CORA Cork Open Research Archive
Cartlann Taighde Oscailte Chorcaí

Title	The challenges facing recruitment and retention of doctors in obstetrics and gynaecology in Ireland
Authors	O'Sullivan, Suzanne
Publication date	2020-09
Original Citation	O'Sullivan, S. 2020. The challenges facing recruitment and retention of doctors in obstetrics and gynaecology in Ireland. MD Thesis, University College Cork.
Type of publication	Doctoral thesis
Rights	© 2020, Suzanne O'Sullivan. - https://creativecommons.org/licenses/by-nc-nd/4.0/
Download date	2026-10-30 06:54:40
Item downloaded from	https://hdl.handle.net/10468/10619



UCC
University College Cork, Ireland
Coláiste na hOllscoile Corcaigh

The Challenges Facing Recruitment and Retention of Doctors in Obstetrics and Gynaecology in Ireland

Suzanne O'Sullivan
MB, BCh, BAO, FRCPI, FRCOG



National University of Ireland, Cork
Department of Medicine

This thesis is submitted to University College Cork in fulfilment of the requirements for the degree of Doctor of Medicine

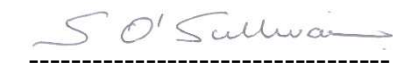
September 2020

Head of Department
Prof. Paula O'Leary

Supervisors
Prof. Mary Horgan
Dr. Deirdre Bennett

Declaration

This thesis is my own work and has not been submitted for another degree, either at University College Cork or elsewhere.



Suzanne O'Sullivan
(Student No. 117223410)

Abstract

Obstetrics and gynaecology is a medical specialty which includes all aspects of sexual and reproductive health across the life course of a female. It is traditionally perceived as a "lifestyle unfriendly" specialty, and future specialist shortages have been identified internationally. Irish maternity services have low consultant numbers, understaffed units, predominantly female trainees and have been exposed to high levels of litigation and intense media scrutiny for years. Using a combination of quantitative and qualitative research, this thesis presents a detailed exploration of attitudes to and experience of obstetrics and gynaecology as a career from the perspectives of the following groups:

1. Medical students from an Irish medical school (University College Cork),
2. Current specialists in training across all levels of experience, and
3. Consultant obstetrician gynaecologists.

The quantitative research involved detailed surveys of all penultimate year medical students in UCC (n=134, response rate 68.7%) and trainees in obstetrics and gynaecology (n=124, response rate 70.8%). The qualitative research involved semi-structured interviews using deductive thematic analysis, of 17 consultant obstetrician gynaecologists from different ages, genders and geographical locations across the country.

For medical students, factors that increased the attraction to the specialty were continuity of care (p= 0.002), delivering babies (p=0.004), female patients only (p=0.026), limited focus of disease (p=0.01), intellectual content (p=0.001), combination of obstetrics and gynaecology (p=0.014), predominance of female

practitioners (p=0.002), career opportunities and interaction with consultants (p=0.016). Protection from litigation was deemed by 85% of students to moderately or strongly increase the appeal to the specialty.

When trainees were asked how much they enjoyed working in the specialty on a scale of 1 to 10 with 1 representing no enjoyment at all and 10 representing immense enjoyment, 85.3% responded with a value of 7 or higher. When asked if they would recommend a career in obstetrics and gynaecology to their family member or child, only 3% strongly agreed. 86.7% of trainees felt that the media did not have a positive impact on patients and 94.1% felt that the media representation of obstetrics and gynaecology was fair and balanced. 82.3% felt that the media negatively influenced patients' attitudes to doctors. 37.1% of trainees have been involved in a medico-legal case and 79.5% state that the medico-legal climate has a moderately or strongly negative impact on recruitment and retention, while 84.2% feel it has a moderately or strongly negative impact on patients.

In terms of future workforce planning, female trainees are significantly more likely to consider job-sharing (p=0.006) and are less likely to do private practice in obstetrics and gynaecology (p=0.002). 50.4% of all trainees plan to take parental leave and 33.9% plan on taking a sabbatical.

The qualitative part of the study reflected themes of gender imbalance, reduced experience of new consultants due to EWTD, increased patient demand and unrealistic expectation, harm due to negative media coverage and the litigation culture, new entrant consultant pay disparity and lack of advocacy for doctors from professional bodies and the Health Service Executive. Solutions to the problems raised included restoration of pay parity, increased consultant numbers, improved advocacy, formal mentorship, and tackling negative media coverage and the

litigation culture. Robust workforce planning, flexibility in training and consultant posts, diversification of the specialty to include community gynaecology and interdisciplinary spread of clinical care were also recommended.

The voice of the current and future physician was at the centre of this work and the opinions and perceptions of these doctors is what I wish to address in this thesis. Their knowledge of the particular problems facing obstetrics and gynaecology in terms of clinical need and medical recruitment is unparalleled. Policymakers would do well to partner with the professional and training bodies to ensure, practical, economical and evidence-based solutions to the problems facing recruitment and retention in maternity services.

Dedication

To Brian, Johanna and Lily

Acknowledgements

I am beholden to my supervisors, Mary Horgan and Deirdre Bennett, for their encouragement, support and guidance throughout this process.

My appreciation also extends to all the medical students and trainees who inspired this work in the first place, and whose contributions are central to this thesis. I am indebted to my consultant colleagues who gave willingly of their time and their wisdom.

I thank Dr. Aoife Howard for her work on the study of medical students, and Drs. Maeve Eogan and Fadi Salameh for their assistance in developing and distributing trainee questionnaires.

I wish to acknowledge Dr. Paul Corcoran for his expertise and infinite patience in helping me with statistical analysis, and Rose Keane for her help in transcription.

To Dr. John O'Sullivan, my brother, who elevated this thesis with his formatting expertise and eagle eye for detail. I am so grateful.

I thank Brian for his support, without which this work would not have been possible.

Table of Contents

1 Introduction 1

1.1 Background 1

1.2 Maternity Units in Ireland 3

1.2.1 Symphysiotomy 8

1.2.2 Dr. Michael Neary 10

1.2.3 Miscarriage Misdiagnosis 11

1.2.4 Savita Halappanavar 11

1.2.5 Portlaoise 12

1.2.6 Portiuncula 13

1.2.7 CervicalCheck 14

1.2.8 Media Coverage 14

1.3 Historical Context of Consultant Recruitment and Retention across all Specialties in Ireland 16

1.3.1 Obstetrics and Gynaecology - The Irish Context 22

1.4 Obstetrics and Gynaecology - Training in Ireland 22

1.4.1 Specialist Registration “Parallel Route” 25

1.4.2 Obstetrics and Gynaecology Recruitment and Retention Elsewhere 26

1.5 What About Obstetrics and Gynaecology in Ireland Now? 27

2 Factors Influencing Medical Students’ Decision to Pursue a Career in Obstetrics and Gynaecology 31

2.1 Introduction 31

2.2 Existing Research 31

2.2.1 Lifestyle 32

2.2.2 Clinical Experience 33
2.2.3 Gender 34
2.2.4 Litigation and Media 34
2.3 Study Objectives 35
2.4 Long Term Relevance 35
2.5 Methodology 36
2.5.1 Study Design 36
2.5.2 Study Tool 36
2.5.3 Data Analysis 38
2.5.4 Ethical Approval 38
2.6 Results 38
2.6.1 Response Rate 38
2.6.2 Obstetrics and Gynaecology as First Choice of Specialty 39
2.6.3 Clinical Clerkship 41
2.6.4 Characteristics of Obstetrics and Gynaecology 43
2.6.5 Theoretical Factors to Increase the Appeal of Obstetrics and Gynaecology 49
2.6.6 Media Portrayal of Obstetrics and Gynaecology 51
2.7 Discussion 52
2.7.1 Strengths and Limitations of Study 57
2.7.2 Recommendations for Future Research 58
2.8 Conclusions 59
3 Factors influencing Trainees in Obstetrics and Gynaecology in Ireland 61
3.1 Introduction 61
3.2 Study Objectives 64

3.3 Methodology 65
3.3.1 Study Design 65
3.3.2 Study Tool 65
3.3.3 Data Analysis 66
3.4 Ethical Approval 66
3.5 Results 67
3.5.1 Media Representation of Obstetrics and Gynaecology 69
3.5.2 Medico-Legal Climate on the Specialty 71
3.5.3 Experience of Workplace Environment 72
3.5.4 The impact of European Working Time Directive (EWTD) 74
3.5.5 Trainee's Recommendation of Obstetrics and Gynaecology as a Career 74
3.6 Discussion 75
3.7 Study Strengths and Limitations 81
3.7.1 Recommendations for Further Research 81
3.8 Conclusions 82
4 Career Plans and Future Working Patterns of Obstetrics and Gynaecology Trainees in Ireland 84
4.1 Introduction 84
4.1.1 The Irish Context 86
4.1.2 Existing Research 90
4.1.3 Study Objectives 90
4.2 Methodology 91
4.2.1 Study Design 91
4.2.2 Study Tool 91

4.2.3 Data Analysis 92
4.2.4 Ethical Approval 93
4.3 Results 93
4.3.1 Response Rate and Demographics 93
4.3.2 Career Grade of Respondents 94
4.3.3 Future Work Preferences 94
4.3.4 Future Work Pattern Preferences 96
4.3.5 Attitudes Towards Working in Each Maternity Hospital in Ireland 99
4.3.6 Theoretical Factors Which May Improve Recruitment 102
4.3.7 Preferred Age at Retirement 103
4.4 Discussion 104
4.4.1 Gender and Generational Differences 105
4.5 Choice of Maternity Units and Implications for Policymakers 107
4.6 Possible Solutions to Predicted Shortfalls in Care Provision 108
4.7 Strengths, Limitations and Recommendations for Future Research 109
5 Consultant Perspectives on Recruitment and Retention with Emphasis on Solutions 111
5.1 Introduction 111
5.2 Study Objectives 113
5.3 Methodology 114
5.3.1 Design 114
5.3.2 Ethical Approval 114
5.3.3 Participants 114
5.3.4 Data Collection 115
5.3.5 Data Analysis 116

5.3.6 Reflexivity 116
5.4 Results 116
5.4.1 Research Question #1 119
5.4.2 Research Question #2 123
5.4.3 Research Question #3 125
5.4.4 Research Question #4 131
5.4.5 Research Question #5 132
5.4.6 Redefining the Role and Looking at Alternative Options to Providing Services 137
5.5 Discussion 140
5.5.1 Addressing the Problems 140
5.5.2 Addressing the Solutions 146
6 Conclusions and Recommendations for Further Work 155
6.1 Concluding Remarks 155
6.2 Recommendations for Further Work 165
6.3 Plans for Publication of Research Findings 167
References 168
Appendix A 192
Appendix B 194
Appendix C 202
Appendix D 215
Appendix E 220
Appendix F 222
Appendix G 225

List of Figures

Figure 1.1 Locations and sizes of maternity hospitals in Ireland (NPEC, 2019)..... 4

Figure 1.2 Total mothers delivered and total births per maternity unit 2017 (NPEC 2019) 5

Figure 1.3 Medical graduates per 100,000 2013 (adapted from OECD Health Statistics 2017)..... 18

Figure 1.4 Domestically and Internationally-trained doctors per 1,000 (adapted from OECD 2012) 19

Figure 1.5 Training pathway in obstetrics and gynaecology (Royal College of Physicians of Ireland 2019)..... 24

Figure 2.1 Student's first preference specialty (n = 134)..... 40

Figure 2.2 Factors that negatively influence medical students towards obstetrics and gynaecology (numbers shown reflect % values)..... 43

Figure 2.3 The relative importance of factors that positively influence attitudes of medical students towards obstetrics and gynaecology careers (numbers shown reflect % values)..... 45

Figure 2.4 Factors most likely to deter students who consider a career in obstetrics and gynaecology..... 49

Figure 2.5 Theoretical factors that may alter the appeal of the specialty 50

Figure 3.1 Career grade of respondents (n=124) 68

Figure 3.2 How much do you enjoy working in Obstetrics and Gynaecology? (% of respondents) 68

Figure 3.3 Perception of the media impact on obstetrics and gynaecology (% of respondents) 69

Figure 3.4 Perception of the media impact on obstetrics and gynaecology (% of respondents) 70
Figure 3.5 The impact of the medico-legal climate on obstetrics and gynaecology (% of respondents) 71
Figure 3.6 Trainee's experience of negative behaviour from patients and the public (%) 73
Figure 3.7 Trainees' attitudes to their choice of career 73
Figure 3.8 Impact of European Working Time Directive (EWTD) 74
Figure 3.9 I would recommend a career in obstetrics and gynaecology to a family member or my child (% of respondents) 75
Figure 4.1 OECD 2013 data for obs/gynae per 100,000 women – revised and re-produced for Ireland, removing inactive doctors and those working exclusively outside Ireland (Turner and McNicholl 2015) 85
Figure 4.2 Career grade of respondents (n=115) 94
Figure 4.3 Future work preferences 95
Figure 4.4 Future work specification preferences (% of respondents) 96
Figure 4.5 Preferred working options 98
Figure 4.6 Preferred working options comparing gender 99
Figure 4.7 Likelihood of considering Consultant role per maternity unit in Ireland 100
Figure 4.8 Factors that may improve recruitment to less popular hospitals 102
Figure 4.9 Preferred age at retirement 104

List of Tables

Table 2.1 Demographic characteristics of participants 39

Table 2.2 Likelihood of pursuing obstetrics and gynaecology as a career 40

Table 2.3 Students' responses to statements on Clinical Clerkships 42

Table 2.4 Factors that increase attraction to obstetrics and gynaecology as a specialty..... 46

Table 2.5 Factors that do not significantly increase attraction to obstetrics and gynaecology 48

Table 2.6 Respondents' perceptions of the media's portrayal of obstetrics and gynaecology 51

Table 3.1 Demographic characteristics of trainees 67

Table 4.1 Demographics of respondents..... 93

Table 4.2 Future work preferences comparing gender..... 95

Table 4.3 Future work specification preferences comparing gender 97

Table 4.4 Factors that may improve recruitment comparing gender 103

Table 5.1 Demographics and characteristics of interviewees 117

Table 5.2 Research questions addressing the problems of recruitment and retention 118

Table 5.3 Research question addressing solutions to recruitment and retention issues 119

Chapter 1

Introduction

1.1 Background

Obstetrics and gynaecology is a medical specialty that is tasked with providing care for pregnant women and their unborn children and the management of specific diseases in pregnant women (obstetrics), as well as female reproductive health in non-pregnant women (gynaecology) which includes all aspects of sexual and reproductive health across the life course of a female.

It has been a strong proponent of women's health through the continuum of their lives, from prevention to diagnosis and treatment. Ireland has a long and illustrious history as a world leader in terms of obstetric practice and innovation. The Rotunda hospital, which was founded by Bartholomew Moss in 1745 and received its Royal Charter in 1756, is acknowledged as the oldest continuously operating maternity hospital in the world.

The Coombe hospital was founded by Margaret Boyle in the vacated building of the Meath Hospital in the Coombe in Dublin's Liberties area in 1826. It formally opened as the Coombe Lying-in Hospital in 1829 and was granted a Royal Charter in 1867. The hospital moved to modern premises nearby in Dolphin's Barn in 1967.

The National Maternity hospital, Holles Street, was established through charitable donations in 1894 and received a Royal Charter, in line with other maternity hospitals

in Dublin, in 1903. It gained worldwide acclaim after introducing a policy of "Active Management of Labour" during the 1960s under the mastership of Dr. Kieran O'Driscoll and publishing results confirming a reduction in the incidence of complications caused by prolonged labour (O'Driscoll, Stronge and Minogue, 1973). Obstetricians and midwives from all over the world continue to travel to Dublin to attend the annual Active Management of Labour courses.

Irish obstetric institutions have also been a beacon worldwide in terms of clinical audit and hospital reporting. In 1869 the first Rotunda clinical report was issued under the mastership of George Johnston and the problem of puerperal fever was debated before the Dublin Obstetrical Society (founded in 1838), the same year. The British and Foreign Medico-Chirurgical Review in 1873 under Proceedings of the Dublin Obstetrical Society, wrote:

"*The Dublin school of midwifery is second to none in this empire; exceeding in magnitude every other elsewhere, and that it's practice has been thrown more fully open to learners, and turned to better account in the advancement of obstetrical knowledge, than any like institution we possess. The report of the practice of the Rotunda Hospital, by the Master Dr. Johnston, forms one of the articles included in the volume before us, respecting which it is incumbent on us to state that it is the first issued by the Dublin Society, although this society has been thirty-four years in existence. We congratulate the members on their resolution no longer to hide their light under a bushel, but to hold it forth that it may be seen of all*".

Over the past few decades, the specialty has continuously evolved and adapted to the needs of women of modern-day Ireland. Success can be measured by increased longevity, with Ireland having the third highest number of healthy life years in Europe

for women, at 69.8 years versus the EU average of 64.2 years, according to European Commission figures (Eurostat, 2019).

Ireland has the third highest fertility rate in Europe after France and Sweden. However, we have the 6th highest mean age of women giving birth to their first child in in Europe (30.3 compared to the EU average of 29.1), and we had the highest average age at maternity in Europe in 2016 at 32.6 (Central Statistics Office, 2016). Ireland has the highest proportion of babies born to women over 30 in the EU, with a rate of 56.6% compared to the EU average of 43%. Ireland also has the 5th highest proportion of babies born to mothers over 40 in Europe with a rate of 4.8 % versus the EU average of 3.4% (Eurostat, 2019). Despite the well-recognised increased risk associated with an older maternity demographic, the Confidential Maternal Death Enquiry Ireland 2018 found that maternal mortality rates in Ireland have fallen consistently since 2011, with a direct maternal mortality rate of 2.1 per 100,000 maternities compared to a rate of 4.2 in the UK during the same 3 year period from 2014 to 2016 (MBBRACE, 2018).

Ireland's low stillbirth rates continue to fall with a stillbirth rate corrected for congenital abnormality in 2017 of 2.1 per 1000 births, which the euro peristat results put at 29th out of 33 European countries, or 5th lowest in Europe (Euro-Peristat Project, 2018).

1.2 Maternity Units in Ireland

As illustrated in Figure 1.1 from the National Perinatal Epidemiology Centre (NPEC) 2018, there are 19 maternity units in Ireland and 62, 079 babies were born in 2017. Whilst historically obstetric practice in Ireland was heavily influenced by, and constrained within, a widely accepted Catholic religious framework, the last 2 hospitals formerly run by religious orders, Our Lady of Lourdes in Drogheda and

Portiuncula in Ballinasloe, have become state run in recent years, and currently no Irish maternity hospital is run by a religious order. There remains a number of different governance and financial structures at play with state run and voluntary hospitals. Ireland also has the lowest number of obstetrics and gynaecology trained specialists per 100,000 women in the OECD (Turner and McNicholl, 2015).

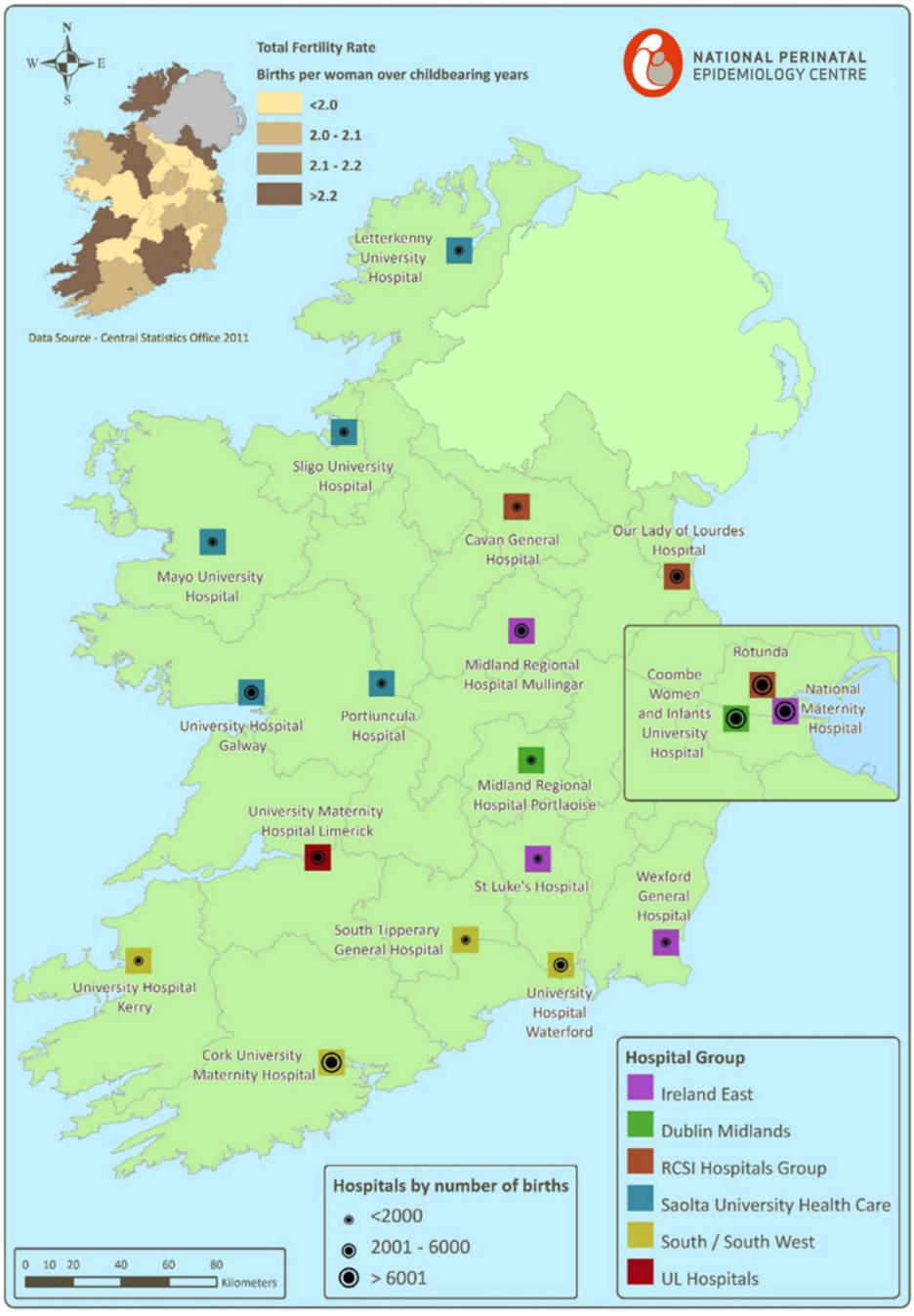


Figure 1.1 Locations and sizes of maternity hospitals in Ireland (NPEC, 2019)

The three largest maternity hospitals in Ireland are based in Dublin and each one is housed in outdated and unfit-for-purpose buildings on stand-alone sites in the city centre with limited parking and poor access from public transport. As illustrated in Figure 1.2, each of these hospitals delivers in excess of 8,000 babies per annum making them among the busiest maternity units in the developed world. Ireland has the highest proportion of babies in Europe (more than 55%) born in hospitals categorised as large due to a delivery rate of more than 5,000 babies per annum (Sandall, 2015). The lack of co-location with a general hospital for these units means that there is no direct access to general and vascular surgery, urology, neurology and intensive care facilities and allied health expertise when required, resulting in a clear deficit in safety and quality care for women. While all three hospitals have been due to move to newly built and co-located sites, the process has taken far too long and has been dogged by political wrangling and lack of clarity over governance and finance.

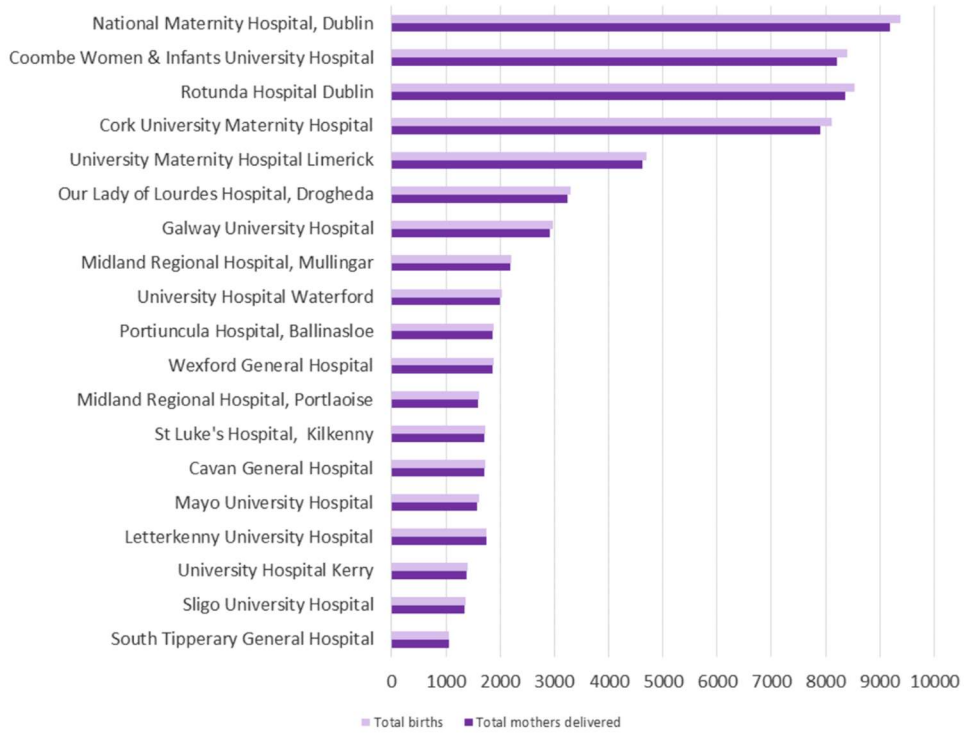


Figure 1.2 Total mothers delivered and total births per maternity unit 2017 (NPEC 2019)

This thesis outlines the unique issues that continue to pose challenges for recruitment and retention in the specialty of Obstetrics and Gynaecology from the perspectives of future doctors, trainees currently specialising, and consultants working in the specialty. It also aims to discuss and address potential solutions for the problems raised.

On December 15th, 2016, a letter was printed in the Letters to the Editor of the Irish Times in response to an article by journalist Dr. Jacky Jones "Women-centred Maternity Care".

I was a co-author of the letter, which arose out of severe frustration at the constant and severely inflammatory media coverage of issues in maternity services. As consultants we were acutely aware of the impact that constant negativity in the media was having on all doctors in the specialty but especially on trainees in obstetrics and gynaecology, as well as our midwifery and nursing colleagues in Ireland's maternity services.

"A chara, – We have become sadly accustomed to Dr. Jacky Jones's opinion pieces, many of which appear to have the singular aim of demonising maternity services. However, we seriously question the wisdom of the editorial decision to print the highly inflammatory, sensationalist and misleading headline accompanying this week's piece ("Ireland's maternity services: an ongoing horror story", December 13th), which adds little to the otherwise welcome debate on how we can continue to improve women-centred maternity care in modern Ireland.

Judge Harding Clarke's 273-page report on the surgical symphysiotomy ex gratia payment scheme report is detailed, comprehensive and makes for sobering reading. However, to conflate the findings of this report with the numerous and very real challenges currently facing Irish mothers and their care givers is dangerous and distracts from the key issues within Irish maternity services in 2016.

Ireland has the lowest number of consultant obstetrician and gynaecologists per capita in the OECD (just 6 per 100,000 women compared with an average of 24 per 100,000 women) yet despite this, the clinical outcomes for Irish mothers and babies are comparable with the best.

Dedicated consultants, specialists-in-training, midwives and allied staff combat poor infrastructure, a hostile media and a litigious culture every day and every night to ensure that our maternity hospitals remain open, safe and women-centered environments for antenatal, intrapartum and postnatal care.

However, almost a year after the launch of the national maternity strategy, there has been no progress on the modest aims outlined in this report.

The failure to invest in maternity services, coupled with the repeated and ill-founded slurs made on our profession in this newspaper and elsewhere, make it increasingly difficult for us, as senior clinicians and trainers of the next generation, to provide high-quality care in what your columnist appears not to understand is now a largely female-led and female-delivered specialty.

Repeated and unfounded attacks on us and our midwifery colleagues will do little to attract tomorrow's doctors and midwives to this wonderful specialty, and our daughters will be the worse for it.

We are committed to delivering high-quality maternity care to all women of Ireland and work tirelessly with our midwifery colleagues and other healthcare professionals to constantly review and improve the care we provide.

We are passionate about what we do, and many of us could work in any country but choose to work in Ireland. We would like the women of Ireland to know that their care is our utmost priority. – Yours, etc,

> Prof. LOUISE KENNY, Dr. KEELIN O'DONOGHUE, Dr. MOYA McMENAMIN,
>
> Dr. MAIREAD O'RIORDAN, Dr. SUZANNE O'SULLIVAN, Dr. NOIRIN RUSSELL, Cork University Maternity Hospital;
>
> Dr. CATHY ALLEN, Dr. VENITA BRODERICK, Prof. MARY HIGGINS, Prof. FIONNUALA McAULIFFE, National Maternity Hospital, Dublin;
>
> Dr. CAROL BARRY, Prof. FIONNUALA BREATHNACH, Dr. NAOMI BURKE,
>
> Dr. SHARON COOLEY, Dr. JENNIFER DONNELLY, Dr. MAEVE EOGAN,
>
> Dr. KAREN FLOOD, Dr. MARY HOLOHAN, Dr. ETAOIN KENT, Rotunda Hospital, Dublin;
>
> Dr. AISLING MARTIN, Dr. NIAMH MAHER, Dr. AOIFE MULALLY, Dr. CLIONA MURPHY, Prof. DEIRDRE MURPHY, Dr. SHARON SHEEHAN, Coombe Women and Infants University Hospital, Dublin;
>
> Dr. MARIE CHRISTINE de TAVERNIER, Portiuncla University Hospital, Ballinasloe.

By that time, major problems in Maternity Services had been exposed in the media and are outlined below.

1.2.1 Symphysiotomy

In 2002, Matilda Behan and her daughter, Bernadette, set up an advocacy group for the victims called Survivors of Symphysiotomy (SoS). After media exposure and political discussion, in 2008 the Irish Human Rights Commission recommended that the Government should reconsider its decision not to set up an independent inquiry into symphysiotomy (symphysiotomyireland.com). On 18 February 2010, an RTÉ Prime Time documentary revealed that, over half a century, some 1,500 women had symphysiotomies performed on them in childbirth by doctors to ensure childbearing without limitation, often linked to the unswervingly catholic ethos of hospitals at that time (https://www.rte.ie/news/2010/0219/127799-symphysiotomy/). Following the

programme, victims of the procedure called on the Minister for Health, Mary Harney, to initiate an independent inquiry.

In June 2012, details of Professor Oonagh Walsh's draft report on the use of this procedure in Ireland were released. The report found that although symphysiotomies were phased out in most medical institutions across the country, occasional procedures were performed in Our Lady of Lourdes Hospital into the 1980s, and that some cases were justifiable considering the clinical scenarios and the medical facilities of the time (Walsh, 2012). The report was criticised by victims' advocate group Survivors of Symphysiotomy, and by a number of opposition TDs and journalists, for failing to adequately address issues such as patient consent, and for perceivably justifying the performance of the operation. Survivors of Symphysiotomy members subsequently decided to boycott the second stage of the Walsh report *(*O'Hanlon, 2012). In July 2014, Professor Oonagh Walsh published her completed Report on Symphysiotomy in Ireland – 1944 to 1984 which had been commissioned by the Department of Health (Walsh, 2014).

It was agreed by Government in July 2014 to establish an *ex gratia* scheme for women who underwent a surgical symphysiotomy. The surgical symphysiotomy payment scheme was established in November 2014. In November 2016, Judge Maureen Harding Clarke on behalf of the Department of Health, published The Surgical Symphysiotomy Ex Gratia Payment Scheme Report (Department of Health, 2016). She found that 185 out of almost 600 applicants were unable to establish their claim. “All of these applicants were assisted in trying to establish their claims before being declared ineligible/not accepted into the scheme. Many personal recollections reduced

to a statement were simply not corroborated by the contemporaneous medical records of the symphysiotomy delivery. Many applicants did not undergo symphysiotomy".

It was shortly after this, amidst a heated media debate, that Dr. Jacky Jones published the article in the Irish Times that prompted the letter above.

1.2.2 Dr. Michael Neary

After concern was raised by a midwife in Our Lady of Lourdes Hospital in Drogheda in 1998 over the unusually high number of peripartum hysterectomies performed by Dr. Michael Neary an investigation into his practice was initiated by the Irish Hospital Consultants Association the same year. Prof. Prendiville, Dr. Murphy and Dr. Bernard Stuart agreed to review files on a number of Dr. Neary's patients at the Lourdes Hospital in Drogheda. They recommended in their report that Dr. Neary not be suspended pending a review by the Institute of Obstetrics and Gynaecology in Dublin, on the basis of his (Neary's) undertaking that he would not perform any Caesarean hysterectomies unless he had the agreement of another consultant. Dr. Neary adhered to that undertaking, however, he was later struck off the Medical Register, as a result of performing unnecessary Caesarean hysterectomies.

In February 2007, The Medical Council upheld the decision of a Fitness to Practice inquiry, which found Prof. Walter Prendiville, Dr. John Murphy and Dr. Bernard Stuart had been negligent in clearing Dr. Neary of any wrongdoing after reviewing 9 of his 122 Caesarean hysterectomy cases (O'Hanlon, 2007).

Two of these consultants subsequently won a high court case overturning this finding as unlawful. Mr. Justice Peter Kelly overturned the decision in a finding and strongly criticised the handling of the case by the Medical Council and its Fitness to Practice Committee. (Healy, 2007). The Lourdes Hospital Inquiry into peripartum

hysterectomy was published in 2006 by Judge Maureen Harding Clarke and was critical of the allied health professionals including consultant pathologists and consultant anaesthetists who were aware of the fact that an excessive number of hysterectomies were being performed but who did not report concerns. A government redress scheme was launched by the then minister for health, Mary Harney in April 2007.

1.2.3 Miscarriage Misdiagnosis

In early June 2010, a report of the case of Melissa Redmond, who had a misdiagnosed miscarriage in Our Lady of Lourdes Hospital Drogheda, appeared in the Irish news media (Magennis, 2010). This led to widespread concern and public discussion about diagnosis of early pregnancy loss and several similar cases came to light. The National Miscarriage Misdiagnosis Review was chaired by Professor William Ledger and was published by the HSE in April 2011.

1.2.4 Savita Halappanavar

Just two weeks after the death of Savita Halappanavar in University College Hospital Galway, Kitty Holland of the Irish Times published a front-page article in the Irish Times "Woman denied a termination dies in hospital" on November 12th, 2012. The story was reported across every outlet in Ireland, dominated the political agenda of the coming weeks and made headlines across the world. On 16th November 2012, the main story on the India Times website was run under the headline *Ireland Murders Pregnant Indian Dentist* (O'Carroll, 2013).

The terms of reference for the Health Service Executive's investigation into Savita Halappanavar's death were quickly agreed by 19th November 2012. That probe, as well as an internal one by the hospital itself, was already under way before the case

was made public by the Irish Times. Sir Sabaratnam Arulkumaran, Professor Emeritus of Obstetrics and Gynaecology at St George's University of London, was tasked with being its external independent chairperson. This report "Investigation of Incident 50278 from time of patient's self-referral to hospital on the 21st of October 2012 to the patient's death on the 28th of October, 2012" (Arulkumaran, 2013) was published on June 13th 2013 and highlighted inadequate assessment and monitoring of Savita Halappanavar, failure to offer all management options, and non-adherence to clinical guidelines relating to the management of severe sepsis and septic shock.

The third report, by HIQA (the Health Information and Quality Authority). "Investigation into the safety, quality and standards of services provided by the Health Service Executive to patients, including pregnant women, at risk of clinical deterioration, including those provided in University Hospital Galway, and as reflected in the care and treatment provided to Savita Halappanavar" was published in October 2013 (HIQA, 2013). It included local and national recommendations for improvements. "The HSE governance arrangements to support the execution of these national recommendations must be clear, with a named accountable person with overall delegated responsibility for implementation – the implementation plans should include clear timelines and identified individuals with responsibility for each recommendation and action". It also recommended that the review should inform the development and implementation of a National Maternity Services Strategy.

1.2.5 Portlaoise

On January 30th, 2014, RTE broadcasted a Prime Time Investigates episode called Fatal Failures investigating the deaths of 4 babies over six years in the Midlands Regional Hospital Portlaoise.

An initial report by the Chief Medical Officer Dr. Tony Holohan published in February 2014 identified clear failures, at local and national level, in the management of risk and patient safety in the Portlaoise maternity unit. While there was awareness of a rapidly increasing birth rate, and that the service was under pressure, there was no evidence that monitoring of how this was impacting on patient care took place. He found a culture of insensitivity among staff in Portlaoise in the maternity and paediatric units.

In May 2015 Health Information and Quality Authority's (HIQA) Report of the investigation into the safety, quality and standards of services provided by the Health Service Executive to patients in the Midland Regional Hospital, Portlaoise (Portlaoise Report) was published. This acknowledged that, "as a result of the negative experiences of a number of patients and their families in receipt of services in Portlaoise Hospital, their experiences highlighted significant deficiencies in the delivery of person-centred care at the hospital. This care fell well below the standard expected in a modern acute hospital. We would particularly like to pay tribute to the patients and families who made contact with the Authority to outline their experience of care within Portlaoise Hospital".

Subsequent to the 2016 letter to the Irish Times that opens this chapter, further problems in maternity services were revealed with commissioned reviews and reports and high-profile media reporting.

1.2.6 Portiuncula

In May 2018, Saolta group published their Report of the External Independent Review of Maternity Services at Portiuncula University Hospital, chaired by Professor James Walker, initially investigating the care of six women whos' babies were referred for

therapeutic hypothermia or "head cooling" in 2014, but which subsequently encompassed 12 other cases between 2008 and 2014 "External Independent Clinical Review of the Maternity Services at Portiuncula Hospital, Ballinasloe (PUH) and of 18 perinatal events which occurred between March 2008 and November 2014". They found serious errors in the management of 10 of the cases they reviewed. Failings included a lack of consultants at weekends, insufficient training among locum doctors, a lack of communication between healthcare professionals and an absence of open disclosure with patients and their families.

1.2.7 CervicalCheck

On April 25th, 2018, Vicky Phelan was interviewed by RTE outside the courts after settling her case against a US laboratory for incorrectly reporting her cervical smear in 2011 (Traynor, 2018). Subsequently extensive media coverage led to a national outcry and Dr. Gabriel Scally, a senior public health doctor working in the UK with experience in performing such reviews, was tasked with a Scoping Review into the problem. He has produced 3 reports: A Progress Report in June 2018, a Final Report in September 2018, and a Supplementary Report in June 2019 (Scally, 2019).

In these reports he found no evidence of a cover-up or any evidence that the laboratories currently used by Ireland's screening programme were substandard. But he did conclude that governance was poor and that the programme was doomed to fail. He also found that laboratories contracted by the health service had outsourced work without the knowledge of health service management.

1.2.8 Media Coverage

In her Report on Symphiotomy in Ireland 1944 – 1984, Professor Oonagh Walsh was critical of the media coverage surrounding the issue and wrote "There are lessons to

be learned from the manner in which a topic such as symphysiotomy is handled in the press and other public fora. At each of the consultation meetings survivors indicated their discomfort at the manner in which, as one expressed it, the topic had been 'hijacked' for personal and political ends, and grave concerns were expressed over the confrontational nature of the coverage. Nine respondents indicated that they were deeply uncomfortable with the continual presentation of the women as victims and were unhappy with the demonisation of the medical profession as a whole. 'I wish it hadn't happened to me, as it has limited aspects of my life. But it was done in my case because the baby was stuck and was born safely thank God'.

Dr. Gabriel Scally, in an interview with Susan Mitchell, in the Sunday Business post in July 2019 (Mitchell, 2019), was asked to compare the Cervicalcheck investigation to prior reviews he conducted in the UK and Northern Ireland. "This one was really quite remarkable, or remarkably different," he says, adding that it was particularly emotional. While he says he could understand why women and their families were "so emotional", the atmosphere "was really very unusual. Typically, when one of these things happen that I've been involved in, either in the North or in England, there's a really serious problem identified and it's decided there'll be an investigation into it, or an inquiry. And usually there's a pause. The pause button is pushed, and people wait to see the outcome of the inquiry."

This "toxic mixture of politics, media and law" was an "impediment" to him. But he also feels it was "unhealthy" and led to "snap judgments, erroneous facts and some very wild statements from a lot of people which were most, most unhelpful".

"Some of the political public discourse here seemed to be focused on the rapid identification of who did wrong before the facts were established. I don't know

whether that's the norm in the Republic, whether that's the way the system works or not. But the net effect of it is not helpful".

1.3 Historical Context of Consultant Recruitment and Retention across all Specialties in Ireland

In June 2003, the Department of Health published the Report of the National Task Force on Medical Staffing, or Hanly Report (Hanly, 2003). The key recommendation of the report was that in order to ensure compliance with the European Working Time Directive (EWTD), as well as to improve quality of care and doctors' job satisfaction, Ireland would need to transition from a consultant-led to a consultant-provided health service. To deliver such a service, the report recommended that the number of consultants working nationally would have to more than double in ten years, from 1,731 on the 1 January 2003 to 3,625 in 2013. As the number of consultants increased, the proportion of non-consultant hospital doctors (NCHDs), of whom there were 3,932 on 1 January 2003, would decline.

In 2015, a report by Tomas Campbell from the Department of Public Expenditure and Reform shows that while the number of consultants, across all disciplines working within the health service, did increase by 904 from January 1st 2003 to December 1st 2014, this is less than halfway to the 2013 target set by Hanly of 3,625. Indeed, it does not even meet the 2009 interim target of 3,063 consultants despite having the benefit of five extra years to achieve it. Moreover, the recruitment of 1,372 additional NCHDs across the same period has meant the ratio of NCHDs to consultants has remained static at roughly two-to-one for the past four years. Indeed, the number of NCHDs employed has increased three-fold over the past five years.

Following the Hanly Report in 2003, two follow-up reports on medical education were published in 2006: *Preparing Ireland's Doctors to Meet the Health Needs of the 21st Century* or Buttimer Report, and *Medical Education in Ireland: A New Direction*, or Fottrell Report. The Buttimer Report again identified increasing the number of consultants as a priority and recommended creating a new graduate access pathway to medical training. The Fottrell Report looked at the levels of EU and non-EU medical students in Irish universities. In 1978 a cap on the number of EU students that could be admitted to Irish medical schools of 305 had been introduced, and this cap remained in place for the following three decades despite growing demographic pressure. This led to a gap between the supply of doctors produced by medical schools and demand for doctors from our population, which was closed by recruiting from overseas. Moreover, universities' reliance on income from non-EU students meant that 60% of the medical school intake in 2003/2004 were from outside the EU, the majority of whom would return to their country of origin following graduation.

