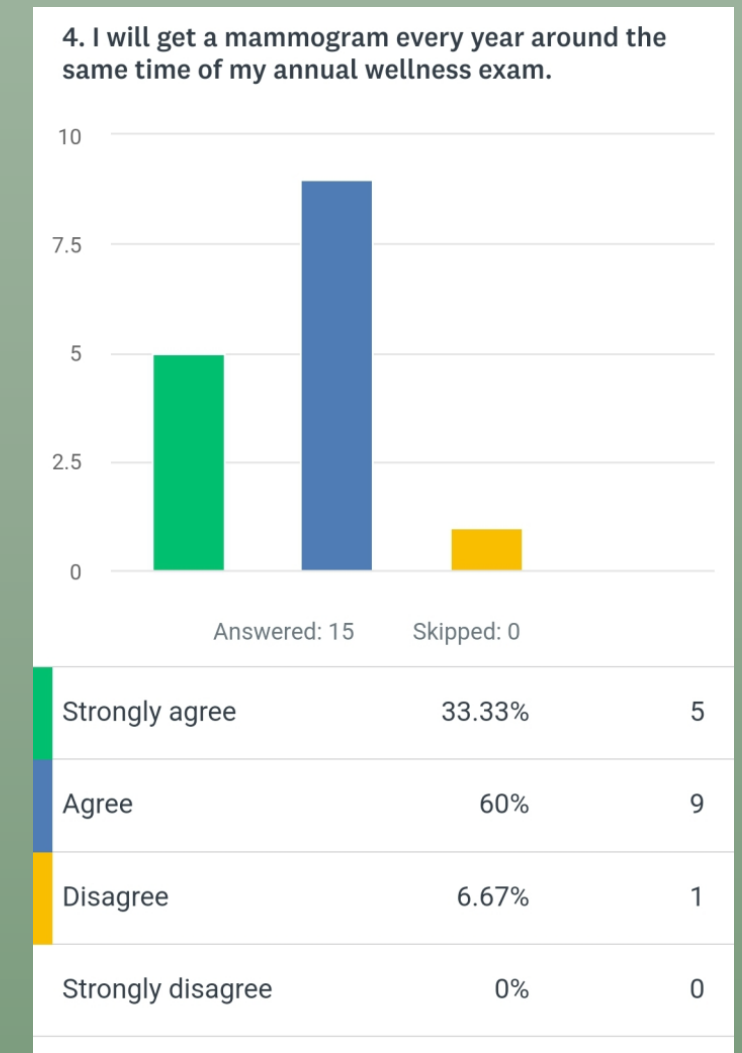
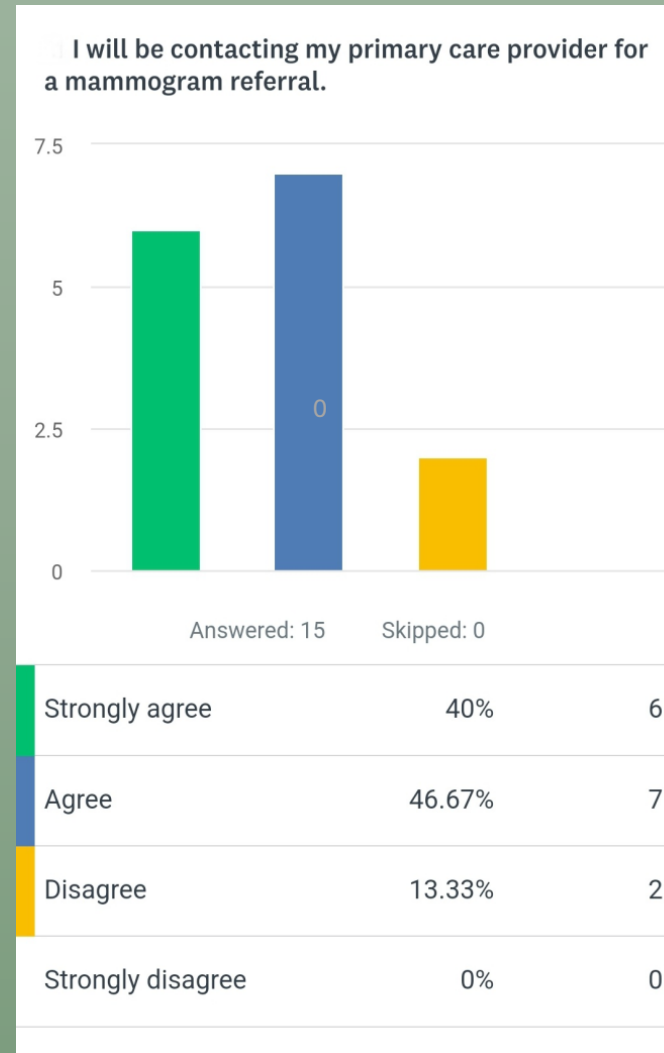


