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Factors and scenarios influencing Arab Americans' preference for male versus female physicians

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Abstract: As the Arab American community sees an increase in female physicians, knowledge of patients' perceptions is necessary to foster the physician-patient relationship. The objective of this study was to better understand physician gender preference among Arab Americans when given a range of selected medical scenarios. An anonymous survey was distributed electronically through social media. The survey elicited gender preferences of Arab Americans given different scenarios. Data was collected from 325 participants. No physician gender preference was noted for 6 out of 7 scenarios with the exception for sensitive medical issues. Same-sex gender preference was noted in the cases of sensitive medical issues, routine medical visits, medical emergencies, and minor medical procedures. Predominant visitations to male physicians across specialties was found. The current study shows that although most Arab Americans expressed no preference for physician gender, the majority currently visit male physicians. The study highlights similarities to other populations in terms of same-sex physician gender preference when it comes to patient choices. Our study shows, however, that physicians' experience and empathy were leading criteria as opposed to gender or Arab identity when it came to physician selection by Arab American patients.

Keywords: Physician gender ■ Patients preferences ■ Arab Americans ■ Social medicine

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INTRODUCTION

In the United States, the number of women physicians has increased nine-fold from 35,636 women in 1975 to 333,294 in 2013[1]. In 2015, almost half of all residents and fellows in the US were females and nearly a third of active U.S. licensed physicians were female[2, 3]. Although the gender distribution of physicians has become increasingly equitable, literature studies continue to report high rates of gender discrimination targeting female physicians[4]. Patients' medical visits experiences vary based on the gender of the physicians and patients' pre-existing preferences[5]. Despite more studies showing that female physicians use a patient-centered approach and spend more time with patients, they are still evaluated as less favorable than their male colleagues[6,7]. With the emergence of more women in medicine, the concept of gender preference of physicians among patients has been a topic of great interest. Some research has been conducted on how characteristics and stereotypes of each gender affect the preference of patients. Others focused on how cultural expectation or other factors of gender roles affect the preference. Some studies have shown that characteristics like humaneness and comprehensiveness were top priorities when looking for a physician, while technical competence was lower in priority, regardless of gender[8]. There is also evidence that patients hold different expectations for male and female physicians and that same-sex physician-patient interactions may have more effective communication and stronger connections than opposite-sex interactions[9]. This idea is important to explore as some studies show that the preference of one gender over another can delay necessary procedures and represent a barrier for screening. For instance, one study showed that women prefer women physicians when it comes to performing endoscopic procedures and preventative screening for colon cancer and this preference is strong enough to delay the procedure[10].

Despite historical gender bias against female physicians, although some literature looked at the role of gender preference in Muslim communities, there is no existing literature that has investigated patients' physician gender preference within the Arab American community[11,12,13]. It is often assumed that due to religious and cultural stereotypes that Arabs often embrace a patriarchal view of medicine. As the Arab American community sees an increase in female physicians, knowledge of patients' perceptions is necessary to foster the physician-patient relationship. The unique Arab American patient-physician relationship and its impact on patient physician gender preference is one that has not been yet explored. We do not

know how such factors affect physician gender preference. The aim of this study is to identify Arab American patients' physician gender preference when given a range of selected medical scenarios and specialties, and to identify patient demographics associated with these preferences.

METHODS

This cross-sectional study was determined to be exempt from Institutional Review Board (IRB) review at the University of Michigan in accordance with federal regulations. An anonymous online survey was conducted to better understand the physician gender preferences of Arab Americans given six different scenarios: routine visit, emergency visit, sensitive medical visit, minor surgical/procedural visit, major surgical/procedural visit, bad news delivery, and pediatric visit. The survey was adapted from an existing survey that assessed patient preferences for physician genders in the emergency room[14]. The survey consists of 18 questions and required approximately 5–10 min to complete. The survey link was available in both English & Arabic languages and online consent was obtained from all participants. Subjects were recruited through online Arab American social media groups. Responses were collected between February and August 2017. Non-Arab Americans as well as Arab Americans under the age of 18 were excluded. No monetary compensation was offered for participation. Data analysis was performed using SAS 9.4. Univariate analysis of data included percentages. Categorical variables and data were analyzed using the chi-squared test and likelihood ratio chi-square as appropriate.

