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Motives influencing students' preferences for obstetrics and gynaecology speciality: A cross-sectional multi-site Swiss study

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ABSTRACT

Objectives: Knowing and understanding the reasons why medical students choose postgraduate medical specialities are essential to help influence the workforce for a balanced national healthcare system. The objective of this study was to determine motivating factors for choosing a speciality career in general and, more specifically, for the choice of obstetrics and gynaecology (OBGYN) over surgery or general practice.
Study design: This study was based on prospectively collected data from a large research multi-site cross-sectional study. We sent a survey to medical students in the sixth year, which contained questions about demographics, choice of speciality and motives for choosing. We grouped the specialities into families of specialities and motives into motivating factors clustered by principal component analysis. We used a multivariate analysis of variance (MANOVA) test to identify differences between motivating factors in speciality categories and gender. We performed logistic regression analyse to compare the choice of OBGYN to choices of surgery and general practice as well as undecided.
Results: A total of 1749 students responded with an average return rate of 56%. Our study revealed four motivating factors: "experiential", "relational", "occupational" and "scientific". Logistic regression analysis showed that the choice of OBGYN was particularly influenced by "experiential factor" (OR 1.5; 95%CI [1.2; 1.9]) and by gender (OR 4.5; 95%CI [2.2; 9.2]). When we compared the motivational profile of OBGYN to other speciality categories, OBGYN appeared to stand between surgery and general practice for the "experiential" and "relational" factors, more like surgery for the "occupational factor" and more like general practice for the "scientific factor".
Conclusion: This study highlighted the importance of "experiential factor" and gender for choosing OBGYN as a career. OBGYN seemed to stand between surgery and general practice from a Swiss students' point of view. These findings provide useful information for targeted interventions to promote OBGYN at the undergraduate level. Such interventions could include providing more hands-on experiences, improving integration of male students and encouraging student involvement in patient care.

Introduction

Knowing and understanding how medical students choose postgraduate specialities are essential to influence the medical workforce for a balanced national healthcare system. This knowledge is particularly important in Switzerland, where students can choose their speciality without a ranking examination, as is required in France [1] and Belgium [2].

In 2008, the postgraduate training program for the OBGYN speciality was changed in Switzerland. The requirements for OBGYN became less focused on surgery, no longer required a year of general surgery and required the performance of fewer surgical procedures to graduate. Concurrently, five OBGYN subspecialty training curriculum were created — surgical OBGYN, gynaecological oncology, maternal and foetal medicine, reproductive medicine and urogynaecology — each requiring 2–3 years of training after the initial 5 year postgraduate training in OBGYN. It is possible that the new curriculum attracted more medical students who were deterred by the surgical requirements (a deterrent that may have affected women more than men) as well as students who were attracted by primary care aspects (preventive medicine,

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private practice). This trend could have resulted in a deficit of gynaecologists with polyvalent surgical abilities who were able to assume head positions in public hospitals. Currently, OBGYN departments in many public hospitals are experiencing difficulties finding consultant-level physicians.

Thus, it is important to better understand which motives drive student career choices to promote OBGYN and therefore rebalance our medical workforce in this field.

The first studies on factors influencing medical speciality choices were published in the early 1970s [3,4]. Most of the scientific literature on speciality choices made by medical students concerned primary care speciality or all specialities together, and only a few examined OBGYN. Blanchard et al. [5] showed that surgical opportunity, clinical variety and fast-paced/high-acuity experiences were important reasons for students to apply to an OBGYN residency program. The Royal College of Obstetricians and Gynaecologists [6] showed a polarizing effect of the OBGYN undergraduate placement on students with 43% experiencing high levels of interest and 31% low levels of interest. The most predictive characteristics of undergraduate placement influencing the students to choose a career in OBGYN were encouragement to participate in discussion about patient care and help developing problem-solving skills.

To our knowledge, there is no study examining motives influencing the choice for the OBGYN specifically in Switzerland. The current paucity of studies makes it difficult to meaningfully understand the motives influencing the choice for OBGYN as a career.