# Behavior change: Mammography screening

## Pre-survey



## Post survey





## Pre and post survey results: Session feedback

- The post-educational program survey included feedback regarding the program which included 93.33% participants finding the educational session beneficial and 100% of participants finding the method of delivery engaging.



# Follow-up to Education Session

- 12 out of 15 participants responded at eight weeks follow-up.
- 100% reported being **VERY COMFORTABLE** discussing breast screening with a female provider.



# Follow-up to Education Session

- The majority of participants reported:
  - An increase in knowledge and willingness of breast cancer screening.
  - The educational session was easy to understand
  - Comfortable with the provider offering the educational session
  - Scheduled an appointment to have a clinical breast exam (83.33%)
  - Already obtained a mammography referral since the education session (75%)
  - The materials provided beneficial and increasing their understanding of breast cancer.
  - Comfortable completing self-breast cancer examinations and are completing them at home (80%).
  - They found this program beneficial.
  - Do not need a primary care provider as they have a PCP.



This Photo by Unknown Author is licensed under CC BY-NC-ND

## Monthly Self-Exam



**Get to know your breasts with monthly self-exams**



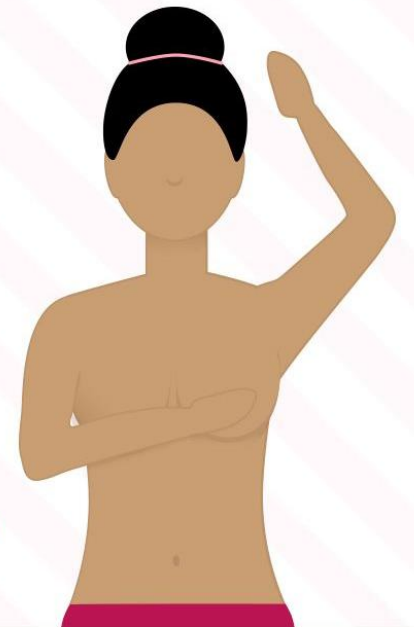
**Look for:**

- Discharge
- Rashes
- Dry patches



**Feel for:**

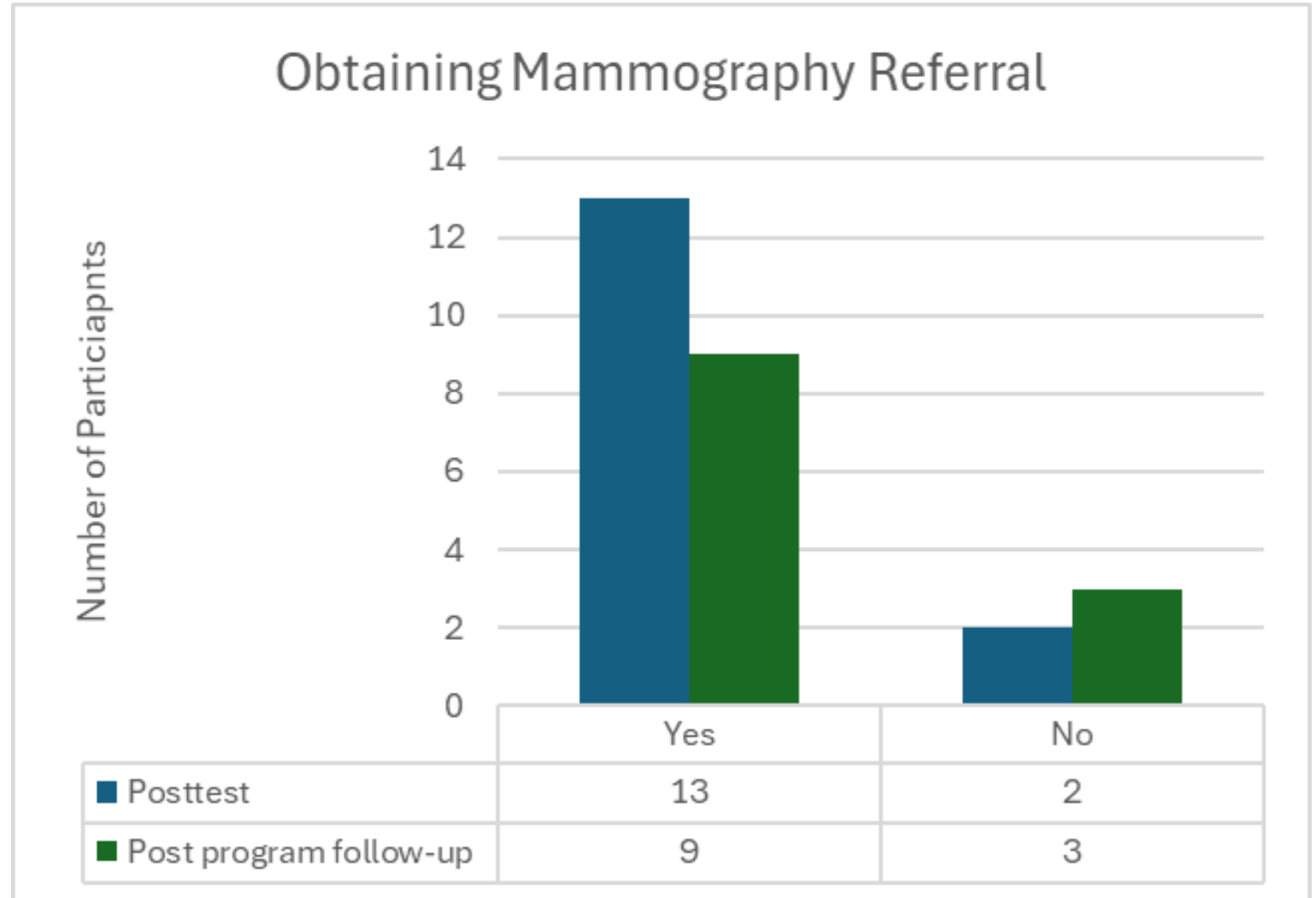
- Lumps
- Indenting
- Bumps
- Skin dimpling



