

# Obstetrics and Gynaecology as a Future Career for Medical Graduates in Oman

## Factors that attract and discourage graduates

Asma Al Salehi,<sup>1</sup> Tamima Al Dughaishi,<sup>2</sup> Gauhar Rizvi,<sup>3</sup> \*Vaidyanathan Gowri<sup>4</sup>

### تخصص أمراض النساء والولادة كمهنة طبية مستقبلية للأطباء الخريجين في عمان العوامل الجاذبة والعوامل المثبطة للخريجين

أسماء الصالحية، تميمة الدغيشية، جوهر رزفي، جاوري فيدياناثان

**ABSTRACT: Objectives:** Obstetrics and gynaecology (OBGYN) is a major speciality in the medical field that is often demanding yet rewarding; however, OBGYN receives the least number of applicants in Oman. This study aimed to determine the factors that influence graduates in choosing OBGYN as their speciality. **Methods:** This cross-sectional questionnaire-based study was conducted from February to March 2017 at Sultan Qaboos University Hospital, Royal Hospital, Khoula Hospital and Al Nahdha Hospital, Muscat, Oman. The questionnaire was distributed to 150 Omani medical graduates (interns and post-intern doctors). **Results:** A total of 145 Omani graduates took part in the study (response rate: 96.7%) and the participants' average age was 26 years. Family medicine ranked as the first choice followed by paediatrics and emergency medicine. OBGYN was the first choice for eight female graduates. The top factors attracting male graduates to the OBGYN speciality were its surgical opportunities (80.6%), intellectual content (77.4%), faculty interactions and the opportunity to care for a healthy population (54.8% each); however, the top factors attracting females were the intellectual content (88.6%), patients' desire for female physicians (85.1%), the opportunity to care for a healthy population (76.3%) and cultural expectations (69.5%). The most discouraging factors for male graduates were cultural expectations (100%), the patients' desire for a female physician (93.5%) and the level of stress (71%), while the discouraging factors for female graduates were the level of stress (82.5%), time demands (78.1%), night duties and the length of the residency (71.9% each). **Conclusion:** Most of the factors that discourage female graduates from choosing OBGYN are to some extent modifiable. These changes should be considered to encourage the selection of OBGYN as a career by medical students.

**Keywords:** Career Choice; Obstetrics and Gynecology Department, Hospital; Internship and Residency; Medical Student; Oman.

**المخلص:** الهدف: تخصص النساء والولادة من أهم التخصصات في المجال الطبي والذي يتطلب جهداً فائقاً ولكنه جهد مجزي. على الرغم من ذلك، فإن عدد المتقدمين للإلتحاق بهذا التخصص يعتبر الأقل من بين التخصصات الأخرى في عمان. هدفت هذه الدراسة لتحديد العوامل التي تؤثر على اختيار الخريجين لهذا التخصص. **الطريقة:** أجريت هذه الدراسة المقطعية المعتمدة على الاستبيان في الفترة من نوفمبر إلى مارس 2017 في مستشفى جامعة السلطان قابوس في مسقط، عمان. تم توزيع الاستبيان على 150 طبيباً عمانياً ممن بدأوا مزاولة مهنة الطب في فترة سنة الإمتياز وما بعد سنة الإمتياز. شارك في البحث 145 خريجاً عمانياً بمعدل إستجابة (96.7%) وكان متوسط أعمار المشاركين في الدراسة 26 سنة. حاز تخصص طب الأسرة على الاختيار الأول لدى المشاركين (46.5%) وتبعه تخصصي طب الأطفال (39.4%) وطب الطوارئ (14.1%). كان تخصص النساء والولادة الاختيار الأول لثمانية من المشاركين كلهم إناث. أكثر العوامل جذباً لتخصص النساء والولادة للمشاركين الذكور هو توفر الفرص الجراحية (80.6%) ومحتوى المادة العلمية للتخصص (77.4%)، بينما كانت أكثر العوامل جذباً للمشاركات الإناث هو محتوى المادة العلمية (88.6%) ورغبة المرضى بطبيبات (85.1%). أهم العوامل المثبطة للذكور للإلتحاق بتخصص النساء والولادة كان التوقعات المجتمعية تجاه هذا التخصص (100%) ورغبة المرضى بطبيبة أنثى في هذا المجال (93.5%) بينما كانت أكبر العوامل المثبطة للإناث هي مستوى الضغط النفسي التي تتعرضن له في هذا التخصص (82.5%) وما يتطلبه من وقت (78.1%). الخلاصة: أغلب العوامل المثبطة لاختيار تخصص النساء والولادة للخريجات الإناث قابلة للتعديل إلى حد ما. هذه التعديلات يجب أن تؤخذ في الإعتبار وذلك لتحفيز طالبات الطب لاختيار تخصص النساء والولادة كمهنة طبية لمزاولتها في المستقبل.