The objectives of this study were to determine the factors that motivated final-year medical students to choose a specialization, to compare motivating factors influencing OBGYN career intentions over surgery or general practice and to assess the impact of gender.

Table 1
Specialities.

	Total (n = 1749) (%)	Female (n = 1087)	Male (n = 631)
OBGYN	93 (5.3)	82	9
Obstetrics and Gynaecology			
Surgery	291 (16.6)	131	158
Surgery	24 (1.4)	7	16
Cardiothoracic surgery	8 (0.5)	5	3
Oral and maxillofacial surgery	4 (0.2)	1	3
Orthopaedics	46 (0.6)	17	29
Plastic, reconstructive and aesthetic surgery	28 (0.6)	15	13
Paediatric surgery	15 (0.9)	6	9
General surgery	58 (3.3)	31	27
Neurosurgery	26 (1.5)	7	19
Otorhinolaryngology (ENT)	27 (1.5)	11	15
Ophthalmology	43 (2.5)	29	14
Urology	12 (0.7)	2	10
General practice	643 (36.8)	480	152
Geriatrics	3 (0.2)	2	1
Practitioner	15 (0.9)	11	3
General medicine	64 (3.7)	50	13
Internal medicine	308 (17.6)	218	87
Psychiatry	43 (2.5)	27	16
Child and adolescent psychiatry and psychotherapy	11 (0.6)	9	2
Paediatrics	199 (11.4)	163	30
Medical subspecialties	184 (10.5)	96	88
Allergy and Immunology	4 (0.2)	3	1
Angiology	2 (0.1)	1	1
Cardiology	33 (1.9)	12	21
Dermatology	26 (1.5)	20	6
Endocrinology	11 (0.6)	5	6
Gastroenterology	9 (0.5)	4	5
Haematology	7 (0.4)	5	2
Infectious disease	15 (0.9)	6	9
Sports medicine	4 (0.2)	2	2
Physical medicine and rehabilitation	2 (0.1)	1	1
Tropical medicine	4 (0.2)	2	2
Neurology	40 (2.3)	21	19
Nephrology	3 (0.2)	2	1
Oncology	15 (0.9)	8	7
Pulmonology	4 (0.2)	3	1
Rheumatology	5 (0.3)	1	4
Technical	168 (9.6)	83	84
Anaesthesiology	90 (5.2)	51	39
Emergency medicine	31 (1.8)	15	16
Intensive care medicine	16 (0.9)	8	7
Radiology	27 (1.5)	9	18
Radiation oncology	4 (0.2)	0	4
Others	65 (3.7)	34	26
Others	39 (2.2)	16	18
Forensic medicine	7 (0.4)	4	3
Pathology	5 (0.3)	4	1
Research	14 (0.8)	10	4
Undecided	305 (17.4)	181	114

Methods

Procedure and sample

This observational study was based on prospectively collected data from a large research multi-site cross-sectional study. At the time of the study, five universities in Switzerland offered full undergraduate medical training consisting of a 6-year curriculum. Four of these faculties participated in the study: Zurich, Bern, Lausanne and Geneva. Administration of the survey was granted exemption from review by the institutional review board of the University of Geneva.

Eligible participants were all students officially enrolled in the sixth year of study at one of these four medical faculties from 2009 to 2013 for Zurich, Bern and Lausanne and from 2011 to 2015 for Geneva. We used an online survey for Zurich and Bern, a paper-based survey for Lausanne, and both online and paper formats for Geneva. To maximize return rate of the online survey, we sent reminders at two and four weeks after sending the questionnaire. Participation in the survey was on a volunteer basis.