# Mammography Referral

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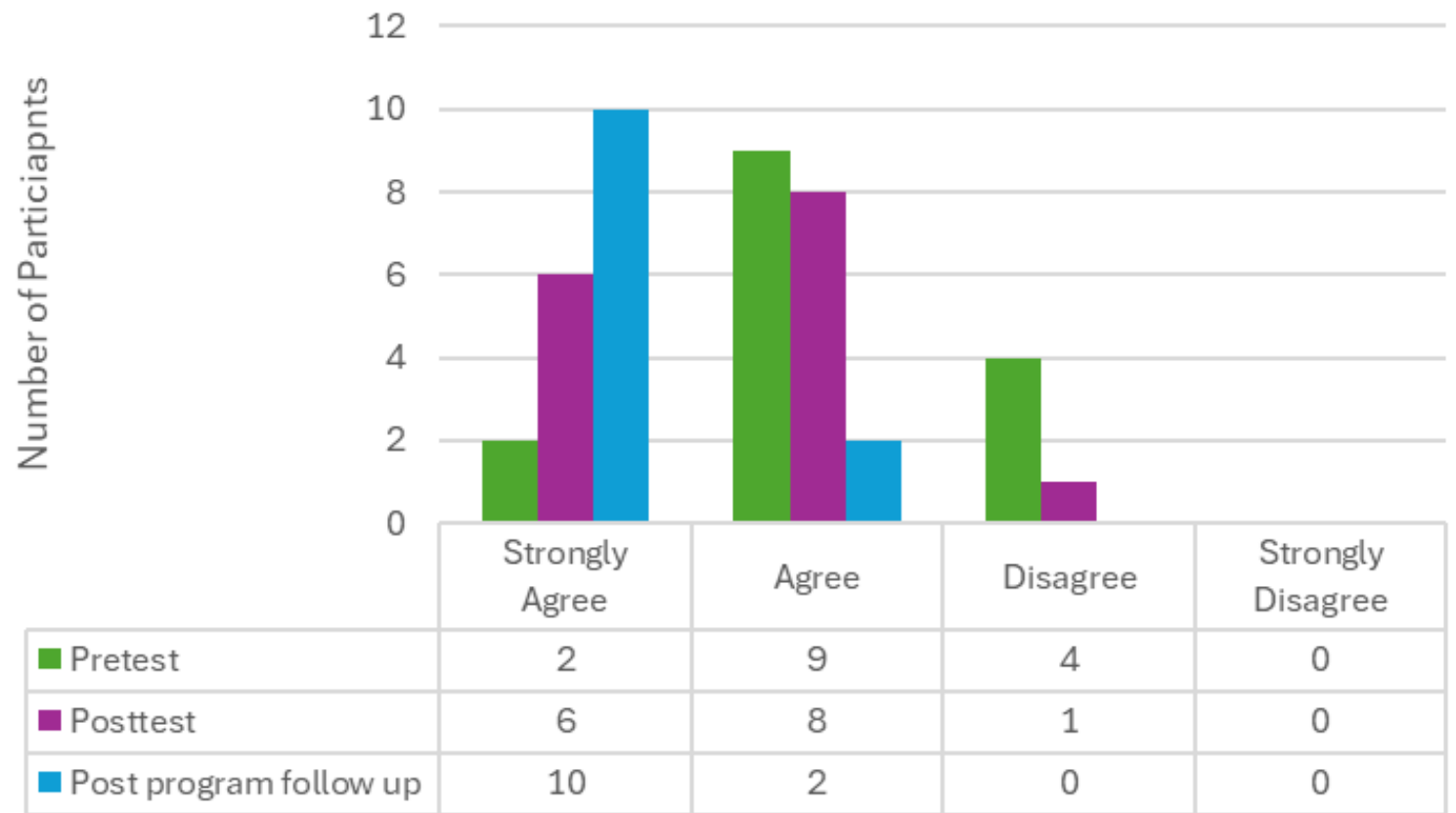
- Majority intended to seek mammography referral immediately after session.
- Majority had a mammography referral by the 8 week follow up.