**الكلمات المفتاحية:** اختيار المهنة: تخصص النساء والولادة: مستشفى: التدريب والإقامة: طالب طب: عمان.

OBSTETRICS AND GYNAECOLOGY (OBGYN) IS one of the major specialities that medical graduates can choose as a career. However, in Oman, the number of graduates applying for residency in this speciality is low. Obstetrics is both a gratifying and demanding practice.<sup>1</sup> Abu-Rafea *et al's* study, cond-

ucted in Saudi Arabia, showed that the rotation of students through OBGYN was the most influential factor in choosing this speciality as a career, attracting 81.3% of the students, followed by faculty interactions (71.9%). The factors that did not have a significant impact on the career decision included lifestyle and income

<sup>1</sup>Obstetrics and Gynaecology Programme, Oman Medical Speciality Board, Muscat, Oman; <sup>2</sup>Department of Obstetrics and Gynaecology, Sultan Qaboos University Hospital, Muscat, Oman; Departments of <sup>3</sup>Family Medicine & Public Health and <sup>4</sup>Obstetrics and Gynaecology, Sultan Qaboos University, Muscat, Oman

\*Corresponding Author's e-mails: [gowri@squ.edu.om](mailto:gowri@squ.edu.om) and [gowrie61@hotmail.com](mailto:gowrie61@hotmail.com)

prospects, mostly dealing with healthy patients, stress levels and the time demands of the speciality.<sup>2</sup>

Scott *et al.*'s study was conducted in Canada and found that students' ultimate decision to choose OBGYN as their career when they started medical school depended on three elements—selecting it as their first choice at this early stage, being female and wanting a narrow scope of practice.<sup>3</sup>

In a study conducted in the USA, Chang *et al.* reported that the interest in an OBGYN career was stimulated by residents who behaved professionally and also by the students feeling that they were part of the team, including being asked to perform some tasks in the operating room.<sup>4</sup> They found that males were more interested in this career if they were included as a functioning part of the team.

In contrast to Chang *et al.*'s study, Fogarty *et al.* found that female students were more interested in this speciality than male students. Furthermore, this study reported that students' decision were influenced by several factors—including the OBGYN staff, continuity of patient care, primary care opportunities, surgical opportunities and dealing with a healthy patient population.<sup>5</sup> In addition, malpractice concerns did not negatively influence their choice.<sup>5</sup>

The number of births in Oman continued to rise between 2011 and 2016 with 18,987 live births and a change rate of 30%.<sup>6</sup> Consequently, this increase in births requires more specialists to be trained and employed in OBGYN. At Sultan Qaboos University Hospital (SQUH), Muscat, Oman, the current intake is approximately six residents per year; however, this figure is variable as many of the residents do not take OBGYN as their first choice and there is a high dropout rate (approximately 15%; unpublished data). A study to determine the factors that attract Omani medical graduates towards OBGYN as a future career or discourage them from it is required as the need for specialists in this area is continually increasing. This study aimed to determine the factors that attract and discourage the choice of OBGYN as a future career for Omani medical graduates and suggests solutions for the most common discouraging factors.

## Methods

This observational cross-sectional study was conducted from February to March 2017 at SQUH. Questionnaires were distributed to a convenient sample of 150 Omani medical graduates—both interns and post-intern doctors—of which a total of 145 (response rate: 96.7%) completed the questionnaire. The sample size was 150 as only the interns rotating in Muscat were included as other interns were posted elsewhere at the time the study was conducted. It was not possible to include

only final year students as most students do clerkships in the final year and the sample size would have been too small. Increasing the duration of the study would not have increased the sample size. The survey evaluated age, gender, place of origin, marital status, the medical school they graduated from—Sultan Qaboos University (SQU), Oman Medical College (OMC) or medical schools abroad—their future residency choices and the reasons for these choices.

Those who did not respond to the question; “Do you have an interest in specialising in OBGYN as a future career?”; were classified as ‘unsure’.

This research was approved by the Medical Research Ethical Committee (MREC #1428). Verbal consent was given by the participants who completed the survey.