Data collected

The survey comprised demographics, choice of specialization and motives for speciality choice. Demographics included year of birth, medical faculties and gender. Students chose from a list of 44 specialities, which were derived from the list of medical specialities recognized by the Swiss Medical Association. We then grouped these specialities into 7 categories: “OBGYN” (1 speciality), “surgery” (11 specialities), “medical subspecialties” (16 specialities), “general practice” (7 specialities), “technical” (5 specialities), “others” (4 specialities) and “undecided” (Table 1). Students selected motives for a speciality from a list of 25 reported in the literature (e.g., “experiences as a student”, “team collaboration”, “financial security”); multiple answers were possible.

Statistical analyses

We calculated descriptive statistics for demographics, motives for speciality choice and categories of specialities. The Chi-square was used to compare the proportion of female and male respondents.

Because we hypothesized that motivational factors are independent with each other, we used a principal component analysis (PCA) with Varimax Rotation to aggregate, of the 25 motives, those with a frequency of > 15%. We combined several criterions (i.e., scree plot, eigenvalue > 1.0, and interpretability) to determine factors to be retained. The critical value for significant factor loading was > 0.40 [7] We defined each factor obtained from the PCA procedure as a motivating factor that was labelled according to its content. Each student was characterized according to these motivating factors whose coordinates ranged from -1 to 1 (regression variables of each factor).

We also conducted a multivariate ANOVA to analyse difference of motivating factors with respect to speciality categories and gender as well as to their interaction (main and interaction effects, respectively).

We used logistic regression analyses (Odd Ratio and 95% confidence intervals) to determine whether motivating factors predicted speciality choice and to compare OBGYN to surgery and general practice and undecided. Type I error rates were set at 0.05. We performed all analyses with Stata/SE version 14.2.

Results

Descriptive

A total of 1749 students responded (overall return rate 56%). Average return rates at the Faculty of Medicine in Zurich, Bern, Lausanne and Geneva were 49% (N = 523/1067), 57% (N = 478/838), 62% (N = 391/630) and 59% (N = 357/605), respectively. Sixty-three percent (1087) of the respondents were female. Table 2 presents demographic characteristics and speciality categories. Difference

Table 2
Students characteristics by gender.

	Total (n = 1749) (%)	Female (n = 1087) (%)	Male (n = 631) (%)	P value
Year of birth				
Before 1980	65 (3.7)	40 (3.7)	25 (4.0)	0.950
1980–1985	854 (48.8)	545 (50.1)	306 (48.5)	
1986–1990	788 (45.1)	489 (45.0)	289 (45.8)	
After 1990	17 (1.0)	10 (0.9)	6 (1.0)	
Unknown	25 (1.4)	3 (0.3)	5 (0.8)	
Already selected speciality				
Yes	1115 (63.8)	704 (64.8)	399 (63.2)	0.591
No	588 (33.6)	365 (33.6)	219 (34.7)	
Unknown	46 (2.6)	18 (1.7)	13 (2.1)	
Medical faculties				
Geneva	357 (20.4)	205 (18.9)	133 (21.1)	0.445
Lausanne	391 (22.4)	248 (22.8)	131 (20.8)	
Bern	478 (27.3)	310 (28.5)	168 (26.6)	
Zurich	523 (29.9)	324 (29.8)	199 (31.5)	
Main categories of specialities				
OBGYN	93 (5.3)	82 (7.5)	9 (1.4)	<0.001*
Surgery	291 (16.6)	131 (12.1)	158 (25.0)	
General practice	643 (36.8)	480 (44.2)	152 (24.1)	
Medical subspecialties	184 (10.5)	96 (8.8)	88 (14.0)	
Technical	168 (9.6)	83 (7.6)	84 (13.3)	
Others	65 (3.7)	34 (3.1)	26 (4.1)	
Undecided	305 (17.4)	181 (16.7)	114 (18.1)	

* <0.05.

in the speciality categories chosen by women and men was significant ($p < 0.001$) with more women choosing OBGYN or general practice than men, except for surgery (88%, 75% and 45%, respectively).

