ADDRESSING MUSLIM MAMMOGRAPHY DISPARITIES THROUGH A RELIGIOUSLY TAILORED INTERVENTION

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AIMS

- Discuss notions of healthcare disparities
- Describe research to identify religion-related mammography disparities among US Muslims
- Detail an intervention model and its outcomes to address such disparities

BACKGROUND

Breast cancer is the second leading cause of cancer death among American women, and screening mammography is a proven method to reduce its mortality.

MUSLIM AMERICANS

- Estimated between 3–7 million & *growing*
- 1,200+ mosques
- Diverse:
  - African Americans (35%), Arabs (25-30%), South Asians (20-25%)
  - 62% foreign-born
  - Household income: 14% > $100k (16% US); 45% < $30k (36% US)
  - 87% are English-literate
- Highly Religious:
  - 69% say religion is very important in my life (58% US)
  - 65% report performing their daily prayers
  - 50% attend mosque at least once per week (36% US)

Does Islam influence American Muslim health and health behaviors?

J Relig Health (2013) 52:1333–1345
DOI 10.1007/s10943-012-9620-y

ORIGINAL PAPER

Religion and Disparities: Considering the Influences of Islam on the Health of American Muslims

Aasim I. Padela · Farr A. Curlin

- Islamic Beliefs
  - Constructions of Health, Illness & Disease
    - Pregnancy is a "blessing"→ attitudes towards contraception
    - Cancer is based on God's decree→ attitudes towards screening
- Islamic Ethics
  - Reduced alcohol consumption → decreased health risks
  - Gender concordance (modesty) → influences healthcare seeking patterns
- A Muslim Identity
  - Discrimination→ Delayed healthcare-seeking patterns

EXPLANATORY MODEL

- God-centered view of healing
  - Actors:
    - Doctors, imams, family and community are sources of healing
  - Means:
    - Worship, medicine, herbs, and text-based practices can produce healin
- Construction of health
  - Health : Spiritual, Social, Physical
    - Spiritual failings may → physical illness
- Construction of disease
  - Pregnancy is a “blessing”→ not in favor of contraception
  - Cancer may be fate → prevention not a priority

ETHICO-LEGAL FRAMEWORK

- Certain behaviors may be motivated & others restricted
  - Breast feeding of children → health benefits
  - Reduced alcohol consumption → health benefits
  - Restricted abortion → children with developmental delay or special needs
- Governs treatment acceptance and manner of receipt
  - Porcine based medications may be proscribed → attitudes towards vaccination
  - Gender concordance → influences healthcare seeking patterns across a variety of conditions

A SOCIALLY-MARGINALIZED IDENTITY

- Post-9/11 discrimination & Islamophobia
  - Abuse and Discrimination →
    - Increased psychological distress and lower levels of happiness
  - May contribute to
    - Maladaptive behaviors
      - Social isolation, avoiding healthcare, smoking, etc
    - Stress-related illnesses

Does Islam contribute to health disparities?