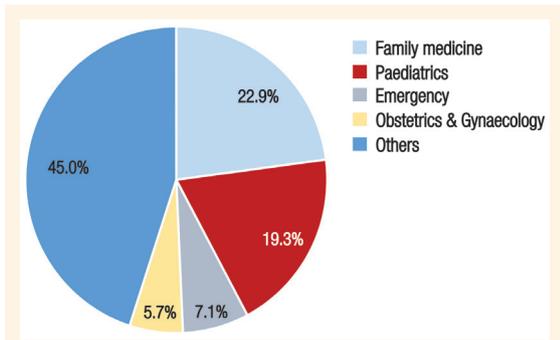
## Results

A total of 114 (78.6%) female and 31 (21.4%) male participants completed the questionnaire; the participants' average age was 26 years (range: 23–29 years). The majority of the participants graduated from SQU (51%), followed by OMC (40%) and medical schools from abroad (9%). According to the graduates' responses, family medicine ranked first as a preferred future career (46.5%), followed by paediatrics (39.4%) and emergency medicine (14.1%) [Figure 1]. Male graduates generally preferred paediatrics and emergency medicine while female graduates preferred family medicine (26.3%), paediatrics (20%) and OBGYN (7%).

Of all the Omani graduates, only 20 expressed an interest in the OBGYN speciality while 108 showed no interest and 17 were unsure. Only one male graduate expressed an interest in OBGYN. Out of the female graduates, 19 expressed interest in the OBGYN speciality, 82 showed no interest and 13 were unsure. Of the eight graduates who chose OBGYN as their first choice speciality, two graduated from abroad, four were SQU graduates and two were OMC graduates.

The main factors attracting male graduates to the OBGYN speciality were surgical opportunities (80.6%), intellectual content of OBGYN (77.4%), taking care of a healthy population (54.8%) and faculty interaction (54.8%). On the other hand, cultural expectations (100%), patients' desire for a female physician (93.5%), level of stress (71%) and spouse or family opinion (64.5%) were the most discouraged factors [Table 1].

The main factors attracting female graduates to the OBGYN speciality were its intellectual content (88.6%), patients' desire for a female physician (85.1%), taking care of a healthy population (76.3%) and cultural expectations (69.3%). Level of stress (82.5%), time demands (78.1%), night duties (71.9%) and the length of residency (71.9%) were the most discouraging factors in choosing



**Figure 1:** Preferred future speciality of Omani medical graduates (N = 145).

**Table 1:** Attracting and discouraging factors of the obstetrics and gynaecology speciality for male Omani medical graduates (N = 31)

Factor	n (%)		
	Attracted	Discouraged	Neutral
Rotation through OBGYN during medical school	16 (51.6)	11 (35.5)	4 (12.9)
Presence of a role model in OBGYN speciality	13 (41.9)	8 (25.8)	10 (32.3)
Faculty interaction	17 (54.8)	12 (38.7)	2 (6.5)
Faculty encouragement	16 (51.6)	10 (32.3)	5 (16.1)
Previous interaction with OBGYN residents	12 (38.7)	7 (22.6)	12 (38.7)
Taking care of a healthy population	17 (54.8)	6 (19.4)	8 (25.8)
Patients' desire for a female physician	0 (0)	29 (93.5)	2 (6.5)
Cultural expectations	0 (0)	31 (100)	0 (0)
Surgical opportunities	25 (80.6)	5 (16.1)	1 (3.2)
Hands-on procedures	16 (51.6)	13 (41.9)	2 (6.5)
Intellectual content of OBGYN	24 (77.4)	5 (16.1)	2 (6.5)
Length of residency	9 (29)	14 (45.2)	8 (25.8)
Time demands	6 (19.4)	11 (35.5)	14 (45.2)
Level of stress	3 (9.7)	22 (71)	6 (19.4)
Night duties	3 (9.7)	16 (51.6)	12 (38.7)
Income prospects/ financial opportunities	12 (38.7)	11 (35.5)	8 (25.8)
Spouse/family opinion	2 (6.5)	20 (64.5)	9 (29)
Affect family life/ family considerations	0 (0)	19 (61.3)	12 (38.7)

OBGYN = obstetrics and gynaecology.

OBGYN as a future career for female graduates [Table 2]. Factors influencing female graduates' choice have been separated according to the institution of graduation in Table 3.