Motives

Table 3 shows motives driving speciality choice by gender. The most frequent motives were "level of enthusiasm, passion", "skills, interests, affinity" and "experiences as a student"," work variety" and "doctor–patient relationship". The less frequent motives were "familial pressure", "availability of residency positions" and "familial circumstance". We found a significant difference between men and women for 14 motives. Women were more influenced by "level of enthusiasm and passion", "experiences as a student", "work variety", "doctor–patient relationship" and "working conditions", "work–life balance" and "multidiscipline". Men were more influenced by "technical aspects", "level of autonomy", "complex care", "research", "career advancement, competitiveness" and "financial security". Nine motives had a frequency below 15% and were therefore excluded from factors analysis.

Motivating factors

Table 4 presents the component of motives driving speciality choice after applying a PCA. The analysis identified four motivating factors: 1) "experiential factor" (which included "technical aspects", "experiences as a student", "skills, interests, affinity" and "level of enthusiasm, passion"), 2) "relational factor" (which included "doctor–patient relationship", "multidiscipline", "work variety" and "team collaboration"), 3) "occupational factor" (which included "working conditions", "work–life balance", "work atmosphere" and "restriction on practice") and 4) "scientific factor" (which included "complex care", "research", "scientific curiosity" and "level of autonomy"). Despite their weak weight on the component (<0.40) [7], "work atmosphere", "restriction on practice" and "team collaboration" were retained, based on interpretation and theoretical background [8].

Motivating factors and speciality

Table 5 shows the difference of each motivating factor according to four speciality categories (OBGYN, surgery, general practice and undecided) and to gender. Motivating factors differed by speciality categories and by gender with an interaction effect. This interaction effect was significant only for the "scientific factor".

"Experiential factor" showed higher mean for OBGYN and even more so for surgery. "Relational factor" was higher for OBGYN and even more so for general practice. "Occupational factor" was high only for general practice. A small difference between speciality categories was observed for "scientific factor" with a low mean for surgery. Regarding gender, women showed higher means on "experiential factor" and "occupational factor" than men, while men showed higher means on "scientific factor" than women.

Motivating factors and OBGYN

Results of the logistic regression, presented in Table 6, indicated that the choice for OBGYN was particularly influenced by "experiential factor" (OR 1.5; 95%CI [1.2; 1.9]) and by gender (OR 4.5; 95%CI [2.2; 9.2]). "Experiential factor" increased the tendency to choose surgery over OBGYN and to choose OBGYN over general practice. "Relational factor" increased the preference for OBGYN to surgery. "Occupational factor" reduced the preference for OBGYN over general practice, but no difference was observed for the preference for surgery. "Scientific factor" decreased the choice of OBGYN over surgery. Being a woman increased the preference for OBGYN over surgery, general practice and undecided categories.

Discussion

Our study revealed four motivating factors driving speciality choice: "experiential", "relational", "occupational" and "scientific". When comparing these motivating factors for a preference for OBGYN to preferences for surgery or general practice, OBGYN showed its own motivational profile. Gender had an important

Table 3
Motives by gender.

