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ORIGINAL ARTICLE



A questionnaire survey of second year graduate-entry medical students' perception of obstetrics and gynaecology as a future career speciality

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ABSTRACT

The aim of this study was to explore the impressions of second year graduate-entry medical students of Obstetrics and Gynaecology, before their attachment in the speciality in the subsequent year, so as to improve its appeal to them and increase their recruitment into it. A total of 74 questionnaires were distributed at the end of the Learning Opportunities in Clinical Setting (LOCS) week in the speciality and 66 (89.19%) completed questionnaires were returned. Over 4% of the respondents were considering the speciality as their career choice and less than half would consider it as a second option. Whilst more than a third perceived some of the demerits of the speciality, more than a third endorsed its merits. This showed the need to explore and address their concerns about training and working in the speciality. Having a health-related primary degree, prior employment and being female were significantly associated with choosing the speciality as a career ($p < .001$). Barriers for male respondents were flagged, which need to be addressed, and a bias towards Obstetrics was noted, which reflects the narrow focus on the Labour Ward and necessitates a broader exposure to the speciality.

IMPACT STATEMENT

- **What is already known on this subject?** The perception of third year graduate-entry medical students of Obstetrics and Gynaecology is biased towards Obstetrics, and they have apprehensions about the challenges of training and working in the speciality.
- **What do the results of this study add?** The views of second year graduate-entry medical students are consistent with the views of third year graduate-entry medical students, which shows that these views may be formed early.
- **What are the implications of these findings for clinical practice and/or further research?** More research is needed to establish and understand the perception of the speciality earlier than second year and explore the value of practical steps that may improve this perception and increase the interest in it and recruitment into its training programmes.

KEYWORDS

Graduate-entry; medical students; obstetrics and gynaecology; career; recruitment; second year

Introduction

The speciality of Obstetrics and Gynaecology in the United Kingdom is facing a recruitment crisis (Royal College of Obstetricians and Gynaecologists 2004). Less than one in 30 medical school graduates seek the speciality as first career choice (Turner et al. 2006). This needs to be trebled to provide the required staffing for services (Brettingham 2006). Efforts have been made to increase the appeal of the speciality and explore its perception by medical students (Royal College of Obstetricians and Gynaecologists 2006).

Graduate-entry was introduced in the United Kingdom to increase the number of doctors (Cullen et al. 2007) and diversify their mix, in terms of maturity, self-directed learning and career choice (Geffen 1991). A look at third year graduate-entry medical students' perceptions of the speciality, upon completing their attachment in it, highlighted the need for more information about a career in the speciality and wider exposure to its different areas (Ismail and Kevelighan 2014).

No work was done to explore their views in earlier years to guide correcting misconceptions, and/or address any concerns during the attachment in the third year.

In Swansea, graduate-entry medical students spend a week in Obstetrics and Gynaecology as part of Learning Opportunities in Clinical Settings (LOCS) in their second year. This week includes lectures, tutorials and clinical sessions, either individually or in pairs. In Gynaecology theatre, the students clerk patients before surgery and obtain their valid written consent for pelvic examination under anaesthesia, present the cases to the Consultant, undertake a supervised pelvic examination at the start of the operation, and assist if required and as appropriate. In clinics, they observe Consultants and see patients to obtain their history, which they then present to and discuss with Consultants, and may carry out examinations, including vaginal examinations, with the patients' consent and under Consultant supervision. On the Labour Ward, they attend the hand over, board and ward

rounds alongside the multidisciplinary team, and may assist in operative delivery. They also get teaching in foetal heart monitoring interpretation.

The aim of this study was to explore the perception of second year graduate-entry medical students of the speciality, on completing the Learning Opportunities in Clinical Settings (LOCS) week in it, to gain an understanding of their views.

Materials and methods

A self-construct questionnaire was circulated to second year graduate-entry medical students by hand at the end of their Learning Opportunities in Clinical Setting (LOCS) week in Obstetrics and Gynaecology attachments at Singleton Hospital, in Swansea, in the academic year 2014–2015. This questionnaire was a modification of the questionnaire used in the survey of third year graduate-entry medical students (Ismail and Kevelighan 2014), which can be provided by the corresponding author on request. It was piloted by 20 participants prior to its actual circulation and the piloted questionnaires were not included in the analysis.