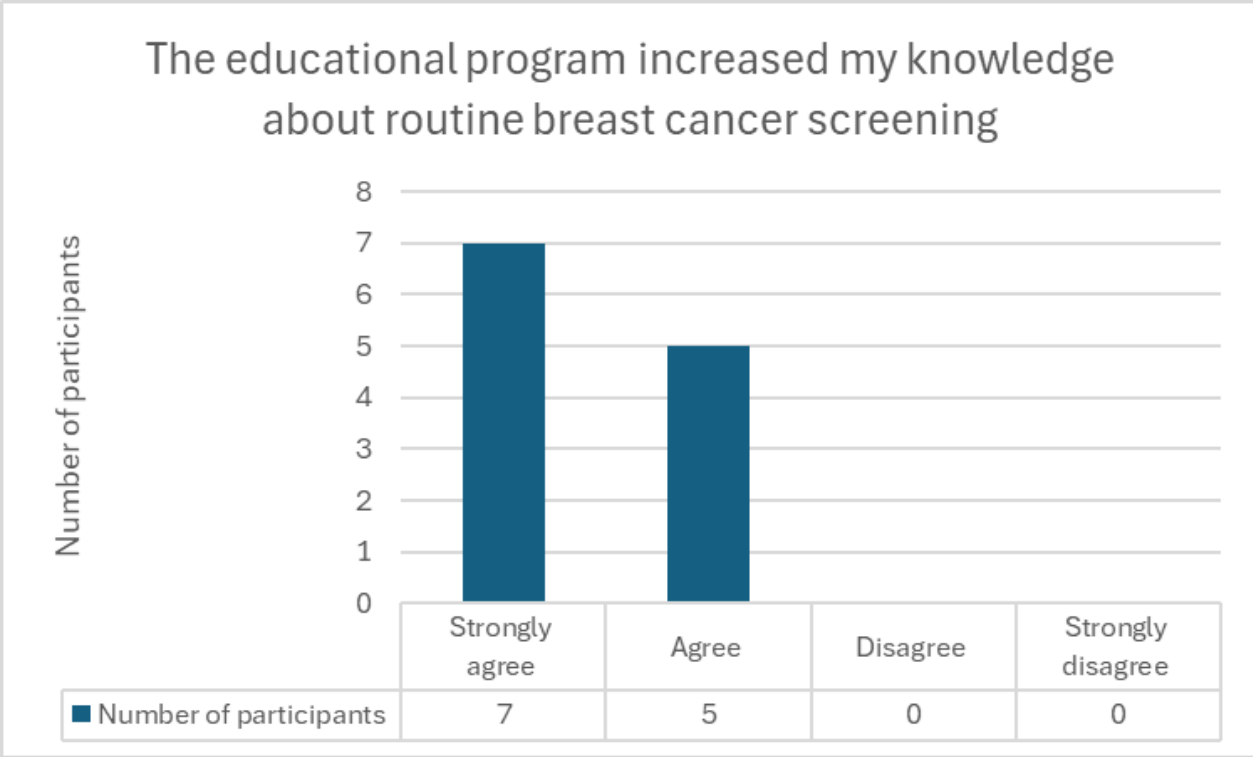