RESULTS

A total of 325 Arab American, age 18 and above, participated in the study between February 2017 and August 2017. Characteristics of study participants are summarized in Table 1. Participants included 233 females and 92 males. 66% of the participants identified Lebanon as their country of origin followed by 10% identifying Yemen and 9% identifying Iraq. The average age for study participants was 28.6 years old (SD +/- 10.2) with 51% of participants falling in the 18–25 age group, 31% falling in the 26–35 age group and 18% in the over 35 age group. 90% of participants identified as Muslims. Regarding highest level of education, 61% of participants have completed college and post-college degrees. Lastly, the average number of years lived in the United States was 21.5 years (SD +/- 9.2). 14% of participants reported living in the USA for 10 years or less, 37% reported 11–20 years, 33% reported 21–30 years and 16% reported living in the USA for over 30 years.

Physician gender preference was assessed for all participants based on 7 different clinical scenarios as highlighted in Table 2. Over 74% of participants had no preference for the gender of their physician when it came to medical emergencies, a minor medical procedure, a major medical procedure, receiving bad news or pediatrician preference. Of those who made a preference for these 5 scenarios, the preference was between 2 to 10% higher for females except in the case of a major medical procedure where 20% of participants preferred the male physician as compared to 5% preference for the female physician. Otherwise, in the remaining 2 clinical scenarios: For sensitive medical issues 19% preferred a male physician, 61% preferred a female physician and 20% had no preference. For routine / non-emergency medical visits, 13% preferred a male physician, 33% preferred a female physician and 55% had no preference.

Fig. 1 highlights physician gender preference for the 7 clinical scenarios, described in Table 2, by participant gender. Statistically significant differences between gender preference distribution were noted in the cases of routine medical visits, medical emergencies, sensitive medical issues, and choice of pediatrician. Regarding the first three, males had a stronger preference for male physicians and females had a stronger preference for female physicians. Note that regarding sensitive medical issues, 82% of females preferred a female provider compared to 55% of males preferring a male provider. Regarding the choice of pediatrician, both males and females reported a higher preference for a female pediatrician with 27% and 15% female preference as compared to 7% and 8% respectively. No significant differences were noted for physician preference between male and female participants for a minor medical procedure, a major medical procedure or receiving bad news. Both males and females reported a higher preference for a male physician for a major medical procedure with 26% and 18% male preference as compared to 2% and 6% respectively. Analysis by age was also conducted to further understand physician gender preference in this community. Physician preference for participants under or equal to 25 years old was compared to those over 25 years old. Physician preference in only 2 of the 7 scenarios was noted to be different by age ($p<0.05$). The first is regarding physician choice for a major medical procedure where 14% of those under or equal to 25 years old reported a male preference. This number went up to 27% in those over the age of 25. The second scenario is regarding the choice of pediatrician. 23% of those under or equal to 25 reported a preference for a female pediatrician as compared to 5% preferring a male pediatrician. The

Table 1. Characteristics of Participants. Demographics distribution for gender, country of origin, age, religion, education, and number of years in the United States for Arab Americans who participated in the study between February 2017 and August 2017. All values represent the total number of participants for the respective characteristic with the percentage among all participants between parentheses.

		Participants ($n = 325$)
Gender	Male	92 (28.3)
	Female	233 (71.7)
Country of Origin	Lebanon	213 (65.5)
	Iraq	30 (9.2)
	Yemen	31 (9.5)
	Palestine	21 (6.5)
	Syria	13 (4.0)
	Other	17 (5.2)
Age	18–25	167 (51.4)
	26–35	99 (30.5)
	36–45	34 (10.5)
	46 and over	25 (7.7)
Religion	Muslim	293 (90.2)
	Christian	22 (6.8)
	Atheism	4 (1.2)
	Other	6 (1.9)
Education	Less Than & Equal to High School	85 (26.2)
	More than High School But no college degree	41 (12.6)
	College graduate	125 (38.5)
	Post-College Degree (Masters/PhD)	74 (22.8)
Number of Years in the United States	Less than & equal to 10 years	44 (13.5)
	11–20 years	121 (37.2)
	21–30 years	107 (32.9)
	Over 30 years	53 (16.3)

Data is n (%).