HEALTH DISPARITIES OR HEALTH INEQUITIES ARE

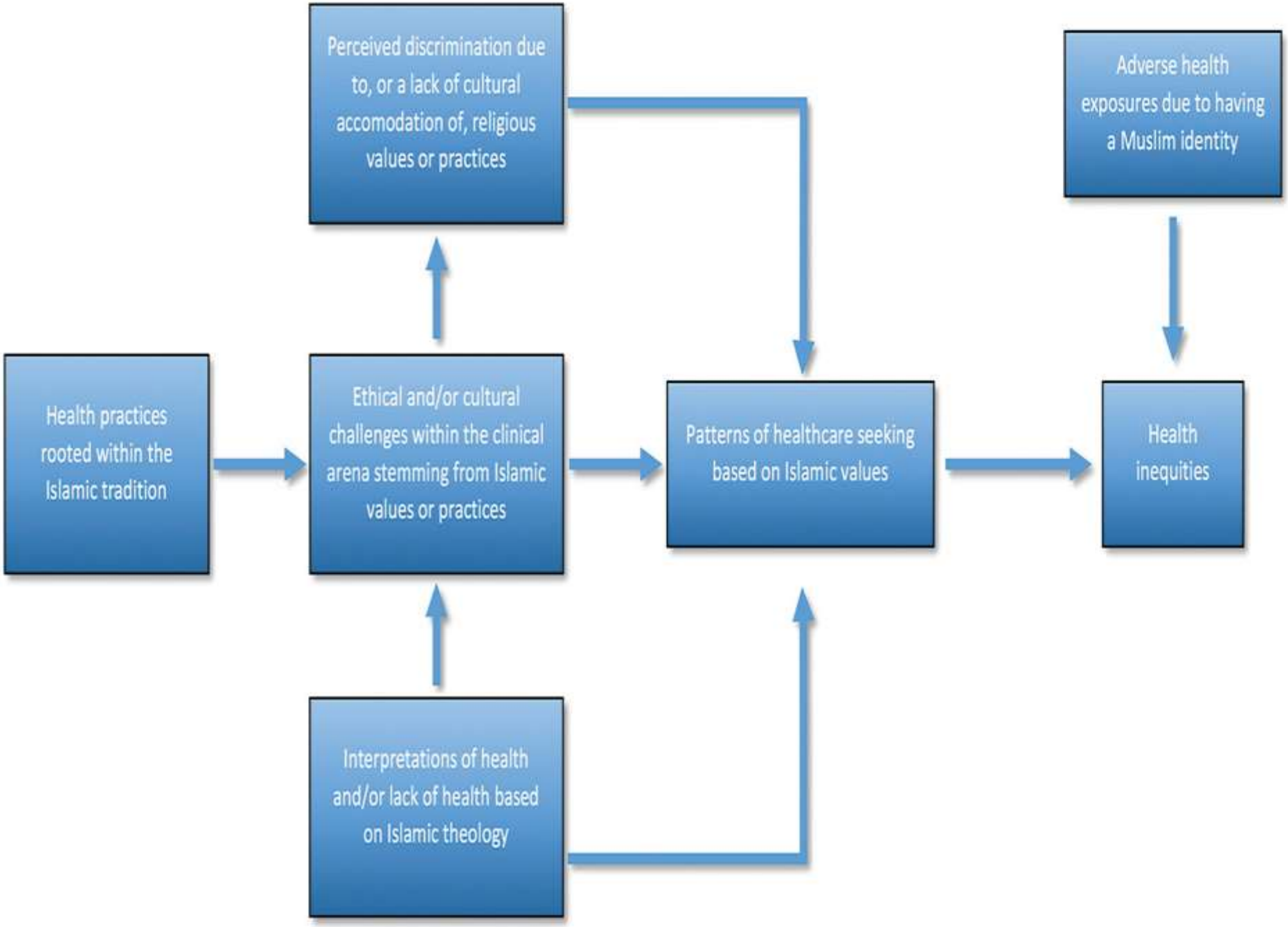
Empirical Questions

1) RELATED TO DIFFERENCES IN HEALTH STATUS OR MEDICAL TREATMENT

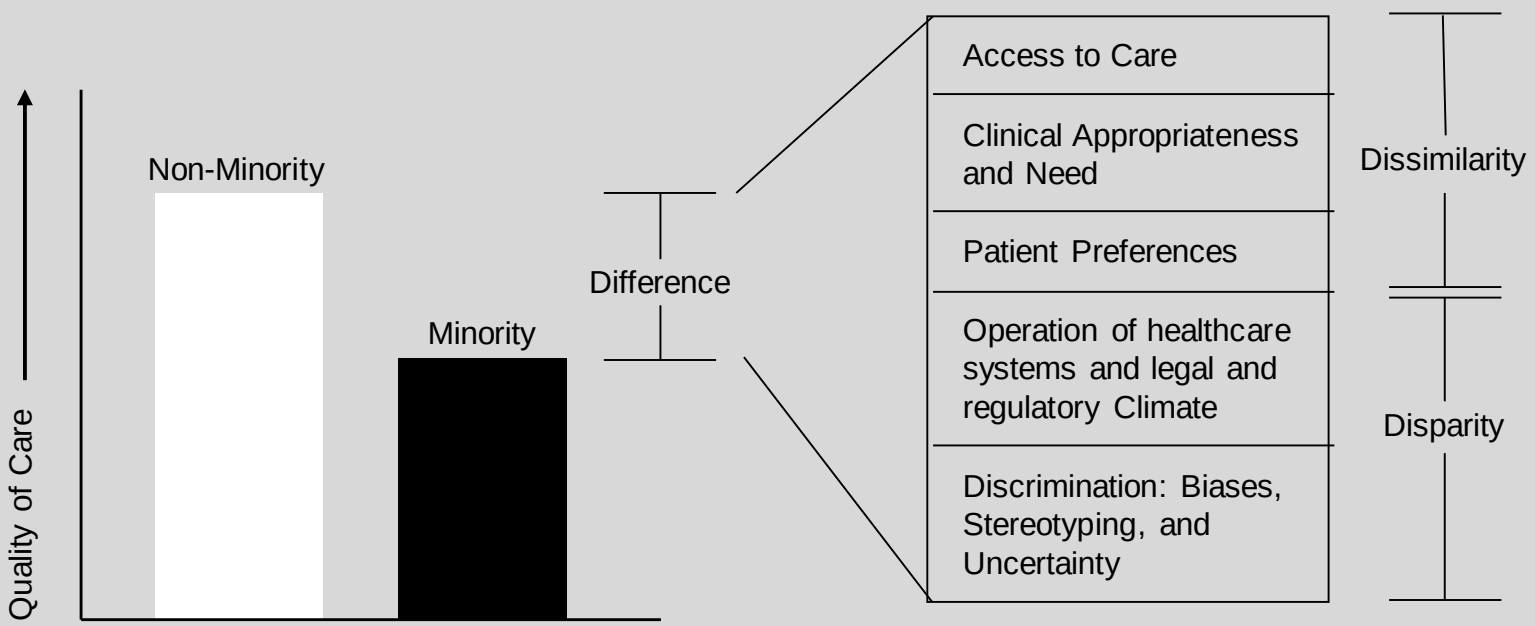
Normative Assessment

THAT ARE UNFAIR TO DISADVANTAGED PEOPLE *AND* AVOIDABLE

Braverman and Tarimo, Soc Sci and Med:54:1621-1635 (2002)


Perceived discrimination due to, or a lack of cultural accomodation of, religious values or practices
Adverse health exposures due to having a Muslim identity
Health practices rooted within the Islamic tradition
Ethical and/or cultural challenges within the clinical arena stemming from Islamic values or practices
Patterns of healthcare seeking based on Islamic values
Health inequities
Interpretations of health and/or lack of health based on Islamic theology