In order to address this reliance on international medical graduates, the Fottrell Report recommended a significant increase in the number of EU students admitted to our medical schools. Over a four-year period, this intake would increase to 725 while the proportion of non-EU students taking up medical training places would fall to a quarter at most. As the loss of non-EU fee income would threaten the viability of some Irish medical schools (in 2001/02 it was the source of over half of their combined revenue), resources would have to be put in place to compensate them.

Collectively, the Buttimer and Fottrell Reports led to a €200 million multi-annual investment programme in medical education, which had as its aims the doubling of EU student places and the creation of a new graduate pathway (Hanafin, 2006). Due

to the extended nature of medical training, with undergraduate courses in medicine typically lasting five or six years, there is an inherently long lead time with any reform. However, as can be seen in Figure 1.3, the 2006 investment in medical training has begun to manifest itself in recent years and in 2013 Ireland produced the most medical graduates per capita in the EU, overtaking Denmark from the previous year (OECD Health Statistics, 2017).

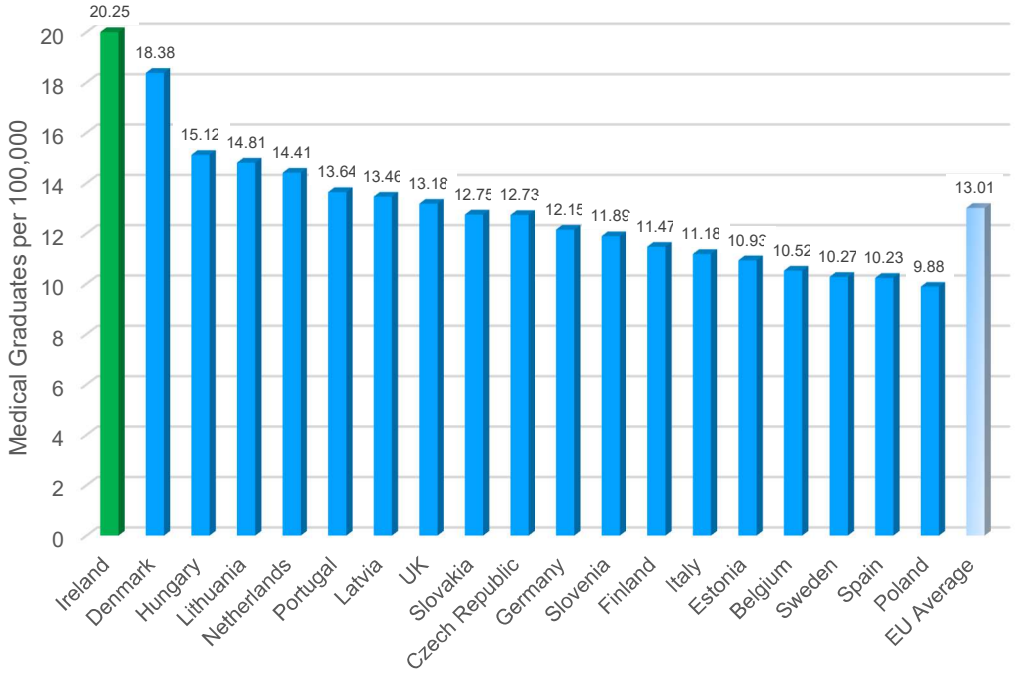


Figure 1.3 Medical graduates per 100,000 2013 (adapted from OECD Health Statistics 2017)

While the desired increase in numbers of medical graduates has been achieved, the ability of the Irish health system to retain their graduates once they qualify has come under significant scrutiny. Gouda *et al*. in 2015 found that 34% of students in Irish medical schools definitely intend to emigrate after graduation and a further 53% report that they are contemplating emigration, with only 40% intending to return within 5 years. Only 3% stated they did not intend to go abroad. The reason for migration was multifaceted.

In his 2015 Staff Paper Medical Workforce analysis, Tomas Campbell writes that despite having one of the lowest numbers of practicing doctors and the highest number of medical graduates per capita in the EU, in recent years Ireland has struggled for self-sufficiency. No other EU country was more reliant on international medical graduates (IMGs) in 2012 than Ireland, as Figure 1.4 shows. In that year 32.6% of doctors licensed to practice in Ireland qualified overseas, which was almost three-times the average level of 12.3%. What is especially striking about the high level of international medical graduates in Ireland is the rapid growth in the last decade underlying it – in 2000, only 13.4% of our doctors were internationally-trained according to Bidwell *et al.* in 2013. From near-average levels, the proportion of doctors in Ireland trained overseas almost tripled in twelve years and has continued to grow according to the latest OECD figures, to 34.2% in 2013 and 36.1% in 2014.

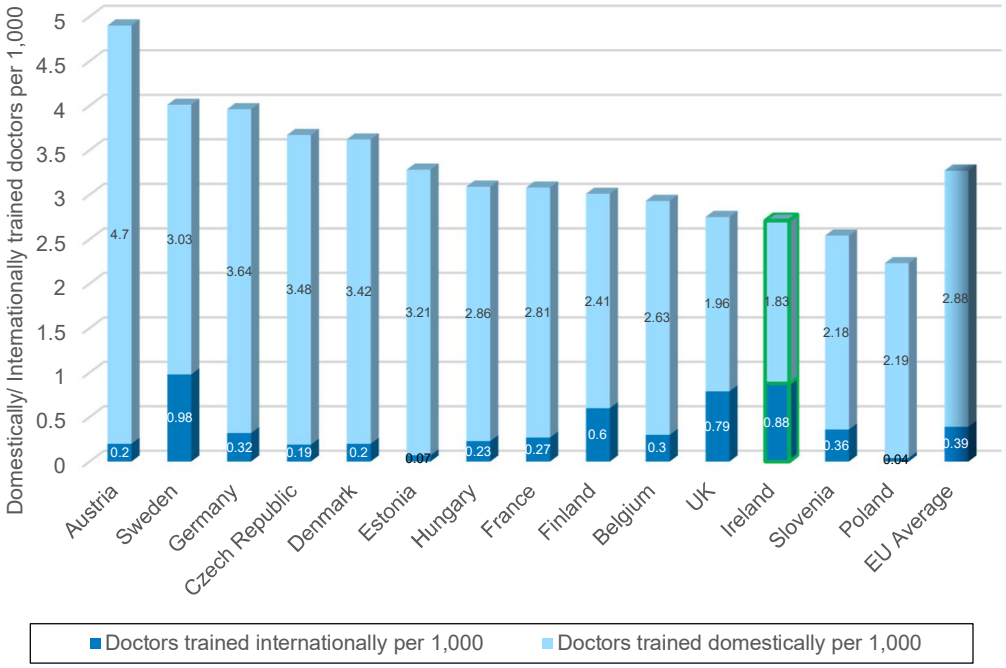


Figure 1.4 Domestically and Internationally-trained doctors per 1,000 (adapted from OECD 2012)

The second interim MacCraith Report published in April 2014 made a number of recommendations to improve the retention of consultants in the public system. These included harmonising remuneration rates, increasing flexibility of working arrangements, addressing the unattractiveness of working in some Level 2 and 3 hospitals through the Hospital Groups, and more centralised and coordinated workforce planning.

A significant driver of Consultant vacancies is a Consultant recruitment and retention crisis. The Public Appointments Service, for example, has confirmed that of the 149 Consultant posts it advertised in 2015, 20 (13%) received no applicants (Keane, 2016). Research by the RCSI Doctor Migration Project (Brugha, Cronin and Clarke, 2018) provides useful context for the above. As part of its work, the Project has researched the outward migration or emigration of doctors from the Irish health system. Although Ireland now trains sufficient doctors to meet the needs of the Irish health system, increasing numbers are emigrating. High levels of doctor migration (inward and outward) distort the composition and skills mix of the health workforce and undermines attempts to match supply to need. These research findings are being used to support the work of HSE HR, NDTP and the Medical Council in developing feasible strategies to retain and attract back doctors.

Key findings from the RCSI research to date include that respondents stated that their emigration from Ireland had been driven by professional rather than personal reasons. Of the top five reasons for emigration given by respondents, all but one related to the workplace (in order of importance: working conditions, training, career progression, financial reasons, personal reasons). Doctors stated that the working conditions experienced in Ireland left them with ‘no option but to leave’ and gave concrete

examples of the working conditions they had experienced in the Irish health system, particularly in relation to long working hours. Respondents stated that health employers did not respect the health professionals in their employ, that poor working conditions were evidence of that disrespect and that significantly improved working conditions in the Irish health system would be necessary prior to their return.

These findings are echoed in the Imrie Report ('Training 21st Century Clinical Leaders, A review of the Royal College of Physicians of Ireland training programmes' RCPI 2015), which noted that remaining in Ireland has become less attractive for doctors, specifically those undertaking postgraduate specialist training. Leading factors in the increased difficulties in the recruitment and retention of senior trainees include a 30% reduction in salary for new Consultants imposed during Ireland's financial crisis in 2012, and an increased pressure on clinicians in all disciplines to maintain a high level of service with reducing resources.

According to the Spending Review of Health Workforce, Consultants Pay and Skills Mix, 2012-17 (Department of Public Expenditure and Reform, 2019), there is a pay disparity between pre-October 2012 entrants into Consultant service and those recruited post-October 2012. New entrant (post-October 2012) salaries range from 51% to 14% lower depending on an individual's point on the scale when compared with that of their predecessors. On average, there is approximately a 32% differential in salary. This report also acknowledges that the reductions in pay which were applied to consultants appointed since 2012 were "particularly severe", and the differential in pay between the pre-existing cadre of consultants and these new entrants was greater than for other categories of public servants. The injustice of consultants being singled

out or victimised with the most punitive cuts of all public servants is clearly felt especially amongst younger doctors.

1.3.1 Obstetrics and Gynaecology - The Irish Context

In March 2019 HSE medical manpower data showed a gap of 25 between the number of consultant posts (166) and the number of consultants employed (141). (HSE, 2019). This does not take into account part-time or job-sharing posts, so this deficit of 15% is likely to be greater in real terms.

At consultant level, posts outside of Dublin have been extremely difficult to fill, and many remain vacant. The National Doctors Training & Planning (NDTP) has advised significant expansion in the HST training scheme over the last 3 years in order to prepare for the planned consultant expansion throughout the country, however, many of the graduates of the training scheme remain in locum or private practice in Dublin while consultant posts outside Dublin remain unfilled. This is a particular problem, as more than 60% of births in Ireland per annum are outside Dublin.

1.4 Obstetrics and Gynaecology - Training in Ireland

Obstetrics and gynaecology as a medical specialty is concerned with the care of pregnant women and their unborn children and the management of specific diseases in pregnant women (obstetrics), and female reproductive health in non-pregnant women (gynaecology) across the life course of a woman.

Historically Ireland has been a leader in the clinical training and research in obstetrics. The training pathway for Obstetrics and Gynaecology in Ireland is one of the longest and most arduous of all specialties and takes a minimum of eight years, and usually more, especially for those who choose a subspecialty area requiring a fellowship. After

completing an Internship that is recognised by the Irish Medical Council (IMC), a trainee is eligible to apply for Basic Specialist Training (BST) through the RCPI. This is a competitive interview process with 25 posts available per year. In obstetrics and gynaecology BST takes a minimum of three years to complete compared to two years in most other specialties, and run-through training is not available. Once trainees pass the Membership of the Royal College of Physicians of Ireland examination (MRCPI) and have completed the logbook and assessments required to be signed off for BST they are eligible to apply for Higher Specialist Training (HST) as described in Figure 1.5.

Access to the HST scheme is via a competitive interview process and there has been a significant expansion in HST posts since 2014, increasing from 33 to 62 and therefore access has been significantly improved (IOG annual report, 2017). As a result over the last 5 years, all eligible applicants have been offered an interview. According to the IOG annual reports, an average of 21 candidates were interviewed between 2016 and 2020 (range from 16-23) and an average of 15 candidates appointed per year (range 13-19). 51% of SpR training posts are outside Dublin and 59% of babies born in Ireland are born outside of Dublin maternity services.

The pathway to HST however, may not be smooth. If trainees are not deemed to have met the criteria and competencies required to pass BST, they may need to spend more time in training. Also, as the MRCPI exam is an exit exam for BST, if a trainee does not pass the MRCPI they will not be awarded their BST certificate and are therefore not eligible to apply for Higher Specialist Training. As the opportunity to sit and pass this exam is limited to once during the 3rd year on BST (already a challenging time as trainees step up to registrar grade), this further hurdle can jeopardise career

progression. Many trainees often have to spend a further year as a registrar gaining experience and passing the examination in order to transition from BST to HST.



Figure 1.5 Training pathway in obstetrics and gynaecology (Royal College of Physicians of Ireland 2019)

The interview process for HST is an annual and competitive process, and the number of places on the programme varies from year to year. A doctor who wishes to pursue training in Ireland, may take more than one attempt to get on the training programme, increasing the overall time spent in training.

The training programme is nationwide, so trainees must rotate to different units around the country. This is important as almost 60% of births are outside Dublin, and experience gained in smaller maternity units is extremely valuable The first two years of the programme are predefined, but from year 3 onwards, posts are allocated on an annual basis and notification of the next rotation is usually in the January or February

prior to the changeover date in July. The challenges of having to move frequently, especially for trainees who are married and or have children should not be underestimated. These trainees have to juggle childcare responsibilities and often separation from a partner who cannot move with them, as well as acclimatising to new work environments, staff and lab and IT systems.

Once on the HST programme at least 50% of trainees take time for Out of Programme Experience (OPE) for research or overseas experience and more than 20% of HST trainees are on OPE at any one time (IOG annual report, 2018). Up to one year of training can be taken in lieu of a clinical year on the scheme if the OPE is deemed relevant by the Specialist Training Committee of the Institute of Obstetricians and Gynaecologists. Since the introduction of European Working Time Directive (EWTD) in 2014, there has also been a growing trend for doctors who have gained their CSCST (Certificate of Satisfactory Completion of Specialist Training) to seek further fellowship training and this has been supported by NDTP with their national programme of post CSCST fellowships.

The length of time spent in training and the requirement to train in geographically different units around the country, which often requires trainees to move home on an annual basis, make this specialty even more challenging.

1.4.1 Specialist Registration "Parallel Route"

In Ireland it is possible to attain registration on the Specialist Division of the Medical Register by recording and logging in detail all clinical and professional experience, which must be deemed by the Medical Council (after review and advice from specialist assessors through the RCPI) to be equivalent to the training and experience gained by a trainee receiving CSCST from the RCPI. This is often referred to as the "Parallel

Track" for getting on the Specialist Register and becoming a consultant and takes at least as long and usually longer than the current process for those who train in Ireland. Such doctors have to organise their own posts and endeavour to fulfil the criteria necessary (including mandatory courses study days), without the support of a training body. They must collect and log experience and have it signed off by a consultant. The cost of the application process is also extremely high and costs 4037 euro (https://www.medicalcouncil.ie/Registration-Applications/Fees/ Accessed Dec 2019) without registration.

1.4.2 Obstetrics and Gynaecology Recruitment and Retention Elsewhere

During the early 2000s the intake of trainees to specialist schemes in the UK became critically low, and improving recruitment and retention became government policy (Turner and Lambert, 2006; Ogbonmwam and Ogbonmwam, 2010). The Health Education England O&G Workforce Analysis, May 2017 found that 52.3% of consultant obstetricians and gynaecologists working in the UK graduated outside the UK.

Similar trends have been seen in other countries, with reductions in the numbers of doctors choosing obstetrics and gynaecology (Bienstock and Laube, 2005; Lam, Cheung and Hui, 2016). Traditionally in Ireland, recruitment has not been difficult, but consultant numbers have remained critically low and access to the structured training schemes has been very limited and extremely competitive (Institute of Obstetricians and Gynaecologists, 2014).

The Royal College of Obstetricians and Gynaecologists has also reported a rapidly increasing level of attrition amongst trainees from training schemes of over 30% in

2018 compared to 18% in 2014 (Royal College of Obstetricians and Gynaecologists, 2018).

1.5 What About Obstetrics and Gynaecology in Ireland Now?

In my role as National Specialty Director for Higher Specialist training with the Royal College of Physicians and its faculty, the Institute of Obstetricians and Gynaecologists, and after discussion with the National Doctors Training and Planning department of the HSE, it was agreed in 2017 that the views of trainees should be sought on issues impacting the working environment in the specialty in Ireland. The Royal College of Physicians of Ireland, whose remit is to oversee training, was also supportive. In response to this, I led a quality improvement initiative surveying trainees about their experiences of the current workplace environment in obstetrics and gynaecology, and how and where they might chose to work in the future, and what factors might influence their decisions.

As this work was being done, it became apparent that there was a significant deficit in the literature in regard to medical students in Ireland and their attitude towards obstetrics and gynaecology as a career choice. With support from Professor Mary Horgan (Dean of the School of Medicine UCC at the time up to 2017) and Dr. Deirdre Bennett (Head of the Medical Education academic unit, UCC), and in recognition of the particular challenges facing maternity services in the current climate, the idea of a larger piece of work which would also encompass the voices of consultants came to light.

Considering the scope of this research, and in order to optimise the breadth and depth of the themes, a mixed methods approach was chosen. A mixed methods approach provides access to the best of both quantitative and qualitative worlds, aiming to

compensate for weaknesses in one method via the other and has been shown to be particularly beneficial in assessing complex research problems that cut across cultural, institutional, regional and moral dimensions (Kiessling and Harvey, 2005). A quantitative questionnaire collected from a large cohort of trainees gathered frequency data on respondents and their attitudes, and allowed for detailed analysis of complex relationships between variables that could be readily generalised but with a lack of depth of analysis. Qualitive methods revealed a depth of understanding of the processes governing complex phenomena and provided an extra dimension and nuance to the conversation. Stronger inferences can often be made from data gathered using mixed methods (Teddlie and Takashori, 2003) and greater confidence can be held in the results (Johnson and Christensen, 2004). There is also evidence that mixed methods are positively associated with measures of research impact. Molina-Azorin (2012) found that mixed methods articles receive a greater number of citations than articles that utilise a single method.

Due to the fact that the larger piece of work grew from a smaller quality improvement survey, (which was part of the normal remit of the training body and for which ethical approval was not sought), ethical approval was sought and granted by the Clinical Research Ethics Committee of UCC for the study on medical students (Chapter 2) and also for the study on consultants (Chapter 5).

This thesis aims to incorporate a detailed exploration of attitudes to and experience of obstetrics and gynaecology as a career from perspectives of the following groups:

1. Medical students from an Irish medical school (University College Cork),
2. Current specialists in training across all levels of experience,

3. A mix of male and female consultants practicing in different level hospitals around different geographical locations around the country, and at different stages of their careers.

The questionnaire to medical students enquired about the impact of issues such as lifestyle, working hours, fear of litigation and adverse publicity, have on whether a medical student will consider training in Obstetrics and Gynaecology. We also asked what specifically could be done to make the specialty more attractive to doctors in training.

The trainees' surveys asked about the specific positives and negatives they experience in terms of training and working in the specialty. It looked at the impact of work life balance, litigation, media and publicity, as well as current challenges in dealing with patient expectation and communication. The factors that influence how and where they wish to work in the long term were explored, and how we can encourage and entice doctors to work outside large cities were examined.

In qualitative research using semi-structured interviews, clinical consultant trainers were asked about the specific challenges facing specialists today, including lifestyle issues, medico-legal and media concerns, as well as changing patterns with patient expectations and interactions. Their views on solutions and remedies to the problems discussed were then sought and analysed.

The use of a triangulation design in order to obtain different but complementary data on the same topic, and convergence model to expand quantitative results with qualitative findings (Creswell and Plano Clark, 2011), gives voice to the current and future physician who was at the centre of this work. The opinions and perceptions of these doctors is what I wish to address in this thesis. Insights gained from this

information will allow anticipation of, and solutions to, predictable problems likely to face recruitment and retention in Obstetrics and Gynaecology services across the country.

Chapter 2

Factors Influencing Medical Students' Decision to Pursue a Career in Obstetrics and Gynaecology

2.1 Introduction

As recruitment into any medical specialty is vital to the development, enhancement and sustainability of that area of medicine, it is also a crucial factor for workforce planning. The career intentions of medical students can exert influence on both service provision and medical staffing. Understanding the factors that influence the decision for medical students to choose a career in obstetrics and gynaecology is important to help predict future workforce shortages in the specialty. Failure to recognise changing career trends among undergraduates may lead to gaps in service provision for the evolving healthcare needs of our population. Appreciation of how a specialty is viewed as a potential career may allow the opportunity for early intervention to improve the perception of the specialty and thus reduce future workforce problems.

2.2 Existing Research

Detailed workforce planning reports from the USA and Australia have identified projected deficits of physician-to-population calculation in obstetrics and gynaecology of up to 20% by 2030 (Rayburn, 2017; Department of Health, Australia, 2018). International studies have identified several factors that influence the likelihood of medical students embarking on a career in obstetrics and gynaecology. The majority

of research examining this cohort centers predominantly on lifestyle, gender, and rotation experience, and the enthusiasm and commitment of the doctor to the specialty.

2.2.1 Lifestyle

"Controllable lifestyle factors" is a term first coined by Schwartz *et al*. in 1990, in his seminal study which illustrated the proclivity of doctors to select a specialty based primarily on three factors; hours worked per week, number of on-call nights and time available for the pursuit of avocational activities. It has become increasingly evident that the tendency for medical students to prioritise lifestyle issues when choosing a career has impacted on obstetrics and gynaecology, which is widely deemed to be a "non-controllable lifestyle" specialty and, along with surgery, has been categorised as "most lifestyle unfriendly" by medical students (Newton, Grayson and Thompson, 2005; Kent *et al*., 2013).

The past 2 decades have seen a shift away from the more traditional career motivators of prestige and remuneration towards controllable lifestyle factors (Gorenflo, Ruffin and Sheets, 1994; Dorsey, Jarjoura and Rutecki, 2003). The reversal in the gender balance of medicine in general, which is significantly more acute in obstetrics and gynaecology has had a role but as per Victoria Twigg's blog in the BMJ in 2017 "Training in the NHS needs to be tailored to "Generation Y", there are also significant generational differences that have had a substantial impact on this changing paradigm.

In a longitudinal British Medical Association cohort study in 1995, 5% of graduating doctors had plans for a career in obstetrics but this had fallen to 1% by 2002 (BMA, 2003).

2.2.2 Clinical Experience

Poor clinical experience during students' rotations is a recurring theme in the literature looking at factors that deter doctors from the field of obstetrics and gynaecology (Metheny, Blounta and Holtzman, 1991). In general, students report difficulty in gaining hands-on clinical experience due to the frequent reluctance of female patients to consent to history taking and intimate clinical examination by medical students in general, however the problem is significantly magnified for male medical students (O'Flynn, 2002; Queenan, 2003). This theme was echoed in the paper by Siddiq and Atiomo in 2009 which showed that positive factors that encouraged an early career choice of obstetrics and gynaecology were: a positive undergraduate obstetrics and gynaecology attachment; consultant and junior doctor role-models; a good mix of medicine and surgery; availability of hands-on opportunities and early career advice. They found that the perception of long working hours was not a negative influence, but lack of opportunity to undertake pelvic examinations for male medical students was a particular problem. In response to strong evidence in the literature highlighting the experience of students during their undergraduate attachment as a factor in their attraction to the specialty, the RCOG in 2006, published a list of undergraduate placement standards in an effort to improve the obstetrics and gynaecology undergraduate experience and reverse declining interest in the specialty among UK graduates. In an audit published in 2012 by Bonnett, Roberts and Farrell, students rated the RCOG standards as highly appropriate, and significant differences in clinical exposure and career intentions were seen between genders. Overall, students demonstrated greater interest in pursuing O&G than had previously been documented.

2.2.3 Gender

Current evidence shows that the decline in numbers choosing to pursue further training in Obstetrics and Gynaecology is particularly marked amongst newly qualified male doctors (Lambert, Smith and Goldacre, 2018). It appears that, as well as more difficult access to direct clinical experience at medical school, the emerging predominance of female obstetricians and gynaecologists in the specialty acts as a further deterrent to male graduates, thus perpetuating the cycle and leading to a more pronounced gender imbalance (Lambert and Holmboe, 2005).

2.2.4 Litigation and Media

In recent years litigation has increasingly become an element of all spheres of medicine. However, there is a paucity of research into the relationship between what those who practice obstetrics and gynaecology view as the increasingly litigious nature of the specialty, and medical student's increasing reluctance to consider this career (Anupam *et al*., 2011). Deutsch *et al*. in a 2007 study from Florida found that a subgroup of students who were initially interested in the specialty became deterred by medical liability issues. "Florida is a state known as being in a professional liability crisis and this survey demonstrates evidence that this has adversely affected students' decisions to pursue OB/GYN". It is unsurprising perhaps that such little research exists on the influence of the media due to the highly variable nature of medical law and media coverage across different countries.

It is evident that lifestyle issues, gender and experience of student attachments or clerkships are recurring elements in the existing literature pertaining to factors that influence medical students' decision to pursue a career in obstetrics and gynaecology. However, the extent to which these factors influence medical students in Ireland, and their relative degrees of importance in the decision-making process cannot be

extrapolated from existing data. In addition, the limited international research that is focused on obstetrics and gynaecology is largely outdated and fails to reflect that these influences have changed in complex ways in the intervening years. Also, none of this research examines the possible approaches that might be most effective in encouraging medical students to see the specialty in a more favorable light.

2.3 Study Objectives

The primary objectives of this study were to determine:

1. The career preferences of medical students in their penultimate year.
2. Their likelihood of pursuing a career in obstetrics and gynaecology.
3. The impact of the 4-week obstetrics and gynaecology clerkship on their attitude to the specialty.
4. The factors influencing their decision, including lifestyle, gender and other characteristics of the specialty.
5. The impact of media coverage and the medico-legal climate on their perception of the specialty.
6. What might make the specialty more attractive as a career option.

2.4 Long Term Relevance

Understanding how different factors impact the perception of medical students to a specialty is hugely important for future planning. It is clear in many countries that obstetrics and gynaecology is seen as a potentially more difficult career, with poorer work-life balance and arduous training pathways. If such factors are deterring medical students from the specialty in Ireland, identifying factors which may be modifiable is important and would allow that the positive factors are emphasised and the negative

factors ameliorated in order to attract the next generation of highly skilled doctors and therefore guarantee the highest level of patient care in a sustainable and predictable way.

2.5 Methodology

A questionnaire was developed which addressed multiple domains including demographics, desire to consider obstetrics and gynaecology as a career, placement experience, characteristics of the specialty, theoretical developments in the specialty and the media portrayal of obstetrics and gynaecology. UCC final year medical students were invited to complete this self-administered questionnaire. Analysis included descriptive statistics, logistic regression both univariate and multivariate and also odds ratios as appropriate.

2.5.1 Study Design

Participation in the study was entirely voluntary and no identifying details were recorded during the study thereby ensuring that collected data was completely anonymised and that confidentiality was maintained at all times during the study. All medical students in their penultimate year in UCC (graduating class of 2018) were eligible for inclusion in the study. All students had completed a clinical rotation in obstetrics and gynaecology prior to their completion of the questionnaire. The comprehensive questionnaire was administered in hard copy form to all students.

2.5.2 Study Tool

The study took the form of a self-administered questionnaire with a total of 70 questions (Appendix B). After a review of the current international literature pertaining to Obstetrics and Gynaecology as a career choice for medical students, this questionnaire was designed to reflect the many established determinants of medical

students' choice of specialty. However, we also looked at factors that are unique to the Irish medical experience and setting, including the impact of the media and the particularly challenging medico-legal climate.

Questions were divided into six main categories:

1. Demographics of participants encompassing age, gender, socioeconomic background, family circumstances and nationality.
2. Career choice.
3. Placement experience.
4. Characteristics of obstetrics and gynaecology.
5. Theoretical changes to the specialty.
6. Media portrayal of the specialty.

For each of these categories of questions students were asked to indicate whether they agreed or disagreed with a series of statements. Strength of agreement was assessed using the five-point Likert scale (1 = completely disagree, 2 = moderately disagree, 3 = neither agree nor disagree, 4 = moderately agree, and 5 = completely agree).

The questionnaire was initially piloted amongst a group of 24 students, feedback obtained, and the study tool refined to incorporate recommendations gathered from the focus group. A hard copy of the questionnaire was administered to all final year UCC students on the first day of University after the summer holidays in order to ensure maximal participation in the survey. Completed questionnaires were then uploaded to online survey tool, Survey Monkey. This group comprised a mixture of Direct Entry undergraduate medical students (DEM) who spend 5 years in medical school, and Graduate Entry medical students (GEM) whose medical course takes 4 years.

2.5.3 Data Analysis

Data collected was summarised on online survey tool Survey Monkey and then converted to a .sav file for use in a statistical package (SPSS Inc). Descriptive statistics were performed on the students' demographics, and Pearson Chi-Square testing was used to explore the strength of statistical correlations between gender and other factors.

Students were asked to rate the likelihood of them pursuing a career in obstetrics and gynaecology on a scale of 1 to 10. Those who rated 6 or more were deemed interested in pursuing the specialty, and this dependent variable (DV) was recoded into a binary variable {1= likely to pursue a career in OB/GYN, 0 = unlikely to pursue a career in OB/GYN}. Logistic regression was used to assess the association between "characteristics" or "factors", and their impact in attracting or detracting students from the specialty. These associations are reported using odds ratios and their 95% confidence intervals and p-values.

2.5.4 Ethical Approval

Prior to the commencement of the study ethical approval was obtained from the Clinical Research Ethics Committee of UCC and can be seen in Appendix A. In order to ensure informed consent a comprehensive cover letter incorporating a clear statement of the study objectives accompanied the questionnaire distributed to each student (included in Appendix B).

2.6 Results

2.6.1 Response Rate

A total of 134 completed questionnaires were collected from a class of 195 students giving a response rate of 68.7%. Of these, 74 (55%) were female and 59 (45%) male (Table 2.1). This corresponds to a male female ratio of approximately 1.2:1 and is in

keeping with the gender breakdown for this class of whom 107 (55%) were female and 88 (45%) were male. 77% (n= 102) of respondents were Direct Entry Medicine (DEM) year 5 students while 23% (n= 31) were Graduate Entry Medicine (GEM) year 4 students. There is an over representation of DEM students in the study group with only 41% of the GEM students in the class of versus 84% of DEM students responding, or DEM students accounted for 77% of the respondents compared to the 62% of the final year class which they compose. The median age of respondents was 23 with a range of 21 to 37.

Table 2.1 Demographic characteristics of participants

Sex	**n**	**%**
Female	74	55
Male	59	45

Year of medical school	n	%
DEM 5	102	76
GEM 4	31	23

*1 respondent omitted gender and 1 omitted year of medical school

2.6.2 Obstetrics and Gynaecology as First Choice of Specialty

37% of students responded that they knew which specialty they wished to pursue after graduation with the remainder undecided. When asked what their first choice of specialty might be, 7 (5.26%) of the 134 surveyed chose Obstetrics and Gynaecology, and Figure 2.1 illustrates the overall spread of specialty choices. Of these 7 students, all were female and were students in the 5-year DEM undergraduate programme. They ranged in age from 22-25, and 3 (43%) of this group were Malaysian. This is relevant, as Malaysian students typically return to their home country upon graduation.

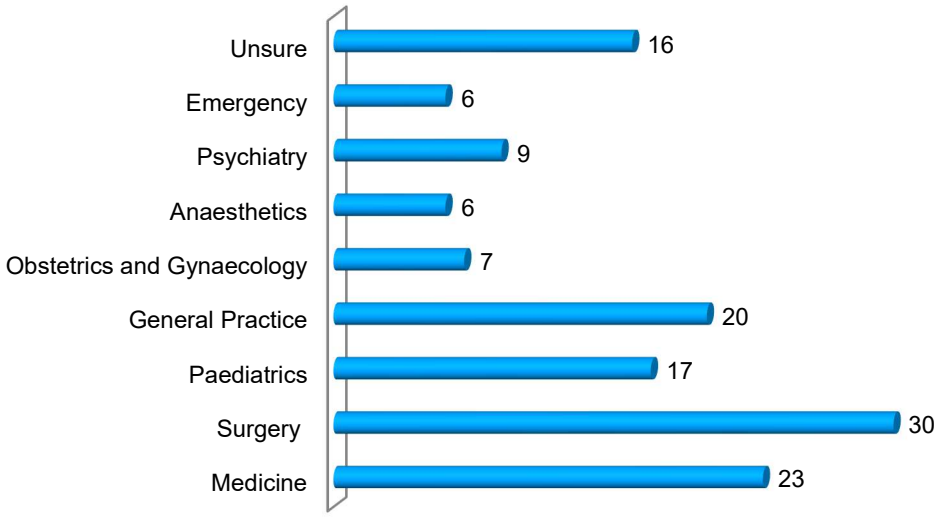


Figure 2.1 Student's first preference specialty (n = 134)

Students were also asked to rate their likelihood of considering a career in obstetrics and gynaecology on a scale of 1 to 10 (Table 2.2). Those who scored 6 or more were, for the purpose of data analysis, deemed interested in pursuing a career in the specialty. Scores of 5 or less were taken as an indication that these students were unlikely to consider further training in obstetrics and gynaecology. There was no statistically significant difference between male and female students.

Table 2.2 Likelihood of pursuing obstetrics and gynaecology as a career

Likelihood of pursuing obstetrics and gynaecology (scale of 1 to 10)	0-5 Less likely	%	6-10 More likely	%
Female (n=74)	52	70.3%	22	29.7%
Male (n=59)	40	67.8%	19	32.2%
Total (n=133) **1 respondent omitted sex*	92	69.2%	41	30.8%

Chi-Square = 0.094, df = 1, p-value = 0.759

2.6.3 Clinical Clerkship

Students were asked to respond to a series of statements pertaining to their obstetrics and gynaecology clerkship and to indicate whether they agreed or disagreed with these statements using a scale of 1 to 5 (1 = completely disagree, 2 = moderately disagree, 3 = neither agree nor disagree, 4 = moderately agree, and 5 = completely agree).

Logistic analysis was used to explore the relationship between different aspects of the clerkship experience and whether those students were more or less likely to consider a career in obstetrics and gynaecology. These associations are reported using odds ratios and their 95% confidence intervals and p-values. For the purposes of statistical analysis, those who answered 1 to 3 were deemed not to agree with statements, and those who answered 4 and 5 were deemed to agree with statements.

As Likert scale questions often lead to a sizeable group choosing the neither agree not disagree (neutral option), and in order to include them in the analysis, these responses were reframed into the group who did not agree with statements. This allowed us to maintain the full sample size, thus preventing a significant reduction in the sample size on which the analysis was based, whilst maintaining a fair reflection of the original responses and therefore validity of the data. Removing the “neutrals” was considered, and while some differences may have been highlighted, the reduction in sample size would have reduced the power to identify statistically significant differences and was deemed to be unhelpful. Using logistic regression analysis, each factor was examined, and results tabulated in Table 2.3.

Table 2.3 Students' responses to statements on Clinical Clerkships

Statement on Overall Placement Experience		Agrees (Y/ N)	Likely to pursue		Odds Ratio	95% CI	p-Value
			n	%			
Sex (M/ F)	F (n=74)		22	29.7	0.891	0.425-1.866	0.759
	M (n=59)		19	32.2			
I gained valuable hands on experience		Y (n=71)	27	38.0	2.057	0.96-4.41	0.06
		N (n=62)	14	22.5			
My attachment increased my interest in OB/GYN		Y (n=89)	36	40.4	5.68	2.04-15.76	0.005
		N (n=44)	5	11.4			
I felt satisfied with my experience of the rotation		Y (n=82)	31	37.8	2.67	1.17-6.06	0.017
		N (n=51)	10	19.6			
I had positive interactions with nurses and midwives		Y (n=74)	21	28.3	0.792	0.38-1.66	0.536
		N (n=59)	20	33.8			
I had positive interactions with doctors		Y (n=97)	34	35.0	2.31	0.92-5.81	0.07
		N (n=36)	7	19.4			
I had positive interactions with patients		Y (n=117)	37	31.6	1.37	0.41-4.53	0.59
		N (n=16)	4	25.0			
I felt that my gender negatively influenced my learning experience		Y (n=40)	15	37.5	1.49	0.68-3.24	0.322
		N (n=93)	26	27.9			
I felt that my gender positively influenced my learning experience		Y (n=39)	11	28.2	0.85	0.38-1.93	0.699
		N (n=94)	30	32.2			

Table 2.3 indicates that students who found that their clerkship increased their interest, were significantly more likely to consider a career in the specialty (OR 5.68, CI 2.04-15.76, p-value 0.005). Additionally, the data confirms that those who felt satisfied

with their experience of the rotation were also more likely to consider a career (OR 2.67, CI 1.17-6.06, p-value 0.017). Those who gained valuable hands on experience and those who had positive interactions with doctors were twice as likely to consider a career in obstetrics and gynaecology, however statistical significance was not reached, with p-values of 0.06 and 0.07 respectively. Students' perception of their gender influencing their learning experience was not found to impact on whether they were more likely to consider obstetrics and gynaecology as a career.

2.6.4 Characteristics of Obstetrics and Gynaecology

Medical students were asked what impact a list of factors had on their perception of the specialty as a career option on a scale of 1 to 5 with 1 representing "strongly detracts" and 5 representing "strongly attracts". Responses are summarised in Figure 2.2.

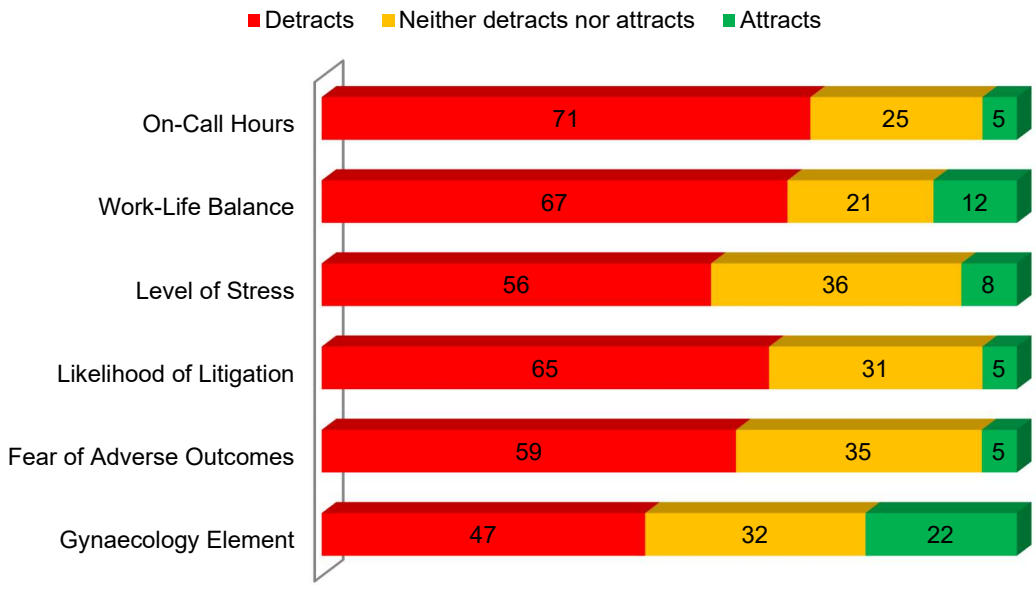


Figure 2.2 Factors that negatively influence medical students towards obstetrics and gynaecology (numbers shown reflect % values)

Lifestyle factors encompassing on-call hours, work life balance and level of stress were cited as powerful detractors from the specialty. 71% percent of students deemed the on-call hours to be an unattractive element of the specialty with 40% percent considering the on-call hours to strongly detract and 31% to moderately detract. Of those surveyed 68% considered the work-life balance to be largely unattractive. The level of stress associated with obstetrics and gynaecology exerted a strong negative influence on 57% of students' perception of the specialty. Likelihood of litigation and fear of adverse outcome were cited by 64% and 59% of respondents respectively, as negative characteristics of the specialty. The gynaecological component of obstetrics and gynaecology was considered a detractor from the specialty by 46% of survey participants.

Conversely, as can be seen in Figure 2.3, the obstetric element of the specialty was cited as a positive component by 65% of students. In further support of obstetrics, performing deliveries was perceived to be an attractive constituent of the specialty by 69% of survey respondents. The continuity of care intrinsic to obstetrics and gynaecology was viewed favorably by 62% of those surveyed. 55% agreed that a predominately healthy patient population exerted a positive influence on their attitude towards the specialty. Interactions with consultants in obstetrics and gynaecology was deemed by 68% of survey participants to positively impact their views on obstetrics and gynaecology.

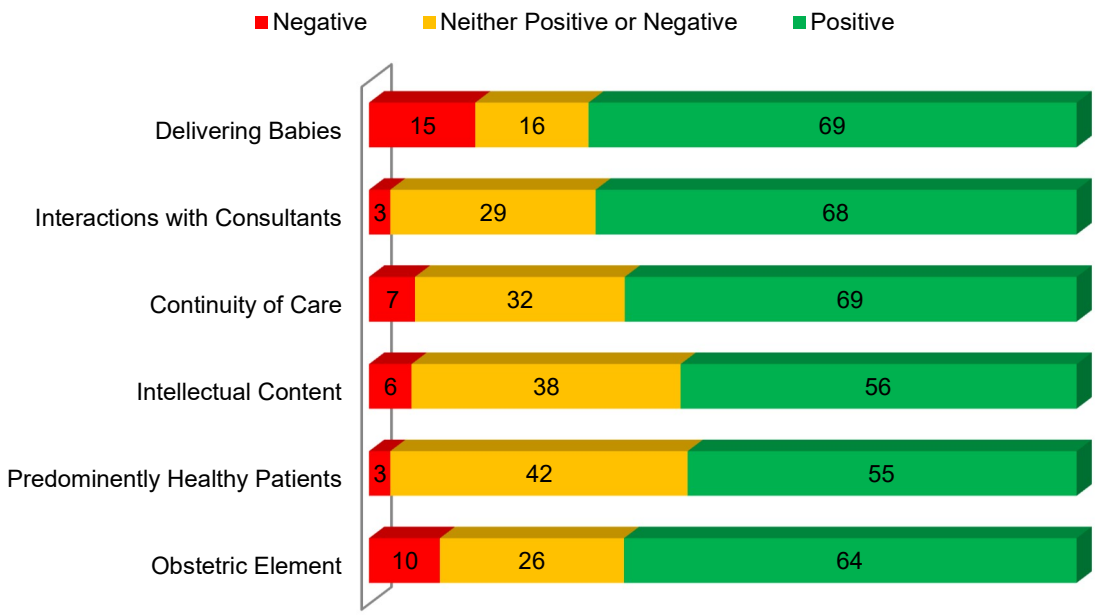


Figure 2.3 The relative importance of factors that positively influence attitudes of medical students towards obstetrics and gynaecology careers (numbers shown reflect % values)

The aim was to correlate the relationship between these factors, and students who expressed an interest in considering the specialty. In terms of statistical analysis, Logistic regression was used to assess the association between the factors above, and attraction to the specialty. These associations are reported using odds ratios and their 95% confidence intervals and p-values.