All P-values are <0.0001.

differences became negligible in those over 25 years old with 13% preferring a female and 11% preferring a male pediatrician.

Participants were also asked about their opinions on the most important characteristic for a choice of a physician. Results for this question are highlighted in Table 3. 66% chose age or years of experience as the single most important characteristic for choice of physician. This was followed by medical school or residency training at 11%, followed by personality and competence at 6% each. Note that only 2% of participants reported the importance of having an Arab race or ethnicity for a choice of a physician.

Lastly, Table 4 highlights the gender distribution for visited physicians by 15 specialties in all participants. For 12 out of the 15 specialties, between 47 and 89% of participants indicated "Not applicable" to the addressed specialty. Participants were asked to select "Not applicable" if they have not seen a physician of the respective specialty. For the remaining 3 out of the 15 categories, 2%, 14% and 24% reported "Not applicable" for family/primary care physician, pediatrician, and emergency

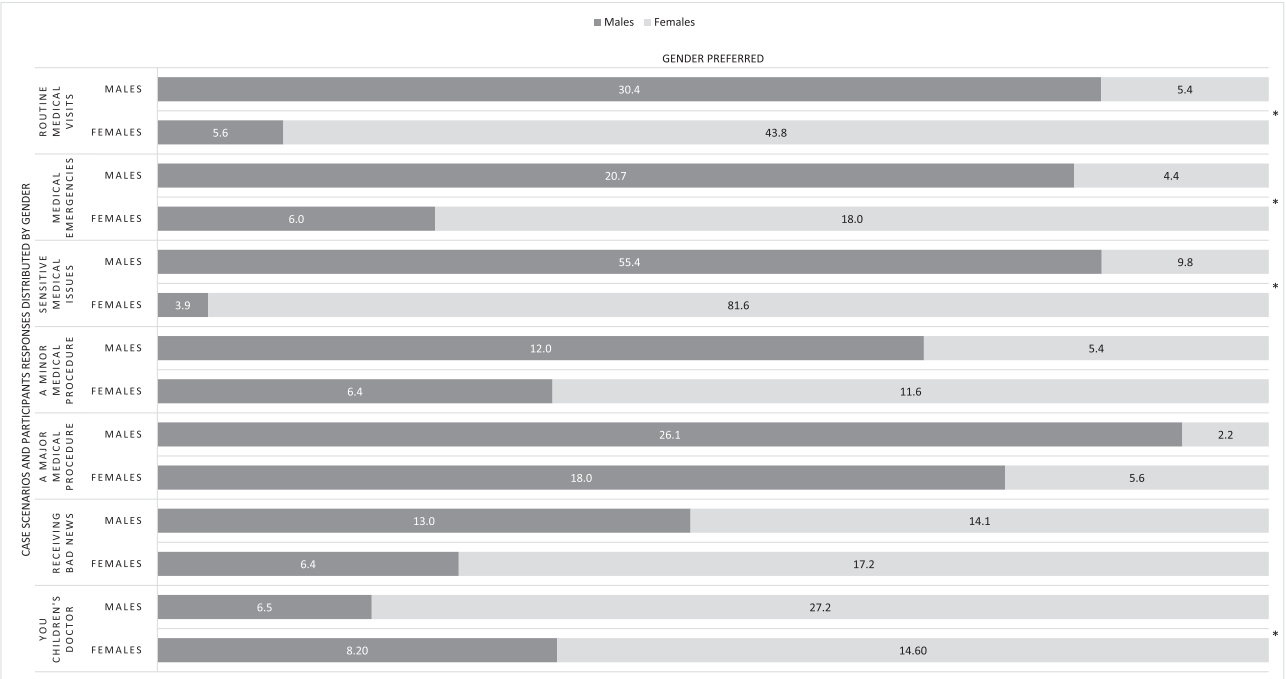
Table 2. Gender Preference Based on Scenarios. Gender preference distribution for study participants when it comes to scenarios addressing various medical specialties as routine medical visits, medical emergencies, sensitive medical issues, minor and major medical procedures, receiving bad news, or children's doctor. All values represent the total number of participants selecting the specific gender or no gender preference per scenario with the percentage among all participants between parentheses.