COMPONENTS OF HCD



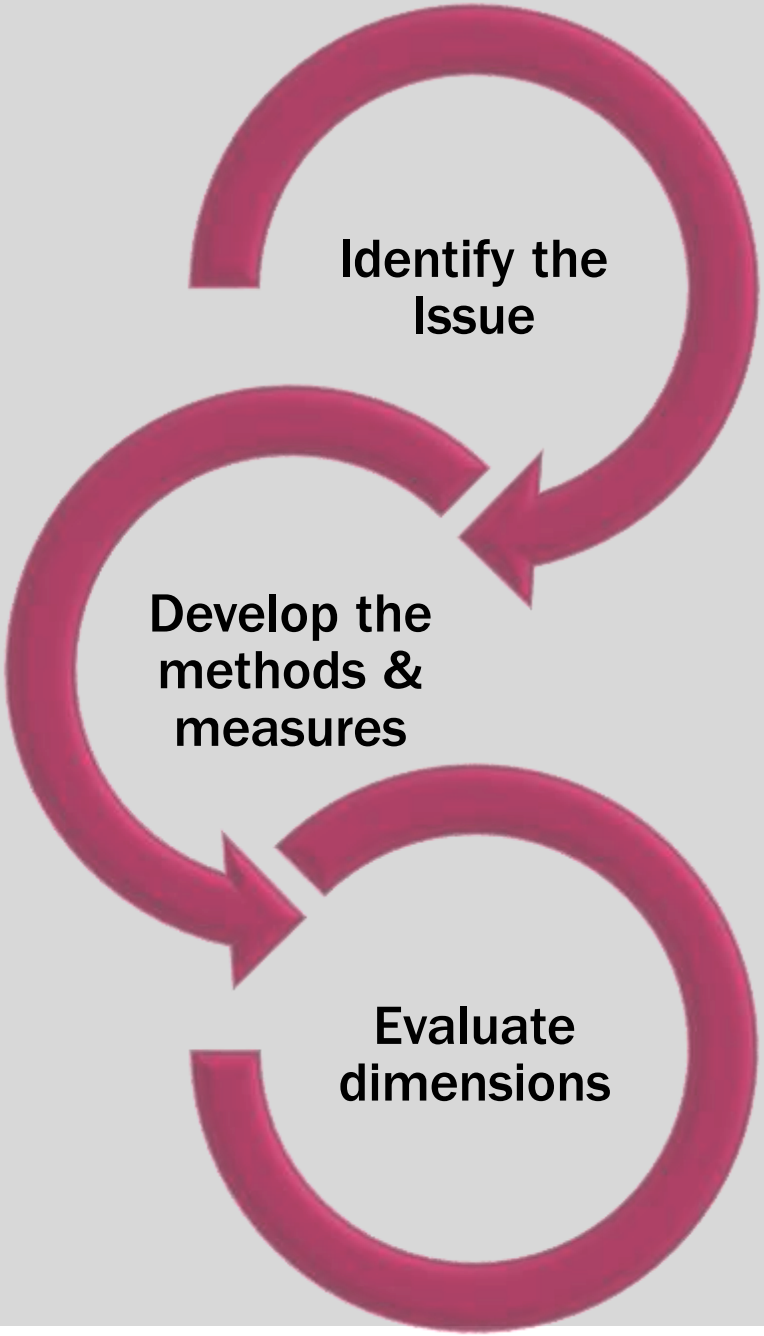
TRACKING HEALTHCARE DISPARITIES

- AHRQ measures
- "disparities in healthcare delivery as they relate to racial factors and socioeconomic factors"
- across domains of (i) access and (ii) quality

- Religion is overlooked, yet
  - Could manifest within barriers to care (access metric)
  - Relates to spiritual needs of patients in hospital (quality metric)
  - Impacts health behaviors just like race and socioeconomics
    - Shared exposures & values

FURTHER CHALLENGES

- "Finding" American Muslims
  - Absence of national metrics:
    - Religious affiliation is not captured in national databases or health surveys (SEER, NHIS, NHAMCS)
    - Naming algorithms have low specificity
- Assessing "Muslim" qua "Islamic" influences upon health
  - Religiosity measurement tools are not validated for use in this population



DO MUSLIMS IN THE US SUFFER FROM HEALTH & HEALTHCARE DISPARITIES?

IF THEY EXIST ARE THEY RELATED TO RELIGION IN SOME WAY (BELIEFS, VALUES, IDENTITY)?

