

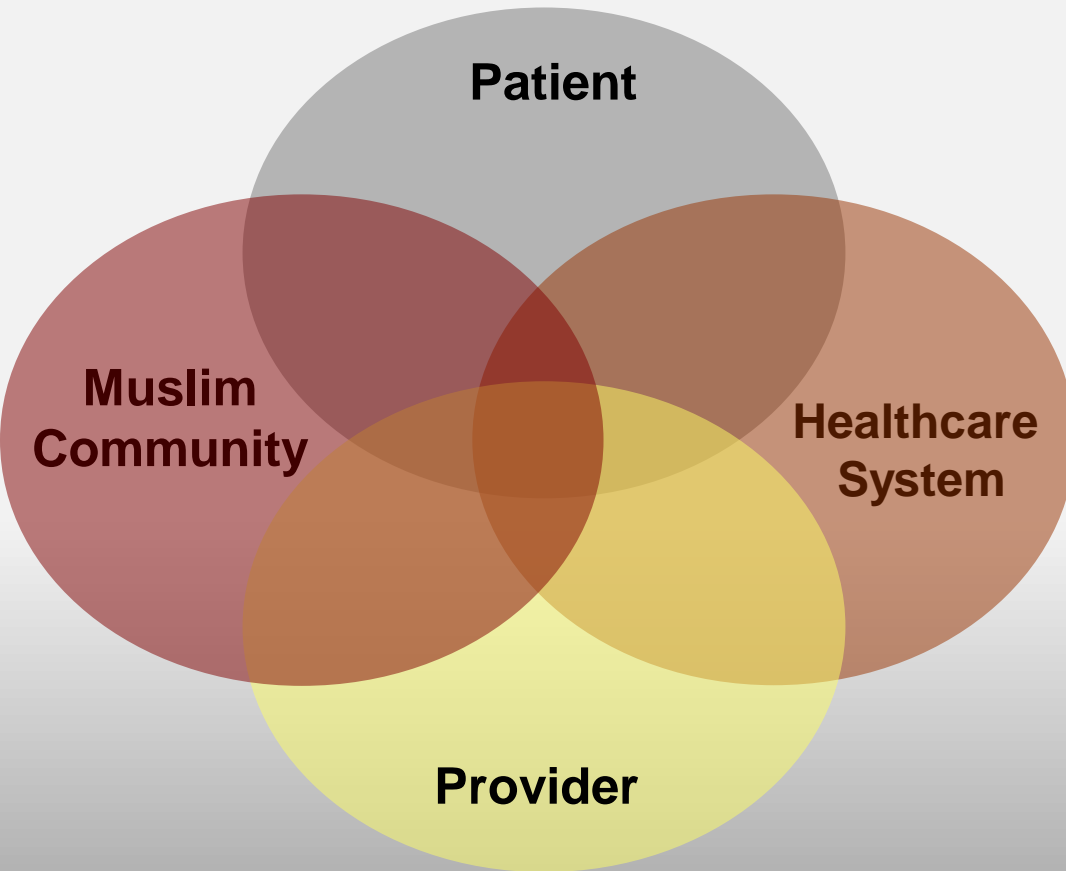
# Exploring Associations Between Breast Cancer Screening Practices & Religious Concepts among American Muslims

Aasim I. Padela MD MSc  
apadela@uchicago.edu

# Requests

- Feedback on research proposal
  - 3 areas
    - Measures [depth]
    - Sampling [breadth]
    - Data Analysis [implications & power]
- Suggestions on next steps
  - Aims for a K-award to NCI