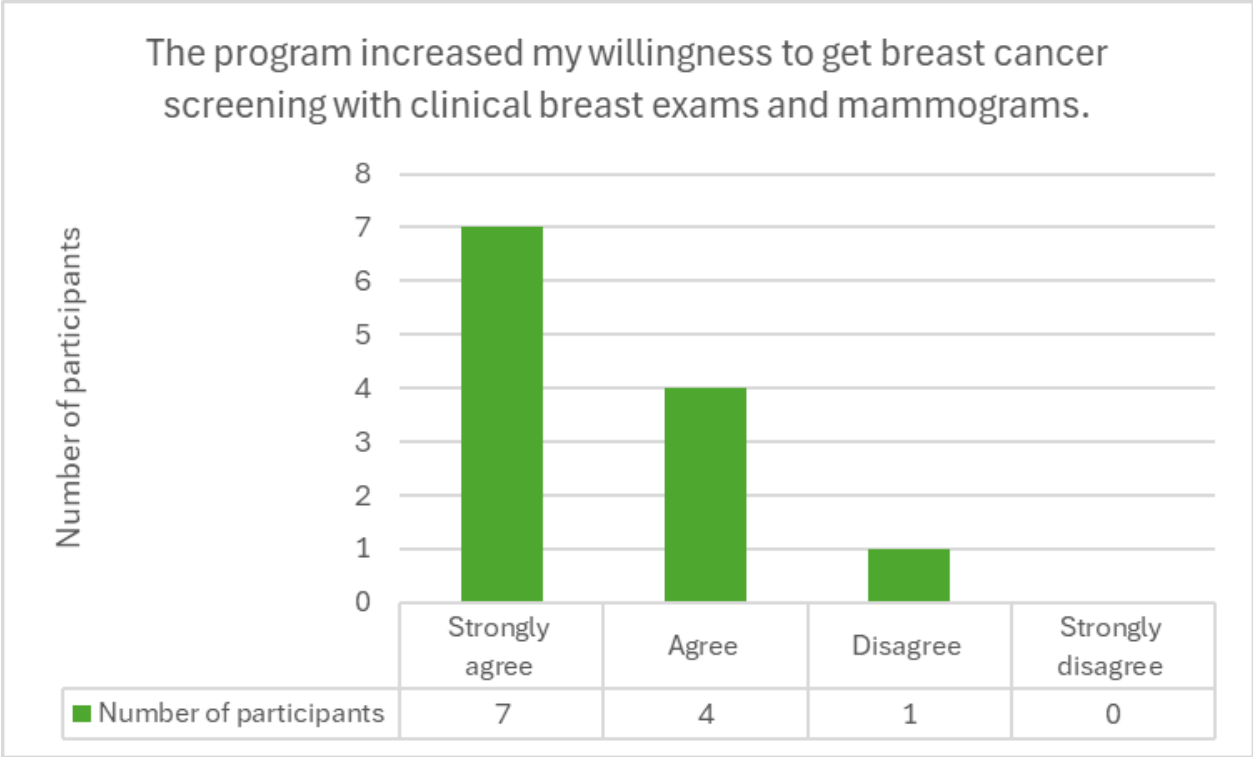