STUDYING MUSLIM HEALTH DISPARITIES

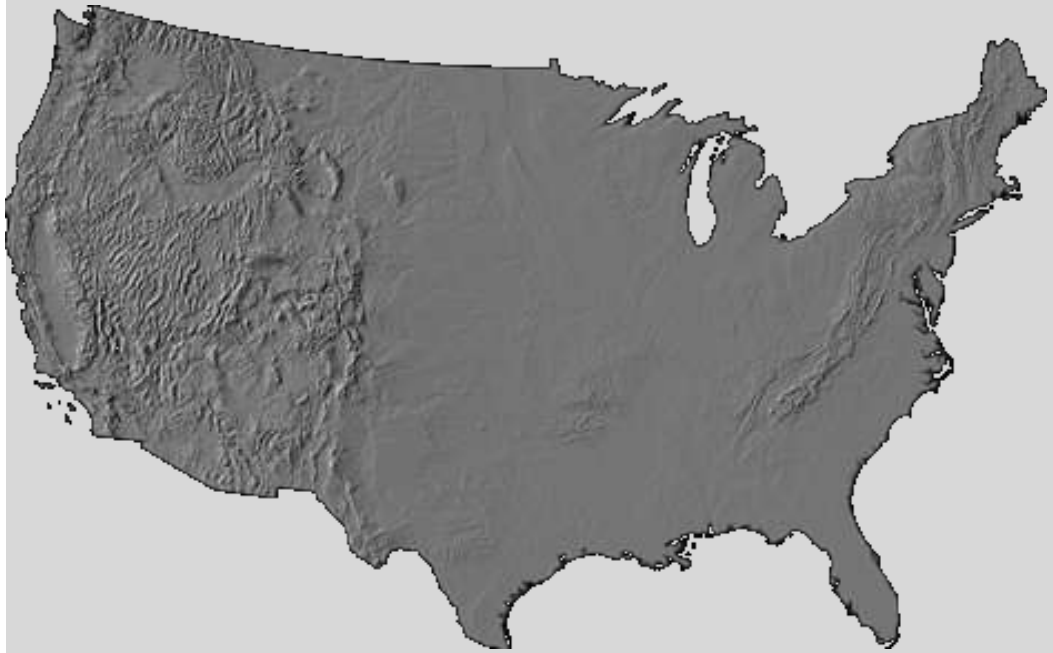
- Our strategy expanded to include
  - Country of origin & ethnic descriptors
  - More disparity terms

- Marginal improvement
  - 171 empirical studies
  - 42 studied Arab Americans; 41 South Asians
    - These populations may include non-Muslims
  - 19 considered religious factors to potentially contribute to health disparities

Take Home: we don't know and may neglect learning

American Muslim Health Disparities: The State of the Medline Literature

Aasim I. Padela University of Chicago
Afrah Raza University of Michigan Medical School

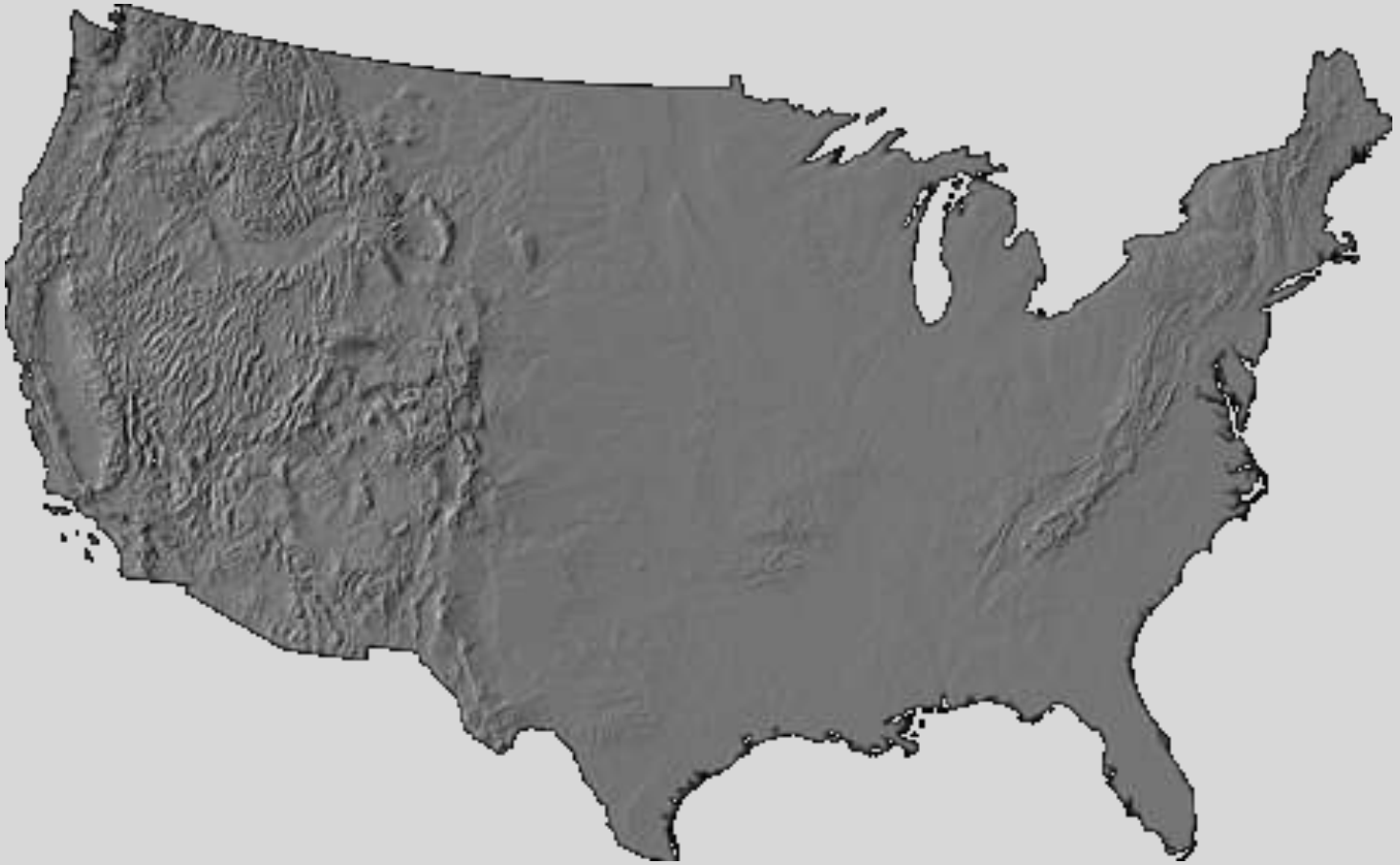


From 1970-2009

- Muslim & America & Health Disparity → 2 articles
- Muslim & America & Disparities → 10 articles