The questionnaire covered background features, such as gender and working experience since first degree completion, career prospects in terms of the views and perception of the speciality, its merits and demerits as well as the appeal of various areas of advanced and subspeciality training and included an area for free comments. Completed questionnaires were collected at the end of week. The principles of the Declaration of Helsinki were followed in carrying out this research. The Medical School confirmed that ethical approval was not required. Consent was taken as given by returning the completed questionnaire.

Data were saved on a Microsoft Works Database version 8 for Windows (www.msn.com) and analysed using Stata version 14 for Windows (www.stata.com). Continuous data were checked for normality of distribution, using Shapiro-Francia *W* test. Normally distributed continuous data were described using the mean \pm standard deviation. Continuous data that did not fit a normal distribution were described using the median [interquartile range] and compared using the Mann–Whitney *U* test. Categorical data were described in frequencies (%).

Results

Seventy-four questionnaires were distributed and 66 (89.19%) completed questionnaires were returned. The background features of the respondents are shown in Table 1. Their preference of Obstetrics and Gynaecology as a future career, the factors likely to affect this and the perception of opportunities to train in the speciality, preference for a split between Obstetrics and Gynaecology, as well as the likely impact of such a split on their career intentions, are shown in Table 2. Their perception of suggested merits and demerits of a career in the speciality are shown in Tables 3 and 4, respectively. Their perception of the appeal of its advanced and subspeciality training areas are shown in Tables 5 and 6,

Table 1. The distribution of respondents according to their background features.

Feature	Result
Type of primary degree	
- Health related	- 48 (72.7%)
- Non-health related	- 18 (27.3%)
Time since obtaining primary degree	2 [0–4] years
Age	24 [23–27] years
Working prior to studying medicine:	
- Yes	- 51 (77.3%)
o Duration	o 3 [2–5] years
- No	- 15 (22.7%)
Working whilst medical students:	
- Part time	- 16 (24.2%)
- Shift work	- 5 (7.6%)
- No	- 45 (68.2%)
Nationality:	
- British	- 63 (95.5%)
- European Union	- 2 (3.0%)
- Overseas	- 0 (0.0%)
- Not filled	- 1 (1.5%)
Gender:	
- Male	- 32 (48.5%)
- Female	- 34 (51.5%)

Table 2. Respondents' career intentions regarding obstetrics and gynaecology as a speciality and factors affecting these intentions.

Career aspect	No (%)
Career intentions regarding obstetrics and gynaecology:	
- First choice	- 3 (4.5%)
- Second choice	- 29 (43.9%)
- No	- 34 (51.5%)
- No answer	- 0 (0.0%)
Factors affecting career intentions:	
- Health related primary degree	- $p < .001^*$
- Prior employment	- $p < .001^*$
- Gender	- $p < .001^*$
Split of obstetrics and gynaecology:	
- Yes	- 19 (28.8%)
- No	- 42 (63.6%)
- No answer	- 5 (7.6%)
Effect of split on attractiveness of the speciality:	
- Yes, as I would like to concentrate on obstetrics	- 16 (24.2%)
- Yes, as I would like to concentrate on gynaecology	- 5 (7.6%)
- No, as I would like a bit of each	- 26 (39.4%)
- No, as I do not like it any way	- 16 (24.2%)
- No answer	- 3 (4.5%)

*Mann–Whitney test.

respectively. Their free comments and suggestions for improvement are shown in Table 7.

Discussion

The aim of this study was to explore how second year graduate-entry medical students perceived the speciality of Obstetrics and Gynaecology. Three respondents (4.5%), which is just over 1:20, considered the speciality as their first choice. This matches the reported <1:30 (3.3%) of overall medical school graduates (Turner et al. 2006) and <1:25 (4%) of third year graduate-entry medical students seeking the speciality as first career choice (Ismail and Kevelighan 2014). However, 29 (43.9%) would consider it as their second choice. This is consistent with the reported 54.7% of third year graduate-entry medical students willing to consider it as their second option (Ismail and Kevelighan 2014).

