Understanding the Diverse Cultures and the Use of CAM in Muslim Populations
Hello!

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Objectives:

• Identify the Diversity within the Muslim Population.

• Recognize Nutritional Trends in the Muslim Population.

• Describe the Use of CAM in Muslim Populations

• Identify Culturally Appropriate Strategies useful in helping to Motivate behavior change in Muslim patients.
The Muslim Population is on a Rise.

**Muslims projected to be fastest-growing major religious group**

*Estimated percent change in population size, 2015-2060*

<table>
<thead>
<tr>
<th>Religion</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Muslims</td>
<td>+70</td>
</tr>
<tr>
<td>Christians</td>
<td>+34</td>
</tr>
<tr>
<td>Hindus</td>
<td>+27</td>
</tr>
<tr>
<td>Jews</td>
<td>+15</td>
</tr>
<tr>
<td>Folk religions</td>
<td>+5</td>
</tr>
<tr>
<td>Unaffiliated</td>
<td>+3</td>
</tr>
<tr>
<td>Other religions</td>
<td>0</td>
</tr>
<tr>
<td>Buddhists</td>
<td>-7</td>
</tr>
</tbody>
</table>

32% growth in overall global population

**Number of Muslims in the U.S. continues to grow**

*Number of Muslims in the U.S. (in millions)*

- **All ages**
  - 2007: 2.35M
  - 2011: 2.75M
  - 2017: 3.45M

- **Adults**
  - 2007: 1.50M
  - 2011: 1.80M
  - 2017: 2.15M

Note: U.S. Muslim population estimates reflect a correction made on Nov. 9, 2017.

Source: Pew Research Center estimates based on analysis of surveys of Muslim Americans in 2007, 2011 and 2017 combined with U.S. Census data.

“U.S. Muslims Concerned About Their Place in Society, but Continue to Believe in the American Dream”

PEW RESEARCH CENTER

Diversity within the Muslim Population

<table>
<thead>
<tr>
<th>Region</th>
<th>% of World’s Muslim Population in 2010</th>
<th>% of World’s Muslim Population in 2050</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asia-Pacific</td>
<td>61.7%</td>
<td>52.8%</td>
</tr>
<tr>
<td>Middle East-North Africa</td>
<td>19.8%</td>
<td>20.0%</td>
</tr>
<tr>
<td>Sub-Saharan Africa</td>
<td>15.5%</td>
<td>24.3%</td>
</tr>
<tr>
<td>Europe</td>
<td>2.7%</td>
<td>2.6%</td>
</tr>
<tr>
<td>North America</td>
<td>0.2%</td>
<td>0.4%</td>
</tr>
<tr>
<td>Latin America-Caribbean</td>
<td>&lt; 0.1%</td>
<td>&lt; 0.1%</td>
</tr>
<tr>
<td>World</td>
<td>100.0%</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

Source: The Future of World Religions: Population Growth Projections, 2010-2050. Figures may not add to 100% because of rounding.

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http://www.pewforum.org/2015/04/02/muslims/
A majority of Muslims globally are not from the Middle East... Not all Muslims are Arab and Not all Arabs are Muslim.
## 10 Countries With the Largest Muslim Populations, 2010 and 2050