For the purposes of statistical analysis, those who answered 1 to 3 (strongly detracts, moderately detracts, neither detracts nor attracts) were deemed not to find these factors attractive and those who answered 4 to 5 (moderately attracts or strongly attracts) were deemed to find these factors attractive. Using logistic regression analysis, each factor was examined, and results are presented in Table 2.4.

Table 2.4 Factors that increase attraction to obstetrics and gynaecology as a specialty

Factor		Attracts (Y/ N)	Likely to pursue		Odds Ratio	95% CI	p-Value
			n	%			
Sex (M/ F)	F (n=74)		22	29.7	0.891	0.425-1.866	0.759
	M (n=59)		19	32.2			
Continuity of care		Y (n=82)	33	40.2	4.233	1.701-10.533	0.002
		N (n=51)	7	13.7			
Female patients only		Y (n=24)	12	50	2.793	1.129-6.909	0.026
		N (n=110)	29	26.4			
Delivering babies		Y (n=93)	36	38.7	4.547	1.633-12.665	0.004
		N (n=41)	5	12.2			
Limited focus of disease		Y (n=56)	24	42.9	2.691	1.266-5.722	0.01
		N (n=78)	17	21.8			
Intellectual content		Y (n=76)	32	42.1	3.96	1.702-9.21	0.001
		N (n=58)	9	15.5			
Combination of obstetrics and gynaecology		Y (n=57)	24	42.2	2.567	1.219-3.45	0.014
		N (n=77)	17	22.1			
Obstetric element		Y (n=86)	33	38.4	3.113	1.298-7.466	0.002
		N (n=48)	8	16.7			
Predominance of female practitioners		Y (n=19)	12	63.2	5.044	1.828-14.137	0.002
		N (n=115)	29	25.2			
Career opportunities		Y (n=62)	27	43.5	3.196	1.48-6.901	0.003
		N (n=72)	14	19.40			
Interaction with consultants		Y (n=91)	34	37.4	3.068	1.23-7.654	0.016
		N (n=43)	7	16.3			

Data indicates that a student that rated continuity of care an attractive element of the specialty is 4.2 times more likely to be interested in pursuing a career in obstetrics and gynaecology (95% CI 1.701-10.553, p-value 0.002). Students finding the obstetric

element of the specialty attractive are significantly more likely to be interested in pursuing a career in obstetrics and gynaecology (OR 3.113, p=0.002) than those finding the gynaecology element attractive (OR 1.177, p= 0.712). Students rating interactions with consultants as an attractive aspect were more likely to be interested in pursuing the career (OR 3.068, p=0.016), when compared to interactions with doctors in training (OR1.262, p=0.536) and midwives (OR1.054, p=0.901). Other factors that were found to be statistically significant in terms of increasing interest in pursuing the specialty included delivering babies (p=0.004), limited focus of disease (p=0.01), intellectual content (p=0.001), and career opportunities (p=0.003). Students who rated the predominance of female practitioners as an attraction were also significantly more likely to consider the specialty with an OR of 5.044 (p=0.002).

Table 2.5 lists factors where no significant correlation was found that increased the likelihood of students pursuing a career in obstetrics and gynaecology.

These factors were then reviewed further and separated into those who answered 1 (strongly detracts), and 2 (moderately detracts), from those who answered 3 to 5 (neither detracts nor attracts, moderately attracts and strongly attracts), in order to examine the influence of strongly detracting factors on those students who are more likely to consider this career. As shown in Figure 2.4, likelihood of litigation and on call hours, followed by fear of adverse outcomes and work-life balance are the factors most likely to act as deterrents for these students.

Table 2.5 Factors that do not significantly increase attraction to obstetrics and gynaecology

Factor		Attracts (Y/ N)	Likely to pursue		Odds Ratio	95% CI	p-Value
			n	%			
Sex (M/ F)	F (n=74)		22	29.0	0.891	0.425-1.866	0.759
	M (n=59)		19	32.2			
Level of stress		Y (n=11)	4	36.4	1.365	0.376-4.952	0.636
		N (n=122)	36	29.5			
On call hours		Y (n=6)	2	33.3	1.141	0.201-6.492	0.882
		N (n=128)	39	30.5			
Gynaecology element		Y (n=30)	10	33.3	1.177	0.494-2.804	0.712
		N (n=104)	31	29.8			
Fear of adverse outcomes		Y (n=8)	3	37.5	1.389	0.316-6.11	0.663
		N (n=126)	18	30.2			
Media Portrayal		Y (n=6)	3	50	2.368	0.457-12.266	0.304
		N (n=128)	38	29.7			
Likelihood of litigation		Y (n=7)	1	14.3	0.363	0.042-3.112	0.355
		N (n=127)	40	31.5			
Financial remuneration		Y (n=35)	10	28.6	0.877	0.376-2.048	0.762
		N (n=99)	31	31.3			
Work-life balance		Y (n=16)	4	25	0.73	0.221-2.414	0.606
		N (n=118)	37	31.4			
Duration of training		Y (n=15)	5	33.3	1.153	0.368-3.614	0.807
		N (n=119)	36	30.3			
Working under pressure		Y (n=26)	10	38.5	1.552	0.635-3.793	0.335
		N (n=108)	31	28.7			
Increased patient expectations		Y (n=41)	13	31.7	1.078	0.488-2.382	0.883
		N (n=93)	28	30.1			
Interaction with midwives		Y (n=35)	11	31.3	1.054	0.459-2.424	0.901
		N (n=99)	30	30.3			
Interaction with NCHDs		Y (n=60)	20	33.3	1.262	0.604-2.638	0.536
		N (n=74)	21	28.4			

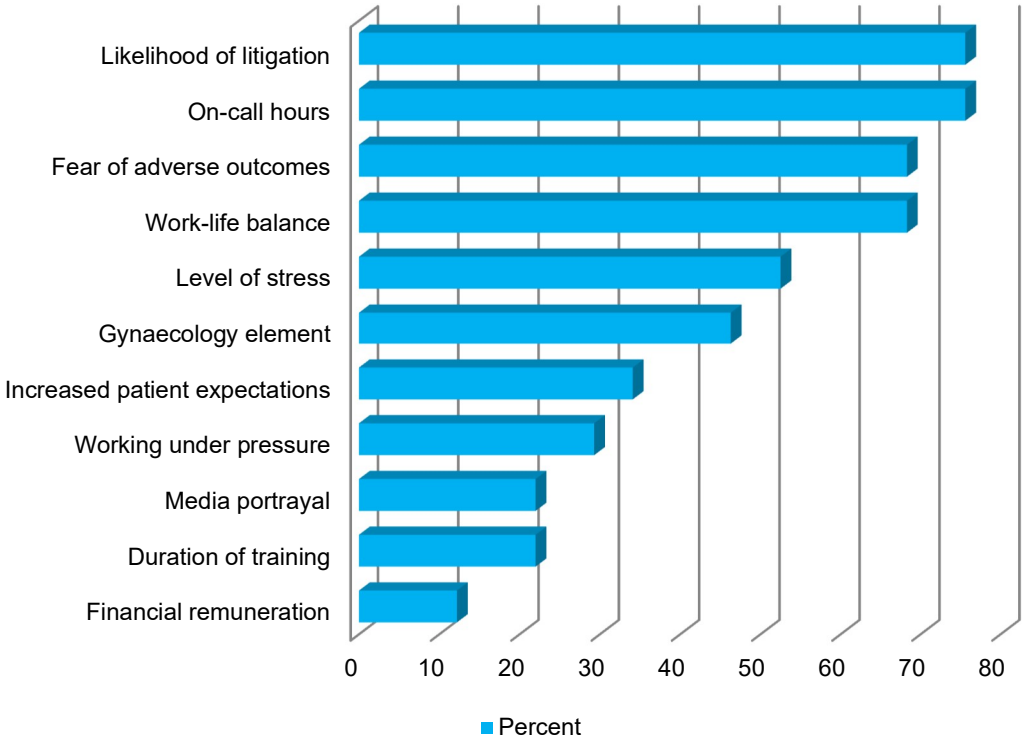


Figure 2.4 Factors most likely to deter students who consider a career in obstetrics and gynaecology

2.6.5 Theoretical Factors to Increase the Appeal of Obstetrics and Gynaecology

Students were asked "Would you be more likely to consider obstetrics and gynaecology if", and a host of theoretical changes were listed with the aim of identifying possible solutions to aspects of the specialty that would render obstetrics and gynaecology a more appealing career choice. As per Figure 2.5, with respect to the participants' clerkships, more hands-on experience on the labour ward was deemed a positive potential change that would increase interest in obstetrics and gynaecology, with 52% citing a moderate increase in the attractiveness of the specialty and 38% expressing that it would strongly increase the attractiveness of the specialty. Furthermore 67% indicated that more exposure to obstetrics and gynaecology during medical school would help increase interest in the specialty.

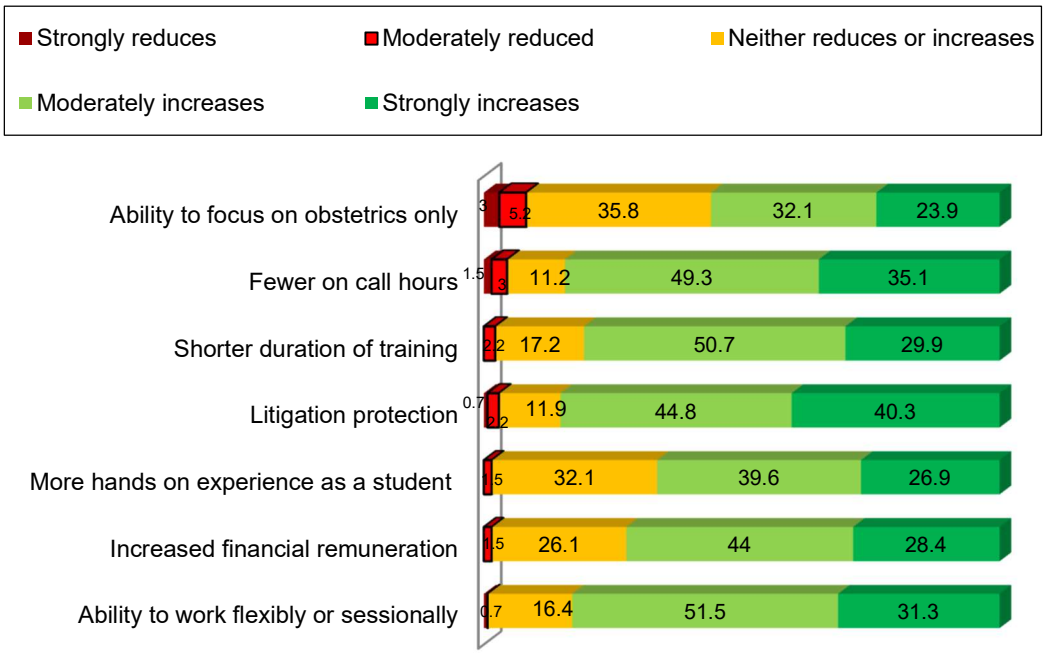


Figure 2.5 Theoretical factors that may alter the appeal of the specialty

In terms of characteristics of the specialty as a career, the theoretical changes that served to significantly increase interest were predominately focused on lifestyle. 83% of survey respondents indicated that the ability to work flexibly, as opposed to a fulltime consultant with on call hours would make obstetrics and gynaecology a more attractive career option. Fewer on-call hours would, in the opinion of almost half of students, moderately increase the appeal of obstetrics and gynaecology, and 35% were of the opinion that it would serve to strongly increase the specialty's appeal. Shorter duration of training and increased financial remuneration would increase the appeal of the specialty in 80.1% and 72.4% respectively.

A reduced level of litigation, however, was deemed by all students to be the single most attractive change to the specialty itself with 85% of participants of the opinion that this would moderately or strongly increase its appeal.

2.6.6 Media Portrayal of Obstetrics and Gynaecology

Respondents' perceptions of the media's portrayal of Obstetrics and Gynaecology are summarised in Table 2.6.

Table 2.6 Respondents' perceptions of the media's portrayal of obstetrics and gynaecology

Media Portrayal of Obstetrics and Gynaecology	Disagree (%)	Neither Agree nor Disagree (%)	Agree (%)	P-value
Obstetrics and gynaecology is positively portrayed in the media	46	31	23	0.27
The media portrayal of obstetrics and gynaecology has influenced my attitude towards it as a potential career	9	67	24	0.085
The media portrayal of obstetrics and gynaecology has made me less likely to a career in it	19	58	23	0.11
Obstetrics and gynaecology is a speciality is the subject of more media focus than other specialities	13	34	52	0.36
Media portrayal of obstetrics and gynaecology has increased my fear of adverse outcomes	10	40	50	0.76
Media portrayal of obstetrics and gynaecology has increased my perception of litigation	3	31	66	0.54
Media portrayal has influenced patients' attitudes towards doctors in a negative way	13	41	46	0.13

Data in Table 2.6 indicates that the media portrayal of the discipline, as considered by respondents, contributes to both an increased perception of litigation (cited by 66% of respondents) as well as a fear of adverse outcomes (cited by 51% of respondents). Data also shows that 52% of respondents agreed that obstetrics and gynaecology was the

recipient of more media focus than other specialties with just 23% agreeing that this focus is largely positive. However when surveyed in relation to the effect that the media portrayal of obstetrics and gynaecology has on career intentions just 23% of participants cited that it would detract them from a career in obstetrics and gynaecology, with 58% implying that it has limited impact on their likelihood to pursue a career in the specialty.

2.7 Discussion

As recruitment into obstetrics and gynaecology is key to future workforce planning, a clear insight into the perception of current medical students towards the specialty is vital. This study aims to identify factors that influence their attraction to the specialty in general, and also within the current Irish context. Knowledge of their experience will enable targeted interventions in order to optimise medical students' interest in the specialty.

When asked on a Likert scale of 1 to 10 to rate their likelihood of considering a career in obstetrics and gynaecology, 30.8% of the students who responded scored 6 or more where 1 was a definite no and 10 was a definite yes. Numbers were similar between male and female students and are overall more reassuring than anticipated. Of concern is the fact that of the 7 students (5.26% of the respondents), all of whom were female, who ranked obstetrics and gynaecology as their first choice of specialty, 4 were from Malaysia and are more likely to return to their home country to practice. This is an issue, as it means the numbers of students likely to contribute to women's healthcare in Ireland is low.

The reason behind why only 41% of the GEM members of the class responded versus 84% of DEM students, is difficult to determine. GEM students are usually older, and

may be less inclined to consider specialties with longer durations of training, and this may explain the lack of interest in this study. As the rate of response was so much lower in the GEM group, and the number of GEM respondents was low, statistical comparison of these groups not performed.

Although gender was not found to be a statistically significant variable in this particular study cohort, all of those who did indicate OB/GYN as their first preference specialty were female, mirroring the ongoing trend of female dominance of the specialty (Scott *et al*., 2010) and the inevitable impact on workforce planning (Deech, 2009). In addition, Gariti, Zollinger and Look in 2005 identify that the emerging predominance of females in obstetrics and gynaecology acts as a detractor for both men and women. In contrast, this study found that the predominance of female practitioners serves to act as a strong attractor to the specialty (OR 5.04, CI 1.828-14.137, p-value= 0.002), and only caring for female patients was also significant (OR 2.793, CI 1.129-6.909, p-value 0.026).

In contrast to Bienstock and Laube in 2005, who found that male students attribute part of their hesitancy to enter the specialty to their experience of clinical clerkships, we found no significant difference between male and female students in their perception of whether their own gender influenced their learning experience on clinical rotation.

Obstetrics and gynaecology in its current form, incorporates a wide breadth of practice incorporating many subspecialties including Maternal and Fetal Medicine (MFM), Labour Ward, Reproductive Medicine, Gynaecological Oncology, Adolescent Gynaecology, Urogynaecology and Advanced Laparoscopic Gynaecology. An appetite for separation of the specialty has been expressed in a UK survey of trainees

in Yorkshire (Pandey and Lindow, 2006), and a study conducted by the RCOG (RCOG Trainees committee, survey of training 2003) examining trainees opinions regarding the future of obstetrics and gynaecology highlighted the increasing consensus that the discipline should be divided into separate specialties with 70% of respondents in favour of this separation. Although the combination of obstetrics and gynaecology was cited as a positive factor by 42% of students, 56% are of the opinion that the ability to focus solely on obstetrics would add to the discipline's appeal. Furthermore, division of the specialty might lead to a shorter duration of training, a theoretical change that would increase the appeal of the specialty according to 81% of this survey's respondents.

Delivering babies (OR 4.547, CI 1.633-12.665, p-value 0.004), intellectual content of the specialty (OR 3.96, CI 1.702-9.21, p-value 0.001), and continuity of care (OR 4.233, CI 1.701-10.533, p-value 0.002), were aspects of the specialty that all had a significantly positive impact on attracting students to a career in obstetrics and gynaecology. Perception of career opportunities also had a significantly positive influence (OR 3.196, CI 1.48-6.901, p-value 0.003). It is clear that the novelty of obstetrics and the excitement of delivering babies remains core to the allure of the specialty over other areas of medicine and must not be underestimated when looking to improve recruitment at medical school level.

The important role of a student's clinical clerkship in their desire to pursue obstetrics and gynaecology is well recognised (Hammoud *et al*., 2006), and this study supports findings from international literature; those whose clerkship increased their interest in obstetrics and gynaecology are over five times more likely to consider pursuing a career in the area. 54% of our cohort report that they gained valuable hands on

experience. In contrast to the majority of existing research which focuses on the negative effect a poor clinical clerkship experience has on a student's desire to pursue the specialty, this study reflects other research showing the positive effect a satisfying rotation experience can have (Dunn *et al*., 2004).

The majority of those surveyed were in favour of gaining both more exposure to the specialty at undergraduate level (66%) and more importantly in garnering additional hands on experience such as time on the labour ward (90%). These findings are consistent with previous studies which advocate more active participation of students during the obstetrics and gynaecology attachment (Chang, Odrobina and McIntyre, 2010). It could be argued that medical schools should aim to reinstate the hands-on experience traditionally associated with the rotation such as partaking in deliveries, as suggested by Jenny Higham in her BMJ commentary in 2006, which reflects students' feedback in cultivating interest.

Of note in this study is the significantly positive impact of interactions with consultants during rotations on a student's likelihood to consider the career (OR 3.068, CI01.23-7.654, p-value = 0.016), when compared with the influence of interactions with junior doctors and midwives. The importance of consultants as role models and the positive influence they exert in terms of inspiring medical students must not be underestimated. 65% of respondents in this study cited that likelihood of litigation detracted them from obstetrics and gynaecology in keeping with two American studies from 2007 (Ogburn *et al*., 2007; Deutsch *et al*., 2007). However, the relationship between the media and fear of litigation is not described elsewhere, and the particulars of the current Irish experience are likely to be unique, and related to the small population and the appetite for reporting on health matters, especially those involving maternity services. In this

study, 66% of students are of the opinion that the media portrayal of obstetrics and gynaecology has increased their perception of litigation in the discipline and 85.1% of students rate protection from litigation as a factor that would moderately or strongly increase the appeal of the specialty.

A substantial body of evidence has illustrated an increasing proclivity of medical students to prioritise lifestyle, and in particular, “controllable lifestyle" factors in their selection of specialty (Schwartz *et al*., 1990; Creed, Searle and Rogers, 2010). The findings of this study underpin the existing classification of obstetrics and gynaecology as a “lifestyle unfriendly" discipline (Newton, Grayson and Thompson, 2005). The perceived lack of flexibility as well as the total number of hours worked, appeared to act as a deterrent to medical students. 71% rated on call hours as a factor that detracts them from the specialty, a finding which is consistent with existing data from Schnuth *et al*. in 2003. Conversely, Fogarty *et al*. in 2003 found that those who do have a genuine desire to embark on a career in obstetrics and gynaecology are less likely to be dissuaded by lifestyle factors.

Societal change is also important, and as most medical students are in the age group of “Generation Z” or born roughly after 1995 (Stillman and Stillman, 2017; Twenge, 2017), anticipation of and adapting to the particular needs of this group must be considered. They tend to be active problem solvers, independent learners, and advocates for social justice, fairness, equality and the environment (Seemiller and Grace, 2016), but their dependence on technology and resultant reduction in time spent face-to-face is associated with higher levels of unhappiness, anxiety and mental health problems (Twenge, 2017). They are also likely to look for healthy work environments with wellness programmes, fitness facilities and healthy food (Eckleberry-Hunt, Lick

and Hunt, 2018). Knowing that especially for Generation Z, lifestyle plays a pivotal role in students' selection of career, and given current gender imbalance, changing the culture to embrace flexible working, should improve interest in the career (McMurray *et al*., 2002). 83% of our cohort agreed that the ability to adopt more flexible work practice, as opposed to the traditional consultant with on call hours, would serve to increase the appeal of the discipline. This culture is changing slowly, in keeping with recommendations from the Strategic Review of Medical Training and Career Structure 2017-2018. The National Doctors and Training Planning (NDTP) and the Royal College of Physicians of Ireland (RCPI), have been proactive in promoting flexible training, and less than whole time working at consultant level in recent years. Data from the UK also supports altering the traditional contract structure in order to optimise recruitment and retention (Thangaratinam *et al*., 2006).

2.7.1 Strengths and Limitations of Study

The strength of this study lies predominantly in the comprehensive nature of the questionnaire utilised. The method of data collection selected was entirely anonymous. The wide breadth of questions covering a broad variety of pre-established determinants of medical students' attitudes towards the specialty gives a multi factorial insight into career direction at this level. As well as looking at the relationships between gender, placement experience and various characteristics intrinsic to the specialty, and tendency to pursue obstetrics and gynaecology, we also examined potential solutions that might increase appeal of the specialty to medical students. This will help inform future approaches to workforce planning in Ireland. In addition, we examined the impacts of both the medico-legal culture and the media portrayal of obstetrics and gynaecology in order to clarify perceived deterrents of recruitment to the specialty.

It is important that the findings of this study be considered within the context of its limitations. This study sampled one Irish medical school in 2017 and may not be representative of other populations of medical students. As this study relied on voluntary participation non-respondent bias is a potential limitation. Although the response rate of 68% is satisfactory and higher than the average response rate for a self-administered questionnaire (Cook, Dickinson and Eccles, 2009), this lower response rate may have introduced the potential for selection bias into the study. Furthermore there was an overrepresentation of Direct Entry Medicine (DEM) students in the sample population. In addition, the field of medicine is ever evolving as are medical student's attitudes towards various elements of the discipline therefore these findings could be rendered outdated in the not too distant future. The data pertaining to student's attitudes towards the specialty was collected following completion of year four of medical school education however as students partake in a further four week obstetrics and gynaecology placement it is not unreasonable that students' attitudes may change over this time. In addition, due to the small number of students who indicated obstetrics and gynaecology as their first preference of specialty (n=7), caution must be drawn from conclusions when contrasting this group with others.

2.7.2 Recommendations for Future Research

Although not without its limitations this study provides a large amount of information pertaining to the many factors that play a role in shaping Irish medical students' attitudes towards obstetrics and gynaecology as a future career. The knowledge gained provides clarity on the areas which must be targeted in order to improve student engagement and optimise recruitment. The medical schools of Trinity College Dublin, University College Dublin, National University of Ireland Galway, and University of

Limerick were all approached and asked to forward the survey to their fourth and final meds, however only a very small number responded. Gathering national data would be useful in predicting future challenges with recruitment across all specialties in Medicine and would allow for early and meaningful intervention as has happened in the UK (Bonnett, Roberts and Farrell, 2012).

Extending the study to incorporate students at different levels of medical school education would aid in determining the point of medical education at which students begin to shape their attitude towards other specialties as well as obstetrics and gynaecology as a career option. In particular, it would be interesting to look at attitudes of students towards obstetrics and gynaecology pre and post their four-week clerkships in order to measure the extent to which placement experience exerts an influence on their perception of the discipline. Considering the poor response of GEM students in the group, a detailed comparison of both GEM and DEM students would allow greater exploration of the differences that may exist between the two cohorts especially as the longer training programme may deter GEM students who are older at the time of graduation. Surveying students at different medical schools would add further weight to the study's findings as well as increasing the finding's generalisability.

2.8 Conclusions

This study highlights the importance of clerkship experience in fostering an interest in obstetrics and gynaecology at undergraduate level. It is imperative that the strengths of the specialty are highlighted, while greater understanding of perceived deterrent factors can be used in a focused way to showcase the changing culture that is emerging towards more flexible working conditions and better work-life balance in this career and also highlights these desires in millennials and Generation Z. The study provides

food for thought and an opportunity to look at a focused approach towards improving attraction towards the specialty of obstetrics and gynaecology.

Chapter 3

Factors influencing Trainees in Obstetrics and Gynaecology in Ireland

3.1 Introduction

Internationally obstetrics and gynaecology is recognised as one of the most "lifestyle unfriendly" medical specialties in which to work (Kent *et al*., 2013). Serious concerns have been raised in the UK where attrition from training reached a record 30% in 2017, up from 18% in 2014 (O&G Workforce Report 2018, RCOG). Gafson *et al*. in 2017 found that trainees in the UK leave for reasons which include low morale, excessive paperwork, poor support, difficulties with work-life balance and poor job satisfaction. Maternity services in the UK are under serious strain with 9 out of 10 obstetric units reporting gaps in their middle-grade rota (The National Maternal and Perinatal Audit, 2017), and this issue has an inevitable impact on postgraduate training, quality of care, and patient and staff wellbeing.

The Royal College of Obstetricians and Gynaecologists (RCOG) has launched multiple initiatives in order to address issues raised from annual workforce reports and trainees' surveys (Stelling, 2018). A recurrent theme is that of undermining and bullying behaviour. In 2013 the General Medical Council (GMC National Training Survey, 2013) in the UK found the highest rate of undermining and bullying amongst obstetrics and gynaecology trainees. The devastating impact of negative workplace environments in the UK has also been exposed during the Mid Staffordshire

Foundation Trust Inquiry where between 400 and 1200 patients were estimated to have died as a result of poor care between 2005 and 2009, (Francis, 2013), and the Report of the Morecambe Bay Investigation 2016, where a series of failures led to the avoidable deaths of 11 babies and a mother at Furness General Hospital between 2004 and 2012 (Kirkup, 2015).

Recent work has shown that low morale, associated with significant levels of depression, stress and burnout, has also been identified amongst trainees in obstetrics and gynaecology in the USA and Australia (Morgan *et al*., 2019; Ryder *et al*., 2019). These studies highlight the need for increased recognition of the problems facing current trainees in the specialty and highlight the importance of improved working conditions and support in order to allow trainees to improve resilience and thrive in their careers.

The Irish Medical Council has published findings of Your Training Counts 2017, the annual national trainee experience survey, which aims to inform and support the continuous improvement of the quality of postgraduate medical training in Ireland. They have looked in detail at bullying and undermining in the clinical learning environment and also at health and wellbeing of trainees and have found significant problems. 48.5% of trainees reported experiencing undermining behaviour from a consultant or GP with 19.3% experiencing this monthly or more often. The impact of adverse incidents has also been analysed as well as the migration intentions of trainees, however, data specific to obstetrics and gynaecology trainees has not been reported.

Women's health services in Ireland have, in the last two decades, been the subject of extensive media coverage related to suboptimal outcomes usually brought to light as a result of medico-legal court cases. As already detailed in the Chapter 1, after an

unusually high number of peripartum hysterectomies performed by Dr. Michael Neary was exposed in Our Lady of Lourdes Hospital in Drogheda, The Lourdes Hospital Inquiry into peripartum hysterectomy was published in 2006 by Judge Maureen Harding Clarke.

In early June 2010, reports of cases of misdiagnosis of miscarriage appeared in the Irish news media, leading to widespread concern and public discussion about diagnosis of early pregnancy loss. The National Miscarriage Misdiagnosis Review was published by the HSE in April 2011.

The 2015 Health Information and Quality Authority's (HIQA) Report of the investigation into the safety, quality and standards of services provided by the Health Service Executive to patients in the Midland Regional Hospital, Portlaoise (Portlaoise Report) occurred after 5 babies died as a result of poor clinical care between 2006 and 2013. In May 2018, Saolta group published their Report of the External Independent Review of Maternity Services at Portiuncula University Hospital initially investigating the care of six women who's babies were referred for therapeutic hypothermia or "head cooling" in 2014, but which subsequently encompassed 12 other cases between 2008 and 2014.

In September 2018, Dr. Gabriel Scally published his Scoping Inquiry into the CervicalCheck Screening Programme (The Scally Report) subsequent to media controversy after Vicky Phelan, a 43-year-old mother of two from Co Limerick, with cervical cancer, settled a High Court case against a US laboratory that was subcontracted by CervicalCheck**,** the national cervical screening programme, to assess the tests.

The National Miscarriage Misdiagnosis Review in 2011 and the HIQA investigation into the death of Savita Halappanavar in 2013 specifically involved non-consultant hospital doctors (NCHDs) and trainees. For the first time in 2013, multiple trainees were named in the press in the wake of the Savita Halappanavar case (Cullen and Holland, 2013).

The impact of European Working Time Directive (EWTD) on training is another very current issue and no information exists to date on the influence this has had on trainees in obstetrics and gynaecology in Ireland. Since its introduction in 2014, EWTD has improved work-life balance by reducing overall hours worked. It has, however, reduced experience gained during training by up to 35% (Rose *et al*., 2012). Trainee surveys like Your Training Counts, from the Medical Council of Ireland (2017), and the RCOG Workforce Report (2018), however, point to worsening morale amongst doctors despite working fewer hours.

3.2 Study Objectives

This study aimed to explore the current experience of obstetrics and gynaecology trainees in Ireland in order to gather accurate information on what factors were influencing their career progression both positively and negatively. Key areas of interest identified as a focus for the study included:

1. Impact of the media on recruitment and retention as well as on clinical practice in obstetrics and gynaecology
2. Impact of the medico-legal climate on recruitment and retention as well as on clinical practice in obstetrics and gynaecology
3. HSE workplace environment: impact of patients' attitudes, social media and practice of defensive medicine

4. Attitudes around practicing in medicine and in obstetrics and gynaecology in Ireland
5. European Working Time Directive and its impact on quality of training and practice of obstetrics and gynaecology

The influence of gender on respondents' attitudes and perceptions was analysed.

3.3 Methodology

3.3.1 Study Design

The survey was created and modified over a 6-month period and incorporated themes from international research as well as suggestions from trainees and from newly appointed consultants. Issues that had become apparent during annual trainee assessments were included, as were factors discussed at exit interviews with trainees leaving the specialty.

The themes of traditional and social media coverage, and medico-legal climate were examined. We also asked about the impact of EWTD and changing attitudes of patients and their families towards doctors in maternity services, and about the effect on morale and their desire to stay in, or to leave the specialty.

3.3.2 Study Tool

A self-administered questionnaire (Appendix C) was developed and anonymous demographic information was recorded including age, gender, grade and number of children. For most categories, trainees were asked to indicate whether they agreed or disagreed with a series of statements and strength of response was graded using a 5-point Likert scale (1. Strongly Agree, 2. Moderately Agree, 3. Unsure, 4. Moderately Disagree, 5. Strongly Disagree). At the end of each section throughout the survey,

respondents were given the opportunity for free comments. The questionnaire was initially piloted amongst four senior trainees, two of whom were on the HST scheme and two who were not. Their feedback informed streamlining of the questionnaires to incorporate their suggestions.

On behalf of the training body of the RCPI, these questionnaires were given to all HST trainees attending their end of year assessment at the RCPI in order to gather detailed information about their experience of working in the specialty in Ireland. A link to the online survey tool Survey Monkey was then emailed to all BSTs and to other trainees not registered on schemes through the JOGs email list.

3.3.3 Data Analysis

Data were collated and analysed using a statistical software package, SPSS statistics. Descriptive statistics were utilised throughout to examine demographics and compute frequencies. As these themes are universal across all doctors in training, analyses of group differences between age and gender were deemed extraneous to the core discussion and are not included.

3.4 Ethical Approval

As described in the Introductory chapter, in 2017 the Specialist Training Committee of the Institute of Obstetricians and Gynaecologists recommended that the views of trainees should be sought on issues impacting the working environment in the specialty in Ireland currently. In response to this, and in my role as National Specialty Director in postgraduate training within RCPI and IOG, a quality improvement initiative was undertaken, surveying trainees about wellbeing and the quality of training schemes. As this work was a prior and ongoing initiative on service evaluation and quality, and

as such, was part of the normal remit of the training body, research ethics approval was not sought for this survey.

3.5 Results

175 trainees were invited to complete the survey. There were 151 responses, however, only 124 completed the survey and these are the data presented in Table 3.1 below. 16% of the male trainees were from outside the EU whilst 8.1% of the female trainees are from outside the EU. The percentage of male trainees who had children was higher (40%) than females (31.3%).

Table 3.1 Demographic characteristics of trainees

Respondents		**All (n=124)**	**Male (n=24; 20.1%)**	**Female (n=99; 79.9%)**
Age (Yrs.)	25 - 34	101 (81.5%)	18 (72%)	83 (83.8%)
	35 - 44	23 (18.5%)	7 (28%)	16 (16.2%)
Nationality	Irish	106 (85.5%)	18 (72%)	88 (88.9%)
	EU	6 (4.8%)	3 (12%)	3 (3%)
	Non - EU	12 (9.7%)	4 (16%)	8 (8.1%)
Years in speciality (Yrs.)	0 - 5	74 (59.6%)	12 (48%)	62 (63.3%)
	6 - 10	40 (32.2%)	10 (40%)	30 (30.6%)
	11 - 15	7 (5.6%)	1 (4%)	6 (6.1%)
	16+	2 (1.6%)	2 (8%)	0
Do you have children?	Y	41 (33.0%)	10 (40%)	31 (31.3%)
	N	83 (67.0%)	15 (60%)	68 (68.7%)

Figure 3.1 shows that 108 (87%) respondents were on the RCPI training scheme for Obstetrics and Gynaecology. 100% (n=64) of Higher Specialist Trainees (HSTs), responded, and 44 out of 75 (59%) BST trainees responded. Nine respondents (7.7%)

were taking time out of programme for either a clinical or research fellowship and a further seven respondents (5.6%) were not on any recognised training scheme.

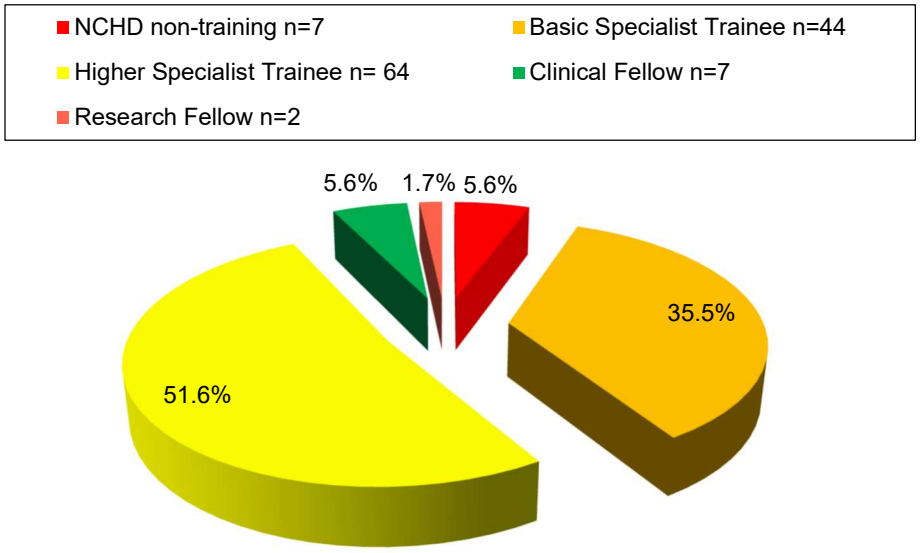


Figure 3.1 Career grade of respondents (n=124)

When asked how much they enjoyed working in the specialty on a scale of 1 to 10 with 1 representing no enjoyment at all and 10 representing immense enjoyment, 85.3% responded with a value of 7 or higher as can be seen in Figure 3.2 with only 2% giving a value of 1.



Figure 3.2 How much do you enjoy working in Obstetrics and Gynaecology? (% of respondents)

3.5.1 Media Representation of Obstetrics and Gynaecology

When asked if the impact of the media on patients needing obstetric or gynaecological care was positive, 86.7% moderately or strongly disagreed. 94.1% moderately or strongly disagreed that the media representation of obstetrics and gynaecology is fair and balanced. These figures shown in Figure 3.3 reflect the strongly damaging impact of what our trainees perceive as one sided or unfairly negative media portrayal. This sentiment is not just limited to an anti-doctor media narrative, however, as 72.6% felt that the media does not have a positive impact on nurses and midwives either.

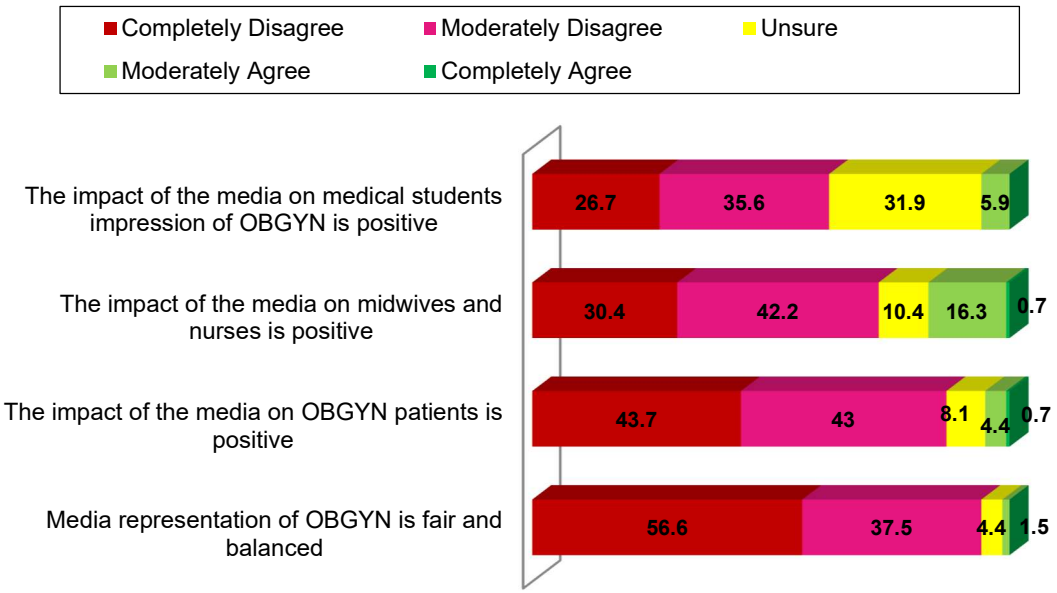


Figure 3.3 Perception of the media impact on obstetrics and gynaecology (% of respondents)

As seen in Figure 3.4, when asked if they felt that the media adversely influenced recruitment and retention to obstetrics and gynaecology, 69.6% agreed. 82.3% felt that the media negatively influenced patients' attitudes to doctors, with 82.3% stating that the media increased both their fear of adverse outcomes and of litigation. 72.3% of trainees state that they believe other specialties are portrayed in a more balanced light.

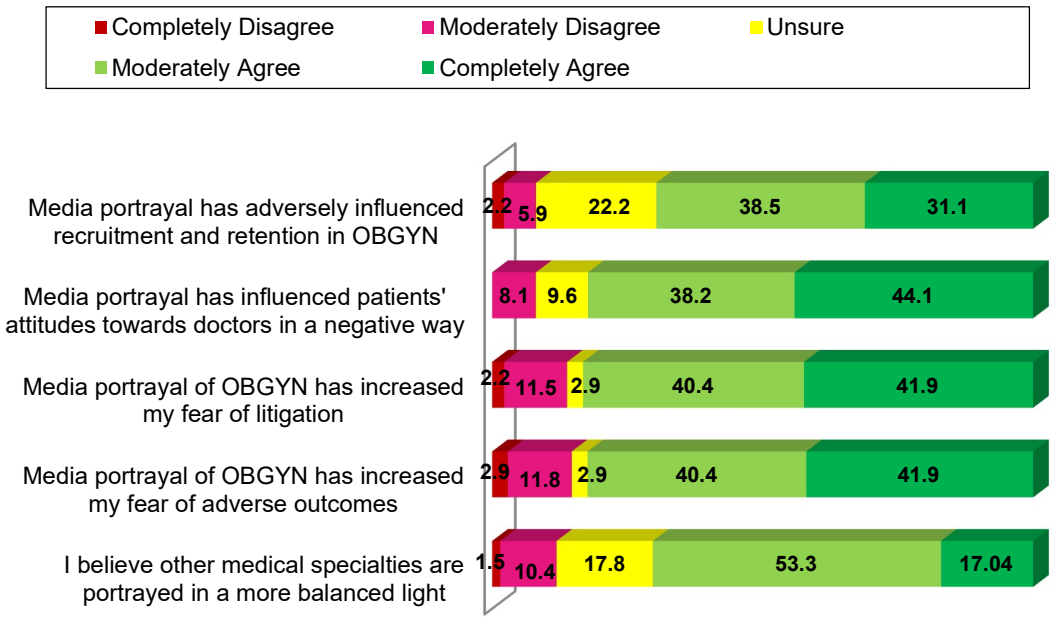


Figure 3.4 Perception of the media impact on obstetrics and gynaecology (% of respondents)

Respondents were asked if there was anything they wished to add, and all comments given by trainees in the free-text boxes are included.

"I don't believe that other medical specialities are necessarily more positively portrayed in the media, it is that they are not mentioned in the media as much and in such a blatantly negative manner". Female HST

"It's very hard working in the speciality as I feel there is a great fear and lack of trust in patients secondary to what they see in the media". Female BST

"Media portrayal of obgy in Ireland is causing patients to be nervous, cynical and suspicious of services provided to them and of doctors. Many patients are surprised when they are treated well and when they find the services good as they are led to believe to expect the opposite" Male HST

The implication that the media is influencing doctor-patient interactions and may be harming patients by undermining confidence in doctors as well as negatively impacting recruitment and retention into obstetrics and gynaecology is clear.

3.5.2 Medico-Legal Climate on the Specialty

46 trainees (37.1%) have been involved in a medico-legal case and of these 19.6% have been involved in 3 or more medico-legal cases. 54.8% have been named in a patient complaint, and rates were similar between male and female trainees.