	Total (n = 1509) (%)	Female (n = 944) (%)	Male (n = 542) (%)	P value
Level of enthusiasm, passion	1186 (78.6)	767 (81.3)	408 (75.3)	0.006*
Skills, interests, affinity	993 (65.8)	640 (67.8)	343 (63.3)	0.077
Experiences as a student	836 (55.4)	550 (58.3)	279 (51.5)	0.011*
Work variety	787 (52.2)	535 (56.7)	248 (45.8)	<0.001*
Doctor–patient relationship	749 (49.6)	550 (58.3)	192 (35.4)	<0.001*
Scientific curiosity	596 (39.5)	346 (36.7)	246 (45.4)	0.001*
Technical aspects	529 (35.1)	294 (31.1)	228 (42.1)	<0.001*
Working conditions (work hours, setting, availability of part-time work)	517 (34.3)	367 (38.9)	147 (27.1)	<0.001*
Work–life balance	459 (30.4)	323 (34.2)	133 (24.5)	<0.001*
Team collaboration	449 (29.8)	290 (30.7)	155 (28.6)	0.390
Multidiscipline	444 (29.4)	302 (32.0)	139 (25.7)	0.010*
Work atmosphere	351 (23.3)	227 (24.1)	118 (21.8)	0.317
Level of autonomy	338 (22.4)	183 (19.4)	152 (28.0)	<0.001*
Complex care	289 (19.2)	120 (12.7)	166 (30.6)	<0.001*
Restrictions on practice	262 (17.4)	176 (18.6)	86 (15.9)	0.176
Research	262 (17.4)	116 (12.3)	144 (26.6)	<0.001*
Influence from a mentor	194 (12.9)	115 (12.2)	78 (14.4)	0.223
Career advancement, competitiveness	180 (11.9)	67 (7.1)	112 (20.7)	<0.001*
Financial security	145 (9.6)	61 (6.5)	84 (15.5)	<0.001*
Prior personal experiences	137 (9.1)	81 (8.6)	55 (10.2)	0.313
Work-force shortages	127 (8.4)	78 (8.3)	49 (9.0)	0.606
Familial circumstances	71 (4.7)	46 (4.9)	24 (4.4)	0.697
Availability of residency positions	68 (4.5)	45 (4.8)	23 (4.2)	0.642
Familial pressure	53 (3.5)	40 (4.2)	13 (2.4)	0.066
Other	29 (1.9)	17 (1.8)	12 (2.2)	0.579

* <0.05.

Table 4
Principal component analysis (PCA) with varimax rotation of the motives.

	Items	Component loadings	Motivating factors (% variance explained ; eigenvalue)
Factor 1	Technical aspects	0.65	Experiential (17 ; 2.7)
	Experiences as a student	0.61	
	Skills, interests, affinity	0.57	
	Level of enthusiasm, passion	0.45	
Factor 2	Doctor–patient relationship	0.70	Relational (12.9 ; 2.1)
	Multidiscipline	0.63	
	Work variety	0.63	
	Team collaboration	*0.31*	
Factor 3	Working conditions (work hours, setting, part-time)	0.87	Occupational (8.8 ; 1.4)
	Work–life balance	0.86	
	Work atmosphere	*0.38*	
	Restrictions on practice	*0.27*	
Factor 4	Complex care	0.74	Scientific (7.5 ; 1.2)
	Research	0.69	
	Scientific curiosity	0.68	
	Level of autonomy	0.44	

Table 5
Motivating factors among specialities (multivariate ANOVA).

	Speciality					Gender			Speciality X gender
	OBGYN Mean [95% Conf. interval]	Surgery Mean [95% Conf. interval]	General practice Mean [95% Conf. interval]	Undecided Mean [95% Conf. interval]	P value	Female Mean [95% Conf. interval]	Male Mean [95% Conf. Interval]	P value	P value
Experiential factor	0.32 [0.10; 0.54]	0.69 [0.59; 0.78]	−0.22 [−0.28; −0.16]	−1.18 [−1.36; −1.00]	<0.001*	0.02 [−0.05; 0.08]	−0.01 [−0.09; 0.08]	0.008*	0.431
Relational factor	0.29 [0.14; 0.44]	−0.74 [−0.83; −0.66]	0.59 [0.52; 0.66]	−0.61 [−0.75; −0.47]	<0.001*	0.15 [0.08; 0.21]	−0.23 [−0.32; −0.15]	0.241	0.774
Occupational factor	−0.14 [−0.34; 0.06]	−0.34 [−0.45; −0.23]	0.16 [0.08; 0.23]	−0.43 [−0.58; −0.28]	<0.001*	0.09 [0.02; 0.15]	−0.14 [−0.22; 0.06]	0.006*	0.200
Scientific factor	−0.41 [−0.54; −0.27]	0.06 [−0.08; 0.19]	−0.26 [−0.32; −0.21]	−0.23 [−0.44; −0.02]	0.001*	−0.17 [−0.23; −0.11]	0.31 [0.21; 0.40]	0.002*	0.002*
Overall					<0.001*			0.028*	0.033*

* <0.05.