<table>
<thead>
<tr>
<th>Rank</th>
<th>Country</th>
<th>2010 Muslim Population</th>
<th>% of World's Muslim Population in 2010</th>
<th>2050 Muslim Population</th>
<th>% of World's Muslim Population in 2050</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Indonesia</td>
<td>209,120,000</td>
<td>13.1%</td>
<td>1 India</td>
<td>310,660,000</td>
</tr>
<tr>
<td>2</td>
<td>India</td>
<td>178,630,000</td>
<td>11.9%</td>
<td>2 Pakistan</td>
<td>273,110,000</td>
</tr>
<tr>
<td>3</td>
<td>Pakistan</td>
<td>167,410,000</td>
<td>1.5%</td>
<td>3 Indonesia</td>
<td>256,820,000</td>
</tr>
<tr>
<td>4</td>
<td>Bangladesh</td>
<td>134,430,000</td>
<td>8.4%</td>
<td>4 Nigeria</td>
<td>230,700,000</td>
</tr>
<tr>
<td>5</td>
<td>Nigeria</td>
<td>77,300,000</td>
<td>4.8%</td>
<td>5 Bangladesh</td>
<td>182,360,000</td>
</tr>
<tr>
<td>6</td>
<td>Egypt</td>
<td>76,990,000</td>
<td>4.8%</td>
<td>6 Egypt</td>
<td>119,530,000</td>
</tr>
<tr>
<td>7</td>
<td>Iran</td>
<td>73,570,000</td>
<td>4.6%</td>
<td>7 Turkey</td>
<td>89,320,000</td>
</tr>
<tr>
<td>8</td>
<td>Turkey</td>
<td>71,330,000</td>
<td>4.5%</td>
<td>8 Iran</td>
<td>86,190,000</td>
</tr>
<tr>
<td>9</td>
<td>Algeria</td>
<td>34,730,000</td>
<td>2.2%</td>
<td>9 Iraq</td>
<td>80,190,000</td>
</tr>
<tr>
<td>10</td>
<td>Morocco</td>
<td>31,930,000</td>
<td>2.0%</td>
<td>10 Afghanistan</td>
<td>72,190,000</td>
</tr>
</tbody>
</table>

**Subtotal**

<table>
<thead>
<tr>
<th>Subtotal for Rest of World</th>
<th>Subtotal</th>
<th>1,053,010,000</th>
<th>65.8%</th>
<th>Subtotal for Rest of World</th>
<th>1,701,070,000</th>
<th>61.6%</th>
</tr>
</thead>
</table>

**World Total**

| World Total | 1,599,700,000 | 100.0% | World Total | 2,761,480,000 | 100.0% |

Source: The Future of World Religions: Population Growth Projections, 2010-2050. Population estimates are rounded to the nearest 10,000. Percentages are calculated from unrounded numbers.

PEW RESEARCH CENTER

http://www.pewforum.org/2015/04/02/muslims/
Muslims in the US

- 3.3 million Muslims in the U.S.
- A majority (63%) are immigrants
  - 40% of these immigrants are from the Middle East-North Africa
  - 14% are from Pakistan.
- 70% of Muslim immigrants are U.S. citizens.
- Among American-born Muslims,
  - 50% African American (20% of U.S. Muslims overall),
  - 15% of American-born Muslims are 2nd generation,
  - while 22% are 3rd generation or more.

Ten counties with the largest Muslim populations

<table>
<thead>
<tr>
<th></th>
<th>Muslims adherents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cook (Ill.)</td>
<td>201,152</td>
</tr>
<tr>
<td>Harris (Texas)</td>
<td>117,148</td>
</tr>
<tr>
<td>Kings (N.Y.)</td>
<td>95,126</td>
</tr>
<tr>
<td>Dallas (Texas)</td>
<td>84,256</td>
</tr>
<tr>
<td>Queens (N.Y.)</td>
<td>81,456</td>
</tr>
<tr>
<td>Los Angeles (Calif.)</td>
<td>69,080</td>
</tr>
<tr>
<td>Wayne (Mich.)</td>
<td>67,775</td>
</tr>
<tr>
<td>DuPage (Ill.)</td>
<td>59,821</td>
</tr>
<tr>
<td>Fairfax (Va.)</td>
<td>50,108</td>
</tr>
<tr>
<td>New York (N.Y.)</td>
<td>42,545</td>
</tr>
</tbody>
</table>

Second Largest Religious Tradition in Each State, 2010
(Christianity remains the largest religious tradition in every state)

© Association of Statisticians of American Religious Bodies, 2012
© 2010 U.S. Religion Census: Religious Congregations & Membership Study
Designed by Research Services using ESRI ArcMap 10.0

Religious Tradition
- Baha’i (1 state)
- Buddhist (13)
- Hindu (2)
- Islam (20)
- Judaism (15)
In addition to the ethnic diversity, we need to consider...