Table 3. The distribution of respondents according to their perception of suggested demerits of obstetrics and gynaecology as a career.

Demerit	1 (too bad)	2 (bad)	3 (neither bad nor good)	4 (good)	5 (too good)	No answer
Demanding	6 (9.1%)	22 (33.3%)	24 (36.4%)	11 (16.7%)	0 (0.0%)	3 (4.5%)
Boring	6 (9.1%)	14 (21.2%)	22 (33.3%)	16 (24.2%)	6 (9.1%)	2 (3.0%)
Stressful	6 (9.1%)	18 (27.3%)	26 (39.4%)	12 (18.2%)	1 (1.5%)	3 (4.5%)
Incompatible with family life	1 (1.5%)	14 (21.2%)	28 (42.4%)	16 (24.2%)	5 (7.6%)	2 (3.0%)
Risky	10 (15.2%)	18 (27.3%)	24 (36.4%)	11 (16.7%)	1 (1.5%)	2 (3.0%)

Table 4. The distribution of respondents according to their perception of suggested merits of obstetrics and gynaecology as a career.

Merit	1 (too bad)	2 (bad)	3 (neither bad nor good)	4 (good)	5 (too good)	No answer
Exciting	4 (6.1%)	13 (19.7%)	22 (33.3%)	16 (24.2%)	9 (13.6%)	2 (3.0%)
Interesting	5 (7.6%)	7 (10.6%)	15 (22.7%)	26 (39.4%)	11 (16.7%)	2 (3.0%)
Fulfilling	5 (7.6%)	5 (7.6%)	6 (9.1%)	27 (40.9%)	20 (30.3%)	3 (4.5%)
Rewarding	5 (7.6%)	4 (6.1%)	7 (10.6%)	31 (47.0%)	17 (25.8%)	2 (3.0%)
Challenging	4 (6.1%)	8 (12.1%)	16 (24.2%)	22 (33.3%)	14 (21.2%)	2 (3.0%)

Table 5. The distribution of respondents according to the appeal of advanced training areas in obstetrics and gynaecology to them.