AMERICAN MUSLIMS & MAMMOGRAPHY

- In 2015 65.3% of U.S. women > 40 had a screening mammogram
- Studies report lower rates among US Muslims (n=4)
  - Mammogram Ever- 69-73%
  - Biennial – 52-61%
  - Samples did not cut across racial, ethnic, sociodemographic lines
- Barriers identified:
  - Access-related
  - Cultural Values (e.g. prevention not a priority)
  - Religious concerns (e.g. modesty)
- Inadequate conceptions and measures of religion



- Some local projects → convenience samples → non-comprehensive, possibly distorted picture


LET YOUR
Faith
BE BIGGER
THAN YOUR
Fear

DEVELOP METHODS & MEASURES

- Assessing Islamic influences on Muslim cancer behaviors required
  - Measuring Relevant Religion-related constructs
    - Religiosity
      - Practice-based [adapted], importance, psychological measures for coping [refined]
    - Religious Discrimination in Healthcare [adapted]
    - Fatalism
      - Validated the religious fatalism health questionnaire via FGs and Surveys
    - Modesty
      - Developed, piloted, and validated a de-novo measure
  - Employing a methodology to "find" Muslims
    - Sampled from mosques and Muslim community organizations = sample with strong religious identity but not-homogenous
    - Purposively sampled from sites with Arab, S. Asian and native African Americans → isolate "Muslim" phenomenon that cuts across race/ethnicity

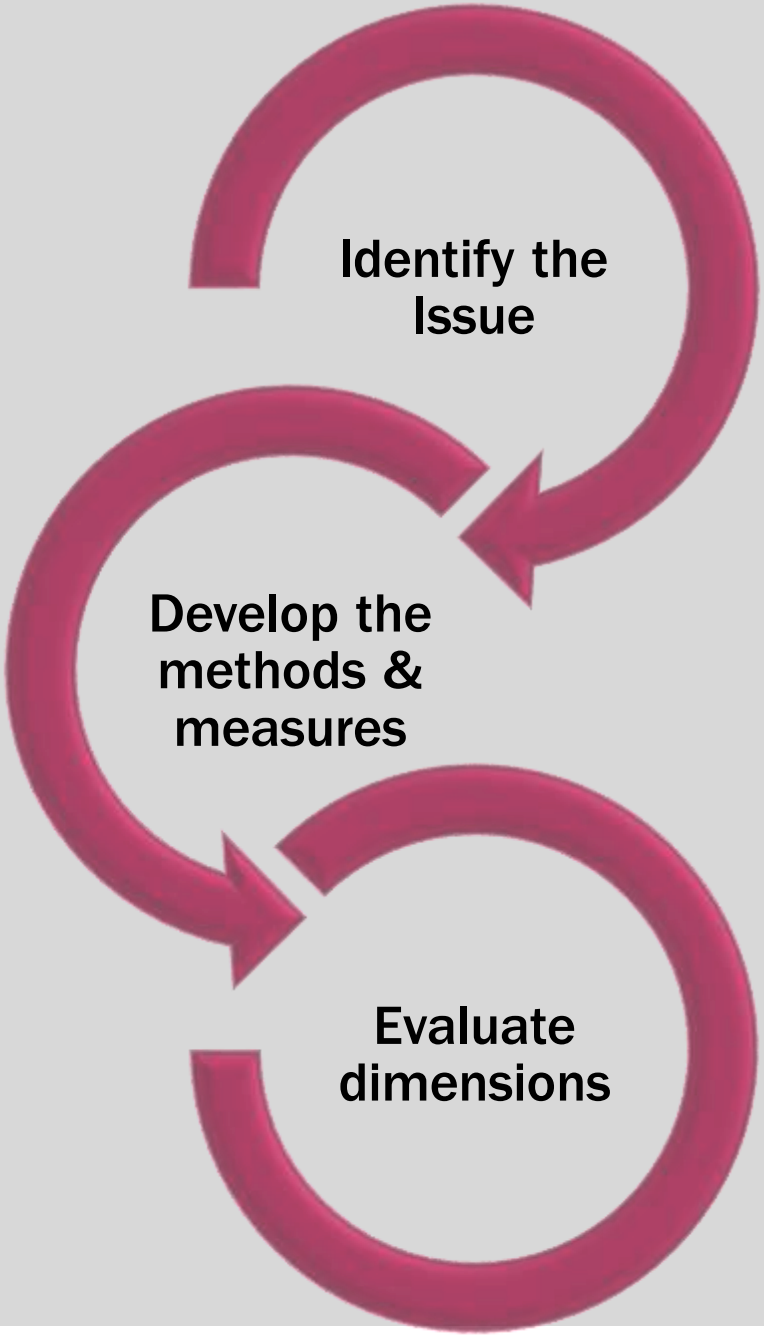
J Immigrant Minority Health
DOI 10.1007/s10903-014-0014-y

ORIGINAL PAPER

Associations Between Religion-Related Factors and Breast Cancer Screening Among American Muslims

Aasim I. Padela · Sohad Murrar · Brigid Adviento · Chuanhong Liao · Zahra Hosseinian · Monica Peek · Farr Curlin