Education
Acculturation
Income
Occupation
Religiosity

Learning to listen
However Many Muslims Share Religious Traditions

- Prayer 5 times a day
- Fasting the month of Ramadan
- Adhering to the Halal Diet
- Adhere to constructs of Modesty
Fasting

- Ramadan: 9th Month in the Islamic Calendar
- Traditionally Muslims abstain from:
  - Eating
  - Drinking
  - Smoking
  - Sexual Intercourse
- From Sun Rise to Sun Set.
- Exceptions are made for those who are too young, too old, pregnant, breastfeeding, sick or traveling
- Supplemental Fasting: Some Muslims choose to fast
  - Monday & Thursday,
  - 13th, 14th and 15th of each Islamic Month
MIDAN Ramadan Toolkit

The MIDAN Ramadan Toolkit is your one-stop resource for providing culturally friendly food and nutrition services to Muslim individuals.

- SKU MIDAN-Toolkit

Member Price
$25.00

Nonmember Price
$35.00

Qty: 1

Add To Cart

Nutrition Trends in Muslim Communities

Diabetes

Obesity

Vitamin D Deficiency
Diabetes Disparities among the Muslim population

Six of the top twenty countries in the world with the highest percentages of diabetes have a large Muslim population including India, Egypt, Bangladesh, Saudi Arabia, Bahrain, and the United Arab Emirates.

International Diabetes Federation Diabetes Atlas

http://www.diabetesatlas.org/resources/2017-atlas.html
Diabetes Disparities among the Muslim population

The number of American Muslims suffering from Diabetes is unknown however with the high rate of diabetes among minority populations in the United States such as African Americans (13.2%, 1.7x higher than non-Hispanic whites) and Hispanics (16%) it can be assumed that American Muslims also have a disproportionately high number of diabetics in this population.
Fasting during Ramadan with Diabetes

“A Population-Based Study of Diabetes and Its Characteristics During the Fasting Month of Ramadan in 13 Countries

Results of the Epidemiology of Diabetes and Ramadan 1422/2001 (EPIDIAR) study

OBJECTIVE — The aim of this study was to assess the characteristics and care of patients with diabetes in countries with a sizable Muslim population and to study diabetes features during Ramadan and the effect of fasting.

RESEARCH DESIGN AND METHODS — This was a population-based, retrospective, transversal survey conducted in 13 countries. A total of 12,814 patients with diabetes were recruited using a stratified sampling method, and 12,243 were considered for the analysis.

RESULTS — Investigators recruited 1,070 (8.7%) patients with type 1 diabetes and 11,173 (91.3%) patients with type 2 diabetes. During Ramadan, 92.8% of patients with type 1 diabetes and 78.7% with type 2 diabetes fasted for at least 15 days. Less than 50% of the whole population observed an absolute fast (no food or water) between dawn and sunset 1 lunar month a year (the Holy Month of Ramadan). Indeed, fasting is one of the five pillars of Islam. However, when fasting may significantly affect the health of the faster or when a subject is sick, Islam exempts that person from fasting. However, a significant number of patients persist in fasting against the advice of their doctors and the permission of religious authorities.

Although several large epidemiological studies have been performed in Asia (2–4), the Middle East (5,6), and in the Maghreb countries (7,8), there is still a lack of information about the standard management of diabetes in the Muslim world. However, these previous studies have not specifically addressed diabetes...