In Figure 3.5, it can be seen that 79.5% of trainees state that the medico-legal climate has a moderately or strongly negative impact on recruitment and retention while 84.2% feel it has a moderately or strongly negative impact on patients. 45.7% and 65.3% say the medico-legal climate has a negative impact on their interactions with patients and on their practice, respectively.

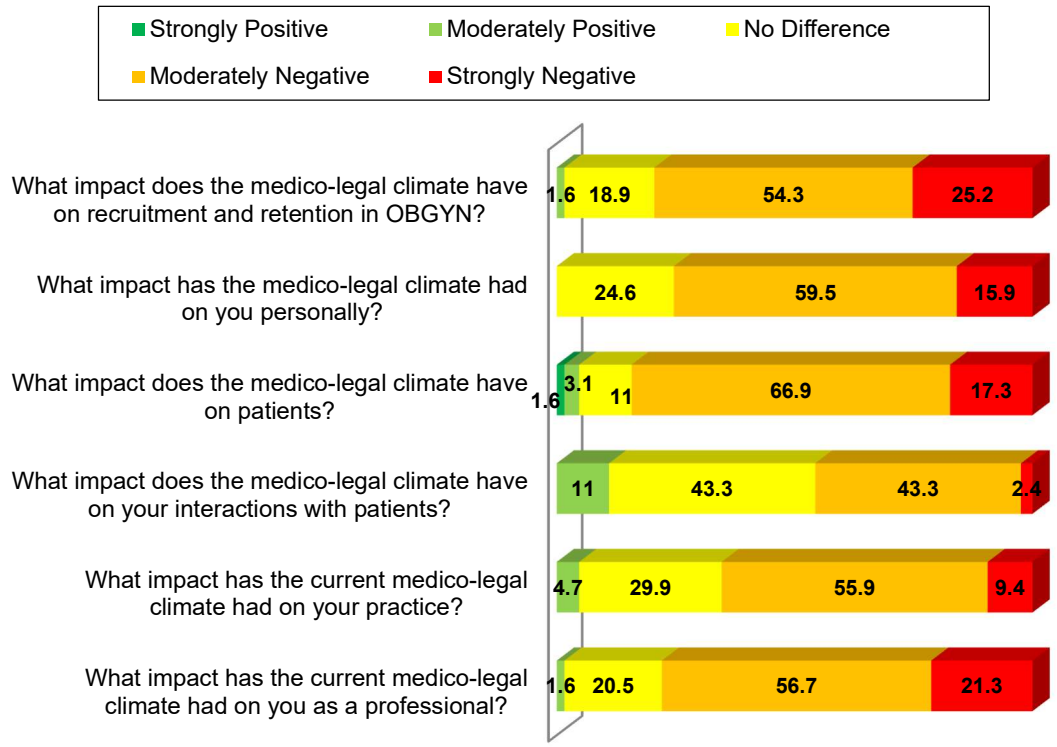


Figure 3.5 The impact of the medico-legal climate on obstetrics and gynaecology (% of respondents)

This clear evidence shows that the current medico-legal culture is taking a toll on trainees both professionally and personally, and also on their interactions with patients. Trainees clearly see it as a deterrent to recruitment and retention in the specialty much more so than is reflected in the medical student's survey. Some of the frustration and fear is expressed below in trainees' own comments:

"I frequently think about leaving medicine to pursue a different course/career altogether for a more balanced and less stressful lifestyle, although I truly enjoy ob/gyn " Female BST

*"Sh*** job sometimes in fairness. It's not at all what I expected it to be, though thankfully, I really like what it turned out to be. I wouldn't change my choice, though I'd like to work a few less hours if possible"* Male HST

"I love medicine and I can't picture myself doing anything else but OBYN. However, the current litigation heavy, fear inducing, undermining, (etc) system makes me reconsider my life choice almost everyday. Specially since I'm only starting, and I can see that worse is yet to come." Female BST

3.5.3 Experience of Workplace Environment

As shown in Figure 3.6, 91.2% of trainees have ever been subject to abusive behaviour from a patient. A culture of abusive behaviour from patients is described by 56% of trainees who experience this on a monthly or more frequent basis. 89.6% have suffered abusive behaviour from a patient's family member or friend with 52% being exposed to such behaviour monthly or more regularly. 79.2% of trainees have experienced threatening behaviour from a patient or their family member. Despite 97% of our trainees being on social media, only 12% of trainees admitted to having had a negative experience as a professional whilst on social media.

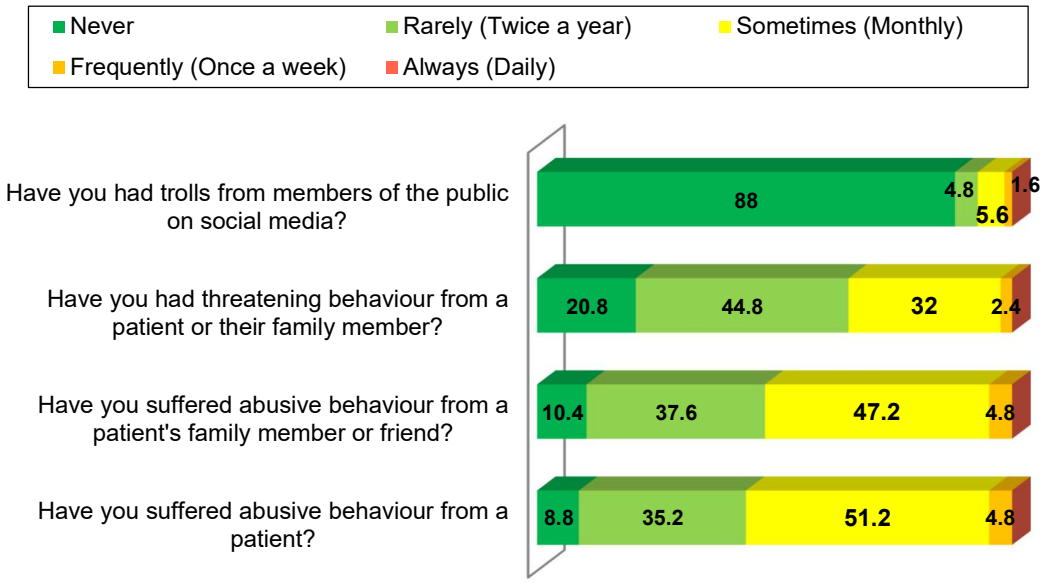


Figure 3.6 Trainee's experience of negative behaviour from patients and the public (%)

In response to questions designed to probe the issues of retention and attrition among Irish trainees, Figure 3.7 shows that 71.2% of our trainees have thought about leaving the specialty with 35.2% considering this on a monthly or more frequent basis, whilst 74.4% have had regrets about choosing the specialty. 69.4% have considered leaving medicine altogether, with 25.5% thinking about it monthly or more often.

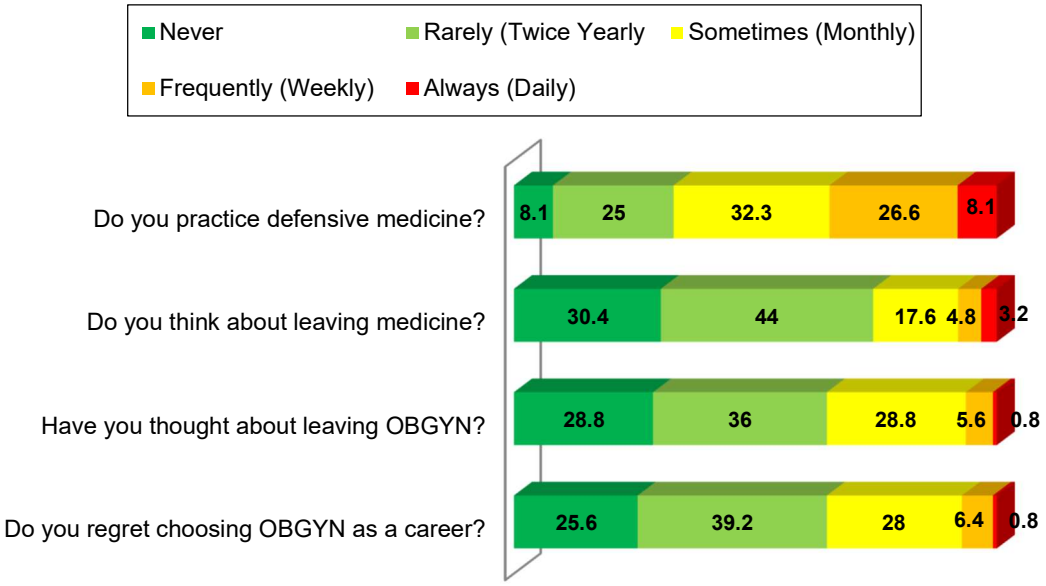


Figure 3.7 Trainees' attitudes to their choice of career

3.5.4 The impact of European Working Time Directive (EWTD)

As can be seen in Figure 3.8, the responses of trainees to statements on EWTD were mixed. 52.9% were either unsure or disagreed that EWTD had improved their personal life. Although 41.5% were either unsure or disagreed that they would be fully trained on completion of their training scheme, only 23.8% would choose to opt out of EWTD. Overall, almost half (48.7%) felt it had improved patient care.

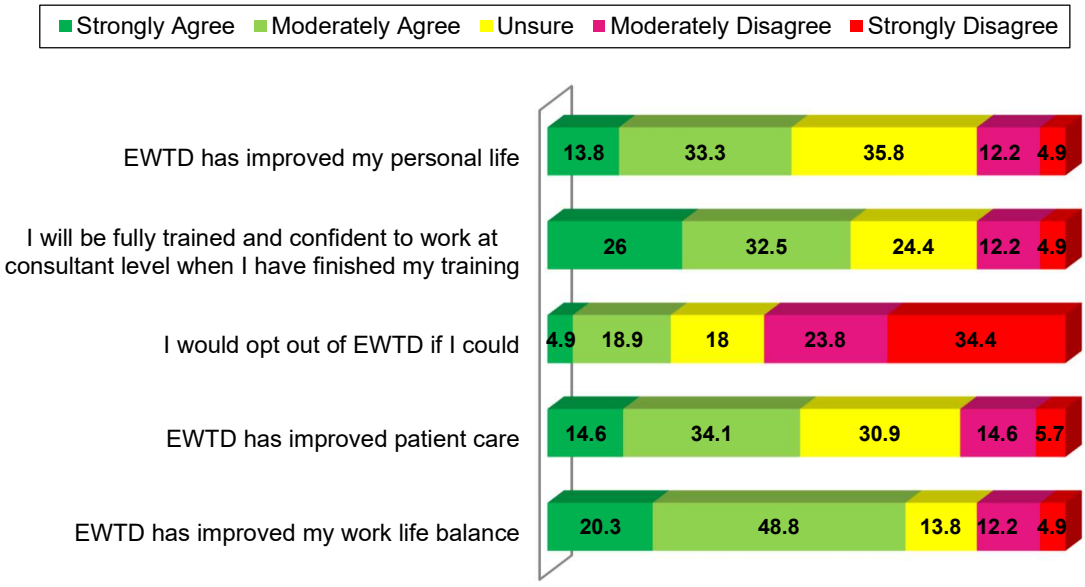


Figure 3.8 Impact of European Working Time Directive (EWTD)

3.5.5 Trainee's Recommendation of Obstetrics and Gynaecology as a Career

When asked if they would recommend a career in obstetrics and gynaecology to a family member or their child, only 3.3% would strongly agree as illustrated in Figure 3.9. Overall, 26% were positive towards recommending this specialty, with 27.9% being unsure and 45.9% who would be moderately or strongly against recommending it as a career.

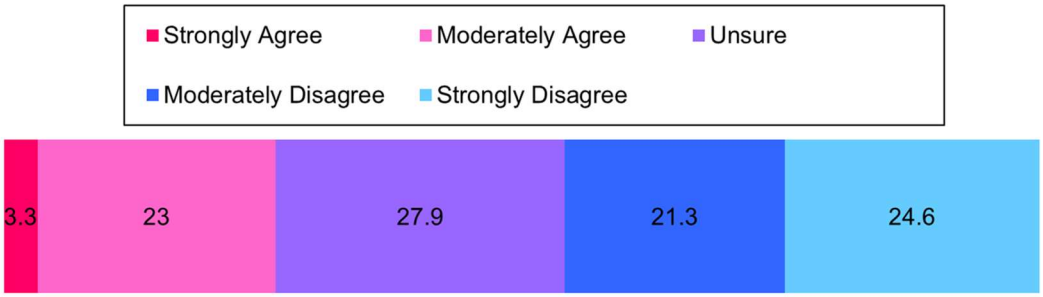


Figure 3.9 I would recommend a career in obstetrics and gynaecology to a family member or my child (% of respondents)

Free comments from trainees include the following:

"Only if they were very keen to try it"

"I would encourage them to train elsewhere. It is a great job but the length of the training with the uncertainty of location from year to year has a massive toll on my life, and my family's ability to plan and grow."

"Medicine as a profession is being eroded. We don't help it ourselves. Fear of complaints is rife. We should have stronger right of reply."

"Better understanding of the exigencies of the working mother is far more pressing an issue for me than litigation."

"I love my job, but I would not recommend it to anybody else"

3.6 Discussion

This study highlights several themes that are having a significant influence on doctors working in Obstetrics and Gynaecology in Ireland today. As Ireland is a small country, the impact of the media is unique and significant. The effectiveness of the media in both accelerating political responsiveness and in allowing tragic personal narratives to be told is well recognised. There are, however, increasing concerns

about the negative impact of some media coverage on clinicians, who are not in a position to comment on individual clinical circumstances. Negative media coverage may also be a contributory factor in the wellbeing, retention and recruitment of clinical staff. Humphries *et al*. in their 2015 study of qualitative insights into health professional emigration from Ireland, describe the 'anti-doctor media narrative', and the feeling that health professionals, who were regularly vilified in the Irish media, were being scapegoated by the Health Services Executive (HSE) as convenient targets when seeking to apportion blame.

94% of trainees in this study did not agree that media representation of obstetrics and gynaecology in Ireland was fair or balanced and 72% believe other specialties are portrayed in a more balanced light, implying that obstetrics and gynaecology is unfairly targeted by the media. 86.7% believe that that the impact of the media on patients themselves is not positive. Almost 70% of trainees feel that the media is adversely influencing recruitment and retention to obstetrics and gynaecology and more than 80% feel that the media negatively influences patients' attitudes towards doctors. As more than 90% of trainees have been subject to abusive behaviour from patients or their family members, the role of the media in influencing such behaviour must be questioned.

Whilst a lot of work done in recent years has focused on the high rate of undermining behaviour and bullying of trainees from medical and allied health professionals in the workplace (Your Training Counts, 2019), little information exists around intimidation of trainees by patients in the HSE environment. The NHS has a zero tolerance policy which states "*The aim of this policy is to tackle the increasing problem of violence against staff working in the NHS and ensures that doctors and all other staff have a*

right to care for others without fear of being attacked or abused". The level of intimidation and bullying behaviour that Irish trainees in obstetrics and gynaecology describe is of serious concern, and work into interventions to help protect our trainees from such behaviour, as well as arming them with tools and training on managing difficult or threatening patients is required. The Health Service Executive has Dignity at Work Policy for the Health Service: Anti Bullying, Harassment and Sexual Harassment policy and procedure, but no specific training exists, and the scope of the problem is likely to be underestimated.

James Phillip's review article in the New England Journal of Medicine in 2016, describes health care workplace violence in the USA is an underreported, ubiquitous, and persistent problem that has been tolerated and largely ignored. The health care sector is statistically among the industries most subject to violence in the United States (aside from law enforcement), however, researchers have yet to discover statistically significant, universally applicable methods of risk reduction.

The increasing tendency to defensive medicine, described by Sekhar and Byas in 2013 as departing from normal medical practice as a safeguard from litigation, with 66.9% of Irish trainees practicing it on a monthly or more basis, reflects a systemic culture of fear. Defensive medicine is damaging for its potential to harm patients, as well as increasing healthcare costs. Not least, defensive medicine also leads to erosion of the physician patient relationship.

Internationally increasing rates of litigation in obstetrics have had the negative effect of increasing medical indemnity rates paid by obstetricians. In an Australian study from 2002, MacLennan and Spencer found increasing numbers of specialists planned withdrawal from the practice of obstetrics. The main reasons given for ceasing

obstetrics were fear of litigation, high indemnity costs, family disruption, intention to specialise in gynaecology, and long working hours. About two-thirds of respondents (557/818) had experienced the threat of litigation, and almost all (768/803) desired some type of "no-fault" indemnity scheme. In a Lancet editorial 2018 “Medical negligence: there are no winners” the unsustainable rise in costs of lawsuits in the UK and the US is detailed.

As far back as 2001, Karen Birchard in the Lancet wrote that “Ireland is in the midst of a medical litigation crisis that looks as if it might get worse before there is a significant improvement. With 77% of all Irish doctors from trainees to consultants saying they fear a legal complaint, the Medical Defence Union (MDU) has added to doctors' concerns by telling the government that it will no longer include obstetricians in its cover package for Ireland”. By 2004 the MDU had withdrawn from covering Irish consultants and the State Claims Agency took over. The amount paid out by the State Claims Agency in the Irish healthcare sector has risen fourfold in the past ten years, from €81 million in 2010 to €353 million in the first 11 months of 2019 (Wall, 2019), with up to 65% of this money related to claims involving maternity services (Cahill, 2018). According to the National Treasury Management Agency Annual Report and Accounts 2018, the estimated outstanding liability of the State Claims Agency at the end of 2018 (NTMA, 2019) had increased by 18% from 2017 to 3.1 billion euro, with 10,658 claims pending (an increase of 7% from the end of 2017). Although clinical claims only represent 30% of the overall number of active claims, they comprise 74% of the overall estimated outstanding liability. Of this, approximately 70% is primarily due to the high estimated liability of settling infant catastrophic brain injury cases from maternity services.

As 37% of trainees have already been involved in a medico-legal case, their perspectives on this topic are extremely valid. Almost 80% of trainees think the medico-legal climate in Ireland has a negative impact on recruitment and retention to obstetrics and gynaecology and 84% consider it to have a negative impact on patients. Almost 80% feel that the medico-legal climate has a negative impact on them professionally. The impact of the culture of litigation in terms of the economic and healthcare perspective has been discussed, but the impact from the physicians' perspectives in the Irish maternity services context has not been estimated to date and would appear to be potentially damaging. Medico-legal proceedings are very stressful and take a significant psychological and emotional toll on the doctor involved. The professional impact can also be severe, as some cases will be reported in the national media and newspaper outlets, and some cases will involve referral to the Medical Council. It is important to appreciate the high proportion of trainees exposed to medico-legal cases and patient complaints and to ensure that adequate training and support is provided to trainees in order to prepare them and also to help build resilience.

71.2% of Irish obstetrics and gynaecology trainees have thought about leaving and this compares to the 75% of UK RCOG trainees who have considered leaving (Gafson *et al*., 2017). As previously stated, attrition from specialist training in the UK is increasing rapidly and the main reasons cited include lack of work-life balance (70%) followed by rota gaps (48%) and intense workload (45%). The issue of low morale amongst our Irish trainees is one of serious concern, and if this is not taken seriously, could lead to deficiencies in service provision in the future. Whilst rota gaps are not a significant problem in our training schemes and hospital rotas to date, there is a real

possibility that current low morale and despondency within the profession may lead to reduced recruitment and increased sick leave, and thus to rota gaps.

In terms of EWTD, it was interesting to note that whilst 69.1% felt it improved their work life balance, only 47.1% felt it had improved their personal life. This is in keeping with work from the UK, where Clarke *et al*. in 2014 found a greater proportion of Foundation doctors commented on the detrimental impact of the introduction of EWTD on their morale, sometimes describing feeling angry, let down or disillusioned. Reasons were multi-factorial but included mismatching of contracted hours to those actually worked, and loss of the traditional firm structure leaving doctors feeling isolated and unsupported. For a minority this led to consideration of leaving the NHS altogether.

Less than half (48.7%) felt it had improved patient care and just under one in four (23.8%) would opt out if they could even though only 58.5% were confident they would be fully competent and trained at the end of their scheme. This may mean that increasing numbers of trainees could look to further their training after completion of their structured training programmes.

The knock-on impact on workforce planning suggests that in practical terms the push to shorten the training pathway as espoused in the McCraith report, may need to be reconsidered in obstetrics and gynaecology.

One of the most striking features of this survey is the contrast between the hugely positive response to trainee's enjoyment of working in the specialty as reflected in Figure 3.2, and the fact that only 3.3% would strongly recommend this career to their family member or child as described in Figure 3.9 . The enjoyment factor of the specialty is most important and must be harnessed for the future. There is a

responsibility on the media and our society in general to care for the carers as well as the patient, and an increasingly litigious "blame" culture will only serve to push our best young people away from Obstetrics and Gynaecology and maybe medicine as well. It is interesting to note that the impact of social media is not yet a serious issue for most of our trainees.

3.7 Study Strengths and Limitations

This comprehensive survey is the first of its kind for the training body of the IOG and RCPI. By asking HST trainees to complete the questionnaires on the day of their attendances for Annual Assessments, we were able to achieve a 100% response rate amongst this group of trainees. The voice of this group amongst all trainees is the most important, as these doctors are the most highly invested. They have completed more years in training and are approaching consultant level. The 59% response rate from BST trainees was not as good and this group was only approached to complete the survey by email. Whilst there was a better response rate from trainees on our structured training schemes, we did not get many respondents from the large number of non-training NCHDs who make up a very significant proportion of the workforce in our specialty. As in other specialties, these doctors usually come from overseas and their career pathways are often complicated and poorly understood. Smaller units, who are more vulnerable to adverse media scrutiny and who have more difficulty with recruitment, are often more reliant on this cohort of doctors to fill rotas and provide service.

3.7.1 Recommendations for Further Research

In order to optimise the future workforce in women's health, accurate data and a clearer understanding of the issues facing NCHDs not on training schemes, will allow

improvements in training opportunities leading to enhanced skills and better patient care. Further inquiry into the direct impact of litigation on trainees is also important, especially in obstetrics and gynaecology. As so many doctors in this survey have been affected directly by medico-legal cases, and we know from the Your Training Counts survey that experience of adverse incidents significantly worsens feelings of depression and burnout in Irish doctors, a clearer insight into the issue amongst obstetrics and gynaecology trainees can only help to address recruitment and retention issues.

3.8 Conclusions

Severe problems with morale amongst trainees in obstetrics and gynaecology fuelled by the Irish media and the current medico-legal climate are highlighted by this study. Whilst it is recognised that there is an evolving societal shift away from traditional attitudes towards authority figures (Frattori et al., 2015), the extremely high level of bullying behaviours towards doctors by Irish patients is noteworthy. More than one third of Irish obstetrics and gynaecology trainees think about leaving the specialty monthly or more frequently, and this must act as a wake-up call.

The voice of the physician is at the centre of this work. This quote from a male Higher Specialist Trainee encapsulates the frustration experienced by trainees. *"Media portrayal of obstetrics and gynaecology in Ireland is causing patients to be nervous, cynical and suspicious of services provided to them and of doctors. Many patients are surprised when they are treated well and when they find the services good as they are led to believe to expect the opposite"*

The fact that most trainees enjoy the job so much is reassuring, but when contrasted to the low numbers of doctors who would recommend their career to a family member or

child, the gap reflects the difficult and adversarial nature of the HSE workplace environment. The theme of fear is highlighted as a recurrent theme, as in this quote from a female BST trainee.

"I love medicine and I can't picture myself doing anything else but OBYN. However, the current litigation heavy, fear inducing, undermining, (etc) system makes me reconsider my life choice almost everyday. Specially since I'm only starting, and I can see that worse is yet to come."

This study highlights the need for the HSE and training bodies to address morale as well as recruitment and retention in obstetrics and gynaecology as a matter of urgency. All services across women's health rely on an adequate and well-trained workforce. Emphasis must be placed on valuing trainees and supporting them through a difficult medico-legal climate and adversarial HSE environment. Provision of proactive collegial support and a protected environment with counselling and mentorship when required should be a priority. The media also have a responsibility to doctors as well as patients when reporting clinical events, and an awareness of the harm they are causing to recruitment and retention in maternity services might help to underline the importance of factual and accurate reporting.

Chapter 4

Career Plans and Future Working Patterns of Obstetrics and Gynaecology Trainees in Ireland

4.1 Introduction

Traditionally Ireland, unlike most other high-income countries, has had a strong culture of medical migration. This has partly been due to a strong professional bias towards international experience propagated by senior consultants presiding over promotion panels and acting as gatekeepers to consultant posts (Humphries *et al*., 2017). In the past, such medical migration was essential rather than optional, and perceived as a necessary rite of passage in order to be competitive for the very small number of available consultant posts in Ireland. Poor appreciation of the consequences of this culture, as described by Humphries *et al*. in 2015, meant that investment into undergraduate training was squandered as a high proportion of specialty trained doctors chose to stay abroad or were unable to secure a consultant post in Ireland. The loss of expertise on the provision of healthcare was not appreciated and little effort was put into workforce planning and future-proofing our health service in line with demographic changes and medical advancements. The Medical Workforce Intelligence Report 2018 from the Medical Council of Ireland states that while Ireland's education and training of doctors is internationally recognised, recruiting and retaining our pool of highly qualified Irish trained doctors is continuing to prove problematic. They recommend challenging current structures and models in healthcare

as a key planning consideration that must be addressed through collaborative working amongst policymakers, educators, planners and employers.

As shown in Figure 4.1, in terms of women's health, Ireland has the lowest number of Obstetrics and Gynaecology trained specialists per 100,000 women as indicated in the Consultant Workforce Planning Report from the National Clinical Programme in 2015.

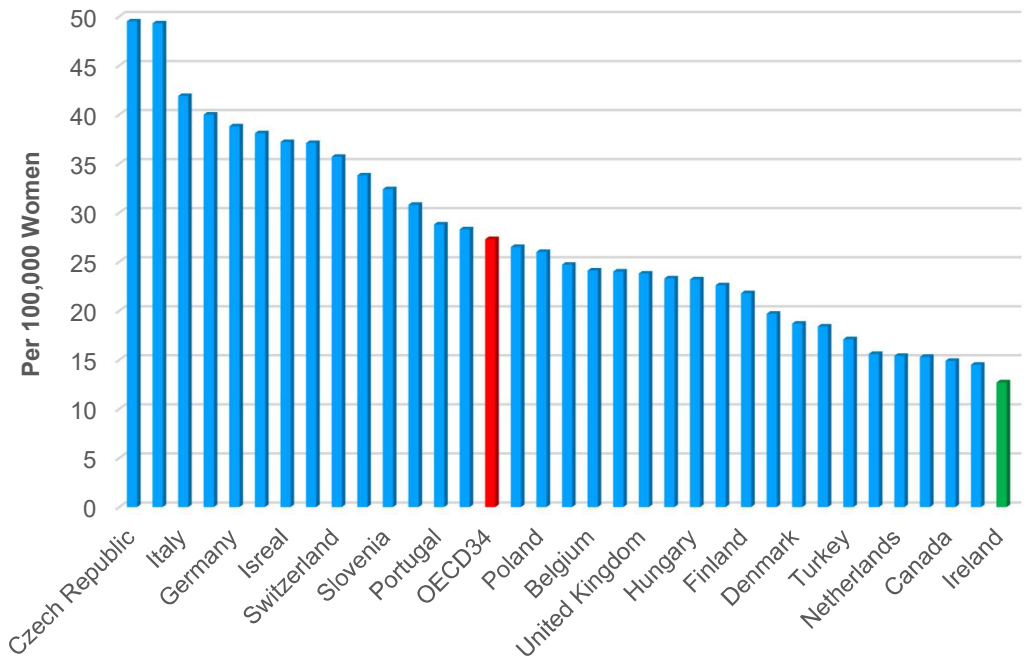


Figure 4.1 OECD 2013 data for obs/gynae per 100,000 women – revised and re-produced for Ireland, removing inactive doctors and those working exclusively outside Ireland (Turner and McNicholl 2015)

Whilst the National Doctors and Training Planning (NDTP) has been working alongside the training body of the Institute of Obstetricians and Gynaecologists (IOG) and the Royal College of Physicians of Ireland (RCPI) in order to improve the training scheme for trainees, there is no consensus on how many obstetrician gynaecologists Ireland needs to produce in order to match service provision with predicted service requirements. Internationally, detailed analyses of workforce planning have been

performed: Australia's future workforce - Obstetrics and Gynaecology, the UK Royal College of Obstetrics and Gynaecology/RCOG workforce report, and the American Obstetrician-Gynecologist Workforce in the United States; Facts, Figures, and Implications 2017. These reports analyse current scope of practice as well as predicted changes in clinical service including the impact of falling birth rates and ageing populations. They have analysed demographics and prevocational intentions of medical students and have also looked at geographical spread of doctors and care as well as medical migration. They have calculated hours worked by physicians including clinical work, administration, training and academic work, and looked at the balance between private and public practice. Deficits between supply and demand in future Obstetrics and Gynaecology manpower have been identified and models have been created to anticipate and correct likely supply and demand disparities, in order to avoid gaps in care. Similar planning is required in Ireland.

4.1.1 The Irish Context

Historically the total number of trainees in Higher Specialist Training (HST) in Ireland has been low with only 33 HST places in 2013 (Institute of Obstetricians and Gynaecologists Annual Report, 2013), and whilst numbers have increased to 61 places in 2018 (Institute of Obstetricians and Gynaecologists Annual Report, 2018), expansion has been based on a short term recognition of the need to expand but without accurate matching to replacement of retirements, or to future predictions of service requirements for women's health. The National Clinical Programme in Obstetrics and Gynaecology and National Maternity Strategy have recognised the very low number of consultant obstetricians and gynaecologists in Ireland, and have recommended increasing the number of posts in line with UK numbers, based on a "per 1000 live births" basis. In 2016 the National Maternity Strategy was published in response to

official recommendations following the death of Savita Halappanavar in Galway more than 6 years ago. The strategy aims to develop quality, safe, consistent and well-resourced care in the State's 19 maternity units, and recommended one hundred new consultant posts throughout the country's maternity units, to be put in place during the ensuing 10 years based on a 2015 report from the National Clinical Programme discussed below.

In response to growing difficulties in retaining graduates of Irish medical schools in the Irish healthcare system, a Working Group, chaired by Prof. Brian MacCraith, President of Dublin City University, was established in 2013 to carry out a strategic review of medical training and career structure. This Working Group was tasked with examining and making high-level recommendations relating to training and career pathways for doctors with a view to improving graduate retention in the public health system, planning for future service needs and realising maximum benefit from investment in medical education and training.

National Doctors Training and Planning (NDTP) was established in September 2014 and incorporates Medical Education and Training, Consultant Appointments and Medical Workforce Planning. Their stated strategic objectives are:

- A shared approach to future doctor training and consultant post requirements for the Irish health service exists and is understood, leading to a combined and focused effort by all stakeholders.
- The training provided to doctors is appropriate, adaptive and capable of responding to the changing needs of the patient and the health service.
- Ireland's medical workforce is increasingly aligned with the needs of the Irish health system.

- Doctors' experience of both training and work is consistently positive regardless of location.
- Morale amongst all doctors – NCHDs, trainees, GPs, specialists and consultants - has improved, resulting in better outcomes for patients.
- Doctors trained in Ireland remain and work in Ireland in the long term.
- Medical training in Ireland is increasingly highly regarded internationally.
- NDTP investment in doctors' training is delivering value for money.
- An established workforce plan/ framework is shaping appropriate medical education and training and the employment of all doctors in the health service.
- Consultant posts are filled in a timely manner resulting in a reduced reliance on locums, which in turn is providing better training and patient experiences throughout the Irish health service.
- High quality data is enabling and informing decision-making and career planning for the medical workforce.

The only specialty specific report from NDTP to date in Obstetrics and Gynaecology is from 2014 and highlights the lack of accurate information on current numbers of consultants throughout the public and private sectors as well as the lack of predictive information on future changes in clinical need. They state that new posts should be recruited on a phased basis, not least because of the current limited capacity of the recognised RCPI training programme. They recommended that in order to develop and maintain a high quality and coherent, multi-disciplinary service, all new posts should ideally be filled predominantly by Irish-trained specialists and also that the expanded consultant workforce should have the correct balance of generalists and sub-specialists (e.g. oncology, maternal-fetal medicine, reproductive medicine etc) in each Hospital Group.

To date, there is no recommendation on how many trainees are required, and where or how these roles will be designed and developed in order to invest appropriately.

There are several gaps in our knowledge that are critical to planning the future of obstetrics and gynaecology training and service delivery nationally. Firstly, information about the problems facing Irish doctors in Obstetrics and Gynaecology, the impact of gender imbalance and current attitudes to work-life balance amongst trainees, and other factors that can influence recruitment, retention, and working patterns, is currently not available, but is necessary in order to accurately predict medical manpower planning in line with future service provision.

Secondly, poor insight into why particular posts are unattractive means that difficulties recruiting consultants into smaller hospitals nationally has been a major problem for many years. The issue of many consultant posts left unfilled and relying on locum cover for long periods has been highlighted in the HSE Portlaoise Report 2014. Understanding and clarity as to why posts are unattractive and what might make them more attractive is currently unavailable and is essential for deciding where and how quality care can be best provided.

Thirdly, changing demographics of the trainee cohort has not been addressed in previous reports, and the high ratio of female to male trainees has not been examined in terms of future service provision in the context that international research suggests that female physicians spend less time working and deliver less care than their male counterparts (Hedden *et al*., 2014).

Finally, societal change and generational differences are also unaccounted for. Caroline Mercer's "How millennials are disrupting medicine", discusses many of these aspects including the influence of technology on communication and also the fact that

younger doctors are more interested in lifestyle factors than in financial remuneration (Mercer, 2018).

Reconfiguring care models and moving some care into an ambulatory care setting in the community may also help provide better access to patients as well as better value for money, but is unlikely to succeed if we do not know whether future specialists are interested in working flexibly across sites or between primary and secondary care.

4.1.2 Existing Research

As the data collected here is specific to Irish hospitals and services, no international data can be compared or contrasted. Several surveys have been undertaken by NDTP and the Irish Medical Council (Your Training Counts, 2014 and 2019) on graduating doctors and their career plans, but no specific data pertaining to trainees in Obstetrics and Gynaecology and how or where they would prefer to work currently exists.

4.1.3 Study Objectives

The primary objectives of this study were to determine:

1. Whether trainees plan to work as consultants in Ireland, and if so, where they would or would not consider working.
2. What preferences they have in terms of full or part time work practice, parental leave and sabbaticals, and age planned for retirement.
3. How trainees respond to alternative job plans compared to the traditional hospital-based consultant post with on call.
4. What might make trainees look more favourably on unpopular hospitals.

4.2 Methodology

4.2.1 Study Design

This cross-sectional survey of trainees was created and modified over a 6-month period. The survey was designed based on factors reflected in international trainee surveys and international workforce planning documents, and also incorporated suggestions from trainees and from newly appointed consultants. Questions were adjusted to encompass recognised issues in the current Irish context of working practices and healthcare provision, for example working across multiple hospital sites within a hospital group and attitudes towards performing private practice. Considering the high proportion of female trainees, we sought to gather specific data regarding less than whole time working and job sharing. Attitudes towards working in each maternity unit in the country were also sought.

Anonymous demographic information was recorded including age, gender, grade and number of children. The questionnaire was initially piloted amongst 4 senior trainees, 2 of whom were on the HST scheme and 2 who were not. Their feedback informed streamlining of the questionnaires to incorporate their suggestions.

4.2.2 Study Tool

Questions were designed to probe how and where trainees might prefer to work, with specific attention to whether they wished to consider less than whole time (LTWT) working, sessional work, community-based work or working across multiple sites. Specific questions about their preferences for working in each of the maternity hospitals in Ireland and information on what might encourage them to work in less popular hospitals was collected.

For some categories, trainees were asked to indicate whether they agreed or disagreed with a series of statements and strength of response was graded using a 5-point Likert scale (1. Definitely Yes, 2. Probably Yes, 3. Unsure, 4.Probably No, 5. Definitely No). Respondents were also given multiple opportunities for free comments throughout each survey.

On behalf of the training body of the RCPI, these questionnaires were given to all Higher Specialist Trainees (HSTs) attending their end of year assessment at the RCPI in order to gather detailed information about their experience of working in the specialty in Ireland. We wished to gather information on what factors were influencing their career progression both positively and negatively. A link to the online Survey Monkey survey tool was then emailed to all other trainees and to other doctors not registered on schemes through the JOGs (Junior Obstetrics and Gynaecology Society) email list. The survey is included in Appendix D.

4.2.3 Data Analysis

Data collected was summarised on the online survey tool Survey Monkey and this information was converted to a .sav file for use in the statistical package SPSS Inc. For the purpose of statistical analysis, all collected data was recoded into categorical variables with levels within some variables collapsing (Definitely no, Probably no and Unsure collapsed into 0 (No**)**, and Probably yes and Definitely Yes into 1 (Yes), to allow for statistical comparison. Descriptive statistics were performed on the trainees' demographics, and Pearson Chi-Square testing has been used to explore the strength of statistical correlations between gender and other factors.

4.2.4 Ethical Approval

As described in Chapter 1, after discussions at the NDTP Service Level Agreement (SLA) meetings in 2017, the Specialist Training Committee of the Institute of Obstetricians and Gynaecologists recommended that the views of trainees should be sought on issues impacting the working environment in the specialty in Ireland currently. In response to this, and in my role as National Specialty Director in postgraduate training within RCPI and IOG, I led a quality improvement initiative surveying trainees about how and where they might chose to work in the long term, and what factors might influence them. As this work was a prior and ongoing initiative on service evaluation and quality, and as such, was part of the normal remit of the training body, research ethics approval was not sought.

4.3 Results

4.3.1 Response Rate and Demographics

Of a total of 175 trainees approached, 117 trainees responded (66.8%), however only 115 completed the questionnaires and these data are presented in Table 4.1. The female to male breakdown was 80% to 20%.

Table 4.1 Demographics of respondents

Respondents		All (n=115)	Male (n=23; 20%)	Female (n=92; 80%)
Age	25 - 34	95 (82.6%)	17 (77.3%)	77 (83.7%)
	35 - 44	20 (17.4)	5 (22.7%)	15 (16.3%)
Nationality	Irish	99 (86%)	17 (74%)	81 (89%)
	EU	6 (5.2%)	3 (13%)	7 (7.7%)
	Non-EU	10 (8.7%)	3 (13%)	7 (7.7%)
Do you have children?	Y	35 (30.2%)	8 (34.8%)	26 (28.3%)
	N	81 (69.8%)	15 (65.2%)	66 (71.7%)

4.3.2 Career Grade of Respondents

Respondents came from across a range of training levels with the highest number coming from the Higher Specialist Trainee's (HST) group (54 out of 64 or 84.3%) with Basic Specialty Trainees (BST) 43 out of 75 (57.3%) coming second. The full breakdown is shown in Figure 4.2.

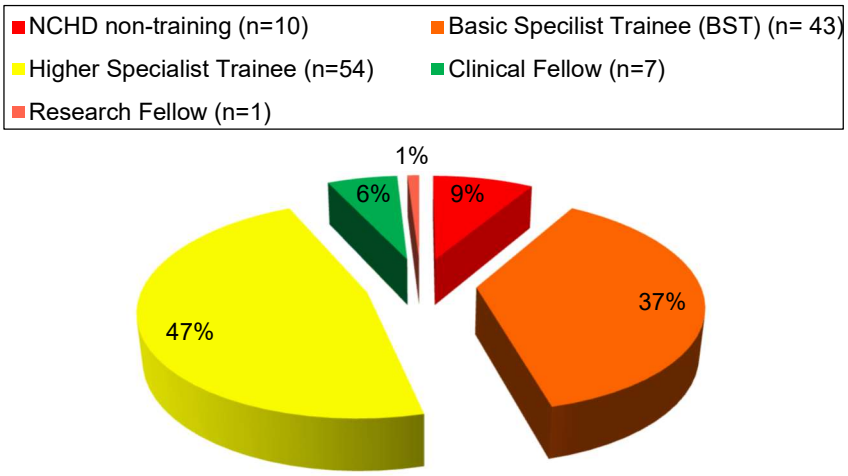


Figure 4.2 Career grade of respondents (n=115)

4.3.3 Future Work Preferences

Figure 4.3 shows that most of our trainees aim to work in Ireland in the long-term with only 4.4% expressing a definite preference for working elsewhere. 79.7% of trainees would probably or definitely work full time. Just under 20% of trainees do not plan on taking a sabbatical at some point in their career, with 46.4% being unsure, and 33.9% leaning in favour of taking a career break or sabbatical.

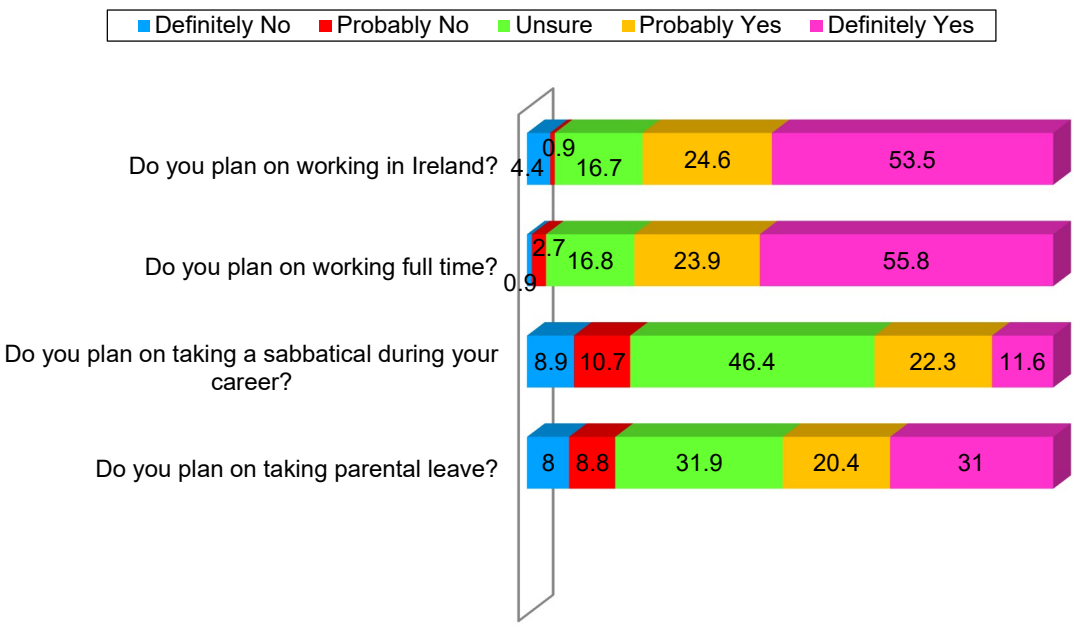


Figure 4.3 Future work preferences

A Pearson Chi-Square test of independence was performed to examine the relation between gender and work preferences. Answers to the questions pertaining to taking a sabbatical and parental leave were similar between males and females as was the response to preference for working in Ireland as shown in Table 4.2. Male respondents however, were significantly more likely to want to work full time than females (95.5% versus 75.6% p-value 0.038).