What Gender Do You Prefer For:	Male	Female	No Preference
Routine/non-emergency medical visits	41 (12.6)	107 (32.9)	177 (54.5)
Medical Emergencies	33 (10.2)	46 (14.2)	246 (75.7)
"Sensitive" medical issues (genital problem, OB/GYN problem or sexual problem)	60 (18.5)	199 (61.2)	66 (20.3)
A minor medical procedure (draining an abscess or stitches)	26 (8.0)	32 (9.9)	267 (82.2)
A major medical procedure (open heart surgery or removing a brain tumor)	66 (20.3)	15 (4.6)	244 (75.1)
Receiving "bad news" (diagnosis of a life-threatening illness or notification about the unexpected death of a family member)	27 (8.3)	53 (16.3)	245 (75.4)
You children's doctor (pediatrician)	25 (7.7)	59 (18.2)	241 (74.2)

Data is n (%).

All P-values are <0.0001.

Fig. 1. Physician Gender Preference Based on Scenarios Distributed by Gender. Gender preference distribution for study participants by study participants' gender when it comes to scenarios addressing various medical specialties as
* $p < 0.05$.



* p <0.05

Table 3. Percentages for Most Important Physician Characteristics. Physician characteristics that study participants viewed as important ordered from most important to least important. Values represent the total number of participants selecting the specific physician characteristic with the percentage among all participants between parentheses.

Which physician characteristic is most important to you?	n (%)
Age / Years of Experience	214 (65.9)
Medical School/Residency Training	37 (11.4)
Personality / Empathy	18 (5.5)
Competence / Knowledge	18 (5.5)
Location	14 (4.3)
Gender	11 (3.4)
Others	7 (2.2)
Arab Race / Ethnicity	6 (1.9)
Data is n (%)	

medicine physician respectively. Regarding gender preference among specialties, statistically significant differences between genders visited was found in all specialties except for psychiatry, oncology, and urology. Aside from those 3, there was a predominant visitation to male physicians across specialties with gap ranging between around 20 to 60% when compared to female physicians visited for each respective specialty. The one exception to this was for obstetrics and gynecology where 58% have visited a female Ob/Gyn physicians when compared to 17% who visited a male Ob/Gyn. Note however, in terms of the 12 statistically significant specialties visited, between 15 and 27% of participants reported having visited both genders. For emergency medicine though, the percentage of participants reporting visiting both genders was up to 54%. When participant gender was taken into consideration, only visits for family / primary care physicians was statistically different by gender. 41% of female participants had visited a male primary care physician when compared to 33% for female primary care physicians reflecting less than a 10% gender gap. In contrast, 66% of males had visited a male primary care physician when compared to only 17% who visited a female primary care physician, reflecting an almost 50% gender gap.

DISCUSSION

Our findings show that overall, predominantly, there was no preference (74–82%) for physician gender in cases of medical emergencies, minor medical procedures, major medical procedures, receiving bad news or pediatrician of choice. These findings are relatively in line with the original study that was conducted in the ED in which we adopted our survey[14]. From another standpoint, our study shows that there was a significant preference for physicians of the same sex when participants were stratified by their gender. Same-sex gender preference was highly noted in the case of sensitive medical issues where 82% of females preferred a female provider while 55% of males preferred a male provider. Scenarios in which same-sex preference was also noted included routine medical visits, medical emergencies, and minor medical procedures. These similarities were also found in the ED study when noting the preferences, as the ED study shows that a preference was found in cases with 'sensitive' or 'bad news' deliveries where patients tended to prefer same-sex physicians for communication style and a feeling of comfort. It is worth noting that, for major medical procedures, there was a prominent preference for male providers by both male and female participants, yet there was a prominent preference for female providers by both male and female participants when it came to choosing a pediatrician. These are not surprising observations and once more demonstrate the community's lower confidence in women when it comes to procedural and traditionally male-dominated 'tougher' specialties such as surgery in contrast to the 'softer' specialties, such as pediatrics, being dominated by females.