“...prevalence estimates of fasting during Ramadan as 43% for type 1 diabetes mellitus and 86% for T2DM...”
Obesity in Muslim Populations


The boundaries and names shown and the designations used on this map do not imply the expression of any opinion whatsoever on the part of the World Health Organization concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted and dashed lines on maps represent approximate border lines for which there may not yet be full agreement. The borders of the map provided reflect the current political-geographic status as of the date of publication (2017). However, the technical health information is based on data accurate with respect to the year indicated (2016). These differences in time arrangement should be noted but no implications regarding political or territorial status should be drawn from this arrangement as it is purely a function of technical and graphical limitations.

http://www.who.int/gho/ncd/risk_factors/overweight/en/

http://www.who.int/gho/ncd/risk_factors/overweight_obesity/obesity_adults/en/
Rise of Obesity in MENA countries

- #10 United Arab Emirates – 31.7%
- #9 Lebanon 32.0%
- #8 Egypt – 34.6%
- #7 Turkey 32.1%
- #6 Libya 32.5%
- #5 Qatar – 35.1%
- #4 Saudi Arabia – 35.4%
- #3 Jordan – 35.5%
- #2 United States – 36.2%
- #1 Kuwait – 37.9%

Vitamin D Deficiencies in Muslim Women
“However, even in the sunniest areas, vitamin D deficiency is common when most of the skin is shielded from the sun. In studies in Saudi Arabia, the United Arab Emirates, Australia, Turkey, India, and Lebanon, 30 to 50% of children and adults had 25-hydroxyvitamin D levels under 20 ng per milliliter.”
The vitamin D status was found to be statistically significant and had a negative correlation with the duration of Islamic dressing…
Use of CAM in the Muslim population

Medicinal Fruits in Holy Quran

Hamid Farhangi1, Maryam Ajilian2, *Masumeh Saeidi3, Gholam Hasan Khodaei4

1Assistant Professor of Pediatric Oncology, Department of Pediatrics, Faculty of Medicine, Mashhad University of Medical Sciences, Mashhad, Iran.
2 Ibn-e-Sina Hospital, Mashhad University of Medical Sciences, Mashhad, Iran.
3 Students Research Committee, Faculty of Medicine, Mashhad University of Medical Sciences, Mashhad, Iran.
5Head of the Health Policy Council, Mashhad University of Medical Sciences, Mashhad, Iran.

Abstract

Fruits are one of the oldest forms of food known to man. There are many references to fruits in ancient literature. According to Quran, the fruits like grape, date, fig, olive and pomegranate are gifts and heavenly fruits of God. Fresh and dry fruits are the natural staple food of man. They contain substantial quantities of essential nutrients in a rational proportion. Persons subsisting on this natural diet will always enjoy good health.

- Foods mentioned in the Quran: dates, honey, olives, figs, milk, grapes, water, beans, lentils, onion, wheat, pumpkin and squash and pomegranate
- Prayer as Healing
Generally Muslims come from diverse backgrounds and do not have specific foods that are culturally relevant to all of them. However most Muslims hold in high esteem the foods that were mentioned in the Quran or were told to be a part of Prophet Mohamed’s diet. By their reference in the Quran many Muslims believe that these foods have additional benefit as they were mentioned by the Creator.

- Also the use of ZamZam water or water that has Quran recited on it has been used in some populations as CAM.
Diversity of CAM in the Muslim population

- **CAM used in Saudi Arabian population**
  - ZamZam water, cinnamon, black seeds oil

- **CAM used in Jordanian population**
  - honey, olive oil, black seeds, and dates

- **CAM used in Malaysian population**
  - Bitter gourd, Misai Kuching, Garlic, Sabah Snake grass, Basil leaf, Ginseng
Nutrition in Islamic Tradition

- In the Quran it says

- “Eat and drink, but avoid excess” (20:81)

- “Eat of what is lawful and wholesome on the earth” (2:168).

- Prophet Mohamed encouraged moderate eating with his famous saying (Hadeth) to divide your stomach into three parts –
  - one for food
  - one for water
  - one for air

Al-Miqdaam ibn Maidly-Karib (RA) reported: I heard the Messenger of Allah (PBUH) saying:

“No human ever filled a vessel worse than the stomach. Sufficient for any son of Adam are some morsels to keep his back straight. But if it must be, then one third for his food, one third for his drink and one third for his breath.”