Table 6
Logistic regression analysis of students' odds to choose OBGYN over other categories of specialities.

Factors	All		Surgery		General practice		Undecided	
	Odds ratio [95% Conf. interval]	P value	Odds ratio [95% Conf. interval]	P value	Odds ratio [95% Conf. interval]	P value	Odds ratio [95% Conf. interval]	P value
Experiential factor	1.5 [1.2; 1.9]	0.001*	0.5 [0.4; 0.8]	<0.001*	2.4 [1.8; 3.2]	<0.001*	4.1 [2.4; 7.2]	<0.001*
Relational factor	1.1 [0.9; 1.4]	0.239	7.3 [4.5; 12.1]	<0.001*	0.5 [0.4; 0.7]	<0.001*	4.0 [2.0; 8.0]	<0.001*
Occupational factor	0.8 [0.7; 1.0]	0.121	1.1 [0.8; 1.5]	0.537	0.7 [0.5; 0.8]	0.001*	1.6 [0.9; 2.9]	0.120
Scientific factor	0.8 [0.6; 1.1]	0.125	0.6 [0.4; 0.9]	0.024*	1.0 [0.7; 1.3]	0.760	0.5 [0.3; 0.9]	0.020*
Gender (female)	4.5 [2.2; 9.2]	<0.001*	11.7 [4.7; 28.9]	<0.001*	2.7 [1.3; 5.6]	0.009*	6.1 [1.7; 21.1]	0.005*

* <0.05.

impact on the choice of speciality, as women chose OBGYN more frequently than men.

Motives, motivating factors and speciality choice

Our findings clustered motives into four motivating factors: "experiential", "relational", "occupational" and "scientific". Although other studies [9–11] defined different motivating factors, our study included similar concepts, such as factors relating to work conditions, relational and patient needs, career and financial considerations. Findings on motivational factors confirmed that OBGYN was a particular speciality sharing similar motivating factors with surgery or general practice, which we describe as an "in-between" speciality. This is in accordance with the preferences of applicants for OBGYN residencies that indicated primary care or surgical specialities (46% and 37%, respectively) as a second choice [12].

The most important motivating factor to choose OBGYN was "experiential"; this result is in accordance with previous studies [13,14]. Despite the importance of the "experiential factor" for OBGYN, this factor had a higher odds ratio for choosing surgery over OBGYN. This could be explained by the "technical aspect" motive included in "experiential factor", which was more influential for choosing surgery rather than OBGYN (85% and 60%, respectively).

"Relational factor" increased the preference for OBGYN over surgery but reduced the preference for OBGYN over general practice. "Doctor–patient relationship" (included in "relational factor") was more frequent for choosing general practice and OBGYN rather than surgery (74%, 71% and 26% respectively); these results are similar to previous studies [1,15].

There was no difference between surgery and OBGYN with respect to the "occupational factor". OBGYN was considered "an

uncontrollable lifestyle speciality" [16] and this work–life imbalance seemed to be a strong deterring factor for OBGYN in studies conducted in the USA [17–19]. For the Swiss students choosing OBGYN, "occupational factor" did not seem to have an important impact, in contrast to the choice for general practice seen in most studies [11,20–22]. Finally "scientific factor" showed no difference in influencing the choice for OBGYN and general practice and decreased the preference for OBGYN over surgery. This result could be explained by the components "research", "complex care" and "scientific curiosity," which were more frequently influential for students choosing surgery, a trend seen in previous studies [1,23–25].

Motivating factors influencing the career choice of Swiss students indicate that OBGYN is "between" surgery and general practice, and this aspect may be due to the fact that the OBGYN speciality includes both surgical and medical aspects, as well as in-hospital and ambulatory office-based practice, and encompasses a variety of activities from emergency to preventive medicine.