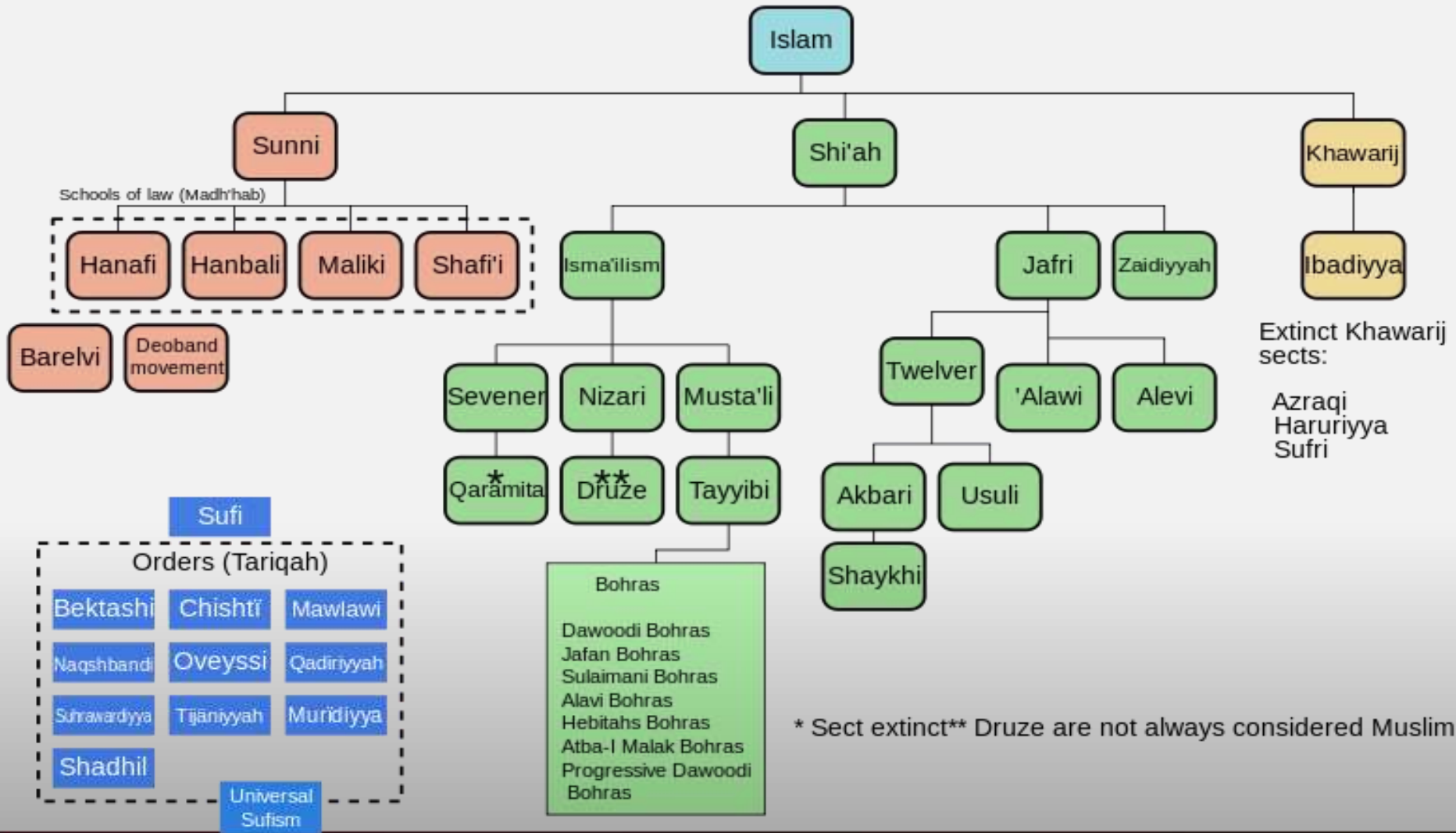
# Research Interests



- Islam influences
  - Patient Health Behaviors
  - Provider Practice of Medicine
  - Bioethical decision-making
- Cultural Accommodations
  - Who [What values] ?
  - How [to what extent] ?

# American Muslims

- Demographically Diverse
  - ~7 million
    - 20-24% Indigenous African American
    - 18-26% South Asian American
    - 24-26% Arab American
- Socio-economically Diverse
  - 65% Foreign-born, 35% Native
  - African Americans: lower socioeconomic strata, hx of racism
  - Arab & South Asians: skilled laborers, business owners



Extinct Khawarij sects:  
Azraqi  
Haruriyya  
Sufri

\* Sect extinct\*\* Druze are not always considered Muslim

# Islam & Health

- Gives meaning to health and disease
  - What constitutes disease
    - Pregnancy is a “blessing” → not in favor of contraception
  - Responses to disease
    - Cancer is fate → prevention not a priority

# Islam & Health

- Ethico-Legal System
  - Health behaviors
    - Reduced alcohol consumption → decreased health risk
  - Manner in which healthcare is received
    - Gender concordance → influence healthcare seeking patterns

# Islam & Health

- Identity
  - Post- 9/11 discrimination may influence health behaviors



# What is known about Breast Cancer in American Muslim community?

# Screening Guidelines

- NCI/ACS
  - Women 40 or older get mammograms q 1-2 yrs
- CDC & USPSTF
  - Women aged 50-74 get mammograms q 1-2 yrs
- Healthy 2020 Goal
  - 81.1% of females btw 50-74 get screened
- Clinical Breast Exam
  - Annually after age 40