**Table 2:** Attracting and discouraging factors of the obstetrics and gynaecology speciality for female Omani medical graduates (N = 114)

Factor	n (%)		
	Attracted	Discouraged	Neutral
Rotation through OBGYN during medical school	78 (68.4)	31 (27.2)	5 (4.4)
Presence of a role model in OBGYN speciality school	67 (58.8)	14 (12.3)	33 (28.9)
Faculty interaction	43 (37.7)	60 (52.6)	11 (9.6)
Faculty encouragement	64 (56.1)	25 (21.9)	25 (21.9)
Previous interaction with OBGYN residents	55 (48.2)	13 (11.4)	46 (40.4)
Taking care of a healthy population	87 (76.3)	10 (8.8)	17 (14.9)
Patients' desire for a female physician	97 (85.1)	4 (3.5)	13 (11.4)
Cultural expectations	79 (69.3)	5 (4.4)	30 (26.3)
Surgical opportunities	61 (53.5)	46 (40.4)	7 (6.1)
Hands-on procedures	78 (68)	30 (26.3)	6 (5.3)
Intellectual content of OBGYN	101 (88.6)	8 (7)	5 (4.4)
Length of residency	15 (13.2)	82 (71.9)	17 (14.9)
Time demands	12 (10.5)	89 (78.1)	13 (11.4)
Level of stress	6 (5.3)	94 (82.5)	14 (12.3)
Night duties	5 (4.4)	82 (71.9)	27 (23.7)
Income prospects/ financial opportunities	58 (50.9)	15 (13.2)	41 (36)
Spouse/family opinion	49 (43)	38 (33.3)	27 (23.7)
Affect family life/ family considerations	5 (4.4)	76 (66.7)	33 (28.9)

OBGYN = obstetrics and gynaecology.

## Discussion

In this study 20 participants (19 female and one male) expressed an interest in the OBGYN speciality, although not as their first career choice. Some of the factors that attracted both genders to OBGYN were the intellectual content, dealing with a healthy population and faculty interaction; male graduates were also attracted by the surgical opportunities. Some of these factors are similar to the findings in the survey by Fogarty *et al.*<sup>5</sup>

Work hours and liability concerns discouraged residents from choosing OBGYN in a study by Ogburn *et al.*;<sup>7</sup> the current study also reflects these findings. Actively involving medical students in the speciality during clinical year rotations and internship training will help increase the number of Omani female medical graduates that join the OBGYN speciality.<sup>4</sup> No parti-

**Table 3:** Attracting and discouraging factors of the obstetrics and gynaecology speciality for female graduates according to institution of graduation (N = 114)

Factor	n (%)								
	Attracted			Discouraged			Neutral		
	SQU (n = 49)	OMC (n = 55)	Abroad graduates (n = 10)	SQU (n = 49)	OMC (n = 55)	Abroad graduates (n = 10)	SQU (n = 49)	OMC (n = 55)	Abroad graduates (n = 10)
Rotation through OBGYN during medical school.	26 (53.1)	44 (80)	8 (80)	20 (40.8)	9 (16.4)	2 (20)	3 (6.1)	2 (3.6)	0 (0)
Presence of a role model in OBGYN speciality	26 (53.1)	36 (65.5)	5 (50)	5 (10.2)	8 (14.5)	1 (10)	18 (36.7)	11 (20)	4 (40)
Faculty interaction	11 (22.4)	27 (49.1)	5 (50)	36 (73.5)	21 (38.2)	3 (30)	2 (4.1)	7 (12.7)	2 (20)
Faculty encouragement	26 (53.1)	33 (60)	5 (50)	12 (24.5)	11 (20)	2 (20)	11 (22.4)	11 (20)	3 (30)
Previous interaction with OBGYN residents	35 (71.4)	15 (27.3)	5 (50)	5 (10.2)	6 (10.9)	2 (20)	9 (18.4)	34 (61.8)	3 (30)
Taking care of a healthy population	39 (79.6)	39 (70.9)	9 (90)	4 (8.2)	5 (9.1)	1 (10)	6 (12.2)	11 (20)	0 (0)
Patient desire for a female physician	41 (83.7)	49 (89.1)	6 (60)	1 (2)	2 (3.6)	1 (10)	7 (14.3)	4 (7.3)	3 (30)
Cultural expectations	30 (59.2)	44 (80)	5 (50)	3 (6.1)	1 (1.8)	1 (10)	17 (34.7)	9 (16.4)	4 (40)
Surgical opportunities	24 (49)	30 (54.5)	8 (80)	20 (40.8)	19 (34.5)	2 (20)	5 (10.2)	6 (10.9)	0 (0)
Hands-on procedures	37 (75.5)	3 (63)	7 (70)	10 (20.4)	16 (29.1)	3 (30)	2 (4.1)	4 (7.3)	0 (0)
Intellectual content of OBGYN	46 (93.9)	47 (85.5)	8 (80)	1 (2)	7 (12.7)	0 (0)	2 (4.1)	1 (1.8)	2 (20)
Length of residency	6 (12.2)	8 (14.5)	1 (10)	36 (73.4)	40 (72.7)	6 (60)	7 (14.3)	7 (12.7)	3 (30)
Time demands	5 (10.2)	6 (10.9)	1 (10)	36 (73.5)	47 (85.5)	6 (60)	8 (16.3)	2 (3.6)	3 (30)
Levels of stress	2 (4.1)	3 (5.5)	1 (10)	45 (91.8)	43 (78.2)	6 (60)	2 (4.1)	9 (16.4)	3 (30)
Night duties	3 (6.1)	2 (3.6)	0 (0)	35 (71.4)	41 (74.5)	6 (60)	11 (22.4)	12 (21.8)	4 (40)
Income prospects/financial opportunities	20 (40.8)	32 (58.2)	6 (60)	7 (14.3)	7 (12.7)	1 (10)	22 (44.9)	16 (29.1)	3 (30)
Spouse/family opinion	19 (38.8)	26 (47.3)	4 (40)	10 (20.4)	15 (27.3)	2 (20)	20 (40.8)	14 (25.5)	4 (40)
Affect family life/family considerations	1 (2)	4 (7.3)	0 (0)	33 (67.3)	39 (70.9)	4 (40)	15 (30.6)	12 (21.8)	6 (60)