Gender

Gender had a major influence on speciality choice, similarly to previous studies where gender had a greater impact on speciality choice than career motivation or life goals [26]. Some differences in motives existed between gender: more women were influenced by passion, former experiences, patient and work-related motives than men, and more men were influenced by technical, career and financial motives than women, compatible with previous studies [9,20,23,27–29]. Thereby, we observed gender difference for "experiential factor", "occupational factor" and "scientific factor". Female students were more influenced by "experiential factor" and "occupational factor" than males, and male students were more influenced by "scientific factor".

An important gender difference was seen between specialities, with more women choosing OBGYN than surgery (88% and 45% respectively), similar to previous studies [30]. Consistent with our study, women students in the USA had three-fold higher preference for OBGYN over primary care and 10-fold higher preference for OBGYN than surgery [31]. Interestingly, this figure corresponded to the proportion of women among residents who received their Swiss speciality postgraduate diploma in OBGYN over the last three years (86%) [32]. This proportion of female was 34% in 1994 [33] and 73% from 2005 to 2007 [34–36]. The dramatic increase in the gender difference over the last 20 years reflects the increase of females entering medical studies as well as an increased interest for this field. This conclusion is supported by better results for female medical students in OBGYN undergraduate exams [37,38] and patient preferences to be cared by a female gynaecologist [39]. This difference also suggests that male students feel negative gender bias during OBGYN clerkship from patients and female-dominated clinical teams [40] and experience more gender discrimination and sexual harassment during undergraduate education in gynaecology than female students [41]. Further, we hypothesize that female students are less likely to choose surgical specialities than male because of gender-based discrimination [42,43], a lack of female role models in general surgery [44,45] and less opportunity to perform or assist surgical procedures compared to male students [46].

Limitations

First, our study explored motivations in a country where students can choose their speciality without a national ranking examination or a similar process to control access to postgraduate training. Therefore, our findings may not generalize to other settings.

Second, although only slightly over half of the students surveyed answered the questionnaire, the respondents attended four of the five medical schools in Switzerland over a 5-year period.

Moreover, the study was limited to the graduation year and no attempt was made to investigate whether the students' preference matched their actual choice of speciality for their residency training. However, from 2015 to 2017, the proportion of OBGYN residents graduating was 4.9% [32] of the total of the Swiss speciality postgraduate diplomas and the proportion of women was 86% [32]. These figures are very similar to our results, suggesting that participating students' preference for OBGYN are likely to be realised.

Conclusion and implications

Overall, as underlined by Boelen [47], coordination of medical education and other stakeholders in health system is an actual challenge since interventions to face global workforce shortage should start in medical school and carried on during residency. This put into play medical school social accountability that should be seen not as a duty but as an opportunity to contribute to society needs and equity, as required by international organization. Understanding the medical career decision-making contribute to the social accountability of medical school [48]. Motivational factors are inherently dynamic parameters that can be reinforced in order to balance doctors' distribution among both specialities and areas [49].

To attract more students to the OBGYN speciality, undergraduate-teaching experiences could be adapted to provide more hands-on experiences, a better integration of male students and more student involvement in patient care (history taking, clinical exam, clinical reasoning, diagnostic approach and treatment) during the OBGYN clerkship. The technical and relational aspects of OBGYN as a discipline could be reinforced. It is anticipated that such actions would better recruit and prepare qualified female and male OBGYN consultants to assume head positions in public hospitals and help meet requirements for health workforce.

Ethics approval and consent to participate

The study was conducted at Geneva University Hospitals in accordance with Good Clinical Practice (Declaration of Helsinki 2002). Administration of the survey was granted exemption from review by the institutional review board of the University of Geneva.

Consent for publication

Not applicable.

Availability of data and material

The data that support the findings of this study have restrictions and so are not publicly available. Data are however available from the authors upon reasonable request.

Competing interests

The authors declare that they have no competing interests.

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Authors' contributions

AF carried out study conception, systematic search, manual search, data retrieval, assessment of risk of bias, analysis, draft of manuscript and revision according to other authors' suggestions, and submission. MA carried out study conception and analysis. PD and GS carried out analysis and critically revision of the manuscript. All authors read and approved the final manuscript.

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