# Breast Ca in All-Muslim samples

- 226 Muslim women aged >40 in Cali – 2005
  - 54% had a mammogram in past 2 yrs
  - Irani Muslims had lower rates (47%)
- 39 Muslim women (only 6 >40 yrs)
  - None had a mammogram
  - Only 1 practiced breast self-exam in past yr [32 had heard of it]

# Breast CA in Ethnic Samples

- 54 South Asian women in Canada
  - 38.5% had CBE ever
- 199 South Asian women in CHS
  - 39% had a mammogram in past 2 yrs
- 570 Arab women in MI
  - 68.9% had a mammogram in past 1 yr
- 365 Arab women in MI
  - 58.1% had a mammogram in past 2 yrs

# Summary

- Breast cancer screening (mammography & CBE) is underutilized in American Muslim population
- Some sociodemographic factors (access, education) may predict higher rates
- **NO EXPLICIT EXAMINATION OF RELIGIOUS FACTORS**

# Do Islamic Values and Beliefs Influence Breast Cancer Screening Practices?

## Islamic Values

- Modesty
- Fatalistic Belief

## Breast Cancer Screening

- Clinical Breast Exam
- Mammography Rates

# Gender concordance & Modesty

- Integral part of Islamic values & teaching
  - Physician-choice hierarchy
  - Regulations around seclusion & physical contact
- Influences healthcare-seeking behaviors

# Specific Aims

1. Determine breast cancer screening rates within the three major subpopulations of Muslims in Greater Chicago
  - Hypothesis: lower rates than recommended by Healthy People 2020



# Specific Aims

- Test measures of Islamic religiosity (modesty and fatalistic belief) and examine their associations with breast cancer screening
  - Hypotheses
    - Higher gender-concordance/modesty concerns → lower rates
    - Higher fatalistic beliefs → lower rates



# THE COUNCIL OF ISLAMIC ORGANIZATIONS OF GREATER CHICAGO

- Community-engaged model
  - CIOGC – umbrella organization of >40 mosques and organizations
  - Community Advisory Board
- Survey administration at partner sites
  - Mosques selected for ethnic composition
  - Social service organizations for heterogeneity on religiosity

# Outcome Measures

## Breast Cancer Screening Practices<sup>1</sup>

7. Have you ever had a clinical breast exam (a breast exam performed by a healthcare practitioner to check your lumps)?

<sub>1</sub> Yes

<sub>2</sub> No

8. Have you ever had a mammogram?

<sub>1</sub> Yes

<sub>2</sub> No

If YES → Was the mammogram performed within the last two years?

<sub>1</sub> Yes

<sub>2</sub> No

## Modesty

35. To what extent to you agree or disagree with each of the following statements:

**Completely agree**      **Somewhat Agree**      **Somewhat Disagree**      **Completely disagree**

a. Maintaining modesty is important to me

<sub>1</sub><sub>2</sub><sub>3</sub><sub>4</sub>

b. My clothing demonstrates a commitment to Islamic modesty.

<sub>1</sub><sub>2</sub><sub>3</sub><sub>4</sub>

c. I practice gender segregation when having a dinner party at home

<sub>1</sub><sub>2</sub><sub>3</sub><sub>4</sub>

d. An unmarried man and unmarried women should not be alone together

<sub>1</sub><sub>2</sub><sub>3</sub><sub>4</sub>

e. I always look for a female doctor for myself

<sub>1</sub><sub>2</sub><sub>3</sub><sub>4</sub>

f. Hospital gowns are not modest

<sub>1</sub><sub>2</sub><sub>3</sub><sub>4</sub>

g. I have delayed seeing a doctor when I know the doctor is male

<sub>1</sub><sub>2</sub><sub>3</sub><sub>4</sub>

# Independent Variables

- Sociodemographic predictors
  - Level of education, Marital status, Insurance status, US citizenship and length of US residency
- Islamic Religiosity measures (Organic)
  - Psychological Measure of Islamic Religiousness
    - Positive Religious Coping and Identification
    - Punishing Allah Reappraisal
  - Self-rating of Religiosity

- Which Fatalism Measures to Utilize?