[Ahmad, Al-Tirmidhi, An-Nasa’i, Ibn Majah]
Factors affecting Disease Management In the Muslim Population

Gender Based Challenges

- Lack of physical activity among women
- Reluctance of female patients to visit male doctors and practitioners
- Reluctance of female patients to expose skin for insulin injection
Factors affecting Disease Management In the Muslim Population

Diet Related Challenges

- Prolonged fasting periods in Ramadan followed by feasting
- Excessive use of honey and dates
- Use of high fat foods in everyday cuisine
- Rude to refuse food – nourishment culture, families eat together with elderly people feeding/encouraging the children to eat more
Factors affecting Disease Management In the Muslim Population

“ Physical activity related challenges

- Limited outdoor activities for patients, especially females
- Sedentary lifestyle during Ramadan
Factors affecting Disease Management In the Muslim Population

"Acceptance of diagnosis and therapy"

- Use of traditional Islamic medicine
- Lack of faith in Modern Medicine
- Assuming that disease is a form of God’s test or punishment. The idea that illness cleanses sins.
- Considering insulin a forbidden substance
- Not using insulin injections because they may cause disease
Factors affecting Disease Management In the Muslim Population

<table>
<thead>
<tr>
<th>Barrier Affecting Muslim patients</th>
<th>Alternative motivating factors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender Based Challenges</td>
<td>Aim to provide same gender counseling for patient when possible. Counsel patient in a private room where they may be comfortable to expose skin for injection practice. Bring in family members to provide support for female patients.</td>
</tr>
<tr>
<td>Diet Related Challenges</td>
<td>Work with patients to understand what foods are staples in their individual diets and provide strategies on portion sizing carbohydrate dense foods like honey and dates. Encourage patients to have tight glycemic control prior to Ramadan and use fasting Ramadan as the reward (if medically possible).</td>
</tr>
</tbody>
</table>
Factors affecting Disease Management In the Muslim Population

<table>
<thead>
<tr>
<th>Barrier Affecting Muslim patients</th>
<th>Alternative motivating factors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical Activity Related Challenges</td>
<td>Discussing the need for some sun exposure while maintaining modesty is a good opportunity for</td>
</tr>
<tr>
<td></td>
<td>suggesting physical activity and the need for routine exercise to help reduce insulin resistance.</td>
</tr>
<tr>
<td></td>
<td>Helping patients understand the relationship between exercise and insulin resistance can help</td>
</tr>
<tr>
<td></td>
<td>motivate them to be more physically active.</td>
</tr>
</tbody>
</table>
Factors affecting Disease Management In the Muslim Population

<table>
<thead>
<tr>
<th>Barrier Affecting Muslim patients</th>
<th>Alternative motivating factors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acceptance of diagnosis and therapy</td>
<td>Reminding the Muslim patient that Prophet Mohamed was open to modern medicine of his time and he encouraged to follow in his footsteps. He was noted for saying that a diseased body cannot fulfill religious obligations or pray.</td>
</tr>
</tbody>
</table>
Practice Applications

- Identify the different cultural groups that you tend to work with and educate yourself on their customs, cultural beliefs and motivators related to health care.

- Work on creating an actual cross-cultural exchange with your patients.

- Help your entire agency by setting processes and policies of cultural competence
Thanks!

WHAT QUESTIONS DO YOU HAVE?

You can find me at

- elnakib@njaes.Rutgers.edu
DIFM Diversity Committee
Miho Hatanaka, RDN -Chair
Rita Batheja, MS, RDN, CDN, FAND, AFMCP
Denine Rogers, MS, RDN LD, FAND

DIFM Diversity Efforts
• Diversity Webinar Series
• Diversity Stipend
• Multicultural Resources at https://integrativerd.org/diversity/

Got ideas for multicultural awareness in DIFM? Please contact Miho at mihohatanakaRDN@gmail.com
DIFM Diversity Webinar Series

Possessed by PMS? Nutrition, Ayurveda and Yoga maybe the solution!

Presented by: Pushpa Soundararajan, RDN, LD, MBA, AHE, AFNC
Thursday, May 17th, 2018
8 – 9 pm ET
1 CPEU
Free Registration at: https://bit.ly/2vsQiPJ