SQU = Sultan Qaboos University; OMC = Oman Medical College; OBGYN = obstetrics and gynaecology.

cular strategies have been suggested by other countries to increase the intake of residents in OBGYN, yet it appears that recognising the students at the entry level in their clerkship years and having residents who act as role models would help to motivate students.<sup>4</sup>

During their internship training, medical graduates in Oman undergo mandatory rotations in internal medicine and general surgery and the third rotation is a choice of either paediatrics or OBGYN. This varies the exposure to OBGYN, especially since most graduates

choose paediatrics rather than OBGYN during their internship year. Hammoud *et al.* reported that an OBGYN clerkship in the third year of their curriculum (which may be sixth or seventh year for SQU students) was the strongest predictor of interest in the speciality.<sup>8</sup> As a future direction we believe additional exposure during internship may increase interest in the OBGYN speciality, for female graduates in particular.

In exploring the role of gender in the OBGYN speciality, Balayla concluded that male gynaecologists

can provide high-quality care for females, yet culture is still the most discouraging factor for males in choosing this speciality in Oman.<sup>9</sup> Chang *et al.* reported that male students experienced gender bias and described feeling socially excluded from clinical teams dominated by females.<sup>10</sup> To correct this, Craig *et al.* suggested that male students have early exposure to OBGYN in the pre-clinical years and encouraged the medical faculty to ensure that all students have a positive experience during their clerkship.<sup>11</sup> A review by Lyon also commented on females' dominance in the speciality and expressed fear regarding the security of the speciality.<sup>12</sup>

Efforts need to be made to increase awareness about this issue and to encourage male graduates to join the OBGYN speciality. Raising awareness can start with OBGYN training during the clinical years of medical school and throughout. When a gynaecologist is needed, it should not matter whether the doctor is a male or female (as happens in Saudi Arabia and many other Muslim and Arab countries). Television and radio awareness programmes could play a major role in enlightening the population. Announcements by *muftis* on this issue would also be helpful. Nevertheless, in view of the cultural preference for female gynaecologists, increasing the number of female medical graduates choosing this speciality needs to be a priority.

The results of this study are limited due to the non-homologous nature of the sample (interns and post-intern doctors), the participants' recent postings at the time of survey and the unequal sample size from different institutions. Another factor was the limited number of participating males; however, approximately 66% of students at SQU are female even among the undergraduates. Hence, the male response rate of 22% is acceptable in that it reflects the current situation.

## Conclusion

Female and male students need more exposure to the OBGYN speciality earlier in their training. OBGYN should be made a mandatory rotation in the internship programme, especially for females. Reducing work-related stress, offering more incentives and ensuring the presence of role models in the speciality will help persuade more interns to choose this speciality. Religious leaders and the media should help in educating the public and encourage more students to choose this speciality.

## CONFLICT OF INTEREST

The authors declare no conflicts of interest.

## FUNDING

No funding was received for this study.

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