- Demographics:
  - Ethnicity/Race- 33% Arab, 32% S. Asian, 27% African American
  - 75% had health insurance (85% access to PCP)
- Mammography Rates
  - 77% had mammogram once in their life
  - *37% did NOT have a mammogram in the past two years*
- Religion-Related Predictors
  - - Religious discrimination in healthcare (OR= .74; p<.05)
  - - Positive religious coping (OR= .21; p<.05)



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DEVELOPING A RELIGIOUSLY-TAILORED MAMMOGRAM INTERVENTION IN MOSQUES

Community Partnership Building

-CIOGC

-Muslim Women Resource Center

-Arab American Family Services

-Compassionate Care Network

Evidence Gathering

- Phase 2-Mosque-based Focus Groups (50 women)

- Phase 3-Key Informant Interviews (n=19)

Mosque-Based Intervention Deployment

- 2-session Peer-led health education workshops

(n=58)

American Cancer Society®

PHASE 2: OBTAINING BEHAVIORAL NARRATIVES

Religious beliefs and mammography intention: findings from a qualitative study of a diverse group of American Muslim women

Aasim I. Padela[1,2,3*] | Milkie Vu[1] | Hadiyah Muhammad[1] | Farha Marfani[1] | Saleha Mallick[1] | Monica Peek[2] | Michael T. Quinn[2]

6 FGs in 6 mosque communities (n=50)

-Focused on understanding ways in which religious values informed mammogram intention

-Categorize barrier and facilitator beliefs

RELIGION-RELATED THEMES

- **Perceived religious duty to care for one's health (facilitator)**
- **Comfort (need) with Gender Concordant Healthcare** (barrier)
- **Religious Practices as a Methods of Disease Prevention (+/-)**
- **Fatalistic Notions about Health (+/-)**
  - Determinism w/o agency
  - Prayer as means to change fate
  - God's decree unknown therefore duty towards healthcare exists

PERCEIVED DUTY TO CARE FOR ONE'S HEALTH

"Allah says you have to take care of yourself. Part of taking care of yourself is visiting the doctor..."

(Nigerian Participant)

"As Muslims we should really be taking care of ourselves and our body because that's – it's a loan from Allah and we should really be taking care of that loan because we have to return it too."

(South Asian Participant)

"Allah gave us a body to take care of... we call (it-concept)'amana' which is you know and like if someone gives you like a gift or something you take care of it."

(Arab Focus Group Participant)

COMFORT WITH GENDER CONCORDANT HEALTHCARE

"If I went in there and I found out it was going to be male physician, I'll probably just walk right back out or I'll stay there until they find me somebody who's going to be a [lady]."

(South Asian Participant)

"Like if I had a male doctor, I couldn't talk him… because he's a stranger to me. Probably if it was a female, I would open up and tell everything."

(South Asian Participant)

FATALISTIC NOTIONS ABOUT HEALTH

"They told me I might have cancer on my liver. Blah, blah, blah. I said, "Look, if this is what Allah (Arabic word for God) wants, I'm ready."

(African American Participant)

"I mean if Allah's going to give it to you, he's going to give it to you."

(African American Participant)

"I believe in God 100%. What's going to happen is going to happen."

(Arab Participant)

BARRIER BELIEFS

- Mammography is painful
- Fear of positive mammography result
- Lack of gender concordant staff at imaging center
- Fatalistic Notions about health
  - It is by Allah's will that I get sick or am cured and I cannot change that fate hence mammography is of no benefit.
- Family over self
- Lack of Insurance (cost) is a barrier

PUTTING IT ALL TOGETHER

Survey

- Perceived Religious Discrimination in Healthcare → Decreased Mammography
- Level of modesty not associated with mammography utilization

Interviews

- No mention of discrimination experiences
- Gender concordant care is “more comfortable”