Participant reported comfort in completing self-breast examinations

Comfort of completing self-breast examinations

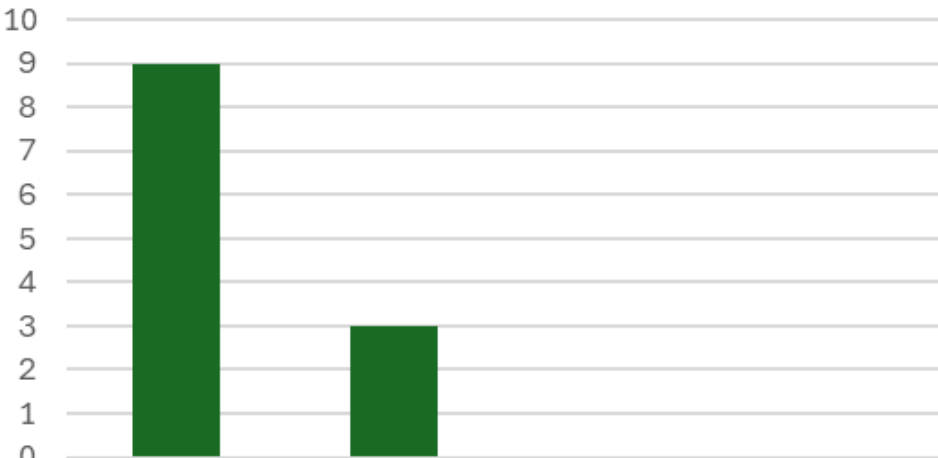


# Feedback on the pilot breast cancer education session



# Feedback on the pilot breast cancer education session

The information presented in the class was easy to understand.



■ Number of participants	9	3	0	0
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The provided written materials increased my understanding about breast cancer risks and screening.



■ Number of participants	5	6	1	0
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# Discussion



# Discussion: Strengths of the pilot program



Women exclusive session

Privacy and ability to talk about sensitive topics

The personable and engaging method of delivery by the presenter.

A sense of community and familiarity during the session

Hearing stories from other women younger and older than the participants with breast cancer scares or diagnoses.



# Discussion: Recommendations for future programs



Arrange for a breast cancer dedicated event on a larger scale

Have a breast cancer patient or survivor speaker to tell their story

Offer clinical breast exam program as one of the new health services at Hype for MENA American women with MENA nurse practitioners

Breast cancer screening and education program or sessions in the future.