Advanced training area	1 (too bad)	2 (bad)	3 (neither bad nor good)	4 (good)	5 (too good)	No answer
Abortion care	19 (28.8%)	12 (18.2%)	20 (30.3%)	9 (30.3%)	3 (4.5%)	3 (4.5%)
Acute gynaecology and early pregnancy	2 (3.0%)	14 (21.2%)	19 (28.8%)	22 (33.3%)	7 (10.6%)	2 (3.0%)
Advanced antenatal practice	1 (1.5%)	14 (21.2%)	18 (27.3%)	22 (33.3%)	9 (30.3%)	2 (3.0%)
Advanced labour practice	3 (4.5%)	10 (15.2%)	18 (27.3%)	24 (36.4%)	8 (12.1%)	3 (4.5%)
Benign abdominal surgery	6 (9.1%)	23 (34.8%)	14 (21.2%)	12 (18.2%)	8 (12.1%)	3 (4.5%)
Advanced laparoscopic surgery for the excision of benign disease	4 (6.1%)	23 (34.8%)	12 (18.2%)	14 (21.2%)	10 (15.2%)	3 (4.5%)
Benign gynaecological surgery: hysteroscopy	9 (30.3%)	20 (30.3%)	17 (25.8%)	14 (21.2%)	4 (6.1%)	2 (3.0%)
Benign gynaecological surgery: laparoscopy	9 (30.3%)	19 (28.8%)	17 (25.8%)	12 (18.2%)	5 (7.6%)	4 (6.1%)
Benign vaginal surgery	11 (16.7%)	23 (34.8%)	17 (25.8%)	7 (10.6%)	5 (7.6%)	3 (4.5%)
Colposcopy	14 (21.2%)	23 (34.8%)	15 (22.7%)	8 (12.1%)	3 (4.5%)	3 (4.5%)
Fetal medicine	4 (6.1%)	4 (6.1%)	15 (22.7%)	25 (37.9%)	16 (24.2%)	2 (3.0%)
Gynaecological oncology	6 (9.1%)	15 (22.7%)	21 (31.8%)	17 (25.8%)	5 (7.6%)	2 (3.0%)
Labour ward lead	7 (10.6%)	7 (10.6%)	20 (30.3%)	19 (28.8%)	10 (15.2%)	3 (4.5%)
Maternal medicine	6 (9.1%)	9 (30.3%)	20 (30.3%)	17 (25.8%)	12 (18.2%)	2 (3.0%)
Medical education	5 (7.6%)	8 (12.1%)	26 (39.4%)	16 (24.2%)	9 (30.3%)	2 (3.0%)
Menopause	13 (19.7%)	18 (27.3%)	23 (34.8%)	6 (9.1%)	4 (6.1%)	2 (3.0%)
Paediatric and adolescent gynaecology	8 (12.1%)	12 (18.2%)	13 (19.7%)	18 (27.3%)	12 (18.2%)	3 (4.5%)
Sexual health	9 (30.3%)	11 (16.7%)	17 (25.8%)	16 (24.2%)	11 (16.7%)	2 (3.0%)
Subfertility and reproductive endocrinology	5 (7.6%)	8 (12.1%)	15 (22.7%)	19 (28.8%)	16 (24.2%)	3 (4.5%)
Vulval diseases	13 (19.7%)	24 (36.4%)	19 (28.8%)	5 (7.6%)	3 (4.5%)	2 (3.0%)
Urogynaecology	12 (18.2%)	21 (31.8%)	23 (34.8%)	5 (7.6%)	3 (4.5%)	2 (3.0%)

Table 6. The distribution of respondents according to the appeal of subspecialty training areas in obstetrics and gynaecology to them.

Subspecialty	1 (too bad)	2 (bad)	3 (neither bad nor good)	4 (good)	5 (too good)	No answer
Feto-maternal medicine	5 (7.6%)	6 (9.1%)	15 (22.7%)	23 (34.8%)	15 (22.7%)	2 (3.0%)
Gynaecological oncology	9 (30.3%)	16 (24.2%)	18 (27.3%)	15 (22.7%)	6 (9.1%)	2 (3.0%)
Reproductive medicine	5 (7.6%)	9 (30.3%)	17 (25.8%)	23 (34.8%)	10 (15.2%)	2 (3.0%)
Urogynaecology	12 (18.2%)	24 (36.4%)	20 (30.3%)	6 (9.1%)	2 (3.0%)	2 (3.0%)
Sexual and reproductive health	9 (30.3%)	13 (19.7%)	19 (28.8%)	13 (19.7%)	10 (15.2%)	2 (3.0%)

Whilst this indicates that there is a room to persuade more graduate-entry medical students to have a second look at the speciality as a career, it raises suspicion that they may have made their impressions about the speciality before their third-year attachment. The challenge is to identify the factors contributing to these views and actively challenge them. This is particularly the case as 34 (51.5%) indicated that they do not wish to consider the speciality as a career.

A previous study showed significantly more female graduate medical students considering the speciality as a career than their male counterparts (Ismail and Kevelighan 2014). This study confirmed this finding, bearing in mind that 32 of the respondents (48.5%) were male. An earlier study in the United Kingdom reported that female medical students

tended to get better pass and distinction rates than their male counterparts (Higham and Steer 2004). The same was reported in New Zealand, where women were more likely than men to be interested in Obstetrics and Gynaecology, with experience during the clinical placement being the most important deciding factor (Boyle et al. 2014).

Notably, eight male respondents in this study, which represents 25% of the 32 male respondents, highlighted the difficulties they faced. Their comments included perceptions of being seen as perverts, not being welcomed, especially by midwives, and constantly being asked to stay outside. Interestingly, the speciality was not long ago considered to be a male-only territory and efforts were made to encourage female applicants (Centre for Workforce Intelligence 2015).