Table 4.2 Future work preferences comparing gender

		Female		Male		p-Value
		n	%	n	%	
Do you plan on working in Ireland?	Yes	68	75.6	19	86.4	0.275
	No or Unsure	22	24.4	3	13.6	
Do you plan on working full-time?	Yes	68	75.6	21	95.5	0.038
	No or Unsure	22	24.4	1	4.5	
Do you plan on taking a sabbatical?	Yes	31	34.8	7	31.8	0.79
	No or Unsure	58	65.8	15	68.2	
Do you plan on taking parental leave?	Yes	48	53.3	9	40.95	0.296
	No or Unsure	42	46.7	13	59.1	

4.3.4 Future Work Pattern Preferences

Trainees were asked their preferences in response to different options of work or role specifications and the results are shown in Figure 4.4. Trainees had mixed responses about working on multiple sites within a hospital group, with 22.4% stating definitely or probably no, and 28.6 being unsure. Just under half, (49.1%) were probably or definitely willing to work on 2 sites. Just over half (50.1%) were favourable towards being resident on call as a consultant while just over a quarter were unsure (25.9%). 70% of trainees would consider job sharing. In terms of private practice, similar numbers expressed a desire to do private obstetrics (45.1%) and private gynaecology (49.5%) but only 37.5% expressed a desire to do both private obstetrics and gynaecology.

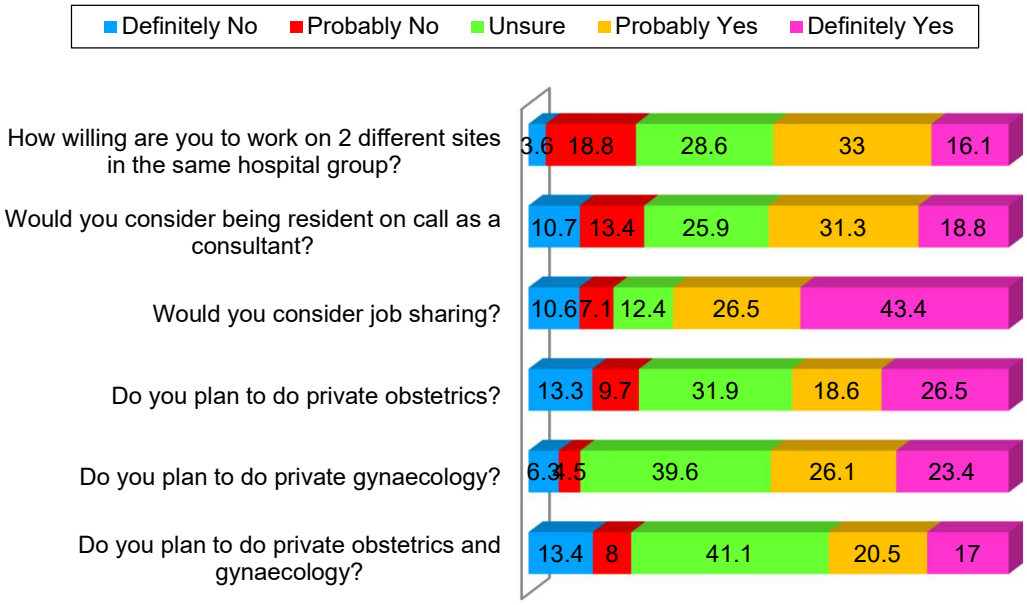


Figure 4.4 Future work specification preferences (% of respondents)

Female and male trainees were analysed with regards to their preferences for working across separate hospital sites and being resident on call, but no statistically significant difference was found. Female trainees, however, were much more likely to consider job sharing than their male counterparts (75.6% vs 54.5% p-value 0.006). Male

trainees were significantly more likely than females to plan on doing private obstetrics (68.2% vs 40% p-value 0.017), private gynaecology (76.2% vs 42.7% p-value 0.006), and private obstetrics and gynaecology (66.7% vs 31.1% p-value 0.002). These results are presented in Table 4.3. The number of male trainees however was low at 22, versus 92 female trainees, so caution in interpreting these findings is necessary.

Table 4.3 Future work specification preferences comparing gender

		Female		Male		p-Value
		n	%	n	%	
How willing are you to work on two hospital sites within the same hospital group?	Yes	44	49.4	11	50	0.962
	No or Unsure	45	50.6	11	50	
Would you consider being resident on call?	Yes	42	47.2	14	63.6	0.167
	No or Unsure	47	52.8	8	36.4	
Would you consider job-sharing?	Yes	68	75.6	10	54.5	0.006
	No or Unsure	22	24.6	12	45.5	
Do you plan to do private obstetrics?	Yes	36	40	15	68.2	0.017
	No or Unsure	54	60	7	31.8	
Do you plan to do private gynaecology?	Yes	38	42.7	16	76.2	0.006
	No or Unsure	51	57.3	5	23.8	
Do you plan to do private obstetrics and gynaecology?	Yes	28	31.1	14	66.7	0.002
	No or Unsure	62	68.9	7	33.3	

Trainees were then asked for preferences towards alternative combinations of working spread between community and hospital sites, with and without on-call commitments, in order to gain an insight into how such altered working conditions might be received in the future. Their responses can be seen in Figure 4.5.

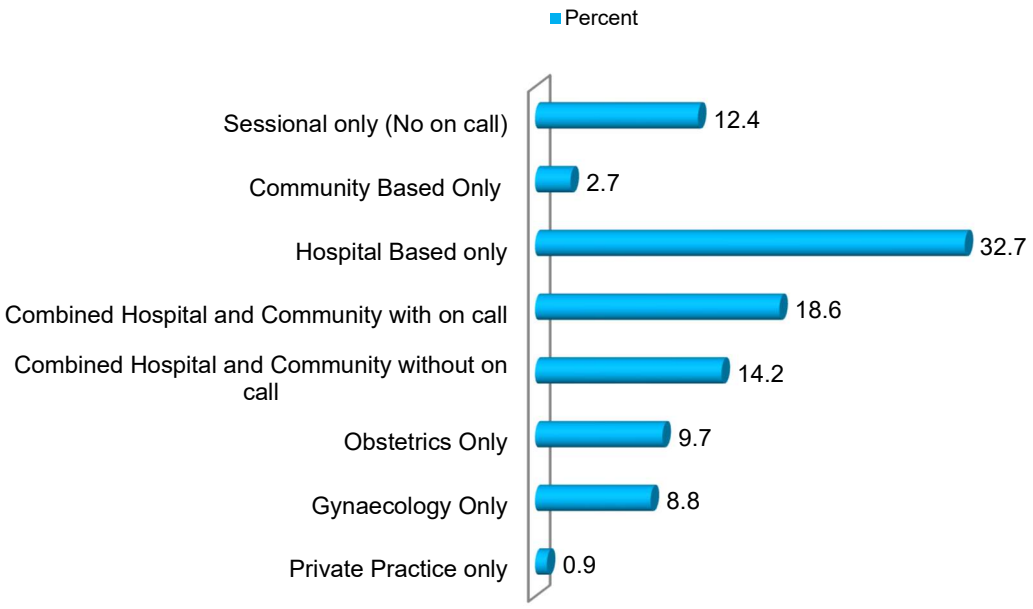


Figure 4.5 Preferred working options

Traditional hospital-based posts were most popular at 32.7%, and combined hospital and community-based service with on-call was second at 18.6%. 18.5% of trainees would consider splitting the specialty and would choose obstetrics only (9.75) or gynaecology only (8.8%). 29.3% of trainees would choose to work without on call.

As shown in Figure 4.6, when female and male trainees were compared, females were more likely to choose sessional only work (15.6% vs 0%) and gynaecology only (11.1% vs 0%). 63.6% of male trainees preferred hospital based only working versus 25.6% of females.

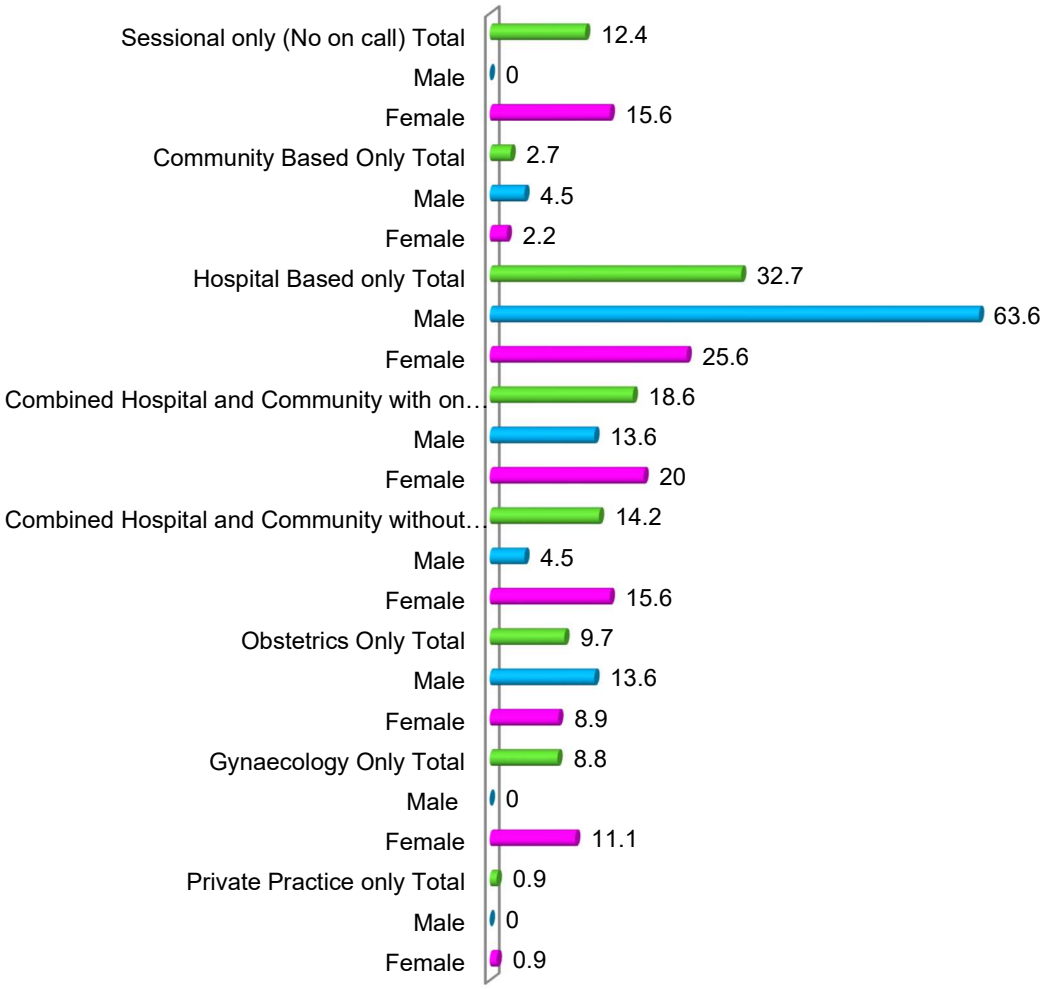


Figure 4.6 Preferred working options comparing gender

4.3.5 Attitudes Towards Working in Each Maternity Hospital in Ireland

Trainees described the specific likelihood of them considering a consultant career in each maternity hospital in Ireland. The results in Figure 4.7 clearly show that the Dublin maternity units are by far the most popular amongst trainees in terms of preferred location for consultant posts.

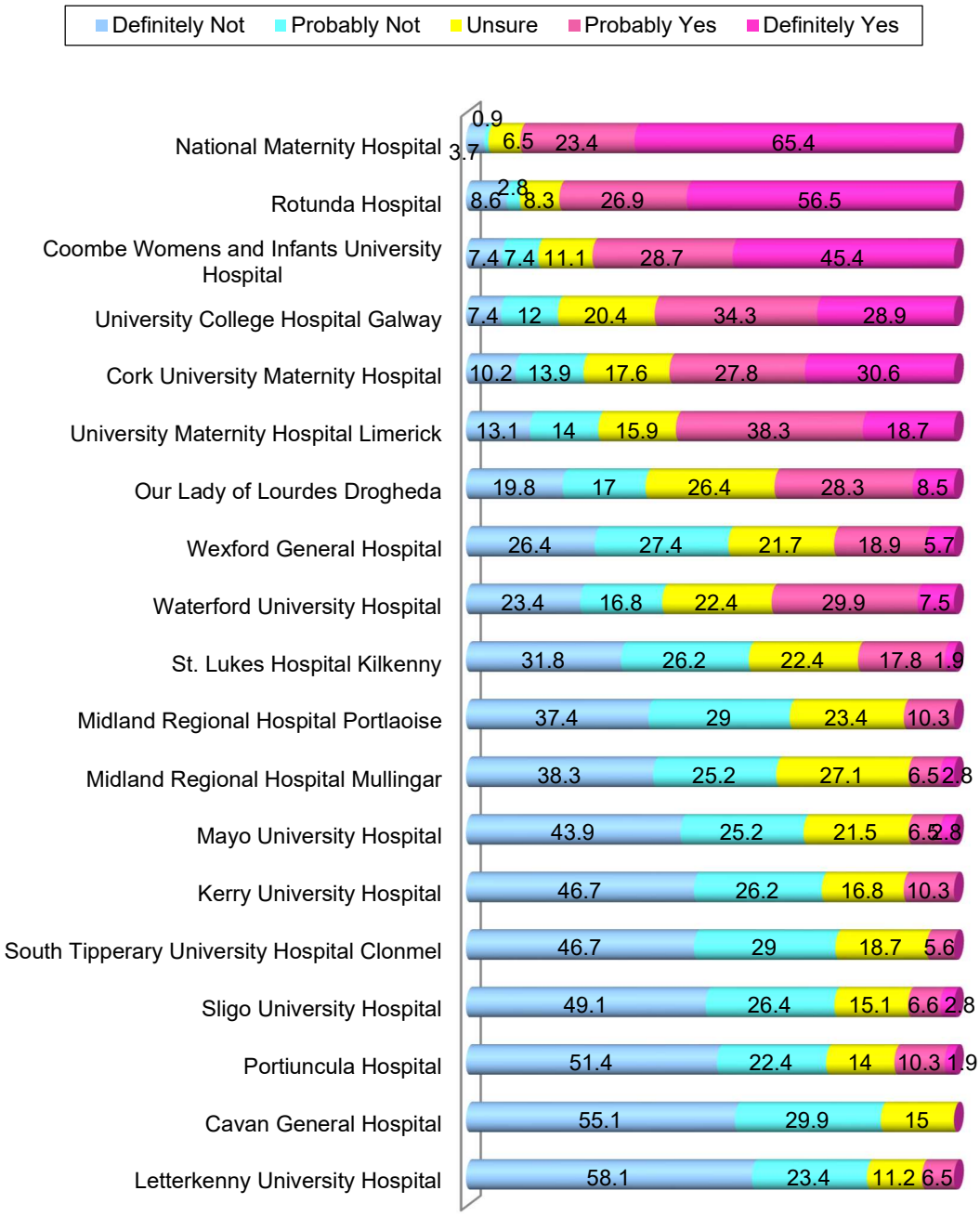


Figure 4.7 Likelihood of considering Consultant role per maternity unit in Ireland

Issues that influence their preferences are commonly logistical and to do with family and spousal working arrangements. Other concerns, mentioned below, include the vulnerability of smaller units to media scrutiny and concerns about poor staffing negatively influencing care. Specific reasons for not wanting to work in certain units were not asked, as such information may be very sensitive and was felt unlikely to be

helpful to the discussion. Instead trainees were asked about a series of possible or theoretical improvements and whether such changes would incentivise trainees to reconsider their choices.

All comments from trainees are included below:

Smaller units very exposed to media as illustrated by recent coverage in Ballinasloe and Portlaoise. (Male Irish HST)

Smaller Hospitals within hospital groups attached to major academic / tertiary centres should have equal access and provide uniformity of care for their patients and however small a unit may be should have facilities to provide the same service. This will improve the morale of the care givers at all levels from NCHD to consultant. Each unit however small must have something unique to be proud of . (Male EU SpR)

I would not like to work in the above hospitals as they cannot provide the services I wish to provide (Female Irish SpR)

note re hospitals and reluctance to work there, the majority of the reasons are logistical, dependent on family/relocation/ spouse's job/children/family support rather than issues with the actual hospitals (Female Irish SpR)

The single biggest factor dictating my ultimate choice of hospital is non-medical; if I can't accommodate my family in terms of schools, childcare and family/social support and my husband's employment does not offer flexibility/positions in that region, then it's a not an option. (Female Irish SpR)

A lot of the smaller units suffer from lack of adequate staffing or lack of training positions meaning that the support available there and the teams working there can be very hit and miss. (Female Irish BST)

4.3.6 Theoretical Factors Which May Improve Recruitment

This part of the survey sought to clarify factors which might improve recruitment into less popular units. Trainees were asked "For hospitals you are reluctant to work in, what would make you reconsider?" A list of options was provided and responses are shown in Figure 4.8.

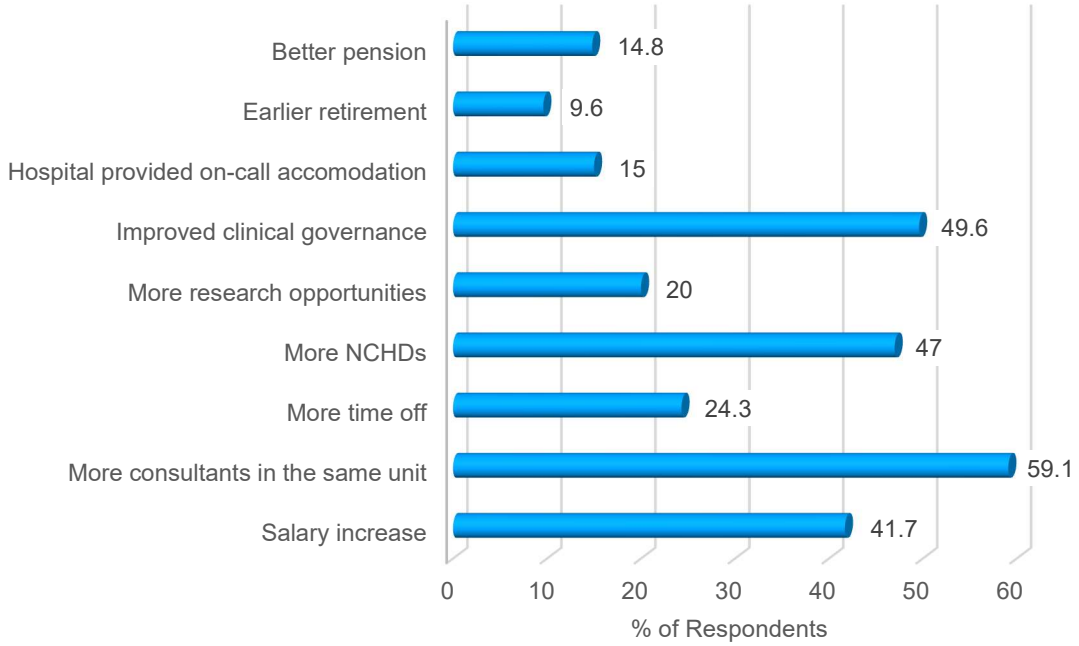


Figure 4.8 Factors that may improve recruitment to less popular hospitals

Increased consultant numbers were the factor rated highest by trainees in terms of making less popular units more attractive in terms of recruitment. Improved clinical governance was second and increased numbers of NCHDs was third. Increased financial remuneration in terms of increased salary ranked fourth, and more time off ranked fifth. Other financial incentives such as better pension or earlier retirement were only cited by 14.8% and 9.6% respectively. As can be seen in Table 4.4, no

statistically significant difference was found when female and male trainees were compared across factors including salary increase, more time off, more NCHDs, earlier retirement or better pension.

Table 4.4 Factors that may improve recruitment comparing gender

For hospitals you are reluctant to work in, what would make you reconsider?	Male		Female		p-Value
	n	%	n	%	
Salary increase	12	52.2	36	39.1	0.257
More consultants in the same unit	12	52.2	56	60.9	0.448
More time off	3	13	25	27.2	0.158
More NCHDs	11	47.8	43	46.7	0.926
More research opportunities	3	13	20	21.7	0.351
Improved clinical governance	11	47.8	46	50	0.852
Hospital provided on-call accommodation	2	8.7	13	14.1	0.489
Earlier retirement	1	4.3	10	10.9	0.342
Better pension	3	13	14	15.2	0.793

4.3.7 Preferred Age at Retirement

Preferred retirement ages for of trainees are summarised in Figure 4.9. Just over two thirds of our trainees (67.6%) expressed a preference for retiring by the age of 64, and 6.5% would choose to work to the age of 70 and over.

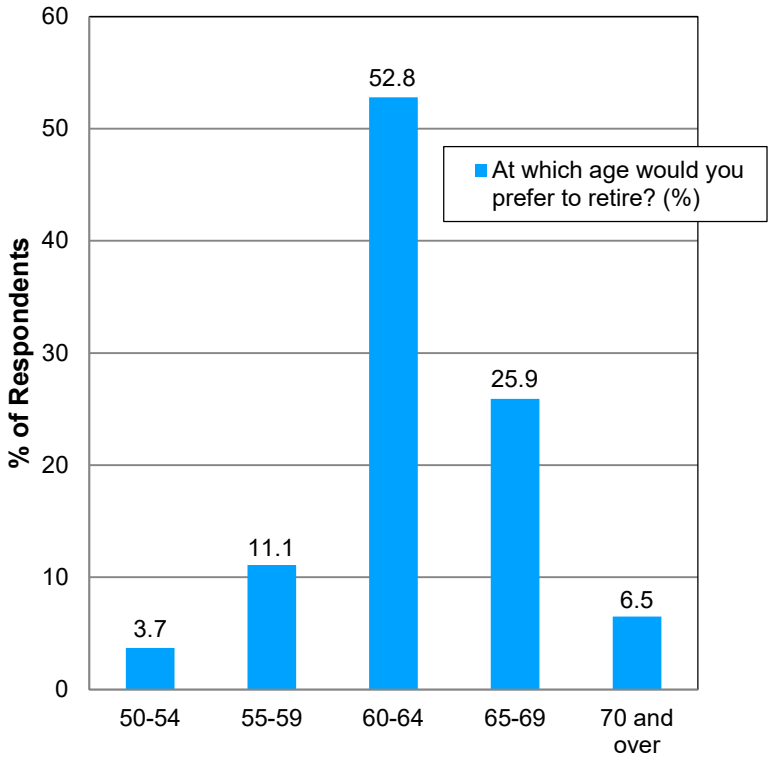


Figure 4.9 Preferred age at retirement

4.4 Discussion

The current specialist workforce in Obstetrics and Gynaecology in Ireland is far below the OECD average. With regard to future forecasting of service demand mapping, it is possible to speculate, based on international data on population demographics increased lifespan and birth rate changes, and the likely evolution of healthcare developments, what will be required in terms of clinical input in the next few decades. A likely future deficit of obstetricians and gynaecologists has been forecast in Australia, the US and the UK. The Irish Medical Council's Medical Workforce Intelligence report 2018 showed a 37.6% increase in voluntary withdrawals from all sections of the medical register compared to 2017 with 69.6% of these doctors planning to practice medicine in another country, so it is likely that Ireland will continue to haemorrhage doctors from all specialties in the short to medium term unless there is a commitment to addressing the problem.

Looking at the issue of obstetrics and gynaecology recruitment and retention as a problem within a problem, to date no information about how and where Irish obstetrics and gynaecology trainees would prefer to work exists. This study, which provides information of preferred working preferences of current trainees will enable focused restructuring of job plans and services to attract and retain the best doctors within the Irish system.

Providing a medical workforce is expensive. According to recent UK data, it costs £250,000 to train a doctor (Department of Health UK, 2017), and according to Martin Wall in the Irish Times from 2010, HSE figures put the cost of postgraduate GP training in Ireland at 300,000 over 3 years (Wall, 2010).

Detailed information on how a workforce is likely to behave in terms of productivity is crucial to both the investment and modelling required for future healthcare provision.

4.4.1 Gender and Generational Differences

The fact that 80% of our trainees are currently female is an important factor. Such a gender imbalance is problematic, and as can be seen from Chapter 1, this imbalance may worsen over time. Our findings suggest that male trainees are significantly more likely to want to work full time in comparison to females, and female trainees were significantly more likely to consider job sharing than male trainees. This means that the numbers of trainees required to fill the predicted number of new consultant posts as per the National Maternity Strategy, will need to be revised based on the desired work practices of these future consultant-grade doctors.

The benefit of a sabbatical or career break, which has traditionally been regarded as an opportunity for doctors to refresh or progress their career or to participate in

humanitarian work abroad, and usually lasts for 1 or 2 years, is recognised by Davidson *et al*. in 2010. However, there is an increasing trend for sabbaticals to be taken as a result of burn-out (Oxtoby, 2014), burn-out being an increasing problem amongst doctors across the world (Brindley *et al*., 2012).

The BMA cohort doctor study 2016 found that increasing numbers of doctors were taking a career break and found that women take more (over a quarter of women against one in ten men) and longer career breaks. This effect is magnified where they have children (BMA, 2016).

At present, whilst it is possible for consultants to take a leave of absence, this is not common, and there is no contractual entitlement to a sabbatical. More than 30% of both male and female trainees in this study plan to take a sabbatical during their career. Reviewing the policy on sabbaticals and making them easily accessible for consultants would be a positive initiative and an acknowledgment of investment into sustaining the workforce in maternity services. This level of time out however, would need to be factored in when calculating future consultant numbers. Female trainees are also significantly less likely to do private practice as a consultant. The historical and ongoing reliance on the private health sector for dealing with gynaecology patients nationally should not be underestimated. This includes the outsourcing of public HSE waiting lists to the private sector in the form of the National Treatment Purchase Fund, a public health service-funded initiative to address long patient waiting lists, and also direct private referrals. An estimate of the predicted availability of new consultants to provide care in this area is required.

The preferred retirement age of trainees is in keeping with current OECD trends and no significant difference was found between female and male trainees.

4.5 Choice of Maternity Units and Implications for Policymakers

In terms of workforce planning and delivery of care in certain areas of the country, these data would suggest that urgent attention is required. Unsurprisingly, the larger teaching hospitals in Dublin, Cork and Galway, are more attractive and popular amongst our trainees. Other units in level 3 hospitals, for example, in Cavan and Letterkenny, will have great difficulty attracting Irish trained doctors, and are likely to continue to rely on locums. Consideration therefore must be given to a national discussion on either making units more attractive for Irish trained consultants to work in, or to look seriously at amalgamating certain units and rationalising care within a geographical area. Work has been done by Professor John Higgins in his 2014 report "The Establishment of Hospital Groups as a transition to Independent Hospital Trusts", however there has always been a significant political agenda when discussing smaller hospitals in Ireland, and what might make sense in terms of safety and quality in service provision, has frequently been sacrificed to vested commercial interests and short term political expedience as described by Marie O'Connor (2009) in 'Profit and Loss: The Politics of Health Reform in Ireland'. Concerns have been raised (Heuston, 2018; Redmond, 2015) that continuing this status quo will inevitably lead to suboptimal outcomes, with adverse media reporting, fear on behalf of women, reduced incentives for doctors to work in such units, and further opportunity to avoid harm may be lost. Armed with the knowledge that increased consultant numbers, better clinical governance, more doctors-in-training and better financial remuneration are likely to attract trainees to smaller units, policy makers can consider such investment in order to ensure the safe and supported survival of smaller maternity units.

4.6 Possible Solutions to Predicted Shortfalls in Care Provision

We know that consultant numbers in obstetrics and gynaecology are far too low based on OECD reports. We know also that due to chronic underinvestment and lack of forward planning, womens' health services have been exposed and found wanting in Ireland time and again in recent years. With the current numbers of trainees, and the preponderance of female trainees, matching supply to clinical demand will be a challenge. Therefore we must consider increasing the numbers of trainees, and work on a concerted effort to increase attraction to the specialty at medical school level. Increasing attrition from training at BST level in Ireland is linked to fear of litigation and adverse working conditions (Reilly, 2019). Trainees often move to General Practice due to the the lack of diversity within womens health that would allow them to work in an outpatient or sessional basis.

It is imperative that mapping and modelling of service provision with service needs is addressed, especially in a speciality where needs are changing so rapidly. One option is to look at gynaecology and how care can be provided in the safest and most economical way. Womens' health care has changed radically in terms of diagnostic and treatment developments over the last 2 decades, with a shift towards clinician-led imaging and more conservative or minimally invasive therapies. Whilst it is clear that access to hospital based expertise must improve, gynaecology care has moved towards office or community based care in many health systems (Department of Health Australia, 2018; Rayburn, 2017) and one option is to look at developing "Office or Community Gynaecology" as a specialty. Such specialists will require significantly less time and investment in training, and services could be provided in a very economical way in primary care centres with the appropriate equipment. This study highlights some of the predictable deficits in service provision and workforce planning

that are imminent, and gives us an opportunity to think outside the box and look anew at how our services may be reconfigured and our workforce harnessed in the best interests of Irish women and the economy.

4.7 Strengths, Limitations and Recommendations for Future Research

This study is the first to gather current information relating to recruitment and retention in obstetrics and gynaecology in Ireland, from the perspective of it's future consultants. The mixture of quantitative and qualitative data is a strength that puts the physicians' voices at the centre of the study. Information specific to the Irish context is also a core strength of this work, especially with regard to attitudes towards working in specific maternity units, and whether or not trainees wish to undertake private practice.

Group differences between nationality, having children, career grade and age of trainees were not explored due to small group sizes. Further research, especially work that includes international medical graduates and doctors not enrolled in a training scheme, would be helpful in determining accurate data on such group comparisons. Trainees on the RCPI/IOG training scheme are very well represented, and these trainees are the cohort that have been identified as the focus of future recruitment into the consultant workforce by the Maternity Strategy and NDTP. Ireland has, however, relied on international medical graduates to prop up the service for many years, and as can be seen from the IMC Medical Workforce Intelligence Report 2018, since the introduction of European Working Ttime Directive, these numbers have increased. Many such doctors are not on training schemes but may become consultants if they gain entry to the specialist division of the register of the Irish Medical Council. These

doctors have not been represented properly in this study and research to capture this group would be hugely informative.

Chapter 5

Consultant Perspectives on Recruitment and Retention with Emphasis on Solutions

5.1 Introduction

To develop a sustainable health workforce, as recommended by the World Health Organisation Global Code of Practice on the International Recruitment of Health Personnel, each country must "educate, retain and sustain" an appropriate health workforce. A key component of a sustainable health workforce is the ability to "keep scarce skills in the system by effective retention strategies" (Crettenden, Dal and Buchan, 2013). As part of a project by the Health Workforce Research Group of the Royal College of Surgeons in Ireland entitled "The Doctor Emigration Project" Humphries *et al*. in 2019 in their study of semi-structured interviews with 40 Irish emigrant doctors in Australia, found that deterioration in medical job quality and the normalisation of extreme working were key drivers of doctor emigration from Ireland and also deterred doctors from returning to Ireland.

Humphries *et al*. (2015), also found doctors spoke of a general disrespect for health professionals in Ireland, from the media and also from health employers. There was much discussion of an "anti-doctor media narrative and a feeling that health professionals were regularly vilified in the media. Respondents felt that the HSE fuelled these campaigns in order to divert media attention and point the finger away from HSE management and from the Department of Health. Work from McNamara, Meaney and O'Donoghue in 2018 describes obstetricians who were involved in an

intrapartum death (IPD) were frustrated at the way they were perceived by the media and at the way IPD was sensationalised and inaccurately reported. They found that the Irish media regularly report on intrapartum deaths and other adverse obstetric events, and often suggest that a case was mismanaged without factual evidence, while openly naming healthcare professionals. This led to a feeling of frustration on the part of obstetricians who felt victimised by the popular media.

There has been widespread criticism from doctors' unions about the ongoing issue of new entrant consultant pay disparity. According to the Spending Review, Health Workforce, Consultants Pay and Skills Mix 2012-17 (Department of Public Expenditure and Reform, 2019), there is a pay disparity between pre-October 2012 entrants into HSE Consultant service and those recruited post-October 2012. New entrant (post-October 2012) salaries range from 51% to 14% lower depending on an individual's point on the scale when compared with that of their predecessors. On average, there is approximately a 32% differential in salary. This report also acknowledges that the reductions in pay which were applied to consultants appointed since 2012 were "particularly severe", and the differential in pay between the pre-existing cadre of consultants and these new entrants was greater than for other categories of public servants. The injustice of consultants being singled out or victimised with the most punitive cuts of all public servants is clearly felt especially amongst younger doctors (Humphries, Crowe and Brugha, 2015).

The purpose of this study was to investigate and analyse the opinions and experiences of Irish consultant obstetricians and gynaecologists with respect to the current working culture, recruitment and retention, and the impact of litigation and the media, and finally to seek their opinions on solutions to the problems raised. The voice of the

consultant physician who has experienced full training, often having worked abroad, and who has witnessed changes in the profession over the last few decades is central to this study. The experience of having evolved from medical school, through training, and working at the coal face of maternity services was sought.

5.2 Study Objectives

This study aimed to:

- Analyse the perception of the problems facing trainees and consultants working in the specialty, and what impact these factors are having on recruitment and retention into the specialty.
- Describe their thoughts on solutions to issues raised and how to remedy the issue of recruitment and retention and improve other factors contributing to overall morale.

The research questions were:

1. How do established consultant obstetrician and gynaecologists in Ireland describe the rapidly changing nature of the career and its impact on trainees in the specialty?
2. How do established consultant obstetrician and gynaecologists perceive patient perceptions and expectations towards doctors in the specialty?
3. How do consultant obstetricians and gynaecologists in Ireland perceive morale amongst consultant colleagues and trainees, and what are the main factors influencing morale currently?
4. How do consultant obstetrician and gynaecologists in Ireland perceive their own role in influencing recruitment and retention to the specialty?

5. What solutions do consultant obstetrician and gynaecologists suggest to the problem of recruitment and retention in the specialty in Ireland?

5.3 Methodology

5.3.1 Design

A qualitative semi-structured interview design with deductive thematic analysis was used (Braun and Clarke, 2006). Semi-structured in-depth interviews are commonly used in qualitative research and are the most frequent qualitative data source in health services research (DeJohkheere and Vaughn, 2019). An interview guide was designed over several stages and reflected themes arising from literature pertaining to the Irish and international context.

5.3.2 Ethical Approval

Prior to the commencement of the study ethical approval (Appendix E) was obtained from the Clinical Research Ethics Committee of UCC. The information and consent form provided to all participants is included in Appendix F.

5.3.3 Participants

An invitation was extended to participate in a qualitative research study to consultant Obstetrician Gynaecologists currently working in Ireland. Purposive sampling was used to recruit participants who were chosen specifically in order to reflect a representative spread of gender, age and career stage, and to capture a mix of consultants from level 2 and level 3 hospitals from around the country. After consideration of the scope of the study and the nature of the topic, the research team, consisting of Dr. Suzanne O'Sullivan, Dr. Deirdre Bennett and Professor Mary Horgan, agreed an approximate sample size of 15 interviews (Morse, 2000).

Consultants who were registered as trainers with RCPI were chosen, approached by the email addresses held by RCPI, and invited to volunteer for an interview.

Seventeen consultants were approached, and all agreed to participate. A document containing information on the study and a consent form was forwarded to each participant. The consent form outlined the nature of the study and assured confidentiality of data. Participants were advised of their right to opt out at any stage and written consent was obtained prior to interview. Both face-to-face and telephone interviews were conducted. All interviews were done by the lead author, were recorded digitally and were transcribed by a third party.

5.3.4 Data Collection

A semi-structured interview format was chosen to ensure consistency. The interview guide was modified and organised around 2 main areas: (1) Perception of recruitment and retention in obstetrics and gynaecology, and what factors impact morale amongst trainees and consultants, and (2) suggested interventions or solutions that may help improve recruitment and retention. The final outline or interview guide of open-ended questions put to all consultants was reviewed and is included in Appendix G.

Pilot interviews were conducted with 2 locum consultants, one of whom has a strong background in qualitative research and feedback was incorporated.

All interviews were conducted by author at a time chosen by the interviewee. I was known to all interviewees in my capacity as a practicing consultant colleague and also as National Director of Training for Higher Specialist Training. This dynamic assisted in optimising collaboration from consultants and encouraged interviewees to be as direct and open as possible. It also allowed them to engage freely without the need to

explain or translate medical and workplace terms and abbreviations and to express their opinions and experiences on a level playing field.

5.3.5 Data Analysis

SOS and DB conducted the initial data analysis. Each transcript was analysed fully with immersion and familiarisation of the text by reading and re-reading all transcripts. In the first round of coding, chunks of data were assigned summary descriptors which were meaningful in respect of the focus of the research. Following this, recurrent themes were identified and were illustrated with verbatim extracts of text. SOS, DB and MH met regularly throughout the analysis to discuss and organise open coding. Thematic analysis as described by Braun and Clarke (2006) was performed, which identified, analysed and reported patterns and themes across the dataset.

5.3.6 Reflexivity

The methodological approach employed necessitated an acknowledgement of the role of the researcher in the co-construction of knowledge with the participants. As such, we recognised the potential influence of the interviewer on the contribution of the interviewee, and the influence of my own prior experiences, assumptions and preconceptions in shaping the outcomes of the study. DB and MH both work within the School of Medicine in UCC but come from different specialty areas and not from obstetrics and gynaecology, and their "outside" perspective on the data helped to avoid assumptions of shared understandings with participants and allowed prioritisation of the participant's voice (Finlay, 2002).

5.4 Results

Face-to-face interviews were performed with 11 participants and 6 interviews were conducted by telephone. In all, 17 interviews were conducted and they lasted between

17 and 36 minutes with a mean of 26 minutes. Nine consultants were male and 8 were female and consultants from 8 of the country's 19 maternity units were included. The age range was between 36 and 60 with a mean age of 48.8 years. Characteristics and demographic details of interviewees are summarised in Table 5.1.

Table 5.1 Demographics and characteristics of interviewees

Respondent	Sex	Age	Years from graduation to consultant	Number of children during training	Years spent on research or fellowship abroad
1	F	49	15	3	2
2	M	49	13	4	3
3	M	60	10	1	2.5
4	M	48	12	2	3
5	F	49	13	3	3
6	M	54	18	2	3
7	F	46	12	2	2
8	F	36	12	0	3
9	M	40	15	2	3
10	F	42	14	2	1
11	M	60	18	3	3
12	F	50	14	3	3
13	F	43	18	1	3
14	M	52	9	2	0
15	F	39	12	3	2
16	M	60	13	1	4
17	M	54	13	4	4

As the interviews dealt primarily with exploring impacts on recruitment and retention from challenges associated with the changing roles and careers of obstetricians and gynaecologists, and doctors in training, working within the current Irish context, research questions 1 to 4 (summarised in Table 5.2) are presented together. Question

5 which explores the themes and subthemes of a solution based approach to the issues discussed (Table 5.3) is the last presented research question.

Table 5.2 Research questions addressing the problems of recruitment and retention

Research Questions (Addressing the Problems)	Themes
1. How do established consultant obstetrician gynaecologists in Ireland describe the rapidly changing nature of the career and its impact on trainees in the specialty?	Vocation versus Job Declining competence and morale despite EWTD Changing gender balance within specialty Direct experience of trainee attrition
2. How do established consultant obstetrician gynaecologists perceive patient perceptions and expectations towards doctors in the specialty?	Gratitude Desire for information Unrealistic expectation Increased demand Blame culture
3. How do consultant obstetrician gynaecologists in Ireland perceive morale amongst consultant colleagues and trainees, and what are the main factors influencing morale currently?	Litigation culture Negative media coverage Interplay of litigation culture, negative media coverage and fear Lack of advocacy from HSE, Professional bodies and Colleges
4. How do consultant obstetrician gynaecologists in Ireland perceive their own role in influencing recruitment and retention to the specialty?	New entrant pay disparity Consultants as Role models Consultants as Peer supports

Table 5.3 Research question addressing solutions to recruitment and retention issues

Research Question 5 (Addressing Solutions)	Themes	Subthemes
5. What solutions do consultant obstetrician gynaecologists suggest to the problem of recruitment and retention in the specialty in Ireland?	Pay parity Increased consultant numbers Advocacy Formal mentorship of trainees and new consultants Embracing trainee's perspective Investing in Postgraduate Medical Education Tackling negative media coverage and litigation culture	
	Redefine the role/ alternative models of care	Accurate work-force planning Move care to midwives and specialist primary care doctors Flexibility and choice within training and consultant posts Improve conditions for International Medical Graduates Split the specialty in 2: Obstetrics or Gynaecology

5.4.1 Research Question #1

How do established consultant obstetrician gynaecologists in Ireland describe the rapidly changing nature of the career and its impact on trainees in the specialty?

5.4.1.1 Role as Vocation versus Job

Many doctors looked on the pre-European Working Time Directive (EWTD) training days with nostalgia while acknowledging the long hours and impact on lifestyle. They described the career in terms of a vocation rather than a job.

"We were certainly doing 80 hours a week. You hardly ever saw the kids, you know, you spent all your time in the hospital and you probably socialised within the hospital setting and morale was very high. Now, I think that trainees have a much better quality of life outside the hospital setting, morale is at rock bottom" (14)

"It never bothered me because I always felt that if you liked it and enjoyed it you put up with it and you came out the other end and that's your life. But more and more people are choosing, I guess, choosing life over a career" (9)

Many consultants reflected on the fact that the sacrifice of work-life balance for longer hours and more intensive training in the past, led to better competence and confidence at the end of training and that current trainees are not necessarily better off.

"I think in the old days there were so many hours done by the time somebody was coming off whatever scheme....they were at the peak of their game and they certainly were more skilled practically than the consultants whereas now there is a sense that some feel they need a little bit extra even at finishing year 5. So it's been an evolution" (1)

5.4.1.2 Declining Competence and Morale despite EWTD

Concerns are raised about current trainees and their experience, competence and ability to make decisions and take responsibility.

"They are disempowered a little bit by the system.... their ability to make decisions and stand up and be counted is an awful lot more limited than it was" (5)

"I think morale among trainees is fractured. Ironically, as they have worked less hours, morale has declined. I definitely think the loss of the team structure and that close kind of apprenticeship model has been bad for morale" (10)

While much responsibility for the reduced experience and ability of trainees is put on the system and EWTD, some blame is put on a current culture or attitude of clocking in and out.