The findings of this study, focused on Arab Americans, do not stray far from what is encountered by communities across the world. For instance, a study performed in the Netherlands has shown that a minority of patients prefer a care provider of a particular gender[15], as the study noted no sex preferences for the more 'instrumental' health professions such as surgery and anesthesia. Additionally, the study showed gender preferences to be stronger in partic-

Table 4. Physician Gender Visited By Specialty. Physician visits for study participants distributed by the gender of the physician per medical specialty. All values represent the total number of participants selecting the specific gender or both genders per specialty with the percentage among all participants between parentheses.

Please indicate the gender of the physician you have visited based on specialty: *	Male	Female	Both	p
Family physician/Primary care physician	153 (47.8)	92 (28.7)	75 (23.4)	<0.0001
Pediatrician	130 (46.3)	79 (28.1)	72 (25.6)	<0.0001
Emergency medicine physician	81 (32.8)	32 (13.0)	134 (54.3)	<0.0001
Surgeon	105 (65.6)	12 (7.5)	43 (26.9)	<0.0001
Cardiologist	53 (69.7)	8 (10.5)	15 (19.7)	<0.0001
Pulmonologist	34 (64.2)	7 (13.2)	12 (22.6)	<0.0001
Nephrologist	29 (61.7)	6 (12.8)	12 (25.5)	0.0001
Gastroenterologist	55 (64.0)	11 (12.8)	20 (23.3)	<0.0001
Endocrinologist	37 (43.0)	33 (38.4)	16 (18.6)	0.0131
Otolaryngologist	82 (72.6)	14 (12.4)	17 (15.0)	<0.0001
Neurologist	36 (54.6)	12 (18.2)	18 (27.3)	0.0008
Psychiatrist	24 (33.3)	26 (36.1)	22 (30.6)	0.8465
Oncologist (Cancer doctor)	14 (37.8)	9 (24.3)	14 (37.8)	0.5088
Ob/Gyn (Women's reproductive health and breasts doctor)	29 (16.7)	101 (58.1)	44 (25.3)	<0.0001
Urologist (Urinary tract doctor)	31 (43.7)	21 (29.6)	19 (26.8)	0.1744

Data is n (%).

Denominators differ due to eliminating the "Not Applicable" category.

ular scenarios such as in intimate and psychosocial health problems, discussions with gynecologists or general practitioners. Our results are similar to this study, as our data also indicates a strong preference for female physicians in Ob/Gyn fields. Within the referenced study, those who preferred female health professionals indicated that they generally felt greater ease in talking to and being examined by females than males. Contrarily, those with preference for male health professionals used the same reasons in favor of males. It is worth noting that although not all Arab Americans are Muslims, 90% of our participants identified as Muslims. Given that most of our participants were females as well, considerations for female Muslim patients can sometime bias physician gender preferences for modesty and religious reasons. Multiple studies on Islam and physician gender preferences show that Muslim women, regardless of Arab identities, have preference for female healthcare providers[16]. At many times, Muslim females are willing to access healthcare providers only if certain services are provided by a female health care provider such as for therapeutic touch as part of treatment where it is religiously more ideal for it to involve same gender physician, especially if the same gender physician is available in society[16].

When comparing the preference of youth (18–25 years old) to the adults (over the age of 25) in our findings, we found mostly no particular physician gender preference by age group. Significant results were only found in the cases of major medical procedures and pediatrics. Specifically, in terms of major medical procedures, the percentage of those who selected males as their physician gender preference nearly doubled in the adults group (from 14% to 27%). Additionally, although there was a stronger preference for a female pediatrician of choice in the youth group (5% males, 23% females), this difference in pediatrician gender preference evened out for the adult age group (11% males, 13% females). It is important to point though that 65% of participants in the youth group were females compared to 79% of females in the adult group which reassures our outcomes of specific strong gender preferences.