Intervention Messaging

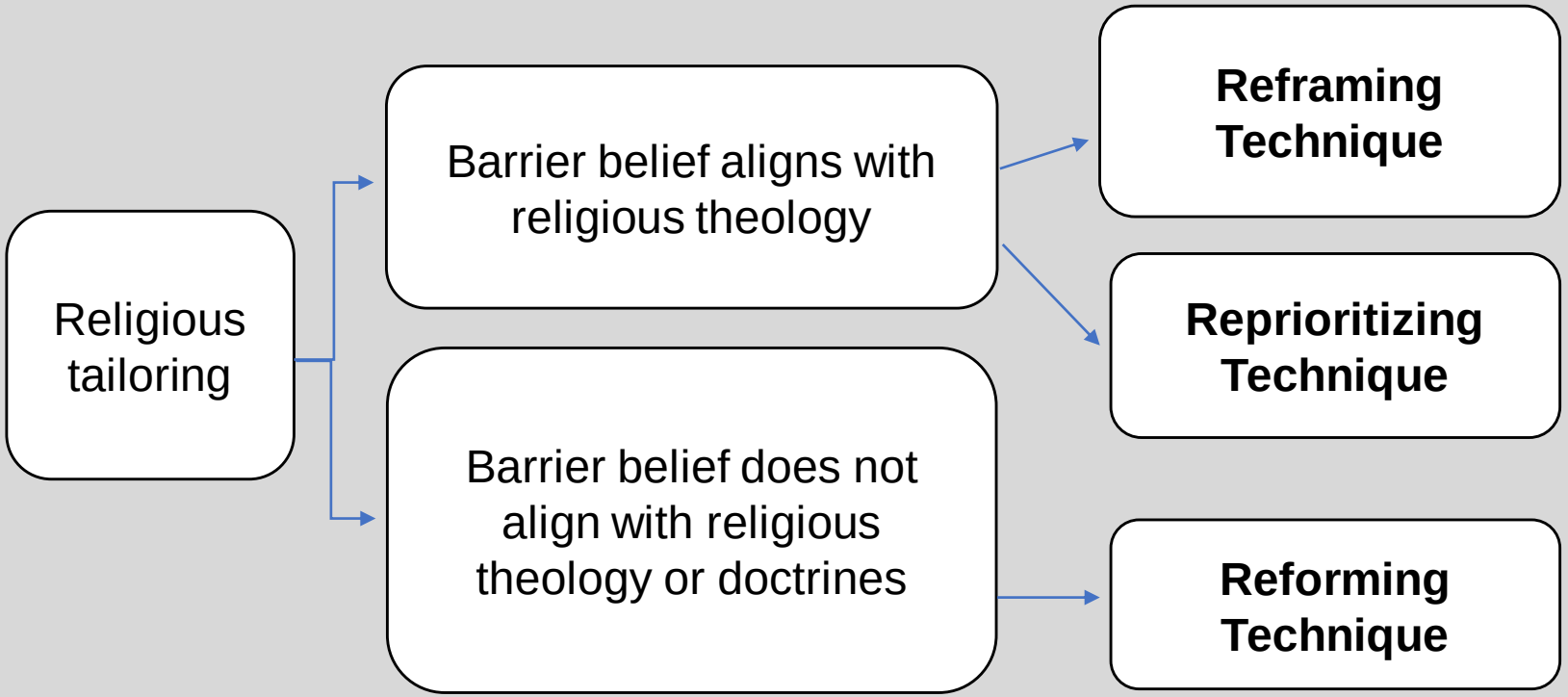
- Patients should feel empowered to ask about gendered care provision regarding mammogram & told most centers have female staff

How did we leverage religious ideas to address mammography-related barrier beliefs?

3R MODEL FOR RELIGIOUS TAILORING

Developing religiously-tailored health messages for behavioral change: Introducing the reframe, reprioritize, and reform ("3R") model

Aasim I. Padela[a,b,c,*], Sana Malik[a,d], Milkie Vu[a], Michael Quinn[e], Monica Peek[e]



ADDRESSING BARRIER BELIEFS

The 3R Model

- **Reframe**: "switch train tracks"
  - Keeping the belief intact but change the way one thinks about it so it is consonant with the desired health behavior
  - Normalizes the barrier belief

- **Reprioritize**: "show them a better train"
  - Introduce a new belief and create higher valence for it than the barrier belief.
  - Normalization of the barrier belief is optional

- **Reform**: "breakdown the train carriage"
  - Negate the barrier belief by demonstrating its faults by appealing to authority structures

BARRIER BELIEFS & RELIGIOUSLY TAILORED MESSAGES

Belief	Reframe	Reprioritize	Reform
I believe mammograms are painful	**The pain incurred on the path to a good deed (caring for body) is also rewarded by God**	**You have a stewardly duty to care for the body God gave and screening coheres with this duty**	**N/A *they are painful***
I fear positive test results	Knowing cancer status earlier is better than late diagnosis	-Reading the Qur'an and prayer are ways to reduce fear of the unknown -Do not fear results; God is merciful and whatever the outcome it is best	N/A ***fear is a normal experience***
It is by Allah's will that I am sick or cured and I can do nothing to change my fate	***Mammography screening does not implicate God's control over disease and cure***	**You have the duty to care for the body God bestowed upon you; your actions are judged not the outcome**	**Human actions have effect; prayer can change decree**
My family's needs and priorities are more important; they "should" come first	I cannot take care of my family if I do not take care of myself first	You have the duty to care for the body God bestowed upon you	Your primary responsibility is yourself and then others

CARING FOR BODY & SOUL: A WORKSHOP ON WOMEN'S HEALTH

- Peer-led, mosque-based, group education classes were held over 2 sessions to address barrier beliefs and provide education regarding mammography
  - Hosted at 2 mosques, 1 South Asian dominant and 1 Arab dominant

- Guest-led, including a female religious scholar and female breast surgeon, didactics and peer-led discussions covered:
  - Relationships between religion and health
  - The importance of mammography
  - Health care access

Reducing Muslim Mammography Disparities: Outcomes From a Religiously Tailored Mosque-Based Intervention

Aasim I. Padela, MD, MSc[1], Sana Malik, MSW, MPH, DrPH[1,2], Syeda Akila Ally, BA[1], Michael Quinn, PhD[1], Stephen Hall, MPH[1], and Monica Peek, MD, MPH, MSc[1]

Racial/Ethnic background (n=52)	n	%
African American	1	1.92%
European/ White	2	3.85%
Arab/ Arab American	18	34.62%
South Asian	27	51.92%
Mean Age (years)	50.36	
Education Level (n=56)		
Less than high school	7	12.50%
High school diploma/GED	11	19.64%
Associates/2 year degree	11	19.64%
Bachelor's level	19	33.93%
Advanced degree	8	14.29%
Annual household income (n= 46)		
Less than $20,000	17	36.96%
$20,000 - 49,999	17	36.96%
$50,000 - $74,999	6	13.04%
$75,000 or more	6	13.04%