Table 7. Most frequent five themes in the free comments made by participants regarding the merits, demerits of as well as training opportunities in obstetrics and gynaecology as a speciality and suggestions to improve its appeal.

Comment	No (%)
Merits of a career in obstetrics and gynaecology:	
- Mix of surgery and medicine	- 30 (45.5%)
- Helping young and healthy women through pregnancy and child birth	- 19 (28.8%)
- Variety	- 18 (27.3%)
- Rewarding	- 12 (18.2%)
- Helping women in private/sensitive area	- 9 (30.3%)
Demerits of a career in obstetrics and gynaecology:	
- Narrow/repetitive	- 21 (31.8%)
- Stress/blame/litigation/risk/unpleasant/chaperone/midwives	- 15 (22.7%)
- Long/unsocial hours, work/family balance	- 10 (15.2%)
- Harder for male/religious reason	- 8 (12.1%)
- Long training	- 6 (9.1%)
Training opportunities in obstetrics and gynaecology:	
- Do not know/not sure	- 18 (27.3%)
- Good, not very competitive	- 14 (21.2%)
- Straight forward/run through	- 8 (12.1%)
- Poor/competitive	- 4 (6.1%)
- Difficult career path	- 2 (3.0%)
Suggestions to improve the appeal of the speciality:	
- More awareness/exposure/activities	- 10 (15.2%)
- Split obstetrics and gynaecology, better hours, less surgery as an option	- 5 (7.6%)
- Do not know yet	- 8 (12.1%)
- More open for males/support for women	- 3 (4.5%)
- Very good teaching	- 1 (1.5%)

Whilst this may reflect the finding that graduate medical students (Shelker et al. 2011), especially men (Goldacre et al. 2007), prefer general practice rather than hospital-based specialities, there is a documented fall in interest in the speciality among male medical school graduates in the United Kingdom (Royal College of Obstetricians and Gynaecologists 2004). These comments, which match similar experiences in other countries, such as the United States of America (Chang et al. 2010) and Malaysia (Zahid et al. 2015), necessitate addressing the barriers facing male medical students in the speciality.

Having a degree in a health-related field and a job since gaining first degree were significantly associated with an increased interest in the speciality in this study. This was not the case in the study of the views of third year graduate-entry medical students (Ismail and Kevelighan 2014). Earlier research showed that primary degrees had no impact on graduate medical students' experience (Rapport et al. 2009).

This matches earlier research showing graduate-entry medical students to have higher distinction, but not graduation rates (Shelker et al. 2011), less anxiety (James et al. 2009) and less liability to syncope in theatre (Jamjoom et al. 2009) than their direct-entry counterparts. However, it does not concur with the finding that graduate-entry medical students are less empathetic and less conscientious (James et al. 2009) or the reports that they pay more attention to hospital accommodation and food and family time (Goldacre et al. 2008) and prefer general practice to hospital specialities (Lambert et al. 2001) than their direct-entry counterparts. All these features point to variation amongst graduate-entry medical students, which necessitates a flexible individualised approach, in terms of medical studies and in promoting the speciality to them.

Research showed that information about training opportunities and specialisation can influence career choice of graduate students (Newton et al. 2011). The lack of knowledge about the speciality could be seen in the majority of respondents rating areas of advanced and subspeciality training as neither bad nor good, and 18 respondents (27.3%) indicating their unawareness of the training opportunities in the speciality and 10 (15.2%) suggesting more awareness, exposure and activities to improve the appeal of the speciality, in their free comments. This might reflect the short duration and limited scope of the week-long attachment and call for more varied exposure during it, with planned coverage of the range of skills and experiences the speciality entail. This finding matches the findings in the study that explored the views of third year graduate medical students (Ismail and Kevelighan 2014) and earlier research showing that good exposure to a particular speciality enhances its perception amongst medical students (Johnson and Michener 1994) and graduate medical students (Ravindra and Fitzgerald 2011).