"On labour ward there is a lot more about the clock in, clock out culture and there is a culture of not seeing cases through from beginning to end....I feel there is a lot less responsibility taken by the NCHDs....They are not getting the number of cases they need to and as a result they are not able to manage things on their own as we might have done as trainees....I fear that our current trainees when they become consultants will have a very rough ride in their first few years because they are essentially going to still be in training" (15)

There is an element of feeling sorry for current trainees, as interviewees predict that they will not be ready for the role at the end of training and that they are not any happier despite the improved work-life balance brought by EWTD.

"I think morale amongst trainees is quite low but trying to put my finger on why it's so low is very hard to tease out, because life has never been better for them compared to myself. They have more free time, they have more money because they are now being paid for all the overtime that they do and everything like that, yet they are far more disgruntled and part of it, I wonder, have they an awareness deep down inside that they are not as well trained, maybe for want of a better word, and that they are not comfortable taking responsibility" (13)

5.4.1.3 Changing gender Balance within the Specialty

The significant increase in the female to male ratio within the specialty was pointed out and is associated with wanting to work less and therefore with reduced productivity by 2 interviewees.

"That there is a change in the demographic in medical students having first a change in the gender balance and that has combined with societal change in terms of attitude to work, but certainly accelerated when you have a different gender balance and therefore people don't want to work as much" (17)

5.4.1.4 Direct Experience of Trainee Attrition in their Units

Several consultants express a sense of frustration and loss over multiple instances of potentially avoidable attrition of good trainees from the training scheme.

"There is very little that's attractive in obs and Gynae right now I think.... But when you know that people are dropping out left, right and centre: Good people that we have lost who you wanted to keep in the profession, have gone off to radiology, pathology, GP, general medicine" (4)

"I think it is a major issue. I think we are consistently seeing trainees coming through to a certain stage in their career, I suppose, and then leaving to other specialties... It's quite physically demanding which I think helped not to make it terribly attractive to certain trainees but it's a kind of shame because it's a fantastic specialty at the same time" (15)

"The current public and media opinion of obstetricians isn't satisfactory, is not optimal at the moment. I suppose I personally know of 5 or 6 good trainees who have left obstetrics completely because of an adverse outcome and the lack of support they

would have gotten after that adverse outcome from senior clinicians and management" (8)

5.4.2 Research Question #2

How do established consultant obstetrician gynaecologists perceive patient perceptions and expectations towards doctors in the specialty?

The positive and negatives of the changing doctor-patient dynamic are described.

5.4.2.1 Gratitude

The positivity that comes with good outcomes in obstetrics is expressed.

"One thing I have always loved about it is that there are so many happy events. A lot of these women and their families are very grateful to us. The majority are to be fair" (6)

5.4.2.2 Patient's Desire for Information

Whilst acknowledging the benefits of better-informed patients, concern is expressed about over reliance on information from the internet and the confusion that unlimited access to information or misinformation from websites.

"Thankfully they are more informed but sometimes they are over-informed. They are googling a lot more. They are more concerned about stuff that may not be an issue and they are not as content as they were in the past. There is a lot of questioning about everything" (12)

While some of the feedback was positive, many doctors described interactions with patients in the current climate in adversarial terms. Themes of increased demand and

increased questioning and even suspicion on behalf of the public are raised. Unrealistic patient expectations were also described as a problem.

5.4.2.3 Unrealistic Patient Expectations

It is recognised that improvements in obstetric care and medical expertise have reduced poor outcomes in relation to pregnancy and childbirth, however, frustration at intolerance to any complication or suboptimal outcome is expressed.

"That does make people a little edgy, potentially practicing a bit of defensive medicine, and the difficulty is that we all know childbirth is the most difficult journey anybody will ever make, and therefore the outcome isn't always perfect, and yet the expectation of patients is that we deliver not only a perfectly healthy baby and an untraumatised and uninjured mother, but they also have a lovely experience while all of this is happening. So I think expectations have massively risen even in the time since I started" (15)

"Expectation is getting higher and higher and that, I think that possibly, will drive trainees away. I don't know whether the medical students will perceive it but it definitely makes the job more demanding" (9)

5.4.2.4 Increased Demand

The extra pressure caused by an increasingly demanding population are described.

"Obviously I think they are an awful lot more demanding. They have completely unreasonable expectations, you know, and obviously our (consultant) numbers aren't greater than they were then so I think it makes the job much more difficult" (5)

5.4.2.5 Blame Culture

A direct impact of the changing doctor-patient relationship on recruitment and retention is described, with patients who are suspicious of their doctors and have lost respect for the medical profession.

"That kind of respect of 'Oh well, my doctor is here and doing the best for me'. Now it's flipped the other way, 'Oh, I better keep an eye on this doctor because they are probably not doing the best for me', which is a strange change in the dynamic. I think it affects retention" (10).

5.4.3 Research Question #3

How do consultant obstetricians and gynaecologists in Ireland perceive morale amongst consultant colleagues and trainees, and what are the main factors influencing morale currently?

The relationship between morale in a profession and recruitment into and retention of professionals is clear. Good morale will have had a positive impact and poor morale will have had a negative impact.

Broad sentiments expressed by several consultants were positive overall.

"I am not demoralised, not yet anyway" (14)

"Even if I had my time over I would still do obstetrics and gynaecology" (7)

Low morale amongst many doctors in the profession, however, was acknowledged across all the interviews performed.

"I think it has almost got to a fatalistic stage, particularly amongst the consultants where we are kind of shrugging the shoulders as in 'I don't know what we should do'" (11)

Factors influencing morale were identified including the Medico-legal Climate and the Media, and the interlinking of these factors. A lack of advocacy from the HSE and professional bodies, and the New Consultant Contract pay disparity from 2012 are the other factors described below.

5.4.3.1 Litigation Culture

Litigation is so ubiquitous and "normal" that it is not a cause for fear any more for many consultants interviewed.

"It's funny. I think that once you get to a consultant's level you kind of accept, well, I am going to go to the High Court, and it sort of like it's inevitable and that's why I pay my insurance and all I can do is to practice to the best of my ability doing what I have been trained to do" (13)

For other consultants, the negative impact of litigation on the individual doctor is described, as is the knock-on effect of litigation on practice and retention.

"The idea of going into litigation is absolutely enormous and probably not the litigation per se but the potential media outflow from litigation. They try and protect themselves. That leads to a whole kind of culture of intervention and when things go wrong, absolute fear. Instead of a genuine concern of what's gone wrong and how I can go about, you know, getting stuck into this and looking at it an seeing what I can learn. People are almost walking away from it and hiding from it because in fact it's just potentially too painful to think about what might come down the tracks. So I think

the medico-legal system and the press are detrimental to good practice and to peoples' working lives" (3)

5.4.3.2 Negative Media Coverage

The perception of the media impact on womens' healthcare is again universally negative, both from the perspective of the damage done to doctors, but also the harm caused to patients.

"Obstetrics and gynaecology has had a lot of unfair negative press that you know, has affected morale both in trainees and in consultant, you know, are going in to do quite long hours and still feel they are being slagged off for 'substandard care'" (1)

"I think the quality of reporting and investigative reporting is very poor and therefore it's easy just to get the quick headline, so, I think that's a problem. I think social media is out of control and essentially you can say what you like, and it just gets there and it becomes as truth, so I think the media are a little bit out of control..... you essentially don't hear of any, or maybe it's not reported of any case that is won in the High Court. Everything is lost, lost, lost" (4)

5.4.3.3 Interplay of Fear with Litigation Culture and Negative Media Coverage

A persistent sub-theme relating to the medico-legal and media impact on professionals, is fear associated with being named and shamed or scape-goated in the media, as a result of an adverse event or medico-legal case, and the impact on the personal and professional lives of doctors.

"...so high profile, and more and more you are seeing doctors named in the press, and you know those of us who work in medicine know that any adverse incident is an

accumulation of any number of errors so no one person should take the blame because it is never one person's fault, and unfortunately it's often a doctor that is named. Where that is a particular problem is where the doctor is in a community and they can't go to the shops, you know. The fact that their kids are at school, I think that's a pity, I mean, I think you see that trend in court reporting now..... Yes, the medico-legal cases do affect morale to an extent especially when there is a lot in the media" (1)

"Having to go through this adversarial system where you have to find one individual, prove them negligent, splash them all over the front page of the paper, make sure their kids, their family, everyone sees them and names the bad doctor, ruin them, drive them to suicide in some extreme cases to get your money.... Why would I work so hard to earn 40% less and get my ass sued and to be publicly humiliated..... The media love this idea of the bad doctor and 'we are going to find the bad doctor, weed them out and everything is going to be fine'. They are definitely a major contributor in people leaving the specialty" (10)

Many participants describe a correlation between retention of doctors within the specialty and fear of litigation and the negative influence the media has on patients' perceptions of care.

"*I suspect that also the public's perception of perfect obstetrics and gynaecology outcomes preys on a lot of peoples' minds and the fear of doing something wrong and the fear of litigation and the personal upset that can occur.... a global thing. I think People feel it is a very difficult specialty to be in at the moment" (6)*

Whilst most of the comments relate to print media, social media is also mentioned.

"I think social media is a huge thing. It is very hard for doctors to keep their good name. It's going to become very much worse and I am very worried about it....The media themselves they are a little bit too one-sided. They are very easily driven by solicitors" (16)

There is a pervasive element of fear as a theme running through the majority of interviews.

"Of course, everyone fears having their name in the paper, you know, and as a trainee, whatever about a consultant being able to defend yourself, as a trainee, I suppose if you thought your name was going to be in the paper, that would have a profound effect on your confidence" (6)

5.4.3.4 Lack of Advocacy from HSE, Professional Bodies and Colleges

Severe and genuine fear of the Medical Council was raised by 2 consultants.

"My fear, and most peoples' fear is not the lawyers anymore, it's the medical council and the inordinate powers that they have to ruin a career and ruin your mental health by even a small investigation" (2)

There is clear frustration at the lack of information and balance that has been provided by the HSE, the Institute of Obstetricians and Gynaecologists and by the Royal College of Physicians in the wake of media reporting of adverse outcomes.

"The media and the way the media have approached stuff and I think the lack of spokespeople to correct the misinformation has been hugely detrimental to consultants because they feel completely unprotected and completely unsupported" (3)

"Real lack of a collegiate supportive culture, and therefore people have become very uncertain, probably fearful of everything, that's probably affecting practice because they are fearful of legal situations and.... because the Cervicalcheck debacle which really is misinformation by the politicians in the country without getting appropriate information from medical people, and therefore the consultants again are the ones that kind of feel that they are hung out to dry really and left out there" (4)

I get the impression that consultants here are frustrated in that they don't perceive anybody is coming out to support them....I have had quite a lot of interaction with a lot of them who actually perceive that they will get the opposite of support if anything goes wrong. That reviews will be done by colleagues from major hospitals who will actually, in fact, blame them for the outcomes" (3)

5.4.3.5 New Entrant Pay Disparity

In terms of the decision in 2012, to cut the starting salaries of new consultants by a further 30% one doctor said

"But take one group, and that is trainees who are about to become consultants, and say 'you will take a further 30%', that was incredibly destructive and it was very negative.....Why would I want to come back to a place that is actually going out of it's way to say uniquely, you are someone we are going to penalise" (17)

There is widespread acknowledgement of the impact of the "new entrant pay discrepancy" on morale, and on retention of doctors working within the specialty in Ireland.

"A colleague doing the same amount of work for considerably less money, that would be a very big impact on morale" (14)

"We have difficulties recruiting consultants as it is and I think that's only going to get worse" (15)

"I mean, a whole generation has stayed overseas. It was never easier to come home. It was never easier to get a consultant appointment, but by and large you have large tracts of fantastic Irish doctors who for generations felt very sad that they couldn't get home. Now it is almost the exact opposite" (17)

5.4.4 Research Question #4

How do consultant obstetrician and gynaecologists in Ireland perceive their own role in influencing recruitment and retention to the specialty?

5.4.4.1 Responsibility of Consultants as Role Models

How trainees perceive the demeanour and attitude of consultants in the workplace is important in influencing young doctors to the specialty. This impact can be positive:

"I want what they have. I do think it's 'he or she looks happy', and I think we have a huge responsibility unbeknownst to ourselves to talk it up and talk ourselves up, you know, rather than not" (2)

"So, in fact, why I went into obstetrics and gynaecology was very much around the people I saw in there and the lives they seemed to have, and the enjoyment they got out of their job, and I don't think the trainees of today are seeing that kind of consultant" (3)

The issue of consultants having a directly negative influence on recruitment and retention is also highlighted.

"I don't think it's seen as a very attractive specialty among trainees really at the moment.....but I think they see demoralised consultants. I think that's what puts a lot of them off. Morale probably starts from the top down" (14)

5.4.4.2 Consultants as Peer Supports

"Consultants in the main will continue in the specialty but may disengage somewhat.... whereas many trainees will not live with the feeling of poor morale and will actually leave the specialty.... but there is also a very nice collegiality among trainees and trainers in most units as far as I am aware, and part of that comes from the fact that we do work long hours. We are there together at the coal face of care provision, and I think that keeps you humble, and therefore keeps you talking to each other compared to some other specialties where people may be working much more in isolation" (7)

5.4.5 Research Question #5

What solutions do consultant obstetrician and gynaecologists suggest to the problem of recruitment and retention in the specialty in Ireland?

Multiple areas were addressed in terms of providing change that would positively influence recruitment and retention.

5.4.5.1 Pay Parity

Reversing the new entrant consultant pay discrepancy was cited commonly as something that would be very likely to improve recruitment and retention.

"That was a great travesty that that was allowed to be introduced and it has brought about a huge amount of dissatisfaction among new entrant consultants, and rightly so. And hopefully a reversal of that will have an impact on retention" (7)

5.4.5.2 Increased Consultant Numbers

Increasing the number of consultants throughout the service would improve working conditions and improve morale and therefore recruitment and retention.

"The health system hasn't recognised the fact that if you have people were previously supposed to be leading care, very senior people, them doing the work and you have junior doctors who aren't as experienced, then there is a huge gap and that gap can only be filled by increasing the number of staff available" (3)

"I think better numbers of consultants would help to support and help train better our trainees" (6)

5.4.5.3 Improved Advocacy from the HSE, Professional Bodies and Colleges

The frustration expressed by consultants interviewed over the lack of balance in the media relating to reviews and reports published after adverse incidents is clear. Having robust and factual information from professional bodies during times of crisis, and this information being endorsed by the HSE and Department of Health, would go a long way to improving the culture of toxicity and misinformation in the media.

"We don't have the support, I believe, of the senior management in the health services. We don't have the support of the Department of Health when it comes to these ideas. People are too often running for cover instead of actually approaching this in a way that would be supportive of consultants, but actually in the end of the day, really helpful to patients to have factual appropriate information" (3)

"I do think the colleges and, you know, people working, do have a responsibility to try and get fairly reasonable information out there to people, because if they are only

getting the medico-legal, or you know, the sensationalised view in the paper, that's not good for anybody really" (1)

5.4.5.4 Formal Mentorship for Trainees and New Consultants

The importance of mentorship within the specialty is widely recognised. Much of this is described as informal mentorship as below.

"t may be tokenistic, but I think it can work... if you get on with someone you develop a relationship. It is nice, I think, a bit like a warm hug....I wonder when certain hospitals have difficulty recruiting somebody, if, say, (name of senior consultant) took somebody under his wing. I just think it would be an excellent way to attract people to these places" (9)

"I think it's all down to mentorship. They need positive role models, and they need to be told, like I tell all our medical students, that men are welcome in the specialty. Maintaining that gender mix is really important" (5)

Formal mentorship is also referred to as being potentially very beneficial.

"It would be beneficial if we had a sort of mentorship, so, where a new consultant was paired with an older consultant for a year or two, or there was some bit of continuous mentoring there" (1)

"We really need to be looking at different levels of consultant. We need to do something about how staff, once they get through training, when they enter as a consultant, how they are looked after. And I think we probably need some kind of a system of mentorship with a senior consultant nearing retirement perhaps working very closely with them" (3)

5.4.5.5 Embracing the Trainee's Perspective

The benefit of seeing things from the trainee's perspective and understanding and valuing that perspective is described.

"As consultants we are not as good at keeping an eye on our work-life balance as our trainees are. Because our trainees have a better handle on work-life balance, it can sometimes be interpreted as not being as interested in their career as we would have been. But perhaps the only way that we can retain people in our specialty, is to value the work-life balance prioritised much more than it has been prior to this. That's our new normal now and we probably need to go with that" (7)

5.4.5.6 Investing in Post-Graduate Medical Education

The importance of investing in and valuing post-graduate medical education in obstetrics and gynaecology is also discussed as being core to optimising recruitment and retention to the specialty. The harm that can come from not having the infrastructure to properly train and mentor within the current clinical training environment is also highlighted.

"I think valuing the role of postgraduate education and training is very important. Senior clinicians in obstetrics and gynaecology are very happy to train and mentor people, but if you are asking them to train and mentor on the back of a very busy, overburdened clinic where people have been waiting 3 years to get in with a benign gynaecological condition, or supervise and mentor in an operating theatre where there are people banging on the door to come in for the next case, that is very difficult. Where, if the role that they are doing in terms of mentoring and training is valued, I think that will have a knock on effect in terms of retention. If you can combine the trainees with sufficient time, debrief appropriately and perhaps to retrain in that area

where they felt they didn't have sufficient competence, well then you can turn in around. Whereas if you are leaving somebody who is floundering, and you leave them floundering, you are not really going to get any further on" (7)

5.4.5.7 Negative Media Coverage and Litigation Culture

Improved advocacy as discussed above would go a long way to improving the media climate. In terms of litigation, "no-fault compensation" was mentioned by multiple doctors as a potential solution to the problems cause by the medico-legal climate.

Compensation programs that do not rely on negligence determinations are popularly referred to as "no-fault" systems. In fault-based models, the claimant must prove four elements: duty, injury, causation, and negligence. No-fault systems eliminate the requirement of proving negligence.

"I suspect that if there was a no-fault compensation climate it would make a huge difference. In my opinion the fear of doing wrong is I'd say very prevalent rather than the ability and enjoyment of doing things correctly" (6)

One consultant suggested surgical audit and a no blame system as one solution to the litigation problem.

"The whole medical litigation thing has to stop, it's out of control. A new system has got to be introduced. So, I think what we should do as surgeons, we should be audited constantly... and you can show that as a surgeon you are well within normal range, and I am afraid there is no case to answer for... You cut the lawyers out. It's a no blame type system" (4)

5.4.6 Redefining the Role and Looking at Alternative Options to Providing Services

5.4.6.1 Necessity of Robust and Accurate Workforce Planning

The absence of a consistent approach to workforce planning and service provision for the future is recognised.

"I think one of the things that would be really valuable to undertake a real assessment of what future needs are. I mean people have thrown out guesses of 'Oh, we need another hundred consultants, but do we need another hundred consultants? If we looked at options of having GPs, or community gynaecology, and we took certain work away from our services, how many consultants would we need" (3)

5.4.6.2 Redistribution of Appropriate Services to Specialist Midwives and Community-Based Doctors

Appropriate transfer of care to midwives and primary care doctors or community-based specialists would improve efficiency and be economical

"We really need to think about how we deliver care. So, we need to get more midwifery care for our antenatal patients and we need to have another specialty which is called community gynaecology. That's why we have such huge issues with the gynaecology waiting lists because all of these people are waiting to see a specialist. They don't need a specialist, they just need a well-trained primary care doctor. Everything could be done by another level of specialist who isn't necessarily going to be a hospital consultant" (10)

"You might diversify the training programme to change the product that comes out or to contribute to an altered product coming. While you still have obstetricians and gynaecologists but also having subspecialists.... and in addition having some sort of

hybrid between primary and secondary tertiary care enabling provision of outpatient gynae services, community gynaecology, termination of pregnancy, SATU (Sexual Assault Treatment Units) contraception and family planning and perhaps some infectious disease, STI clinics etc" (7)

5.4.6.3 Flexibility and Choice within Training and also within Consultant Posts

The traditional lack of flexibility within training schemes and consultant posts is criticised.

"Being able to have a flexibility built into the training scheme. Or somebody who reckons they are not going to make it as a consultant but sees themselves as wanting to be involved in the specialty, but in a different role, with a different lifestyle" (11)

"One of the things that I really get frustrated about is all the very good trainees that we train who then end up leaving the specialty....Either their morale is low, or they just can't see where they will fit in. So more flexibility would be, I think, everyone would benefit. Like, I know in paediatrics, you know, community paediatrics" (6)

5.4.6.4 The Role of International Medical Graduates and Non-EU Trainees

The important role of International Medical Graduates (IMGs) within the Irish maternity services is acknowledged. As the Medical Council of Ireland recognises a limited number of international internships, it is often not possible for IMGs to apply for specialty training schemes. The extra challenge these doctors face in terms of training and parity with European graduates is also conceded.

"I have seen some fantastic non-EU trainees become completely dispirited and demoralised because they are just so less favoured. It just doesn't feel to me that it is

a meritocracy... We have no one who wants to work in anything other than Dublin" (10)

5.4.6.5 Splitting the Specialty into Obstetrics as One Specialty and Gynaecology as Another

In some countries, especially in large university teaching institutions with lots of subspecialisation, the specialty has been divided in two. There was universal objection to this option as a solution to problems with recruitment and retention in the specialty in Ireland.

"Maybe I am a conservative but I am a little bit reluctant about splitting the specialty because I worked in the system in the United States where the specialty was split and actually....my experience of that was it wasn't by any means ideal and in fact sometimes it was detrimental to the patient"(3)

"When I was much more junior I used to think Yes, and I used to be very much thinking, you know, if you want to be a maternal fetal medicine specialist you should probably be devoting all your time to that and not doing gynaecology, however, I totally flipped on that completely now, and I actually think the more senior I have gotten the more I have realised they are kind of in and of the same, you can't really split them" (8)

"While I wouldn't like to see Obs and Gynae separated completely I think that there needs to be some change somewhere because, if this is what the trainees want they are not going to change and we need to get people into the specialty, so the specialty has to change....and I love the job I do doing both, I know that in the future it is not going to be what it is now" (13)

5.5 Discussion

5.5.1 Addressing the Problems

We found that many consultants are worried about the morale of current trainees and that many different factors were influencing morale. Concern was expressed over the impact of EWTD on the development of clinical competence for working at consultant level, with most consultants feeling they were better off having trained in pre EWTD times despite the personal sacrifices they had made with very long working hours and poor work-life balance. Although some studies suggest that the reduction in working hours for doctors in training due to EWTD does not compromise patient safety or training (Cappuccio *et al*., 2009; Moonesinghe *et al*., 2011), many still feel that the new generation of trainees are missing out on essential clinical exposure (Rose *et al*., 2012), and this sentiment is strongly echoed in our interviews.

Interviews reflect the fact that despite the introduction of EWTD and the inevitable improvement in work-life balance, a fall in the morale of trainees was identified by consultants, and the suggestion is made that the reduction in working hours and experience has led to feelings of inadequacy "I wonder, have they an awareness deep down inside that they are not as well trained". Shorter shifts in medicine have been found to decrease ownership of treatment decisions by doctors, with reduced quality of choices made within narrow decisional frames, and this can impact negatively on quality of care (Dubov, Fraenkel and Seng, 2016).

Consultants also described an attitude of clocking in and out by trainees which would not have been usual in the past. Clarke (2016) describes similar comments among American training faculty who struggle with how to teach Millennial learners about responsibility when they are perceived to operate under a "shift work mentality" and

are more engaged by fragmented patient interactions than longitudinal experiences. Questions over the Millennial attitude towards medical professionalism compared to previous generations are discussed by Eckleberry-Hunt and Tucciarone in 2011, who suggest that differences are partly due to current enforcement of work-hour restrictions and a belief that Millennials favour work-life balance over continuity of care and ownership of their medical decisions.

Several consultants describe a sense of loss as a result of a direct experience of trainee attrition by multiple good doctors they know who have left the training scheme. Increased trainee attrition has become a serious problem in the UK, with more than 30% of RCOG trainees leaving the specialty during training (RCOG Workforce Report, 2018).

The changing nature of the doctor patient relationship is frequently described with a lot of emphasis on the widening gap between expectation and reality. Lally *et al*. in 2008 found that while women may have ideal hopes of what they would like to happen during childbirth with respect to pain relief, control and engagement in decision-making, the experience was often very different from expectation and usually less than hoped for.

Patient interactions are described as often being more difficult or adversarial, and consultants feel that trust in doctors has been eroded. This paradigm shift is also observed by Dinesh Bhugra in his article “Medicine’s contract with society” (2014) which describes the changing nature of the implicit contract between doctors and society. As a result of medical scandals and political changes, the expectations within the profession have led to increased pressure on doctors in particular. Changing demographics, increasing demands and new technologies increase tension within the

medical profession, while ever increasing tick-box managerialism, burdensome bureaucracy and restricted resources further contribute to alienation of doctors.

Widespread poor morale amongst specialists in obstetrics and gynaecology was a recurrent theme in interviews and this echoes research by Bourne *et al*. in the UK (2019) which found high levels of burnout in obstetricians and gynaecologists and particularly among trainees. Just under half of trainees and a third of consultants working in obstetrics and gynaeocology in the UK suffer from burnout. Burnout was associated with both increased defensive medical practice and worse doctor well-being as well as having a negative impact on doctor retention and also on patient care.

The particular issues that influence morale are discussed, and the combination of litigation culture and negative media coverage are recurrent and significant themes. The Lancet in 1991 published a paper looking at the increase in defensive medicine and ordering of unnecessary tests caused by a fear of litigation in obstetrics and gynaecology amongst just under 3200 members and fellows in the UK (Ennis, Clark and Grudzinkas, 1991). The study by Bourne *et al*. 2019 analysed a similar number of obstetricians and gynaecologists working currently in the UK and found that consultants with burnout were three times more likely to report both avoidance (avoiding cases or procedures) and hedging (overprescribing or over-referral) often out of fear of litigation, behaviours which can have serious consequences on patient care.

The interplay of the media with litigation and morale is described by Yasunaga in 2008 in her article “The catastrophic collapse of morale among hospital physicians in Japan”, where sensationalised mass media coverage of medical accidents has led to mistrust of doctors, increased litigation and even imprisoning of doctors. One of the

very high-profile Japanese cases involved a 38-year-old obstetrician who was arrested on suspicion of professional negligence in the case of a maternal death after a massive post-partum haemorrhage caused by a morbidly adherent placenta. Two obstetric societies, the Japan Society of Obstetrics and Gynecology and the Japan Association of Obstetricians and Gynecologists advocated on her behalf and issued a joint statement : “If physicians must take criminal liability simply based on the severity of an adverse event, they will possible avoid risky surgeries”. This article describes the ensuing collapse of morale and rise in harmful defensive medicine amongst Japanese doctors in the aftermath, and is highly critical of a lack of media literacy causing confusion and anxiety in the public domain.

Whilst frequent allusion is made to the Irish context of fear of litigation amongst consultants, intertwined with fear of personal exposure in a media that seeks to expose and demonise doctors, international literature on this specific dynamic is scant. However, an Italian study by Toraldo, Vergari and Toraldo in 2015 describes the unsustainably high number of lawsuits against doctors and medical establishments in Italy, and describes how the Italian media present the public with poorly informed bold and reassuring messages about the progress of medical science and on the other hand, they respond with kneejerk criticism every time medical treatment does not have the desired effect. Reports of legal proceedings are frequently full of errors and lack any scientific basis and are presented by the media, both newspapers and television, sensationalising and exaggerating any unfortunate event associated with medical or surgical procedures, without however following the story as it progresses to the legal stage, which in most cases results in the exoneration of the involved health workers.

A recurrent theme expressed in interviews is a frustration at the lack of response by the RCPI and IOG as well as the Department of Health (DOH) to media and political misinformation and accusations that have been common during some of the "scandals" relating to womens health described in the Introduction chapter. Other international professional bodies such as the RCOG, American College of Obstetricians and Gynecologists (ACOG) and the Royal Australian and New Zealand College of Obstetricians and Gynaecologists (RANZCOG) routinely release position statements and organise public awareness campaigns around issues relating to women's health.

These organisations are very large, resourced and wealthy, with long traditions of leading nationally and internationally in terms of education and practice. For example, the RCOG has over 16,000 members worldwide and it's remit includes publishing clinical guidelines, patient information leaflets, development and running of the obstetrics and gynaecology training scheme, provision of continuing professional development programme and organisation of educational and scientific conferences, audit and quality improvement, academic work, contribution to policy development as it affects the profession, health service and women's health concerns, government advice and an invited review service (www.rcog.org.uk).

As no such equivalent has existed in Ireland, traditionally Irish obstetricians and gynaecologists have been members of the RCOG and usually practiced according to RCOG evidence-based guidelines. The IOG and RCPI have often been ineffectual against political and media pressure in the past and have not been assisted or supported by the DOH or the HSE, a problem that is also cited by Humphries *et al*. (2015).

In interviews, the Medical Council of Ireland is viewed with fear and suspicion and is perceived as punitive to doctors rather than supportive. A similar culture exists in the

UK especially in wake of the Bawa-Garba case (Rimmer, 2018) where a paediatric trainee was struck off the medical register after being charged with gross negligence manslaughter in November 2015 for contributing to the death of 6 year old Jack Adcock from septic shock at Leicester Royal Infirmary. A medical practitioner's tribunal, which took account of systemic failings at the hospital and the extreme pressure under which she was working, decided to suspend her for 12 months rather than strike her off, but the GMC appealed to the High Court, which erased her from the register in January 2018. Subsequently three senior Court of Appeal judges unanimously restored the original tribunal's decision, and Dr. Bawa-Garba's suspension was lifted. In June 2018, doctors attending the BMA's annual representative meeting in Brighton declared that they had no confidence in the GMC and called for a public inquiry into the regulator's conduct in the Bawa-Garba case (Kmietowicz, 2018), and in August 2018 the Hospital Consultants and Specialists Association called for Charlie Massey to step down as chief executive of the General Medical Council over his handling of the case.

As explained in the introduction to this chapter, consultants appointed after 2012 in Ireland were subject to salary cut of more than 30% compared to consultants appointed before 2012. The impact of this ongoing situation on the morale of newer consultants is described, "I find it personally destructive on a daily basis". Recent work looking at doctor retention and emigration in Ireland also describes the corrosive effect of salary discrimination and how it has influenced large numbers of doctors to emigrate (Humphries, Crowe and Brugha, 2018; Brugha *et al*., 2016).

The importance of the influence of consultants as role models in both positive and negative terms is expressed by interviewees. Plaice, Heard and Moss in 2002 found

that students and young doctors identify enthusiasm, compassion, openness, integrity, and good relationships with patients as attributes they seek in their role models and that they are also drawn to senior figures who embody responsibility and status. Some senior doctors, however, show poor attitudes and unethical behaviour, causing confusion, distress, and anger in young doctors and students under their supervision.

Other work illustrates the powerful, often subconscious impact of doctor role modeling in medical education, finding that role models are critically important in the professional development, character development, and career development of students and trainees and are central to enhancing the transformation of the student to a doctor (Passi and Johnston, 2016).

5.5.2 Addressing the Solutions

When consultant interviewees were asked for their thoughts on solutions to the issue of recruitment and retention, they discussed pay parity. In December 2019, Paschal Donoghue and Simon Harris, the ministers for finance and health respectively, of the Irish government issued a statement committing to reversing new entrant consultant pay discrimination (Donoghue, 2019). This will be a public only contract, and the role out of such a contract and it's ability to improve recruitment and retention in the Irish health sector remains to be seen.

Another area of improvement that was mentioned in multiple interviews was increasing the number of consultants. However, according to Health in Ireland. Key Trends 2018, the Department of Health has shown a 30.2% increase in the number of consultant obstetricians and gynaecologists from 2009 to 2018 from 118 to 154 whole time equivalents (Department of Health, 2018).

Consultants also recommended valuing of, and investment in postgraduate medical education. Postgraduate medical training in Ireland has been compared unfavourably with training abroad and blamed for an "exodus" of graduates of Irish medical schools (Humphries, Crowe and Brugha, 2018). Bennett *et al.* in 2014 found that in Irish postgraduate medical training within the RCPI, experience fell short of expectations for basic specialist training, however, satisfaction improved with greater seniority to match expectations. Positive aspects were teamwork, consultant willingness to discuss patients and respectful treatment of trainees, however areas of weakness were provision of feedback and time to learn new skills, reflecting a lack of protected training time between trainers and trainees. Investment in, and proper resourcing of postgraduate medical training in women's health must be prioritised in order to bridge the experience gap that post EWTD trainees will have in comparison to doctors trained prior to EWTD.

Another theme that was repeated during the "solutions" part of the interviews, was the potential for formal mentoring of both trainees and new consultants. The terms 'mentor' and 'mentoring' are derived from Greek mythology. Barondess (1995) provided a useful account of the life of Ulysses, the mythical character in Homer's *Odyssey*, set in Ancient Greece. When Ulysses left his family to fight in the Trojan War he entrusted his infant son, Telemachus, to his friend, Mentor. Barondess described how this mythical relationship developed, and what its key characteristics were. He broadly categorised the key elements of the relationship as spiritual and pragmatic, and these are themes that continue to run through the contemporary literature under the categories of personal and professional development. The theme of guidance endures in the contemporary literature on mentoring, where the desire of mentees today is to be guided and not prescriptively directed. Barondess also

introduced a cursory but relevant selection of the early literature on mentoring in medicine, and noted *'…the continuing importance and power of mentoring in medicine are widely, if tacitly, acknowledged in its persistence and especially in the personal bonds that characterize it, although data to support this concept are difficult to come by…'*. He reviewed the acceptance speeches made by individuals receiving the Kober Medal of the Association of American Physicians, which was established in 1925. Of the 41 recipients, 43% referred specifically to their mentor by name. Barondess asserted that '*…this is testimony to the importance of the mentor in shaping the medical and academic career…*'

A systematic review in 2013 showed that faculty retention and career progression appeared to improve in systems with mentoring programmes (Kashiwagi, Varkey and Cook, 2013). Whilst concrete scientific evidence of the absolute value of formal professional mentoring may not exist, the likelihood of a mentorship programme having a positive impact on morale amongst obstetrician gynaecologists is high.

Solutions to address the negative impact of the Irish litigation and media culture were recommended repeatedly, including no-fault compensation. Several no-fault systems in medicine operate internationally. Collectively, Denmark, Sweden, Finland, and New Zealand have accumulated nearly 80 years of experience in operating administrative schemes that replace medical malpractice litigation (Dickson *et al*., 2016). Medical no-fault schemes were introduced in New Zealand in 1974 (as part of its universal scheme), and in Sweden in 1975.

In New Zealand, despite widespread interest in malpractice reform as a means of reducing the growth of healthcare costs, Wallis (2017) suggests that significant savings are unlikely. Whilst there is no legal requirement to learn from these data, initial

analyses indicate that for most injuries there is no hint of error (Wallis, 2013). Nonetheless, she asserts that the absence of a culture of suing in New Zealand helps support the development of an atmosphere more conducive to thriving professional values and norms.

Tort law reform in the US has been associated with a significant reduction in the number and cost of medical malpractice, with a reduction in the practice of defensive medicine, and with improved doctor retention in areas that had previously had problems recruiting doctors due to the adversarial litigation climate (Stewart *et al*., 2011).

Approaches to reduce the harm caused by inaccurate and sensationalised reporting to both patients and doctors in the Irish media are sought by interviewees. In 2005, Deyo and Patrick wrote, "Vested interests, marketing, politics and media hype often have more influence on how new medical advances get used than the best scientific evidence". The intersection of medicine and the media is often a messy place, and the public may be harmed as a result. In 2009 a "media cacophony" followed release of the U.S. Preventive Services Task Force (USPSTF) recommendations on screening for breast cancer, described in an editorial in the Annals of Internal Medicine "When Evidence Collides With Anecdote, Politics, and Emotion: Breast Cancer Screening". There was inaccurate, sensationalised and emotive media coverage and "Confusion, politics, conflicted experts, anecdote, and emotion ruled front pages, airwaves, the Internet and dinner-table conversations".

The ensuing discussion about the role of health journalists, and their responsibilities in disseminating health information was led by Gary Schwitzer, who founded the health journalism watchdog, HealthNewsReview.org, and who said that

communication about health issues to and with the American public – by government agencies, providers, researchers, medical journal editorial boards, advocacy groups, the drug and device industry, and journalists, is itself a major health policy issue. He has advocated for government-funded and foundation efforts to optimise quality and accountability in health journalism (Schwitzer, 2013). There are some clear parallels with the recent Cervicalcheck controversy in Ireland, where there was little balance in the media and political discussion, and misinformation led to public anxiety and loss of confidence in services.

Improving job flexibility for trainees and consultants is recommended as a strategy to improve recruitment and retention. Part time training (PTT) in the UK and Australia is currently mostly accessed by women with children due to family responsibilities, but over 50% of trainees contemplate PTT (Henry *et al*., 2012), and this unmet need for flexible training is an important issue for postgraduate medical training programs to acknowledge. Although both full time and part time trainees recognise potential clinical difficulties with PTT, Henry *et al*. felt that these were outweighed by advantages such as improved morale and flexible rostering.

Fluidity in terms of service provision, with appropriate task transfer to specialist midwives, General Practitioners and allied healthcare professionals is also suggested to improve access to healthcare in Ireland. Historically the health workforce is organised around groups of professions that embrace a repertoire of pre-defined skills within a unifying philosophy, codified through formal education and measured by the achievement of specific competencies (Allsop and Saks, 2002). Whilst any person credentialed to perform a specific task or role, the normative model of the health

workforce assumes that there is a 'right' type of practitioner to deliver specific types of care (Larkin, 1983).

Internationally, and often as a result of staff shortages, there has been a growing trend towards workforce flexibility and interdisciplinary spread of clinical care (Buchan and May, 2002). EWTD has been a powerful lever in this respect and has led to the redistribution of traditionally doctor provided tasks and roles amongst other types of workers (Dolton, Kidd and Fooken, 2014), leading to a growth of new workers and an expanded repertoire of skills for some (Nancarrow and Borthwick, 2005). A growing evidence base suggests that with training and supervision, a great deal of healthcare can be delivered by more than one type of practitioner (Sharma *et al.*, 2012).

Whilst Ireland has been slower than the UK to accept and introduce midwifery-led care (Devan *et al*., 2007), strict guidelines and a good working relationship between midwives and doctors has made it a safe, respected and cost effective option for pregnancy and childbirth in Ireland (Kenny *et al*., 2015). In "Creating a better future together. National Maternity Strategy 2016-2026" (Department of Health, 2016), the national expansion and enhancement of midwifery led care was integral to the implementation plan.

The development of structured, community based ambulatory gynaecology services is also recommended in terms of reducing waiting lists and providing quality cost-effective care. The specialty of gynaecology has also evolved dramatically over the last two decades, with many gynaecological conditions which previously required major surgery, now be dealt with efficiently on an outpatient basis. This has led internationally to the development of ambulatory, office or outpatient gynaecology which can usually be provided in a community based rather than hospital setting. Care

can be organised and services redesigned for the patient's benefit, with a shortened care pathway, quicker recovery and return to work, fewer elective surgery cancellations, and reduced unit cost of treatment. This approach to gynaecology can be delivered in a safer and more cost-effective environment than the management strategies previously provided, and has been shown to reduce waiting times by increasing overall capacity for hospital care and reducing bed occupancy (Jones, 2006).

The Faculty of Reproductive and Sexual Healthcare of the Royal College of Obstetricians and Gynaecologists was launched in 2010 and aims to train a consultant workforce with the necessary leadership and clinical skills for community based Sexual and Reproductive Health services. It aims to produce medical consultants who are trained both to deliver specialist clinical care themselves; but also, to be highly-skilled systems leaders who provide leadership to the bulk of routine Sexual and Reproductive Health care that comes from nurses, GPs, healthcare assistants or other professionals. The Community Sexual and Reproductive Health (CSRH) Specialty Training Programme is currently the second most competitive specialist training programme in the UK (www.fsrh.org), and allows trainees who want to work in womens health but who are not interested in major surgery or obstetric on call to stay in the specialty, with a training pathway that is shorter, more efficient and more economical than traditional obstetrics and gynaecology specialty training (Mikos and Downes, 2005).

The apparent lack of forward planning within the Irish health service is highlighted in interviews. Communication between the HSE, NDTP and training bodies has been poor, with no real effort made towards informed, evidence based, strategic planning

for maternity and gynaecology services for the future. The OECD, in their report "*Recent Trends in International Migration of Doctors, Nurses and Medical Students 2019"*, in chapter 4 titled "The Irish paradox: Doctor shortages despite high numbers of domestic and foreign medical graduates", are critical of the lack of coordination between various stakeholders in medical education and the health employment sector.

"In fact, the lack of dialogue between the medical education and health sectors was mentioned by representatives of the Department of Health, who referenced the 2017 National Strategic Framework for Health and Social Care Workforce Planning as a starting point for this dialogue (Department of Health, 2017, Working Together for Health- A National Strategic Framework for Health and Social Care Workforce Planning). Under this framework, the Department intends to develop a protocol for engagement between the health and education sectors. Key actions will include establishing governance and oversight structures for workforce planning, building communications and engagement between stakeholders, developing protocols for the engagement between the education and health sectors, and expanding the evidence base. The implementation of these actions is ongoing. A new Health Workforce Planning Unit within the HSE is also being established under this framework, with the support of the NDTP".

This study highlights the importance of engaging with consultants working at the coal face of women's health in contemporary Ireland. As the gate-keepers of clinical care and governance, and leaders of service enhancement and evolution as well as sole providers of clinical training, their intimate knowledge of the particular problems facing the profession in terms of clinical need as well as recruitment and retention of specialists, is unparalleled. This wealth of knowledge as well as a unique insight into

what solutions are required and workable, must be central to shaping the future of obstetrics and gynaecology in Ireland. Policymakers must partner with training and professional bodies in order to ensure practical and economical solutions to the problems facing maternity services now and in the future.

Chapter 6

Conclusions and Recommendations for Further Work

6.1 Concluding Remarks

The premise of this thesis is that effective women's health care reform must begin by looking at the primary delivery side, ie, specialist obstetricians and gynaecologists. An efficient, high-quality women's health care system depends on having the right number of well-trained physicians and allied health professionals in the appropriate locations (Rayburn, 2017). It also requires flexibility and adaptability in order to incorporate advances in therapeutics thus optimising patient outcomes, and also research and foresight into anticipating and preparing for a changing and evolving workforce.

The question of who should accept responsibility for articulating and implementing solutions remains uncertain. The approach is reactive rather than proactive, and internationally policymakers aiming to conduct workforce prediction rely on already available data including numbers of active professionals; number of full-time equivalents; types of providers; where they work; their skills; the services they provide; workloads, gender, and age. Data sources used for the model include government bodies, national registries for health professionals, and so on. Modelling is undertaken using a macro approach based on a composite of empirical data and expert opinion. The main aspects considered in the workforce planning and modelling process typically include variables on supply and demand, the assumptions to start from, the algorithm to join them, and the modalities for the presentation of the results

using one or more scenarios (Roberfroid, Leonard and Stordeur, 2009; Ono, Lafortune and Schoenstein, 2013).