# Fatalistic Belief Measures

- Religious Health Fatalism Questionnaire
  - 3 dimensions
    - Divine Provision, Destined Plan, Helpless Inevitability
    - Convergent with religiosity & external LOC
  - Developed in AA church going population
    - Less educated, older, and those with less income have higher fatalistic belief (less self-efficacy)\

## Religious Health Fatalism Questionnaire

36. To what extent do you agree with the following statements?

	<b>Completely agree</b>	<b>Somewhat Agree</b>	<b>Somewhat Disagree</b>	<b>Completely disagree</b>
a. If I just pray to Allah about my health, He will work it out	<input type="checkbox"/> <sub>1</sub>	<input type="checkbox"/> <sub>2</sub>	<input type="checkbox"/> <sub>3</sub>	<input type="checkbox"/> <sub>4</sub>
b. When I am sick, I give my burdens to Allah and let Him handle it	<input type="checkbox"/> <sub>1</sub>	<input type="checkbox"/> <sub>2</sub>	<input type="checkbox"/> <sub>3</sub>	<input type="checkbox"/> <sub>4</sub>
c. Allah will take care of my health because I have found favor in his sight	<input type="checkbox"/> <sub>1</sub>	<input type="checkbox"/> <sub>2</sub>	<input type="checkbox"/> <sub>3</sub>	<input type="checkbox"/> <sub>4</sub>
d. If Allah wants me to have better health, He will provide.	<input type="checkbox"/> <sub>1</sub>	<input type="checkbox"/> <sub>2</sub>	<input type="checkbox"/> <sub>3</sub>	<input type="checkbox"/> <sub>4</sub>
e. I don't worry about my health because it is in Allah's hands	<input type="checkbox"/> <sub>1</sub>	<input type="checkbox"/> <sub>2</sub>	<input type="checkbox"/> <sub>3</sub>	<input type="checkbox"/> <sub>4</sub>
f. If I am sick, I have to wait until it is Allah's time for me to be healed	<input type="checkbox"/> <sub>1</sub>	<input type="checkbox"/> <sub>2</sub>	<input type="checkbox"/> <sub>3</sub>	<input type="checkbox"/> <sub>4</sub>



**Completely agree**      **Somewhat Agree**      **Somewhat Disagree**      **Completely disagree**

g. When I have a health problem, I pray for Allah's will to be done.      <sub>1</sub>      <sub>2</sub>      <sub>3</sub>      <sub>4</sub>

h. As long as I stay focused in prayer, I will be healed of any sickness.      <sub>1</sub>      <sub>2</sub>      <sub>3</sub>      <sub>4</sub>

i. Spiritual people should accept whatever Allah has meant for them      <sub>1</sub>      <sub>2</sub>      <sub>3</sub>      <sub>4</sub>

k. I trust Allah, not man, to heal me.      <sub>1</sub>      <sub>2</sub>      <sub>3</sub>      <sub>4</sub>

l. If a person has enough faith, healing will occur without doctors having to do anything      <sub>1</sub>      <sub>2</sub>      <sub>3</sub>      <sub>4</sub>

m. Sometimes, Allah allows people to be sick for a reason      <sub>1</sub>      <sub>2</sub>      <sub>3</sub>      <sub>4</sub>

n. If I become ill, Allah has intended that to happen.      <sub>1</sub>      <sub>2</sub>      <sub>3</sub>      <sub>4</sub>

o. Whatever illnesses I will have, Allah has already planned it.      <sub>1</sub>      <sub>2</sub>      <sub>3</sub>      <sub>4</sub>

p. Sometimes someone can be ill because of disobedience to Allah

1234

q. I don't need to improve my health because I know it is up to Allah

1234

r. I can control a small health issue, but only Allah can control a big health issue.

1234

# Fatalism Measures Associated With Breast Cancer

- Modified Powe Fatalism Inventory [11 item]
  - Def<sup>n</sup> –Breast cancer is a death sentence
  - Tested in African American
    - Less educated, older, and those with no health insurance have higher fatalistic belief (less self-efficacy)
  - Higher fatalism → less screening (univariate)