This overall middle-of-the-road perception contrasts with a clear fascination with obstetrics and childbirth in particular. Nineteen respondents (28.8%) highlighted helping young and healthy mothers through pregnancy and childbirth. More respondents rated obstetric and foetal medicine advanced and subspeciality training as good and too good in comparison to other areas. This obstetric bias was expressed in one of the free comments on how to improve the appeal of the speciality;

Earlier exposure to know what the career involves, at the moment it seems like pregnant women and vagina issues.

This was further demonstrated in 21 respondents (31.8%) indicating their impression of the speciality as narrow and repetitive, even when 30 of them (45.5%) noted its mix of surgery and medicine and 18 (27.3%) noted the variety of clinical presentations and management options. This could well be due to Labour Ward being the most prominent part of the week-long attachment.

This was noted in the study of the views of third year graduate-entry medical students (Ismail and Kevelighan 2014). The undergraduate curriculum has moved in recent years to focus on basic concepts and essential skills indispensable for foundation doctors, leaving the rest to be covered during specialist training (Lumsden and Symonds 2010). Nonetheless, it is important to maintain a sense of perspective so that medical students acquire the essential skills and still get a broad overview of the speciality.

Some negative views can be seen in relation to some aspects of the speciality like abortion care, vulval diseases, the menopause and urogynaecology, where almost a fifth or even more of the respondents rated them as too bad. These views were noted in some of the free comments, such as;

Having to look at genitals all the time

A lot of unpleasant sights

Impact of negative parts can have on patients, families (miscarriage, still birth, STIs)

Cannot get involved in all aspects due to religious reasons and do not know about flexibility

It is helpful to recognise the sensitive nature of these areas and the ethical controversy that surrounds aspects such as abortion. It is vital to outline that the law allows for conscientious objection (Montgomery 2015), such that no one would be expected to participate in an aspect of care they find unacceptable. It is equally pertinent to focus on the help that can be provided to patients. This is very much the same like fire fighters dealing with fire and police officer dealing with crime, without being responsible for either unfortunate event. The difference good care can make to the lives of distressed women needs to be emphasised.

The perceptions of the respondents on the merits of Obstetrics and Gynaecology give reason to be optimistic, whilst demanding more action to harness this perception into interest in the speciality. More respondents rated the merits of the speciality as good or too good than those who rated them as bad or too bad. In fact, 20 respondents (30.3%) rated it as very fulfilling, 17 (25.8%) rated it as too rewarding and 14 (21.2%) rated it as too challenging.

This study was the first to explore the views of second year graduate-entry medical students about the speciality prior to the main attachment in the third year. It provided ideas that can be acted upon to improve the perception of the speciality and enhance its appeal. It had a high response rate (89.19%), which is higher than encountered in similar studies (Raszeja et al. 2013). It highlighted preconceived ideas about the speciality, especially in relation to male students, which can be acted upon and explored further to promote the speciality to graduate, as well as non-graduate-entry, especially male, medical students. However, it was a questionnaire survey that covered a single academic year in a single medical school. Although covering a number of medical schools over longer periods of time would have been more informative, the study revealed valuable information that can be acted upon and explored further through other research methods, such as interviews and focus groups, with comparison with direct-entry students.

In conclusion, the aim of this study was to explore the perceptions of second year graduate-entry medical students to Obstetrics and Gynaecology as a speciality, to understand their views before the proper attachment in the third year, so as to adjust the third-year attachment in such a way that may increase its appeal to them, and therefore enhance their recruitment into the speciality. The study showed 3 respondents (4.5%) to be considering the speciality as their first choice and 29 (43.9%) to regard it as second choice. This raised the possibility that these perceptions were formed, and therefore need to be aired and addressed, before the third-year attachment. Gender was shown to be a significant factor, with male students perceiving barriers that need to be removed to encourage them to consider the speciality and increase their recruitment into it. A clear bias towards obstetrics was noted in the respondents' responses and free comments. This necessitates broader exposure, to give a comprehensive idea about the speciality, whilst giving prime attention to the immediate need to gain the general skills required at the medical student level.

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