The Health Programme of the European Union strongly advocates the application of qualitative methods and their use in health workforce planning processes. “Whatever the stage of workforce planning and forecasting in specific national contexts, it is recommended that robust qualitative methods are used to enhance the knowledge and expertise used in health workforce planning and forecasting processes to improve the ways in which decisions on these workforces are reached” (Fellows and Edwards, 2014).

With this in mind, this thesis engaged the current and future workforce into the conversation around emerging trends and ongoing problems facing the specialty of obstetrics and gynaecology in Ireland, and their impact on doctors, patients and on workforce planning. This study covered the breath of the medical lifespan from student level, through all levels of training, and then through all levels of consultancy up to retirement age and encompasses the views of multiple generations from baby boomers and through generations X, Y and Z.

Firstly, Chapter 2 probed the attitudes and preferences of medical students approaching qualification at UCC, and sought their experience of the specialty as students, as well of aspects of the specialty itself, including what they find attractive and unattractive about obstetrics and gynaecology, and what might make it more attractive to them as a career.

Chapter 3 analysed the current experience of trainees working in the specialty, and investigated the impact of issues including the Irish litigation culture, the media, the

deteriorating patient-doctor relationship and European Working Time Directive, on general morale and on recruitment and retention.

Chapter 4, investigated how and where trainees would prefer to work. The impact of generational attitudes to work life balance and influence of feminisation on the specialty was sought. Specific detail on how attractive to trainees, consultant posts in every maternity unit in the country was also elicited with a view to identifying hospitals that are unpopular currently. Information was then collected on what might make these units more attractive for trainees to change their minds.

Chapter 5 used a qualitative approach and examined semi-structured interviews with 17 consultants from different level hospitals, at varying stages of their careers, and from across the gender divide and age spectrum. Interviews focused on the challenges of working in the specialty in the current climate, how things have changed during their time in the specialty, and how they perceive the climate is for trainees. The second part of each interview centred around solutions to the problems discussed, and approaches to improving recruitment and retention in obstetrics and gynaecology in Ireland.

Each of the individual chapters of the thesis includes a comprehensive discussion with relationship to the international literature. The purpose of this chapter is not to revisit each these discussions or conclusions but the chapter seeks to present an overarching position based on the analyses in the individual chapters, which will explain how these research findings could be holistically integrated with ongoing work in order to optimise our policymaker's approach to improving women's health provision going forward.

From the perspective of medical students in UCC, on the whole, the intellectual content of obstetrics and gynaecology is attractive, however obstetrics is by far the most attractive element of the specialty and the importance of the student's experience of their clerkship in terms of swaying their attitude to the specialty cannot be overestimated. Students felt that increased labour ward exposure would improve attraction to the obstetrics and gynaecology as a specialty and they felt positive about career opportunities in the specialty. The positive influence of consultants as role models was cited as being statistically significant, and was much more important than the influence of trainee doctors and midwives. For Irish medical schools this information is important in terms of curriculum development and teaching. Maximising hands on experience in the labour ward is essential to optimise interest in the specialty. It is important that consultants appreciate the positive impact they have on medical students and on recruitment to the specialty but also that they understand their potential power to detract students.

Likelihood of litigation, on call hours, fear of adverse outcomes and poor work-life balance were the most cited deterrents from the specialty by medical students. Protection from litigation was deemed the single most important factor that would improve medical student attraction to the career of obstetrics and gynaecology however it is interesting that the media has not had a detrimental influence on students considering the overlapping of litigation and the media in Ireland. It is important to encourage more medical students to pursue careers in the dynamic field of obstetrics and gynaecology. We must recognise and address physician lifestyle concerns both for men and women such as adaptable scheduling and part time work while improving flexibility in training and encouraging a culture of diversity in job planning and career

progression which is urgently needed in order to enhance the perception of medical students and trainees.

In terms of trainees, this research gives an honest, accurate and transparent account from obstetrics and gynaecology trainees and revealed very high levels of enjoyment of the specialty. However, problems with morale are severe, and are being compounded by the pervasive influence of the culture of medical litigation which is shown here to be directly impacting a very high proportion of trainees (37% have been involved already in at least one medico-legal case at such an early stage in their career). The fear of litigation is leading to defensive practice which is known to be costly in financial as well as clinical terms. Negative media coverage exacerbates the problem increasing the culture of fear and further affecting morale while poor media literacy allows misinformation to spread causing further harm to the doctor patient relationship. Trainees reveal an alarming level of undermining and threatening behaviour from patients and members of the public and whilst societal change has a part to play, the influence of the media is hard to overlook. The legal profession and the media have a responsibility to society and this research must raise awareness of the impact of the medico-legal culture and sensationalist journalism on the medical profession and the inevitable consequence to patient care and recruitment and retention. A policy encouraging respect in the clinical environment and of zero-tolerance for adversarial behaviour towards doctors by members of the public would be worthwhile.

The training scheme and pathway to specialism remains unchanged over the past two decades, despite the rapidly changing landscape of health provision. The RCPI should address aspects that provide an obstacle or challenge to career progression, especially

the limitation caused by the single opportunity to sit and pass the MRCPI exam before the HST interviews. Other specialties like Anaesthesiology have embraced run-through training, and this needs to be considered in obstetrics and gynaecology. Further work is also needed towards providing subspecialty training especialty in gynaecology.

Ireland is already far behind other OECD countries in terms of specialist obstetricians and gynaecologists per capita. American, Australian and UK projections strongly predict specialist shortages in the future. Ireland has a long culture of medical migration and has been exporting it's medical workforce for years. This research showed 5% of trainees surveyed do not plan to work in Ireland long-term. Over 80% of trainees in obstetrics and gynaecology are female, and females are significantly more likely to consider less than whole time working. They are also significantly less likely to consider private practice than male trainees and 15% of female trainees were likely to consider sessional work. More than half of all female trainees and over 40% of male trainees plan to take parental leave. Approximately one third of trainees in Ireland wish to consider a sabbatical during their career. Two thirds of trainees in Ireland wish to retire by the age of 64.

Documents from the National Doctors Training and Planning (NDTP) have been "high level" and have discussed specialist numbers or headcounts per population or number of maternities. They have not discussed numbers of trainees required and they have not taken gender or societal change into account. Without information on exactly how and where trainees will prefer to work, any projections are meaningless and are likely to severely underestimate the real numbers of doctors that womens' health services will require.

The data collected with regard specifically to which maternity units are attractive or unattractive to trainees is also crucial in terms of future planning. This study shows that prioritisation of work-life balance is important in general, and that financial compensation is less likely to sway young consultants into working long hours or in a hospital they do not find attractive. We know that some units have been exposed to severe public scrutiny and have been found wanting on many levels and that these units despite being in most need, are often more likely to be avoided by Irish trained specialists. This research has shown that this dynamic can be altered by increasing consultant numbers, improving clinical governance, having more doctors-in-training and optimising financial remuneration. Without addressing these issues, many units will remain reliant on temporary consultants or consultants who have trained elsewhere, and will be more vulnerable to the repeated cycle of adverse outcomes followed by litigation, media outcry, low staff morale and difficulties with recruitment and retention. On balance, prevention must trump cure in terms of the human and financial cost. Alternatively a whole reconfiguration of care, with closure of some units and amalgamation of services, or the formation of new hospitals must be considered.

Insights from the consultant body are important in order to learn from past mistakes and help analyse future interventions. This study revealed concern by consultants for the low morale they see amongst trainee doctors in obstetrics and gynaecology and many expressed a sense of loss as a result of the attrition of good trainees from their units. Consultants are worried about the long-term impact of EWTD on clinical experience and competence, and they acknowledged the changing nature of the doctor patient relationship and the widening gap between patient expectation and reality. They also reflected on poor morale amongst their own cohort and repeatedly raised the

recurrent theme of distress caused by the litigation culture and negative media coverage.

The lack of advocacy from professional bodies and the Department of Health was a raised, and outright fear of what is perceived as a punitive Medical Council of Ireland was expressed. The lack of pay parity for consultants appointed after 2012 was unsurprisingly a bone of contention.

When asked about specific measures to help the problem of recruitment and retention in obstetrics and gynaecology in Ireland, solutions were forthcoming and were realistic and practical. Addressing the issue of pay parity and reversing the pervasive impact this issue has on new consultant morale, as well as increasing the number of consultants, must be prioritised by policymakers.

This research demonstrated the negative impact caused by the culture of litigation in Ireland across all levels of physicians from medical students, to trainees, and all level of consultants. This issue results in direct harm to carers, to patients and to the economy, and reform of the medico-legal system here is long overdue. Suggested solutions included changing tort law or introducing "no fault compensation", and while the solution is likely to be multi-factorial there is no doubt about the magnitude of the problem and the urgency required.

The onus on the media and political bodies to honest and transparent public representation has too often been disregarded when concerning maternity services in Ireland, and this study recommend that responsibility be taken by both politicians and the press in order to optimise media health literacy towards fair and unbiased recording of medical facts and protect both doctors and patients alike.

Investment in postgraduate medical education in obstetrics and gynaecology and valuing both trainers and trainees was identified as a priority by several consultants, and in the era of reduced working hours with EWTD, resource must be given to optimising teaching and training, as well as supporting protected learning time and high fidelity simulation.

A strategy of predicting and addressing what will be necessary to engage and develop Generation Y patients and doctors accross all areas of medicine, would be wise. It is important to contemplate the future now, as historically changes in medical education have occurred slowly and with conflict (Eckleberry-Hunt, Lick and Hunt, 2018). Generation Z will expect a technologically enabled flexible workplace, and up to date technology in education and patient care, including the use of gaming, social media sites and podcasts. They will expect on demand access to education with customisation to their individual needs, and will be adept and finding information but may have difficulty with critical evaluation and validation (Hopkins *et al.*, 2018). Their reliance on electronic communication will negatively impact on in-person communication skills which may extend beyond patient care, and they are more likely to suffer from feelings of insecurity and inadequacy, with less emotional resiliency than previous generations (Stillman and Stillman, 2017). While reform will be required, the question must be whether technological advances lead to better patient care or better performance. It is naive to believe that technology can help subpar educators become better teachers and much international research recommends that organisations should invest in faculty development to harness technology rather than concentrating on investing in technology alone. Moreover, until the difficulties that contribute to current career dissatisfaction among physicians are addressed, it is not likely that the highest performers within Generation Z will be recruited and retained.

Several consultants recommended a programme of mentoring of both trainees and new consultants as a positive step towards recruitment and retention, and there is extensive international evidence to support this. The power of consultants as role models and mentors for students, trainees and consultant colleagues in Irish obstetrics and gynaecology is a significant finding from this research, and a proactive approach to harnessing this energy will reap rewards, especially considering the likely needs of Generation Y doctors.

For a specialty that faces low consultant numbers, understaffed units, predominantly female graduates and intense media scrutiny, there is a lot that can be done to improve flexibility and innovation in work practice. Firstly, the lack of flexible and part time training opportunities should be addressed. There is an opportunity to look at consultant work practices and allow adaptability for professionals to plan their careers throughout their lifetime. The traditional consultant "product" from training schemes needs to be revisited. The specialty of obstetrics and gynaecology has changed rapidly over the last 20 years and there has been a shift towards midwifery-led care internationally. This move has been more gradual in Ireland, however there is an appreciation of the benefits of interdisciplinary care as espoused by the National Maternity Strategy. In terms of gynaecology, a move towards advanced nurse practitioners (ANPs) in areas like colposcopy, outpatient hysteroscopy and urogynaecology must be endorsed and enhanced.

The benefits of developing structured, community based ambulatory gynaecology services against a backdrop of limited consultant numbers and hospital accessibility as well as rising demand and waiting lists, are manifold. Medical and technical developments in the specialty have led to a huge reduction in major surgical cases.

Many more gynaecological problems can now be managed appropriately in an outpatient or office setting. Services ripe for transfer to the community include general gynaecology clinics, colposcopy, Sexual health and Genito-Urinary-Medicine services, menopause clinics, postmenopausal bleeding clinics, adolescent gynaecology clinics, complex contraception clinics, crisis pregnancy clinics and fertility clinics to name a few. Keeping patients in the community is significantly cheaper, and conservative and minimally invasive treatments will cost less in the community than in hospitals. There will be economic gains as community gynaecology specialists will train in a shorter period of time, and will not be required to work on call or weekends.

In conclusion, this study highlights the importance of engaging with medical students, trainees and consultants on the issue of recruitment and retention and future workforce planning in obstetrics and gynaecology. The voice of the physician is at the centre of this work and this wealth of knowledge and unique insight into the solutions required going forward cannot be underestimated by policymakers and the Health Service Executive.

6.2 Recommendations for Further Work

This body of work was based on insights from UCC medical students only. Further work should seek to extend this research to students from other Irish Medical Schools (e.g. University College Dublin, National University of Ireland, Galway, Trinity College Dugblin and the Royal College of Surgeons in Ireland). Whilst the trainee questionnaire had a very high response rate from Higher Specialist Trainees, the response rate from Basic Specialist Trainees was somewhat lower and future work should seek better representation from this group.

Trainees on the RCPI/ IOG training scheme were very well represented in this study. As these trainees are the cohort identified as the focus of future recruitment into the consultant workforce by the Maternity Strategy and NDTP, their views are important. Ireland, however, relies heavily on international medical graduates working in stand-alone service posts throughout the country to maintain services. This cohort has increased significantly since the introduction of EWTD, but the specific training and professional needs of these doctors have not been addressed to date, and have not been under represented in this study. Future research should seek representation of this important group, and a comparison of the experiences of RCPI trainees and non-scheme doctors would be valuable. The authors recommend a call for funding from the Health Research Board to support the creation of a longitudinal cohort study that tracks medical students through training, to consultant appointment and beyond. This data would enable better understanding of how medical careers and work-life patterns are evolving among future generations, and will improve predictive optimisation of healthcare provision. The survey tools used in this study have been specifically included in the Appendices of this thesis such that they can inform this further research.

The RCPI and NDTP continue to work on quality improvement projects for trainees. As this study is based on data collected in the specific period between 2017 and 2019, a longitudinal study that measures changes in perception of consultants, trainees and students in the context of the issues raised, is recommended in order to fully understand the efficacy of such interventions.

6.3 Plans for Publication of Research Findings

The following publication strategy is proposed for the research in this thesis:

- Paper #1 (based on Chapter 2)

  Proposed Title: *Factors Influencing Medical Students' Decision to Pursue a Career in Obstetrics and Gynaecology*

- Paper #2 (based on Chapter 3)

  Proposed Title: *Factors influencing Trainees in Obstetrics and Gynaecology in Ireland* or *Medicine Media and the Law -The Effect on Training in Obstetrics and Gynaecology*

- Paper #3 (based on Chapter 4)

  Proposed Title: *Career Plans and Future Working Patterns of Obstetrics and Gynaecology Trainees in Ireland*

- Paper #4 (based on Chapter 5)

  Proposed Title: *Consultant Perspectives on Recruitment and Retention with Emphasis on Solutions*

References

Allsop, J, Saks, M. (2002) Introduction: the regulation of the health professions. In: *The regulation of the health professions*. London: Sage; 2002.

Annual Specialty Training Report, Institute of Obstetricians and Gynaecologists 2014 Available online at https://rcpi-live-cdn.s3.amazonaws.com/wp-content/uploads/2020/01/IOG-Annual-Report-2014-2015.pdf

Annual Specialty Training Report, Institute of Obstetricians and Gynaecologists 2015 Accessed online at https://rcpi-live-cdn.s3.amazonaws.com/wp-content/uploads/2020/01/IOG-Annual-Report-2015-2016.pdf.

Anupam, B.J., Seabury, S., Lakdawalla, D., Chandra, A. (2011). 'Malpractice risk according to physician speciality'. *New England Journal of Medicine*, Vol 365, pp. 629-636.

Arulkummaran S. (2013) 'Investigation of Incident 50278 from time of patient's self referral to hospital on the 21st of October 2012 to the patient's death on the 28th of October, 2012' HSE. Available at https://www.hse.ie/eng/services/news/nimtreport50278.pdf. Accessed January 2020.

Barondess, J.A., (1995) 'A brief history of mentoring'. *Transactions of the American Clinical and Climatological Association*, Vol 106, pp 1-24.

Bennett, D., Dornan, T., Bergin, C., Horgan M. (2014). 'Postgraduate training in Ireland: expectations and experience'. *Irish Journal of Medical Science* Vol. 183, pp. 611. Available online at https://doi.org/10.1007/s11845-013-1060-5. Accessed online Jan 2020.

Bhugra, D. (2014). 'Medicine's contract with society'. *Journal of the Royal Society of Medicine*, Vol. 107(4), pp. 144–147.

Bidwell, P., Humphries, N., Dicker P., Thomas, S., Normand C., Brugha, R. (2013). 'The National and International Implications of a Decade of Doctor Migration in the Irish Context' in *Health Policy*, Vol. 110, pp. 29–38.

Bienstock, J.L., Laube, D.W., (2005) 'The recruitment phoenix: strategies for attracting medical students into obstetrics and gynecology'. *Obstetrics Gynecology*, Vol. 105(5 Pt 1), pp. 1125-7.

Birchard, K. (2001) 'Ireland discusses how to handle projected increase in medical litigation' *The Lancet,* Vol. 357, pp. 698.

BMA (2003). 'BMA Cohort Study of 1995 Medical Graduates'. Eighth report. London; BMA Health Policy and Economic Research Unit. Available online at https://www.bma.org.uk/collective-voice/policy-and-research/education-training-and-workforce/cohort-study. Accessed Dec 2019.

BMA (2016) 'Cohort study of 2006 medical graduates'. 10th Report. London; BMA Health Policy and Economic Research Unit"; 2016. Available online at https://www.bma.org.uk/collective-voice/policy-and-research/education-training-and-workforce/cohort-study. Accessed Dec 2019.

Bonnett, T.J., Roberts, A.L., Farrell, T.A. (2012) 'Translating obstetrics and gynaecology undergraduate experience into career aspiration: An audit of Royal College of Obstetricians and Gynaecologists (RCOG) medical student placement standards'. *Journal of Obstetrics and Gynaecology*, Vol.32(8), pp. 733-735.

Bourne, T., Shah, H., Falconieri, N., Timmerman, D., Lees, C., Wright, A., Lumsden, M., Regan, L., Van Calster, B. (2019) 'Burnout, well-being and defensive medical practice among obstetricians and gynaecologists in the UK: cross-sectional survey study' *British Medical Journal Open*, Vol. 9:e030968. Available online at doi: 10.1136/bmjopen-2019-030968. Accessed online January 2020.

Braun V., Clarke V. (2006). 'Using thematic analysis in psychology', *Qualitative Research in Psychology,* Vol. 3, pp. 77-101.

Brindley, P.G., Patel, B., Farnan P.A. (2012) 'Psychological Burnout in Acute Care Medicine: "Physician Heal Thyself"'. In: Vincent JL. (eds) *Annual Update in Intensive Care and Emergency Medicine,* Springer, Berlin, Heidelberg.

Brugha, R, Cronin, F, Clarke, N. (2018). 'Retaining Our Doctors. Medical Workforce Evidence 2013-18'. RCSI Health Workforce Research Group, Available online at http://www.healthworkforceireland.com/uploads/1/0/6/5/10659222/ad3310_retaining_doctors_update_2018_full_new_final.pdf. Accessed Jan 2020.

Buchan, J., O'May, F. (2002). 'The changing hospital workforce in Europe". In: McKee M, Healy, J, editors. *Hospitals in a changing Europe. European Observatory on Health Care Systems Series*. Buckingham, UK: Open University Press. pp. 226–39.

Buttimer, J. (2006). 'Preparing Ireland's Doctors to meet the Health Needs of the 21st Century'. Department of Health. Available online at https://www.lenus.ie/bitstream/handle/10147/42920/2677.pdf?sequence=1&isAllowed=y. Accessed online January 2020.

Cahill, N. (2018). 'Root and branch reform needed for negligent medico-legal system' *The Medical Independent,* Available online at https://www.medicalindependent.ie/root-and-branch-reform-needed-for-negligent-medico-legal-system/. Accessed online January 2020.

Campbell, T. (2015). 'Staff Paper: Medical Workforce Analysis. Ireland and the European Union Compared'. *Department of Public Expenditure and Reform*. Available online at https://igees.gov.ie/wp-content/uploads/2014/11/Medical-Workforce-Analysis.pdf. Accessed online January 2020.

Cappuccio, F. P., Bakewell, A., Taggart, F.M., Ward, G., Ji, C., Sullivan, J.P., Edmunds, M., Pounder, R., Landrigan, C.P., Lockley, S.W., Peile, E. (2009) 'Warwick EWTD Working Group 2009. Implementing a 48 h EWTD-compliant rota for junior doctors in the UK does not compromise patients' safety: assessor-blind pilot comparison'. *QJM: An International Journal of Medicine*, Vol. 102, pp. 271–282.

Central Statistics Office (2016). *Vital Statistics Annual Report 2016*. Available online at https://www.cso.ie/en/releasesandpublications/ep/p-vsar/vitalstatisticsannualreport2016/births2016/. Accessed online January 2020.

Chang, J.C., Odrobina M.R., McIntyre-Seltman, K., (2010). 'The effect of student gender on the obstetrics and gynecology clerkship experience'. *Journal of Women's Health*. Vol., 19(1) pp. 87-92.

Clarke, M., (2016). 'Patient ownership and the millennial learner'. *The American Journal of Bioethic*s, Vol. 9 pp. 24-25.

Clarke, R.T., Pitcher A., Lambert, T.W., Goldacre M.J. (2014) 'UK doctors' views on the implementation of the European Working Time Directive as applied to medical practice: a qualitative analysis.'*British Medical Journal Open* Vol. 4: e004390. doi: 10.1136/bmjopen-2013-004390.

Confidential Maternal Death Enquiry Ireland 2018. Available online at https://www.ucc.ie/en/media/research/maternaldeathenquiryireland/MDEDataBriefNo3November2018.pdf. Accessed online January 2020.

Cook J.V., Dickinson H.O., Eccles M.P. (2009) 'Response rates in postal surveys of healthcare professionals between 1996 and 2005: an observational study'. *BMC Health Services Research*. Vol.9(1), pp. 160.

Creed, P.A., Searle J., Rogers, M.E. (2010) 'Medical specialty prestige and lifestyle preferences for medical students'. *Social Science & Medicine*. Vol. 71(6), pp. 1084-8.

Creswell, J., Plano Clark, V. (2011). 'Designing and conducting mixed methods research'. 2nd ed., London: Sage.

Crettenden, I., Dal Poz, M., Buchan J. (2013) 'Right time, right place: improving access to health service through effective retention and distribution of health workers'. *Human Resources for Health*. Vol. 11, pp. 60.

Cullen, P., Holland, K. (2013). 'Notes added to by internal investigation, midwife tells Savita Halappanavar inquest. Medic who first raised sepsis concerns says he was not told of elevated pulse' *The Irish Times,* Available online at https://www.irishtimes.com/news/health/notes-added-to-by-internal-investigation-midwife-tells-savita-halappanavar-inquest-1.1353994. Accessed online January 2020.

Davidson O.B., Eden D., Westman M., Cohen-Charash Y., Hammer L.B., Kluger A.N., Krausz, M., Maslach, C., O'Driscoll, M., Perrewé, P.L., Quick, J.C., Rosenblat, Z., Spector P. (2010) 'Sabbatical Leave: Who Gains and How Much?' *Journal of Applied Psychology*. Vol. 95(5), pp. 953-64. doi: 10.1037/a0020068.

Deech, B. (2009). 'Women doctors: making a difference. United Kingdom Department of Health Report'. Available online at https://www.nwpgmd.nhs.uk/sites/default/files/WIMreport.pdf. Accessed online January 2020.

DeJonckheere, M., Vaughn, L.M. (2019) 'Semistructured interviewing in primary care research: a balance of relationship and rigour'. *Family Medicine and Community Health*;**7**:e000057. Open Access doi: 10.1136/fmch-2018-000057.

Department of Health Australia. (2018). *Australia's Future Health Workforce Obstetrics and Gynaecology Department of Health 2018* Available online at https://www1.health.gov.au/internet/main/publishing.nsf/Content/85A235008D12097BCA2582FD00793F4D/$File/AFHW_%20OG_Report_FINAL.pdf. Accessed Dec 2019.

Department of Health UK. (2017) 'Expanding undergraduate medical education' Available online at https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/636545/Expansion_undergraduate_medical_education_financial_impact_assesment.pdf. Accessed online February 2020.

Department of Health, (2008). 'Independent Review of Maternity and Gynaecological Service in the greater Dublin area (GDA). August 2008' KPMG Available online at https://www.hse.ie/eng/services/publications/hospitals/independent-review-of-maternity-and-gynaecology-services-in-the-greater-dublin-area-.pdf. Accessed online January 2020.

Department of Health. (2016) 'Creating a better future together. National Maternity Strategy 2016–2026'. Available online at https://assets.gov.ie/18835/ac61fd2b66164349a1547110d4b0003f.pdf. Accessed online January 2020.

Department of Health. (2018). 'Health in Ireland Key Trends' Available online at https://assets.gov.ie/9441/e5c5417ee4c544b384c262f99da77122.pdf. Accessed online February 2020.

Department of Public Expenditure and Reform. (2019) 'Health Workforce. Consultants pay and skills mix 2012-17', Available online at https://assets.gov.ie/25637/4757eb04a70b4836900ff250a5636783.pdf. Accessed online February 2020.

Deutsch, A., McCarthy, J., Murray, K., Sayer, R. (2007) 'Why are fewer medical students in Florida Choosing Obstetrics and Gynecology'. *Southern Medical Journal*, Vol. 100(11), pp. 1095-1098.

Devane, D., Murphy-Lawless, J., Begley, C.M. (2007) 'Childbirth policies and practices in Ireland and the journey towards midwifery-led care". Midwifery. 2007;23(1):92–101.

Deyo, R.A., Patrick, D.L. (2005) *'Hope or Hype: The Obsession With Medical Advances and the High Cost of False Promises'*. New York: AMACOM; American Management Association.

DeZee, K.J., Byars, L.A., Magee, CD. (2013). 'The R.O.A.D. Confirmed: Ratings of Specialties' Lifestyles by Fourth-Year US Medical Students with a Military Service Obligation'. *Family Medicine* Vol. 45(4), pp.240-6.

Dickson, K., Hinds, K., Burchett, H., Brunton, G., Stansfield, C., Thomas, J. (2016). '*No-fault compensation schemes: A rapid realist review'*. w, EPPI-Centre, Social Science Research Unit, UCL Institute of Education, University College London.

Dolton, P.J., Kidd, M.P., Fooken, J. (2014). 'Get a life? The impact of the European working time directive: the case of UK senior doctors'. *Health Economics,* doi:10.1002/hec.3082.

Donoghue, P. (2019). Available online at http://paschaldonohoe.ie/2019/12/ministers-donohoe-harris-announce-new-slaintecare-contract-for-consultants/. Accessed online February 2020.

Dorsey, E.R., Jarjoura, D., Rutecki, G.W. (2003). 'Influence of controllable lifestyle on recent trends in specialty choice by US medical students'. *Journal of the American Medical Association*, Vol. 290, pp. 1173-8.

Dubov, A., Fraenkel, L., Seng, E. (2016) 'The Importance of Fostering Ownership During Medical Training'. *The American Journal of Bioethics*, Vol. 16(9), pp. 3-12, DOI: 10.1080/15265161.2016.1197338.

Dunn, T.S., Wolf, D., Beuler, J., Coddington, C.C. (2004). 'Increasing recruitment of quality students to obstetrics and gynecology: impact of a structured clerkship'. *Obstetrics & Gynecology*. Vol. 103(2), pp. 339-41.

Eckleberry-Hunt, J., Tucciarone J. (2011) 'The challenges and opportunities of teaching "generation y"'. *Journal of Graduate Medical Education*, Vol. 3(4), pp. 458-461.

Eckleberry-Hunt, J., Lick, D., Hunt, R. (2018). 'Is Medical Education Ready for Generation Z?'. *Journal of Graduate Medical Education*, Vol. 10(4), pp. 378–381. doi:10.4300/JGME-D-18-00466.1

Editor, (2016). 'Women-centred Maternity Care', *The Irish Times* Letters to the Editor, Available online at https://www.irishtimes.com/opinion/letters/women-centred-maternity-care-1.2906282. Accessed online January 2020.

Editors (2010). 'When evidence collides with anecdote, politics, and emotion: breast cancer screening'. *Annals of Internal Medicine*. Vol. 13, pp. 531–532.

Editorial. (2018) "Medical negligence: there are no winners". *The Lancet,* Vol. 391, pp. 2079. Available online at https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(18)31119-X/fulltext#articleInformation. Accessed online January 2020.

Ennis, M., Clark, A., Grudzinskas, J.G. (1991) 'Change in obstetric practice in response to fear of litigation in the British Isles'. *The Lancet*. Vol. 338(8767), pp. 616-8.

Euro-Peristat (2018). *'European Perinatal Health Report. Core indicators of the health and care of pregnant women and babies in Europe in 2015*'. Available online at https://www.europeristat.com/images/EPHR2015_Euro-Peristat.pdf. Accessed online January 2020.

Eurostat (2019) *'Births and fertility'*. Available online at https://ec.europa.eu/eurostat/documents/2995521/9648811/3-12032019-AP-EN.pdf/412879ef-3993-44f5-8276-38b482c766. Accessed online January 2020.

Eurostat (2019) '*Number of healthy years of life: countries compared'*. Available online at https://ec.europa.eu/eurostat/web/products-eurostat-news/-/DDN-20190204-1) Accessed online January 2020

Eurostat Yearbook (2017). '*Population; fertility'*. Available online at http://ec.europa.eu/eurostat/documents/2995521/8102195/3-10072017-AP-EN.pdf/a61ce1ca-1efd-41df-86a2-bb495daabdab. Accessed Online January 2020.

Fattori, F., Curly, S., Jörchel, A. C., Pozzi, M., Mihalits, D., Alfieri, S. (2015). 'Authority Relationship From a Societal Perspective: Social Representations of Obedience and Disobedience in Austrian Young Adults'. *Europe's journal of psychology*, Vol. 11(2), pp. 197–213. doi:10.5964/ejop.v11i2.883

Fellows, J. and Edwards, M. (2014) *User Guidelines on Qualitative Methods in Health Workforce Planning and Forecasting*. Available online at www.euhwforce.eu and www.cfwi.org.uk. Accessed online March 2020.

Fenn, P., Gray, A., Rickman, N., and Vencappa, D. (2016). '*Funding clinical negligence cases Access to justice at reasonable cost*?' London, Nuffield Foundation.

Finlay, L. (2002) '"Outing" the researcher: the provenance, process, and practice of reflexivity'. *Qualitative Health Research,* Vol. 12(4), pp. 531-45.

Fogarty, C.A., Bonebrake, R.G., Fleming, A.D., Haynatzki, G. (2003) 'Obstetrics and gynecology—to be or not to be? Factors influencing one's decision'. *American Journal of Obstetrics and Gynecology*. Vol. 189(3), pp. 652-4.

Fottrell Report. (2006) *Medical Education in Ireland: A New Direction*. Available online at https://www.education.ie/en/Publications/Policy-Reports/Medical-Education-in-Ireland-A-New-Direction-Report-of-the-Working-Group-on-Undergraduate-Medical-Education-and-Training.pdf. Accessed online February 2020.

Francis R. (2013). '*Mid Staffordshire NHS Foundation Trust Public Enquiry 2013. Report of the Mid Staffordshire NHS Foundation Trust Public Inquiry*. Available online at https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/279124/0947.pdf. Accessed January 2020.

Gafson, I., Currie, J., O'Dwyer, S, Woolf, K., Griffin, A. (2017) 'Attitudes towards attrition among UK trainees in obstetrics and gynaecology'. *British Journal of Hospital Medicine,* Vol. 78, pp. 344–348.

Gariti, D.L., Zollinger, T.W., Look, K.Y. (2005). 'Factors detracting students from applying for an obstetrics and gynecology residency'. *American Journal of Obstetrics and Gynecology*, Vol. 193(1), pp.289-293.

General Medical Council. *National Training Survey 2013: - undermining*. Available online at https://www.gmc-uk.org/-media/documents/NTS_2013_autumn_report_undermining.pdf_54275779.pdf. Accessed online January 2020.

Gorenflo, D.W., Ruffin, M.T., Sheetsm K.J. (1994). 'A multivariate model for specialty preference by medical students'. *Journal of Family Practice*, Vol. 39(6), pp. 570-6.

Gouda, P., Kitt, K., Evans, D., Goggin, D., McGrath, D., Last, J., Hennessy, M., Arnett, R., O'Flynn, S., Dunne, F., O'Donovan, D. (2015). 'Ireland's medical brain drain: migration intentions of Irish medical students'. Human Resources for Health, Vol. 13, No. 11.

Hammoud, M.M., Stansfield, R.B., Katz, N.T., Dugoff, L., McCarthy, J., White, C.B. (2006) 'The effect of the obstetrics and gynecology clerkship on students' interest in a

career in obstetrics and gynecology'. *American Journal of Obstetrics and Gynecology*. Vol. 195(5), pp.1422-6.

Hanafin M. (2006). '*Statement by Ms Mary Hanafin T.D., Minister for Education and Science, to Seanad Eireann concerning funding for Third Level Education and the Fottrell Report.*' Department of Education and Skills. Available online at .http://www.education.ie/en/Press-Events/Speeches/2006-Speeches/SP06-02-08.html. Accessed online January 2020.

Hanly Report (2003). '*Report of the national talk force on medical staffing'*. Available online at https://www.gov.ie/en/publication/8736d0-report-of-the-national-task-force-on-medical-staffing-hanly-report/?referrer=/wp-content/uploads/2014/03/report-of-the-national-task-force-on-medical-staffing-hanly-report.pdf/. Accessed online January 2020.

Harding Clark, M. (2006). '*The Lourdes Hospital Inquiry. An inquiry into peripartum hysterectomy at Our Lady of Lourdes Hospital, Drogheda. Report of Judge Maureen Harding Clark S.C*'. Available online at https://www.gov.ie/pdf/?file=https://assets.gov.ie/11422/febc70aebb7840bb8bb65a4f6edbefcc.pdf#page=1. Accessed December, 2019.

Harding Clarke, M. (2016). '*The Surgical Symphysiotomy Ex Gratia Payment Scheme Report'.* Department of Health. Available online at https://www.gov.ie/en/publication/544fc6-the-surgical-symphysiotomy-ex-gratia-payment-scheme-report/?referrer=/blog/publications/the-surgical-symphysiotomy-ex-gratia-payment-scheme-report/. Accessed online January 2020.

Health Service Executive. (2011) '*National Miscarriage Misdiagnosis Review April 2011'*. Available online at http:www.hse.ie/eng.services/publications/miscarriagemisdiagnosis.pdf. Accessed online January 2020.

Health Service Executive. (2017). *'Maternity Clinical Complaints Review Final Report May 2017'* Available online at https://www.hse.ie/eng/services/publications/hospitals/hse-maternity-clinical-complaints-review-may-2017.pdf. Accessed online January 2020.

Health Service Executive (2019). *'Approved Medical Consultants Posts'*. Available online at https://www.hse.ie/eng/staff/leadership-education-development/met/consultantapplications/rep1/approved-consultant-numbers-by-medical-discipline-report-31-march-2019.pdf. Accessed online February 2020.

Healy, T. (2007). 'Top Doctors win battle to reverse misconduct verdict'. *The Irish Independent.* Dec 15th 2007. Available online at https://www.independent.ie/irish-news/top-doctors-win-battle-to-reverse-misconduct-verdict-26338903.html. Accessed online January 2020.

Hedden, L., Barer, M.L., Cardiff, K., McGrail, K.M., Law, M.R., Bourgeault, I.L. (2014) 'The implications of the feminization of the primary care physician workforce on service supply: a systematic review'. *Human Resources for Health*. Vol. 12:32. doi:10.1186/1478-4491-12-32.

Henry, A., Clements, S., Kingston, A., Abbott, J. (2012). 'In search of work/life balance: trainee perspectives on part-time obstetrics and gynaecology specialist training'. *BMC Research Notes*, Vol. 5, Article 19. doi:10.1186/1756-0500-5-19.

Heuston, M. (2018). 'Politicians and HSE to blame for our health service debacle'. *The Irish Times* Available online at https://www.irishtimes.com/news/health/politicians-and-hse-to-blame-for-our-health-service-debacle-1.3345090. Accessed January 2020.

Higgins J. (2013). '*The Establishment of Hospital Groups as a transition to Independent Hospital Trusts*' Available online at https://assets.gov.ie/12167/64bd8d50ac8447a588d253d040284cd4.pdf. Accessed online January 2020.

Higham, J. (2006). 'Commentary: How can we make our medical students enthusiastic about a future in obstetrics and gynaecology?'. *British Journal of Obstetrics and Gynaecology*, Vol. 113(5), pp. 499-501.

HIQA (2013). '*Investigation into the safety, quality and standards of services provided by the Health Service Executive to patients, including pregnant women, at risk of clinical deterioration, including those provided in University Hospital Galway, and as reflected in the care and treatment provided to Savita Halappanavar'*. Available

online at https://www.hiqa.ie/sites/default/files/2017-01/Patient-Safety-Investigation-UHG.pdf. Accessed online January 2020.

HIQA. (2015). "*Report of the investigation into the safety, quality and standards of services provided by the Health Service Executive to patients in the Midland Regional Hospital, Portlaoise*". Available online at https://www.hiqa.ie/sites/default/files/2017-01/Portlaoise-Investigation-Report.pdf. Accessed online January 2020.

Holohan, T. (2014). '*Midland Regional Hospital, Portlaoise Perinatal Deaths (2006 to date). Report to the Minister for Health from Dr. Tony Holohan Chief Medical Officer'* Availalbe online at https://www.gov.ie/pdf/?file=https://assets.gov.ie/11420/56c3231908dc49c797e1cbb0da4f8cf7.pdf#page=1. Accessed online January 2020.

Hopkins, L., Hampton, B.S., Abbott, J.F., et al. (2018). '*To the point: medical education, technology, and the millennial learner'.* Am J Obstet Gynecol. Vol. 218(2): pp. 188-192. doi:10.1016/j.ajog.2017.06.001. Accessed online July 2020.

Humphries, N., Crowe, S., McDermott, C., McAleese, S., Brugha, R. (2017) 'The consequences of Ireland's culture of medical migration'. *Human Resources for Health*. Vol. 15(1) pp. 87.

Humphries, N., McAleese, S., Matthews, A., Brugha, R. (2015). 'Emigration is a matter of self-preservation. The working conditions...are killing us slowly. Qualitative insights into health professional emigration from Ireland'. Vol. 13:35.

Humphries, N., McAleese, S., Matthews, A. Brugha, R. (2015) "'Emigration is a matter of self-preservation. The working conditions . . . are killing us slowly': qualitative insights into health professional emigration from Ireland". *Human Resources for Health*. Vol. 13, 35 doi:10.1186/s12960-015-0022-6.

Imrie Report (2015) '*Training 21st Century Clinical Leaders, A review of the Royal College of Physicians of Ireland training programmes'* (RCPI). Available online at https://rcpi-live-cdn.s3.amazonaws.com/wp-content/uploads/2016/01/Training-21st-Century-Clinical-Leaders.pdf. Accessed online January 2020.

Institute of Obstetricians and Gynaecologists. (2006). '*The Future of Maternity and Gynaecology Services in Ireland 2006-2016*', RCPI Available online at https://rcpi-live-cdn.s3.amazonaws.com/wp-content/uploads/2016/01/Maternity-Gynaecology-Services-in-Ireland-2006-2016.pdf. Accessed online February 2020.

Institute of Obstetricians and Gynaecologists Annual Report 2018-2019. Available online at https://www.rcpi.ie/news/publication/institute-of-obstetricians-and-gynaecologists-annual-report-2018-2019/. Accessed online February 2020.

Institute of Obstetricians and Gynaecologists Annual Report 2014-2015. Available online at https://www.rcpi.ie/news/publication/institute-of-obstetricians-and-gynaecologists-annual-report-2014-2015/. Accessed online February 2020.

Iwashita, M. (2017). 'No fault compensation in perinatal medicine in Japan-from results for 8 years'. *Obstetrics & Gynecology Science*, Vol. 60(2), pp. 139-144.

Jones, K. (2006) 'Ambulatory Gynaecology: A new concept in the delivery of healthcare for women'. *Gynecological Surgery*, Vol. 3: 153. https://doi.org/10.1007/s10397-005-0166-9

Johnson, R.B., Christensen, L. (2004). '*Educational research: Quantitative, qualitative and mixed approaches'* (2nd ed.). Boston, MA: Pearson.

Kashiwagi, D.T., Varkeym, P. Cook, D.A. (2013). 'Mentoring programs for physicians in academic medicine: a systematic review'. *Academic Medicine*, Vol. 88(7), pp. 1029-1037.

Keane F. (2016). '*Towards Successful Consultant Recruitment, Appointment and Retention'*. Health Service Executive. Available online at https://www.hse.ie/eng/staff/resources/hr-publications/consultantrecruitment-dec16.pdf. Accessed January 2020.

Kiessling, T., Harvey, M. (2005). *Strategic global human resource management research in the twenty-first century: An endorsement of the mixed-method research methodology*. International Journal Human Resource Management, Vol. 16, pp. 22-45.

Kirkup, B. (2015). '*The Report of the Morecombe Bay Investigation'*. Available online at https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/408480/47487_MBI_Accessible_v0.1.pdf. Accessed online January 2020.

Kmietowicz, Z. (2018). 'Doctors call for public inquiry into GMC's handling of Bawa-Garba case'. *British Medical Journal*. Vol. 361:k2818. doi:10.1136/bmj.k2818 pmid:29950441.

Lally, J.E., Murtagh, M.J., Macphail, S. Thomson R. (2008). 'More in hope than expectation: a systematic review of women's expectations and experience of pain relief in labour'. *BMC Medicine* Vol. 6: 7. https://doi.org/10.1186/1741-7015-6-7.

Lam, C.Y., Cheung, C.S., Hui, A.S. (2016) 'Factors influencing the career interest of medical graduates in obstetrics and gynaecology in Hong Kong: a cross-sectional questionnaire survey' *Hong Kong Medical Journal*, Vol. 22(2), pp.138-43.

Lambert, E.M., Holmboe, E.S. (2005). 'The relationship between specialty choice and gender of US medical students, 1990–2003'. *Academic Medicine*. Vol. 80(9), pp.797-802.

Lambert, T.W, Smith, F., Goldacre, M.J. (2018). 'Career specialty choices of UK medical graduates of 2015 compared with earlier cohorts: questionnaire surveys'. *Postgraduate Medical Journal,* Vol. 94(1110), pp. 191–197. doi:10.1136/postgradmedj-2017-135309.