CHANGES IN INTENTION

Table 2. Changed mammography intention and other proxies

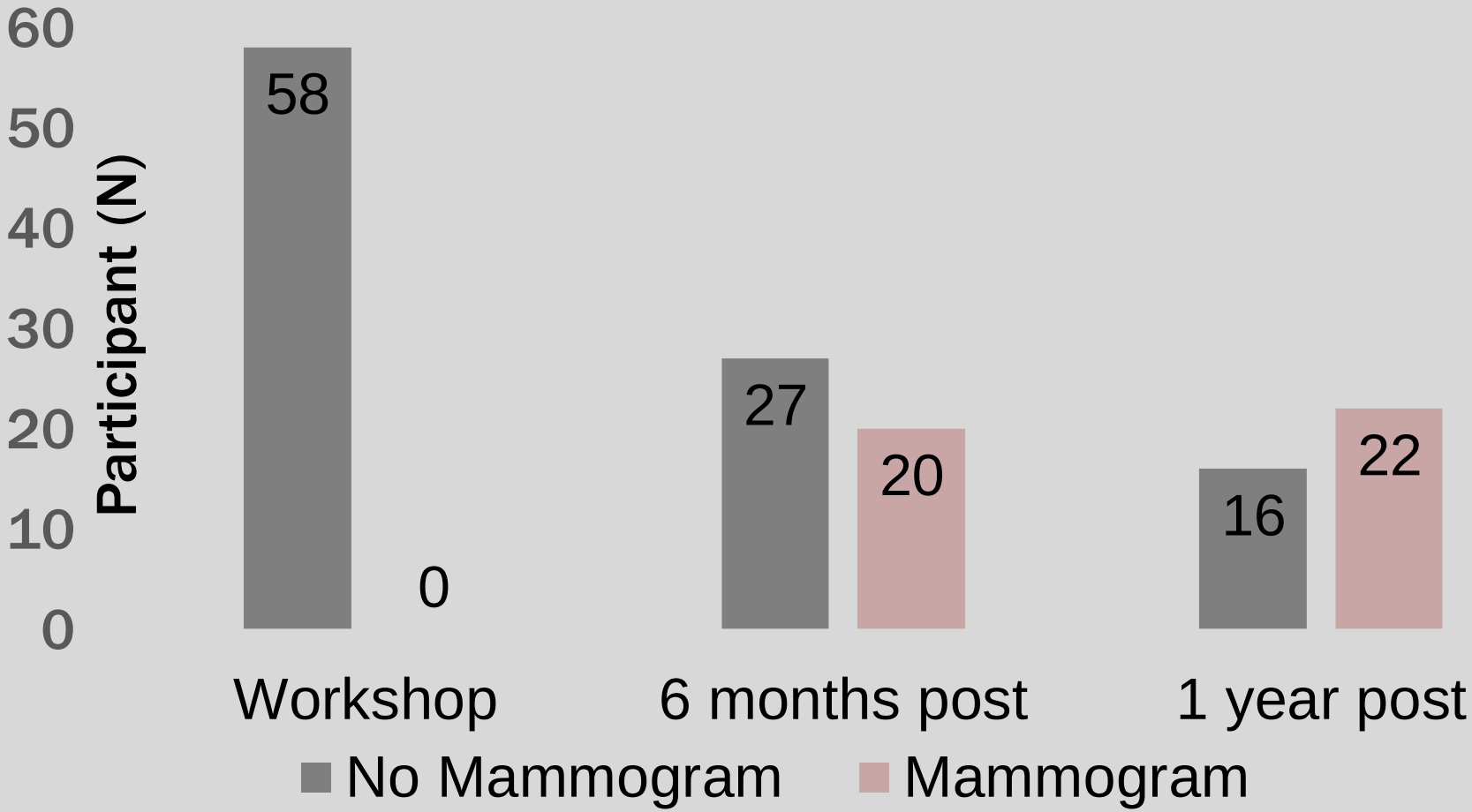
Measure	Mean Δ (P-Value)	
	Pre to Post	Pre to 6-month
Intention	0.19 (0.15)	0.04 (0.74)
Likelihood	0.29 (0.01)	0.20 (0.15)
Confidence	0.18 (0.25)	0.32 (0.08)

CHANGES IN BELIEFS AND KNOWLEDGE

Table 3. Mean change in mammography knowledge and aggregate belief score post-intervention, N = 58

Measure (Δ Scores)	Mean Δ (p-value)
Agreement with Facilitator Beliefs	0.92 (0.08)
Agreement with Barrier Beliefs	0.05 (0.94)
Mammography Knowledge	0.53 (0.0002)

MAMMOGRAPHY RECEIPT



Newsweek

HEALTH

MUSLIM WOMEN MORE LIKELY TO SKIP BREAST CANCER SCREENING, BUT MOSQUES CAN HELP

BY JESSICA FIRGER ON 9/26/17 AT 11:42 AM

Fifty percent of Muslim-American women over 40 undergo routine mammograms, compared with 67 percent of the rest of the U.S. female population. A pilot program in Chicago looked at whether mosque-based education programs could


Promo Video - Case & Problem
Watch later
Share

ENGAGING ISLAM IN THE PROJECT

- Study Design (religious identity)
  - Sampled women from various ethnicities from mosques
- Data Analysis (religious beliefs & values)
  - Sought beliefs (facilitators/barriers) to mammography intention by analyzing shared (salient & dominant) beliefs appearing across racial/ethnic diversity in the focus groups
- Intervention Design (religious community)
  - Set in mosque communities (group education classes + sermons)
  - Community Advisory Board of Muslim community stakeholders

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