Invite a speaker who had routine screening and was unintimidated.

Additional options beside QR codes in future education materials (social media site and printed copies).

# Sustainability Plan

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Continue breast cancer education program.

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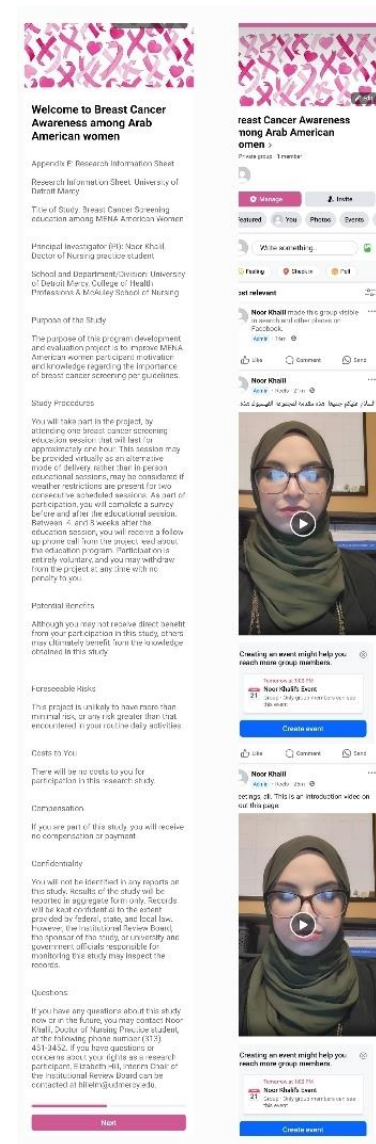
Continue to lead the project with the organization.

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Expand the breast cancer prevention awareness event with additional presenters.

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Social media or Facebook page (tentative).



# Sustainability

- OBGYN and Primary care offices
  - At time of attendance of pilot program
  - After completion of pilot program



University of Detroit Mercy (IRB)  
Institutional Review Board (IRB)  
4001 W McNichols Rd  
Detroit, MI 48221

Dear health provider,

This letter is to inform you that your patient participated in a breast cancer education session at Hype Athletics. This session included information on risk factors, preventative screenings, and self-breast exams. During this session, your patient was encouraged to follow up at your practice for preventative breast cancer screening as appropriate and specific to your patient and per the American Academy of Obstetrics and Gynecology guidelines. Thank you.

If you have any questions, please feel free to contact Noor Khalil, Doctor of Nursing practice student at the University of Detroit Mercy at [khaliina@udmercy.edu](mailto:khaliina@udmercy.edu)

Best regards,

Noor Khalil  
Doctor of Nursing Practice Student  
University of Detroit Mercy



# Implications for Practice

## Awareness of nurse practitioner's role within the MENA American community

- Utilize NPs in community-based health initiatives.
- Holistic, culturally sensitive care.
- Increase uptake of recommended health screenings.

## Community center (Hype Athletics)

- Enhance access for MENA American women
- Culturally sensitive health screening and preventative programs by NPs.
- Future primary care women services

## Policy and advocacy

- MENA American representation is needed in research, government statistics (US Census data).
- Increase government funding and program support to identify and support the healthcare needs of the MENA American population

# IMPACT

Presented at Hype July 18

- Well received by administration and staff
- Supports Hype's goal to expand preventative services for women
- Plans for future presentations with MENA breast cancer survivor

Culturally sensitive community-based education with follow up using this model increases preventative health screening.

Potential to improve health outcomes for MENA American women.





# Thank You

- My *family* for all their continued encouragement, caring, and support during this DNP program.
- ***Dr. Lori Glenn DNP CNM RN (Doctoral Chair)*** for all your support, guidance, cooperation and time throughout this project.
- ***Dr. Karen Mihelich DNP, ACNS-BC***  
(DNP Program Director) for all your guidance during this program.
- ***Hype Athletics leadership and staff*** for all their cooperation and support.
- All the *participants* in the program.





Questions?

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