40. To what extent do you agree with the following statements<sup>6</sup>?

	<b>Completely agree</b>	<b>Somewhat Agree</b>	<b>Somewhat Disagree</b>	<b>Completely disagree</b>
a. If someone is meant to have breast cancer, it doesn't matter what kinds of food they eat, they will get breast cancer anyway	<input type="checkbox"/> <sub>1</sub>	<input type="checkbox"/> <sub>2</sub>	<input type="checkbox"/> <sub>3</sub>	<input type="checkbox"/> <sub>4</sub>
b. If someone has breast cancer, it is already too late to get treated for it.	<input type="checkbox"/> <sub>1</sub>	<input type="checkbox"/> <sub>2</sub>	<input type="checkbox"/> <sub>3</sub>	<input type="checkbox"/> <sub>4</sub>
c. Someone can eat fatty foods all their life, and if they are not meant to get breast cancer, they won't get it.	<input type="checkbox"/> <sub>1</sub>	<input type="checkbox"/> <sub>2</sub>	<input type="checkbox"/> <sub>3</sub>	<input type="checkbox"/> <sub>4</sub>
d. If someone is meant to get breast cancer, they will get it no matter what.	<input type="checkbox"/> <sub>1</sub>	<input type="checkbox"/> <sub>2</sub>	<input type="checkbox"/> <sub>3</sub>	<input type="checkbox"/> <sub>4</sub>
e. If someone gets breast cancer, it was meant to be.	<input type="checkbox"/> <sub>1</sub>	<input type="checkbox"/> <sub>2</sub>	<input type="checkbox"/> <sub>3</sub>	<input type="checkbox"/> <sub>4</sub>
f. If someone gets breast cancer, their time to die is soon.	<input type="checkbox"/> <sub>1</sub>	<input type="checkbox"/> <sub>2</sub>	<input type="checkbox"/> <sub>3</sub>	<input type="checkbox"/> <sub>4</sub>

g. If someone gets breast cancer, that's the way they were meant to die.

 1 2 3 4

h. Getting checked for breast cancer makes people scared that they may really have it.

 1 2 3 4

i. If someone is meant to have breast cancer, they will have breast cancer.

 1 2 3 4

k. Some people don't want to know if they have breast cancer because they don't want to know they may be dying from it.

 1 2 3 4

l. If someone gets breast cancer, it doesn't matter whether they find it early or late, they will still die from the breast

 1 2 3 4

Completely  
agree

Somewhat  
Agree

Somewhat  
Disagree

Completely  
disagree

cancer.

m. If someone has breast cancer, and gets treatment for it, they will probably still die from the breast cancer.

 <sub>1</sub> <sub>2</sub> <sub>3</sub> <sub>4</sub>

n. If someone was meant to have breast cancer, it doesn't matter what doctors and nurses tell them to do, they will get breast cancer anyway.

 <sub>1</sub> <sub>2</sub> <sub>3</sub> <sub>4</sub>

o. If someone is meant to have breast cancer, it doesn't matter if they eat healthy foods, they will still get breast cancer.

 <sub>1</sub> <sub>2</sub> <sub>3</sub> <sub>4</sub>

p. Breast cancer will kill you no matter when it is found and how it is treated

 <sub>1</sub> <sub>2</sub> <sub>3</sub> <sub>4</sub>

# Fatalism Measures Associated With Breast Cancer

- FATE Index [7-item summed score]
  - Def<sup>n</sup> -Health issues are beyond human control
  - Tested in Chinese sample
    - Less educated, older, and those with less income have higher fatalistic belief (less self-efficacy)
  - Higher fatalism → less screening

# Analytic Plan

- Distribution of Breast Cancer Screening outcomes [binary]
- Internal consistency and correlations of
  - 3 fatalism measures
  - 4 measures of Islamic religiosity
  - 1 scale of modesty
- Bivariate analysis of sociodemographics and outcomes



# Analytic Plan

- Stepwise multivariate logistic regressions
  - Adding in measures of modesty, religiosity and fatalism
  - Adjusting for significant sociodemographics

# ***Acknowledgments***

- **Academic:**

- Farr Curlin MD
- Monica Peek MD MPH
- Chris Masi MD
- Funmi Olopade MD
- Nadiah Mohajir MPH

- **Community Team:**

- Zaher Sahloul MD
- Ahlam Jbara
- Ifrah Magan

# Questions

- Outcome measures
  - Ever had CBE or mammogram vs. guideline adherence?
  - Both guidelines?
- Fatalism measures
  - Different religious domains/construct
  - Untested in this population
  - Some correlate to breast cancer behaviors

# Questions

- Sampling and Population Diversity
  - Diversity in race/ethnicity
  - Religiosity
    - Gestalt vs. empirical
- Measure/Scale Refinement
  - How much pilot-testing for validity?

# Possible Next Steps

- Qualitative studies on Intervention Possibilities
  - Mosque-sermons about fatalism
  - Mosque-based mobile mammography vans

# Possible Next Steps

- Refine fatalism vs. determinism
  - FGs/interviews on teasing out construct and influencing of choices
  - In-depth study of theological basis underlying constructs → ? Mosque-sermons

# Possible Next Steps

- Pilot interventions?
  - Pre-post design?
  - Knowledge interventions?
- Population-based sampling
  - Construct dual-frame sampling models [census+community organizations?]
  - Naming algorithms+ ethnicity?
  - Use Pew studies