Our results show us that Arab Americans choice of the most important physician characteristic is very little dependent on gender (3%) or Arab race (2%) and mostly dependent on age or years of experience (66%) and

medical training facility (11%). Although there were some participants who selected this, the trend was not necessarily observed when we evaluated the gender of physician visited by all participants by medical specialties. Male physicians were predominantly visited by study participants in the following specialties: family or primary care, pediatrics, emergency medicine, surgery, cardiology, pulmonology, nephrology, endocrinology, gastroenterology, otolaryngology, and neurology. Female physicians, on the other hand, were mainly visited for the obstetrics and gynecology specialty. Otherwise, there were no differences in gender visits for psychiatrists, oncologists, or urologists. This once again shows that despite the lack of preference of physician gender by Arab Americans, when given the choice, they yet would visit male providers. It is unclear whether the reason for this is simply availability and the fact that there are more male providers than female providers in most specialties. A future direction could include further exploring such gender ratios to better understand physician gender selection.

Some strengths of this study include stratifying responses by gender which allowed us to further dissect the gender preferences within the Arab American community. Additionally, given that not all participants have a strong medical terminology background, a strength of this study was explaining what each physician specialties entails rather than listing the name of the specialty. For instance, we believe it was necessary to list explanations such as 'heart doctor' next to 'cardiologist' or 'lung doctor' next to 'pulmonologist' or 'ear, nose and throat doctor' next to 'otolaryngologist' among others. Additionally, it was important that we provided the survey in the Arabic language to increase the participation within the community. Although we received no Arabic responses, all those who filled out the survey were Arab Americans who spoke fluent English. Also, the large number of participants increased the strength to this study. Another strength was that the questions were adopted based off another study that was conducted regarding physician gender preferences in the Emergency Department. This allowed for further validation of the questions and comparison analysis to past results obtained. One major limitation of this study was that the survey was an online self-assessment survey. Since the study was online and all the participants filled out the English form, we did not get an accurate representation of the Arab American community since there is a large immigrant, first-generation, non-English speaking population. Additionally, our study represented a skewed age distribution towards the younger population. There was also an unequal skewed number of male and female participants, with higher female participants. Both factors, however, were accounted for and adjusted in the analysis. Lastly, a final limitation was the skewed distribution for countries of origin for study participants where the majority were of Lebanese origin who may respond to the survey questions differently than participants from other Arab countries. Given the large differential in the number of participants per country of origin and the significantly smaller number of participants from other countries, we elected to analyze our data under the umbrella of Arab Americans without additional analysis per country of origin. A future direction could be evaluating how Arabs from various Arabic countries of origin would respond to physician gender preferences or choices.

Overall, it is not surprising to observe no preference for physician gender in the number of scenarios and specialties explored. In the current days of modern medicine, relatively less attention is being paid to the gender or training of a physician and more attention is placed on patients' perception of their physician interaction[17]. This is, however, countered by bias towards visiting a specific gender regardless of the preference noted by patients. With pre-existing patient preference based on gender bias, the doctor-patient relationship is threatened to be suboptimal and less effective and at risk of yielding lower patient satisfaction[18]. As the medical world and the Arab American community see an increase in female physicians, it becomes necessary to educate physicians of all genders on the proper ways of building rapport and fostering a healthy and trustworthy physician-patient relationship. At the end of the day, physicians must be able to effectively communicate information is key to having a successful patient-physician relationship. Based on the RESPECT model, rapport, empathy, support, partnership, explanations, cultural competency, and trust, are widely used for physicians to create a healthy relationship with their patients and to promote awareness of potential cultural biases[19]. Whether gender is a factor or not in a physician consideration, a physician who lacks empathy, kindness, effective communication, and cultural competency will be unlikely chosen by patients for their care.

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