Larkin, G.V. (1983). '*Occupational monopoly and modern medicine'*. London: Tavistock; 1983.

Ledger W. (2010). '*National Miscarriage Misdiagnosis Review'* Available online at https://www.hse.ie/eng/services/publications/hospitals/miscarriagereview.html. Accessed Online January 2020.

MacCraith Report (2018). "*Strategic Review of Medical Training and Career Structure 2017-2018*" Department of Health. Available online at

https://assets.gov.ie/9981/171a58f7952c441f9f91f7934ad5243c.pdf. Accessed Dec 2019.

MacLennan, A.H., Spencer, M.K. (2002) 'Projections of Australian obstetricians ceasing practice and the reasons'. *The Medical Journal of Australia*.Vol. 176, pp. 425–8.

Magennis, F. (2010) 'Mother's instinct saves unborn son after miscarriage diagnosis'. *Irish Independent* June 9th 2010. Available online at https://www.independent.ie/regionals/argus/news/mothers-instinct-saves-unborn-son-after-miscarriage-diagnosis-26944508.html. Accessed online January 2020.

Malterud, K., Siersma, V.D., Guassora A,D. 'Sample size in qualitative interview studies: guided by information power'. *Qualitative Health Research*, Vol. 26(13), pp. 1753-1760. doi: 10.1177/1049732315617444. Epub 2016 Jul 10.

MBBRACE: *Mothers and Babies Reducing Risk through Audits and Confidential Enquiries across the UK 2018* Available online at https://npeu.ox.ac.uk/downloads/files/mbrrace-uk/reports/MBRRACE-UK%20Maternal%20Report%202018%20-%20Web%20Version.pdf. Accessed online January 2020.

McMurray, J.E., Cohen, M., Angus, G., Harding, J, Gavel, P., Horvath, J., Paice, E., Schmittdiel, J., Grumbach, K. (1972). 'Women in medicine: a four-nation comparison'. *Journal of the American Medical Women's Association* Vol. 57(4), pp. 185-90.

McNamara, K., Meaney, S., O'Donoghue, K. (2018). 'Intrapartum fetal death and doctors: a qualitative exploration'. *Acta Obstetrica et Gynaecologia Scandinavica,* Vol. 97, pp. 890-898.

Medical Council of Ireland. (2019) '*Medical Workforce Intelligence Report. A report on the 2017 and 2017 Annual Registration Retention and Voluntary Registration Withdrawal Surveys'.* Available online at https://www.medicalcouncil.ie/news-and-publications/press-releases/press-release/medical-workforce-intelligence-report.pdf. Accessed February 2020.

Medical Council of Ireland (2019). "*Your Training Counts. An investigation of Trainee wellbeing and their experiences of clinical learning environments in Ireland 2017"* Available online at https://www.medicalcouncil.ie/News-and-Publications/Reports/Your-Training-Counts-2017-Full-Report.pdf. Accessed online February 2020.

Mercer, C. (2018). 'How millennials are disrupting medicine'. *The Canadian Medical Association Journal,* Vol. 190(22), E696–E697. doi:10.1503/cmaj.109-5605.

Metheny,W., Blount, H., Holtzman, G.B. (1991). 'Considering obstetrics and gynecology as a specialty: current attractors and detractors'. *Obstetrics and Gynecology,* Vol. 78, pp. 308-312.

Mikos, T., Downes, E. (2005). 'Ambulatory gynaecology: what can we do?' *Best Practice and Research: Clinical Obstetrics and Gynaecology*. Vol. 19(5), pp. 647-61. Epub 2005 Sep 10.

Mitchell, S. (2019). 'Cervicalcheck probe was fevered says Scally' *The Sunday Business Post*, Available online at https://www.businesspost.ie/health/cervicalcheck-probe-atmosphere-was-fevered-says-scally-78fe9b72. Accessed online January 2020.

Molina-Azorin, J. F. (2012). 'Mixed methods research in strategic management: Impact and applications'. *Organizational Research Methods* Vol. 15, pp. 33-56.

Moonesinghe, S.R., Lowery, J., Shahi, N., Millen, A., Beard, D.J. (2011). 'Impact of reduction in working hours for doctors in training on postgraduate medical education and patients' outcomes: systematic review'. *British Medical Journal*. Vol. 342:d1580.

Morgan, H., Winkel, A., Nguyen, A., Carson, S., Ogburn, T., Woodland, M. (2019). 'Obstetrics and Gynecology Residents' Perspectives on Wellness: Findings From a National Survey'. *Obstetrics and Gynecology*. Vol. 133. 1. 10.1097/AOG.0000000000003103.

Morse, J.M. (2000). 'Determining Sample Size'. *Qualitative Health Research*, Vol. 10 (4), pp. 3-5.

Nancarrow, S.A., Borthwick, A.M. (2005). 'Dynamic professional boundaries in the healthcare workforce'. *Sociology of Health and Illness*. Vol. 27, pp. 897–919.

NDTP (2014). *National Doctors Training and Planning Specialty Workforce Review/ Obstetrics and Gynaecology* Available online at https://www.hse.ie/eng/staff/leadership-education-development/met/plan/specialty-specific-reviews/obstetrics-and-gynaecology-2014.pdf. Accessed online February 2020.

NPMA (2017). "*The National Maternal and Perinatal Audit 2017*" Available online at https://maternityaudit.org.uk/pages/home. Accessed December 2019.

NTMA (2019). National Treasury Management Agency Annual Report and Accounts 2018. Available online at https://www.ntma.ie/uploads/publication-articles/NTMA-Annual-Report-2018.pdf. Accessed online August 2020.

Newton, D.A., Grayson, M.S., Thompson, L.F. (2005). 'The variable influence of lifestyle and income on medical students' career specialty choices: data from two US medical schools, 1998-2004'. *Academic Medicine*, Vol. 80, pp. 809-14.

O'Carroll S. (2013) 'Ireland Murders Pregnant Indian Dentist'. *The Journal.ie* Available online at https://www.thejournal.ie/eighth-amendment-4-3977441-Apr2018/. Accessed January 2020.

O'Connor, M. (2009). 'Profit and Loss: The Politics of Health Reform in Ireland' The Ireland Institute. *The Citizen* Issue 2 Available online at http://www.theirelandinstitute.com/wp/profit-and-loss-the-politics-of-health-reform-in-ireland/. Accessed December 2019.

O'Donoghue, P. (2019). 'Ministers Donoghue and Harris announce new Slaintecare Contract for Consultants'. Available online at http://paschaldonohoe.ie/2019/12/ministers-donohoe-harris-announce-new-slaintecare-contract-for-consultants/. Accessed online February 2020.

O'Flynn, N. (2002). 'Women's attitudes to the sex of medical students in a gynaecology clinic; a cross sectional survey'. *British Medical Journal*, Vol. 325, pp. 683.

O'Hanlon E. (2012). "Our godlike 'butchers' must be cut down to size". *The Irish Independent*. Available online at https://www.independent.ie/opinion/analysis/eilis-ohanlon-our-godlike-butchers-must-be-cut-down-to-size-26870883.html. Accessed December 2019.

O'Hare, M., Manning, E., O'Herlihy, C., Greene R. (2015). *Confidential Maternal Death Enquiry in Ireland, Report for 2009-2012*, MDE Ireland, Cork.

O'Driscoll, K., Stronge, J.M., Minogue, M. (1973) 'Active management of labour'. *British Medical Journal*. Vol. 3(5872), pp. 135-7. doi: 10.1136/bmj.3.5872.135.

O'Regan E. 2007. 'Neary case: Top doctors are guilty of misconduct' *The Irish Independent* February 7th 2007. Available online at https://www.independent.ie/lifestyle/health/neary-case-top-doctors-are-guilty-of-misconduct-26274473.html. Accessed online January 2020.

OECD (2017). *Health Statistics*. Available online at https://www.oecd-ilibrary.org/docserver/health_glance-2017-54-en.pdf?expires=1581085124&id=id&accname=guest&checksum=56B92348669D4B4F08E10DEF0620203F. Accessed online January 2020.

OECD (2017). 'Future retirement ages', in *Pensions at a Glance 2017: OECD and G20 Indicators*, OECD Publishing, Paris. Available online at https://doi.org/10.1787/pension_glance-2017-10-en. Accessed Dec 2019.

OECD (2019). '*Recent Trends in International Migration of Doctors, Nurses and Medical Students*', OECD Publishing, Paris, Available online at https://doi.org/10.1787/5571ef48-en. Accessed online January 2020.

Ogbonmwan, S.E., Ogbonmwan, D.E. (2010). 'Recruitment and retention in obstetrics and gynaecology in the UK'. *British Journal of Hospital Medicine*, Vol. 71(2), pp.103-5.

Ogburn, T., Espey, E., Autry A., Leeman, L., Bachofer, S. (2007) 'Why obstetrics/gynecology, and what if it were not an option? A survey of resident applicants'. *American Journal of Obstetrics and Gynecology*. Vol. 197(5), 538-e1.

Ono T, Lafortune G and Schoenstein M. (2013) *Health Workforce Planning in OECD Countries: A Review of 26 Projection Models from 18 Countries*. OECD Health Working Papers, No. 62. Paris: Organisation for Economic Co-operation and Development. Available online at http://www.oecd-ilibrary.org/docserver/download/5k44t787zcwb.pdf?expires=1443099935&id=id&accname=guest&checksum=694ABE187C66057DA9AE6FD2F88347ED. Accessed online February 2020.

Oxtoby, K. (2014). 'Are sabbaticals still an option for today's doctors?' *British Medical Journal*, Vol. 348:g1212.

Paice, E., Heard, S., Moss, F. (2002). 'How important are role models in making good doctors?'. *British Medical Journal (Clinical research ed.*), Vol. 325(7366), pp. 707–710. doi:10.1136/bmj.325.7366.707.

Pandey, U., Lindow, S.W. (2006). 'Should obstetrics and gynaecology be separate specialities? A survey of Yorkshire trainees'. *Journal of Obstetrics and Gynaecology*. Vol. 26(4), pp. 305-6.

Passi, V., Johnson, N. (2016) 'The impact of positive doctor role modelling',*The Medical Teacher*, Vol. 38(11), pp. 1139-1145, DOI: 10.3109/0142159X.2016.1170780.

Phillips, J.P. (2016). 'Workplace Violence against Health Care Workers in the United States'. *New England Journal of Medicine* Vol. 374, pp. 1661-1669 DOI: 10.1056/NEJMra1501998.

Proceedings of the Dublin Obstetrical Society. (1873). *The British and Foreign Medico-Chirurgical Review*, Vol. 52(103), pp. 170–171.

Queenan, J.T. (2003). 'The future of obstetrics and gynecology'. *Obstetrics and Gynecology,* Vol. 102, pp. 441-2.

Rayburn, W.F. (2017). 'The Obstetrician-Gynecologist Workforce in the United States Facts, Figures, and Implications' *American Congress of Obstetrician and Gynecologists* Available online at

https://m.acog.org/~/media/BB3A7629943642ADA47058D0BDCD1521.pdf. Accessed December 2019.

RCOG (2017). "Health Education England O&G Workforce Analysis" Available online at https://www.rcog.org.uk/globalassets/documents/careers-and-training/workplace-and-workforce-issues/rcog-og-workforce-report-2017.pdf. Accessed online January 2020.

RCOG (2018) "Workforce Report 2018 Update on Workforce Recommendations and Activities" Available online at https://www.rcog.org.uk/globalassets/documents/careers-and-training/workplace-and-workforce-issues/rcog-og-workforce-report-2018.pdf. Accessed January 2020.

Redmond, S. (2015). 'Ireland's Maternity Units are facing Dangerous and Chronic understaffing' *thejournal.ie* Available online at https://www.thejournal.ie/readme/maternity-care-dangerous-understaffing-ireland-2111224-May2015/. Accessed December 2019.

Reilly, C. (2019) 'Litigation risks contribute to 'attrition' in BST obstetrics – IOG' *The Medical Independent* Available online at https://www.medicalindependent.ie/litigation-risks-contribute-to-attrition-in-bst-obstetrics-iog/ Accessed online January 2020.

Rimmer, A. (2018). 'Bawa-Garba case: GMC chief executive should resign, says consultants' union' *British Medical Journal* [online] pp. 362, Available online at https://doi.org/10.1136/bmj.k3673. Accessed December 2019.

Roberfroid D, Leonard C and Stordeur S. (2009) 'Physician supply forecast: better than peering in a crystal ball'. *Human Resources for Health*, Vol. 7(10), pp. 1-13.

Rose, K., Van de Venne, M., Abakke, A. J., Romanek, K., & Redecha, M. (2012). 'Is 48 hours enough for Obstetrics and Gynaecology training in Europe?'. *Facts, views & vision, ObGyn,* Vol. 4(2), pp. 88–92.

Royal College of Obstetricians and Gynaecologists, Royal College of Paediatrics and Child Health. *Children's and Maternity Services in 2009: Working Time Solutions*. London: RCOG; 2008.

Ryder, R., Kearney, L., Kynn, M., Weaver, E. (2019). "Resilience and workplace stress in Australian and New Zealand obstetrics and gynaecology trainees: A cross-sectional survey". *Australian and New Zealand Journal of Obstetrics and Gynaecology*. Vol. 10.1111/ajo.13098.

Saolta. (2018) 'External Independent Clinical Review of the Maternity Services at Portiuncula Hospital, Ballinasloe (PUH) and of 18 perinatal events which occurred between March 2008 and November 2014'. Available online at https://saolta.ie/sites/default/files/publications/Clinical%20Review%20of%20Portiuncula%20Maternity%20services%202018.pdf. Accessed Dec 2019.

Sandall J. (2015). Place of birth in Europe. *Entre Nous* Vol. 81, pp. 16-17 Available online at https://eeca.unfpa.org/sites/default/files/pub-pdf/Entre_Nous_81_web.pdf. Accessed online February 2020.

Scally, G. (2018). '*Scoping Inquiry into the CervicalCheck Screening Programme" Dr. Gabriel Scally Final Report'* Availalble online at http://scallyreview.ie/wp-content/uploads/2018/09/Scoping-Inquiry-into-CervicalCheck-Final-Report.pdf. Accessed online January 2020.

Scally, G. (2019). '*Scoping Enquiry into the CervicalCheck Screening Programme'* Available online at http://scallyreview.ie/wp-content/uploads/2019/07/Closure-letter-from-Gabriel-Scally-to-Minister-Harris-190710.pdf. Accessed online January 2020.

Schnuth, R.L., Vasilenko, P., Mavis, B., Marshall, J. (2003). 'What influences medical students to pursue careers in obstetrics and gynecology?' *American journal of Obstetrics and Gynecology*. Vol. 189(3), pp. 639-43.

Schwartz, R.W., Haley, J.V, Williams C., Jarecky, R.K, Strodel W.E., Young, B., Griffen, W.O. (1990). 'The controllable lifestyle factor and students' attitudes about specialty selection' Academic Medicine, Vol. 65, pp. 207-10.

Schwitzer, G. (2013). 'Addressing tensions when popular media and evidence-based care collide'. *BMC Medical Informatics and Decision Making*, Vol. 13 (Suppl 3), S3. doi:10.1186/1472-6947-13-S3-S3.

Scott, I.M., Nasmith, T., Gowans, M.C., Wright, B.J., Brenneis, F.R. (2010). 'Obstetrics and gynaecology as a career choice: a cohort study of Canadian medical students'. *Journal of Obstetrics and Gynaecology Canada,* Vol. 32(11), pp.1063-9.

Seemiller, C., Grace, M. (2016) "*Generation Z Goes to College*". San Francisco, CA: Jossey-Bass; 2016.

Sekhar, M.S., Vyas, N. (2013). 'Defensive medicine: a bane to healthcare'. *Annals of Medical Health Sciences Research*. Vol. 3(2), pp. 295–296. doi:10.4103/2141-9248.113688.

Sharma, S., Ward, E., Burns, C., Theodoros, D., Russell, T. (2012) 'Training the allied health assistant for the telerehabilitation assessment of dysphagia'. *Journal of Telemedicine and Telecare.* Vol. 18, pp. 287–91.

Siddiq, T., Atiomo, W. (2009) 'Future recruitment into obstetrics and gynaecology: Factors affecting early career choice' *Journal of Obstetrics and Gynaecology*, Vol. 29(5), pp. 369-372.

Stelling, H. (2018). 'Attrition: Solutions, Focus Group Report 2018'. Royal College of Obstetricians and Gynaecologists. Available online at https://www.rcog.org.uk/globalassets/documents/committees/trainees-committee/trainee-news/attrition-solutions-report.pdf. Accessed December 2019.

Stewart, R., Geoghegan, K, Myers, J.G., Sirinek, K.R., Corneille, M., Meuller ,D, Dent, D., Wold, S., Pruitt, B. (2011) 'Malpractice Risk and Cost Are Significantly Reduced after Tort Reform' *Journal of the American College of Surgeons*, Vol. 212(4), pp. 463 - 467.

Stillman, D., Stillman, J. (2017). "*Gen Z @ Work: How the Next Generation Is transforming the Workplace"*. New York, NY: HarperBusiness.

Scottish Government (2014). '*Consultation Report: Consultation on recommendations for No-fault compensation in Scotland for injuries resulting from medical treatmen't*. Edinburgh, The Scottish Government.

Teddlie, C. Tashakkori, A. (2003). '*Major issues and controversies in the use of mixed methods in the social and behavioural sciences'.* In A. Tashakkori and C. Teddlie (Eds.), Handbook of mixed methods in social and behavioural research (pp. 3-50). Thousand Oaks, CA: Sage.

Thangaratinam, S., Yanamandra, S.R., Deb, S., Coomarasamy, A. (2006). 'Specialist training in obstetrics and gynaecology: a survey on work-life balance and stress among trainees in UK'. *Journal of Obstetrics and Gynaecology*. Vol. 26(4), pp.302-4.

Toraldo, D. M., Vergari, U., & Toraldo, M. (2015). 'Medical malpractice, defensive medicine and role of the "media" in Italy'. *Multidisciplinary Respiratory Medicine*, Vol. 10(1), 12. doi:10.1186/s40248-015-0006-3.

Traynor, V. (2018) '*2.5 million euro settlement for terminally ill woman whose cancer was missed'*. RTE News https://www.rte.ie/news/courts/2018/0425/957122-vicky-phelan/. Accessed online January 2020.

Turner, G., Lambert, T.W., Goldacre, M.J., Barlow, D. (2006). 'Career choices for obstetrics and gynaecology: national surverys of graduates of 1974-2002 from UK medical schools'. British Journal of Obstetrics and Gynaecology, Vol. 113(3), pp. 350-6.

Turner M. McNicholl M. 2015 National Clinical Programme: Obstetrics and Gynaecology (2015) '*Consultant Workforce Planning 2015 Supplementary Report'*, Dublin: National Clinical Programme: Obstetrics and Gynaecology Available online at https://rcpi-live-cdn.s3.amazonaws.com/wp-content/uploads/2018/04/Consultant-Workforce-Planning-Supplement-June-2015.pdf. Accessed December 2019.

Twenge, J.M. (2017). " *IGen: Why Today's Super-Connected Kids Are Growing Up less Rebellious, More Tolerant, Less Happy—Completely Unprepared for Adulthood"*. New York, NY: Atria Books; 2017.

Twigg, V. (2017). 'Training in the NHS needs to be tailored to "Generation Y"' Available online at https://blogs.bmj.com/bmj/2017/06/22/victoria-twigg-training-in-the-nhs-needs-to-be-tailored-to-generation-y/. Accessed November 2019.

Wall, M. (2010). 'HSE puts cost of training doctor to be GP at almost €300,000' *The Irish Times*, Available online at https://www.irishtimes.com/news/health/hse-puts-cost-of-training-doctor-to-be-gp-at-almost-300-000-1.683685. Accessed online January 2020.

Wall, M. (2019). "Medical negligence payments cost over €265m in first nine months of year" *The Irish Times*, Available online at https://www.irishtimes.com/news/ireland/irish-news/medical-negligence-payments-cost-over-265m-in-first-nine-months-of-year-1.4078575. Accessed online February 2020.

Wallis, K.A. (2013). 'New Zealand's 2005 'no-fault' compensation reforms and medical professional accountability for harm'. *New Zealand Medical Journal*, Vol. 126(1371), pp. 33–44.

Wallis, K.A. (2017). 'No-fault, no difference: no-fault compensation for medical injury and healthcare ethics and practice'. *The British Journal of General Practice* Vol. 67(654), pp. 38–39. doi:10.3399/bjgp17X688777.

Walsh, O. (2012). '*Report on Symphysiotomy in Ireland. 1944 to 1984'* Available online at https://www.gov.ie/en/publication/8535fb-report-on-symphysiotomy-in-ireland-1944-1984-professor-oonagh-walsh/. Accessed online January 2020.

Walsh, O. (2014). 'Final report on symphysiotomy in Ireland, 1944-1984'. Government of Ireland, Dublin.

World Health Organization (2010). "*The WHO global code of practice on the international recruitment of health personnel*". Geneva. World Health Organization, 2010.

Yasunaga, H. (2008). 'The catastrophic collapse of morale among hospital physicians in Japan'. *Risk Management in Healthcare Policy*. Vol. 1, pp.1–6.

Appendix A

Ethical Approval for Study of Medical Students

UCC
Tel: + 353-21-490 1901
Fax: + 353-21-490 1919
Coláiste na hOllscoile Corcaigh, Éire
University College Cork, Ireland

COISTE EITICE UM THAIGHDE CLINICIÚIL
Clinical Research Ethics Committee

Lancaster Hall,
6 Little Hanover Street,
Cork,
Ireland.

ECM 6 (cd) 06/12/16 & ECM 3 (ooo) 09/05/17

21st April 2017

Dr Suzanne O'Sullivan
Consultant Obstetrician & Gynaecologist
Cork University Maternity Hospital
Wilton
Cork

Re: Factors influencing medical students decision to pursue a career in obstetrics and gynaecology.

Dear Dr O'Sullivan

The Chairman approved the following:

- Revised Invitation Letter dated 4th April 2017.

Full approval is now granted to carry out the above study.

The Medical Student involved in the research will be:

- Acife Howard.

Yours sincerely

Professor Michael G Molloy
Chairman
Clinical Research Ethics Committee
of the Cork Teaching Hospitals

Gynae Secretary
2017
Cork University Maternity Hospital

Appendix B

Details of Study and Questionnaire Provided to Medical Students (Chapter 2)

Information Letter

Dear student,

My name is Aoife Howard and I am currently a fourth year medical student in University College Cork. I am undertaking a research project that aims to identify the factors that influence medical students' decision to pursue a career in obstetrics and gynaecology (OB/GYN).

I am inviting you to participate in this study as you are a GEM 3, DEM 4, GEM 4 or DEM 5 student currently enrolled in an Irish medical school. This study takes the form of a self administered anonymous questionnaire and the data collected will be stored securely. This questionnaire will examine factors such as age, gender and placement experience as well as your perception of various characteristics of obstetrics and gynaecology. Your participation is voluntary and the study will take around 15 minutes to complete.

Risk; There are no foreseeable risks involved in participation in this study.

If you have any questions regarding the study please feel free to contact me at 113311806@umail.ucc.ie

Your participation is greatly appreciated.

Yours faithfully,

Aoife Howard.

Questionnaire

Age:_____

Gender; Female ☐

Male ☐

University:

University College Cork ☐

University College Dublin ☐

University of Limerick ☐

NUI Galway ☐

Trinity College Dublin ☐

Royal College of Surgeons ☐

Class; Direct entry medicine year 4 ☐

Graduate entry medicine year 3 ☐

Direct entry medicine year 5 ☐

Graduate entry medicine year 4 ☐

Nationality: _____

Do you have children? Yes ☐

No ☐

Career choice:

I know what specialty I wish to pursue after graduation: Yes ☐

No ☐

On a scale of 1 to 10 please rate the likelihood of you pursuing a career in Obstetrics and Gynaecology where 1 represents a definite no and 10 a definite yes; _____

Please state your first preference speciality in the space provided; _____

Overall placement experience:

Below are a series of statements pertaining to your Obstetrics and Gynaecology rotation please indicate whether you agree with these by using a scale from 1 to 5. The scale is as follows.

1; completely disagree, 2; moderately disagree, 3; no affect, 4; moderately agree 5; completely agree.

Please place an X in the relevant column.

Statement	**1 Completely disagree**	**2 Moderately disagree**	**3 No effect**	**4 Moderately agree**	**5 Completely agree**
I gained valuable hands on experience					
My attachment increased my interest in OB/GYN					
I felt satisfied with my experience of the rotation					
I had positive interactions with nurses + midwives					
I had positive interactions with doctors					
I had positive interactions with patients					
I feel that my gender negatively influenced my learning experience					
I feel that my gender positively influenced my learning experience					

Characteristics of obstetrics and gynaecology:

This section contains a series of statements relating to OB/GYN, please select whether or not you believe that the factors listed below attract or detract you as a medical student to/from the speciality or are of no influence using a scale of 1 to 5. The scale is as follows;

1; strongly detracts me from OB/GYN 2; moderately detracts 3; no effect, 4; moderately attracts, 5; strongly attracts me to OB/GYN

Please place an X in the relevant column.

Factors	**1 Strongly detracts**	**2 Moderately detracts**	**3 No effect**	**4 Moderately attracts**	**5 Strongly attracts**
Predominantly healthy patient population					
Continuity of care					
Female patients only					
Carrying out surgery					
Carrying out deliveries					
Limited focus of disease					
Intellectual content of OB/GYN					
Combination of obstetrics and gynaecology					
On call hours					
Gynaecological element					
Obstetric element					
Predominance of female OB/GYNs					
Career opportunities					
Current debate regarding abortion					
Fear of adverse outcomes					
Media portrayal					
Likelihood of litigation					
Financial remuneration					
Work/ life balance					
Duration of training					
Level of stress					
Working under pressure					
Increasing patient expectations e.g. positive birth experiences					
Interactions with midwives on placement					
Interactions with NCHDs					
Interactions with consultants					

Would you be more likely to consider OB/GYN if?

The following section contains a series of statements referring to theoretical changes in OB/GYN please select whether you believe these changes would make the speciality either more appealing, less appealing or be of no effect using a scale from 1 to 5. The scale is as follows;

1; strongly reduces appeal, 2; moderately reduces appeal, 3; no effect, 4; moderately increases appeal, 5; strongly increases appeal.

Please place an X in the relevant column.

Change	**1 Strongly reduces**	**2 Moderately reduces**	**3 No effect**	**4 Moderately increases**	**5 Strongly increases**
Ability to concentrate on obstetrics only					
Ability to concentrate on gynaecology only					
Ability to focus solely on surgical side					
Ability to focus solely on medical side					
Fewer on call hours					
Shorter duration training (currently min.8 years)					
Litigation protection					
More exposure to OB/GYN as a student.					
More hands on experience as a student e.g. labour ward					
Increased financial remuneration					
Ability to work flexibly as opposed to a “full” consultant with on call					

Media portrayal of obstetrics and gynaecology:

This section contains a series of statements examining the portrayal of OB/GYN in the media, you are asked to state whether you agree or disagree with these using a scale from 1 to 5. The scale is as follows:

1; completely disagree, 2; moderately disagree, 3; unsure, 4; moderately agree 5; completely agree.

Please place an X in the relevant column.

Statement	1 Completely disagree	2 Moderately disagree	3 Unsure	4 Moderately agree	5 Completely agree
OB/GYN is positively portrayed in the media					
The media portrayal of OB/GYN has influenced my attitude towards it as a potential career					
The media portrayal of OB/GYN has made me less likely to pursue a career in it					
OB/GYN as a specialty is the subject of more media focus than other specialities					
Media portrayal of OB/GYN has increased my fear of adverse outcomes					
Media portrayal of OB/GYN has increased my perception of litigation					
Media portrayal has influenced patients attitude towards OB/GYN doctors in a negative way					

Do you have any more thoughts on this subject? _____

Thank you for your time and participation in this study.

References

1. Dornan T, Muijtjens A, Graham J, Scherpbier A, Boshuizen H. Manchester Clinical Placement Index (MCPI). Conditions for medical students' learning in hospital and community placements. Advances in Health Sciences Education. 2012 Dec 1;17(5):703-16.

Appendix C

Questionnaire Exploring Factors Affecting Trainee's Experiences in Obstetrics and Gynaecology (Chapter 3)

1.

1. Age:

2. Gender:

- Male
- Female

3. Nationality:

- Irish
- EU
- non-EU

4. Do you have children?

- Yes
- No

2.

5. Grade:

- ◯ Intern
- ◯ BST
- ◯ BST on training scheme
- ◯ Registrar
- ◯ Registrar on training scheme
- ◯ Specialist Registrar
- ◯ Clinical fellow
- ◯ Research fellow
- ◯ Consultant
- ◯ Other (please specify)

3.

6. How long have you worked in the specialty?

- ◯ 0-5 years
- ◯ 6-10 years
- ◯ 11-15 years
- ◯ 15 -20 years
- ◯ more than 20 years

7. Do you enjoy working in Obstetrics and Gynaecology? 1 – 10

	1 (Not at all)	2	3	4	5	6	7	8	9	10 (Immensely)
How much do you enjoy working in Obstetrics and Gynaecology? 1 – 10	◯	◯	◯	◯	◯	◯	◯	◯	◯	◯

4.

8. Media Portrayal of Obstetrics and Gynaecology

	Completely disagree	Moderately disagree	Unsure	Moderately agree	Completely agree
Media representation of OB/GYN is fair and balanced	○	○	○	○	○
The impact of the media on OB/GYN as a specialty is positive	○	○	○	○	○
The impact of the media on OB/GYN patients is positive	○	○	○	○	○
The impact of the media on midwives and nurses is positive	○	○	○	○	○
The impact of the media on medical students' impression of OB/GYNis positive	○	○	○	○	○

9. Media portrayal of Obstetrics and Gynaecology

	Completely disagree	Moderately disagree	Unsure	Moderately agree	Completely agree
I believe other medical specialities are portrayed in a more balanced light	○	○	○	○	○
Media portrayal of OB/GYN has increased my fear of adverse outcomes	○	○	○	○	○
Media portrayal of OB/GYN has increased my fear of litigation	○	○	○	○	○
Media portrayal has influenced patients attitude towards doctors in a negative way	○	○	○	○	○
Media Portrayal has adversely influenced recruitment and retention in Obs and Gynae	○	○	○	○	○

10. Comments:

5.

11. Have you ever been involved in any medico-legal case?

- Yes
- No

12. If yes, how many cases have you been involved in?

- 1-2
- 3-5
- 6-8
- 9-12
- >12

13. Have you ever had to write a report for a medico-legal case?

- Yes
- No

14. Have you ever been involved in a systems analysis review?

- Yes
- No

15. Have you ever had to attend court, or the coroner's court?

- Court
- Coroner's court
- Both
- Neither

16. Have you ever been named in a patient complaint?

	0	1-3	4-6	7-9	10 or more
Have you ever been named in a patient complaint?	○	○	○	○	○

6.

17. Factors

	Strongly positive	Moderately positive	No effect	Moderately negative	Strongly negative
What impact has the current medico-legal climate had on you as a professional?	○	○	○	○	○
What impact has the current medico-legal climate had on your practice?	○	○	○	○	○
What impact does the medico-legal climate have on your interactions with patients?	○	○	○	○	○
What impact does the medico-legal climate have on patients	○	○	○	○	○
What impact has the medico-legal climate had on you personally?	○	○	○	○	○
What impact has the medico-legal climate on recruitment and retention in Obs and Gynae?	○	○	○	○	○
What impact does the medico-legal climate have on your communication with patients?	○	○	○	○	○

18. Comments:

7.

19. Personal Factors

	Never	Rarely	Sometimes	Frequently	Always
Have you suffered abusive behaviour from a patient?	○	○	○	○	○
Have you suffered abusive behaviour from a patient's family member or a patient's friend?	○	○	○	○	○
Have you had threatening behaviour from a patient or their family member?	○	○	○	○	○
Have you had trolls from members of the public on social media?	○	○	○	○	○

20. Personal factors

	Never	Twice a year (Rarely)	Monthly (Sometimes)	Weekly (Frequently)	Daily (Always)
Do you regret choosing obs/gyn as a career?	○	○	○	○	○
Have you thought about leaving obs/gyn?	○	○	○	○	○
If you were back at school, would you choose medicine again as a career?	○	○	○	○	○
Would you be interested in working as a community gynaecologist?	○	○	○	○	○
If you were an intern again, would you choose ob/gyn as a career?	○	○	○	○	○
Would you be interested in working as an "associate specialist"?	○	○	○	○	○
Do you think about leaving medicine?	○	○	○	○	○
Do you practice defensive medicine?	○	○	○	○	○

21. Comments:

8.

22. Are you active on social media?

- [ ] Facebook
- [ ] Twitter
- [ ] Instagram
- [ ] Snapchat
- [ ] Blog
- [ ] Forum
- [ ] No

Other (please specify)

23. Have you had a negative experience with social media as a professional?

- [ ] No
- [ ] Yes (please specify)

9.

24. European Working Time Directive

	Strongly agree	Moderately agree	Unsure	Moderately disagree	Strongly disagree
EWTD has improved my work life balance	○	○	○	○	○
EWTD has improved patient care	○	○	○	○	○
I would opt out of EWTD if I could	○	○	○	○	○
I will be fully trained and confident to work at consultant level when I have finished my training	○	○	○	○	○
EWTD has improved my professional life	○	○	○	○	○

10. Current issues affecting trainees in obstetrics and gynaecology

25. I would recommend a career in OB/GYN to a family member or my child

- ◯ Strongly agree
- ◯ Moderately agree
- ◯ Unsure
- ◯ Moderately disagree
- ◯ Strongly disagree

26. Comments:

Appendix D

Questionnaire Exploring Career Plans and Future Working Patterns of Trainees in Obstetrics and Gynaecology (Chapter 4)

1.

1. Age:

2. Gender:

- Male
- Female

3. Nationality:

- Irish
- EU
- non-EU

4. Do you have children?

- Yes
- No

5. Grade:

- Intern
- BST
- BST on training scheme
- Registrar
- Registrar on training scheme
- Specialist Registrar
- Clinical fellow
- Research fellow
- Consultant
- Other (please specify)

2.

6. Once on the specialist register:

	1(Definitely no)	2	3 (Unsure)	4	5 (Definitely yes)
Do you plan on working in Ireland?	◯	◯	◯	◯	◯
Do you plan on working full time?	◯	◯	◯	◯	◯
Do you plan on taking a sabbatical during your career?	◯	◯	◯	◯	◯
Do you plan on taking parental leave?	◯	◯	◯	◯	◯
How willing are you to work on two different sites in the same hospital group?	◯	◯	◯	◯	◯
Would you consider being resident on call as a consultant?	◯	◯	◯	◯	◯
Would you consider job sharing?	◯	◯	◯	◯	◯
Do you plan to do private obstetrics?	◯	◯	◯	◯	◯
Do you plan to do private gynaecology?	◯	◯	◯	◯	◯
Do you plan to do private obstetrics and gynaecology?	◯	◯	◯	◯	◯

7. If possible, would you work: (More than one answer allowed)

- ◯ Sessional only (no on-call)
- ◯ Community based only
- ◯ Hospital based only
- ◯ Combined hospital and community with on-call
- ◯ Combined hospital and community without on-call
- ◯ Obstetrics only
- ◯ Gynaecology only
- ◯ Private practice only

3.

8. Once on the specialist register, would you consider working in the following hospitals?

	1 (Definitely No)	2 (Probably No)	3 (Unsure)	4 (Probably Yes)	5 (Definitely Yes)
Coombe Women's Hospital	○	○	○	○	○
National Maternity Hospital, Holles Street	○	○	○	○	○
Rotunda Hospital	○	○	○	○	○
Cork University Maternity Hospital	○	○	○	○	○
University Hospital Galway	○	○	○	○	○
Midland Regional Hospital Portlaoise	○	○	○	○	○
Midland Regional Hospital Mullingar	○	○	○	○	○
Cavan General Hospital	○	○	○	○	○
Our Lady Of Lourdes Hospital, Drogheda	○	○	○	○	○
University Hospital Kerry	○	○	○	○	○
Waterford University Hospital	○	○	○	○	○
Wexford General Hospital	○	○	○	○	○
Sligo University Hospital	○	○	○	○	○
South Tipperary	○	○	○	○	○
Portiuncula University Hospital, Ballinasloe	○	○	○	○	○
Letterkenny University Hospital	○	○	○	○	○
St Luke's Hospital Kilkenny	○	○	○	○	○
University Maternity Hospital Limerick	○	○	○	○	○
Mayo University Hospital, Castlebar	○	○	○	○	○

9. For Hospitals you are reluctant to work in, what would make you re-consider? (More than one answer allowed)

- [ ] Salary increase
- [ ] More consultants in the same unit
- [ ] More time off allowed
- [ ] More NCHDs
- [ ] More research opportunities
- [ ] Improved clinical governance structures
- [ ] Hospital provided on-call accommodation
- [ ] Earlier retirement
- [ ] Better pension

10. What age would you prefer to retire at:

- ◯ 50-54
- ◯ 55-59
- ◯ 60-64
- ◯ 65-69
- ◯ 70 and over

11. Comments:

Appendix E

Ethical Approval for Qualitative Study Seeking Consultant's Insights and Solutions to Current Challenges (Chapter 5)

UCC
Tel: + 353-21-490 1901
Fax: + 353-21-490 1919
Coláiste na hOllscoile Corcaigh, Éire
University College Cork, Ireland

COISTE EITICE UM THAIGHDE CLINICIÚIL
Clinical Research Ethics Committee
Lancaster Hall,
6 Little Hanover Street,
Cork,
Ireland.

ECM 4 (kkk) 05/06/18 & ECM 3 (cccccc) 03/07/18

10th July 2018

Dr Suzanne O'Sullivan
Consultant Obstetrician and Gynaecologist
Cork University Maternity Hospital
Wilton
Cork

Re: Current challenges facing recruitment and retention in obstetrics and gynaecology.

Dear Dr O'Sullivan

The Chairman approved the following:

- Application form signed 11th June 2018 (received 18th June 2018)
- Study protocol
- Consent form
- Interview Questions.

Full approval is now granted to carry out the above study.

The date of this letter is the date of authorization of the study.

Please keep a copy of this signed approval letter in your study master file for audit purposes.

You should note that ethical approval will lapse if you do not adhere to the following conditions:

1. Submission of an Annual Progress Report/Annual Renewal Survey (due annually from the date of this approval letter)
2. Report unexpected adverse events, serious adverse events or any event that may affect ethical acceptability of the study
3. Submit any change to study documentation (minor or major) to CREC for review and approval. Amendments must be submitted on an amendment application form and revised study documents must clearly highlight the changes and contain a new version number and date. Amendments cannot be implemented without written approval from CREC.
4. Notify CREC of discontinuation of the study
5. Submit an End of Trial Declaration Form and Final Study Report/Study Synopsis when the study has been completed.

Yours sincerely

Professor Michael G Molloy
Chairman
Clinical Research Ethics Committee
of the Cork Teaching Hospitals

The Clinical Research Ethics Committee of the Cork Teaching Hospitals, UCC, is a recognised Ethics Committee under Regulation 7 of the European Communities (Clinical Trials on Medicinal Products for Human Use) Regulations 2004, and is authorised by the Department of Health and Children to carry out the ethical review of clinical trials of investigational medicinal products. The Committee is fully compliant with the Regulations as they relate to Ethics Committees and the conditions and principles of Good Clinical Practice.

Appendix F

Participant Information and Consent Form for Qualitative Study Seeking Consultant's Insights and Solutions to Current Challenges (Chapter 5)

CONSENT BY SUBJECT FOR PARTICIPATION IN RESEARCH STUDY

Participant Name:_____

Challenges facing recruitment and retention in Obstetrics and Gynaecology

Name of Chief Investigator: Dr. Suzanne O'Sullivan

Contact Number for Chief Investigator: 0868556876

You are being asked to participate in a research study. When you are sure you understand the study and what will be expected of you, you will be asked to sign this form if you wish to participate.

Nature of study

This study aims to look at factors influencing the attraction of this specialty to doctors, and to gather information on the specific difficulties experienced by trainees and consultants in the specialty, with a view to informing how best we can improve recruitment and retention in the specialty going forward.

You will be interviewed in a place of your choosing for approximately 20 minutes, and the interview will be recorded. Questions will address factors impacting doctors in this specialty including media portrayal and medico-legal issues, as well as general morale, changing patient expectations, and burnout. Your thoughts and ideas on how to improve recruitment and retention will also be sought.

POTENTIAL RISKS AND BENEFITS:

All personal details will be anonymous.

The information coming from this study will help to acknowledge and address difficulties facing practitioners in our specialty and will help to inform and optimise workforce planning and recruitment and retention for maternity services going forward.

Your participation is voluntary.

AGREEMENT TO CONSENT

The research project has been fully explained to me. I have had the opportunity to ask questions concerning all aspects of the project. I am aware that participation is voluntary and that I may withdraw my consent at any time. I agree to allow my interview to be recorded. Confidentiality of records concerning my involvement in this project will be maintained in an appropriate manner.

I, the undersigned, hereby consent to participate as a subject in the above described project conducted with UCC. I have received a copy of this consent form for my records. I understand that if I have any questions concerning this research, I can contact the Chief Investigator listed above. I understand that the study has been approved by the Cork Research Ethics Committee of the Cork Teaching Hospitals (CREC) and if I have further queries concerning my rights in connection with the research, I can contact CREC at Lancaster Hall, 6 Little Hanover Street, Cork, 021 4901901.

Answer yes or no

I have read and understand the study:

I agree to participate in this research:

I agree to allow my interview to be audio-recorded:

I grant permission for the data collected to be used in this research only:

I understand that my anonymised data will be stored at CUMH for 2 years:

Chief Investigator Signature: _____

Signature of Study Participant: _____

Date: _____

Appendix G

Interview Schedule for Qualitative Study Seeking Consultant's Insights and Solutions to Current Challenges (Chapter 5)

1. Could you outline your background in obstetrics and gynaecology?
2. How do you see the issue of recruitment and retention of trainees to the specialty?
3. How do you think obstetrics and gynaecology has changed as a career option during your time in the specialty?
4. What is your perception of morale amongst trainee and consultant doctors working in obstetrics and gynaecology at present?
5. What is your impression of the media impact on morale of trainees and consultants working in the specialty?
6. What is your impression of the impact of the medico-legal climate on trainees and consultants working in the specialty?
7. What other factors do you think are affecting morale?
8. What is your perception of how morale is influencing recruitment and retention to the specialty?
9. Are there other factors that might contribute to problems with recruitment and retention?
10. What solutions might you propose to improve recruitment and retention in obstetrics and gynaecology?
11. Is there anything I have not asked you or that you would like to add?