A Qualitive Study of the Impact and Acceptability of Gynaecological Teaching Associates

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Abstract

Objectives

Declining clinical exposure in female pelvic examination, increasing student numbers and the intimate nature of the examination poses challenges for medical student training. This study explores the experience and acceptability of all stakeholders involved in a novel method of pelvic examination teaching with the use of expert patients called ‘Gynaecological Teaching Associates’ (GTAs). An additional aim was to ascertain the motivation of lay women to become GTAs.

Methods

A qualitative study was conducted with participants including medical students, teaching and non-teaching faculty members and GTAs. Data was collected through semi-structured interviews, a group interview with a supplemental interview, and non-participant observation (NPO). Twenty students, eight faculty staff, and four GTAs were interviewed, and NPO was accomplished during teaching sessions.

Analysis

Sequential thematic analysis was conducted on all transcripts. Data from both field notes and interview transcripts was triangulated to establish the validity of findings.

Results

Medical students found GTA teaching acceptable and reported an increased confidence in undertaking female pelvic examinations. They reported a lack of opportunities for male medical students to obtain exposure to, and experience of, gynaecological examination prior to the introduction of the GTA teaching. Other themes included overcoming the intimate nature of the examination, comparing manikin to GTA teaching, and the positive impact on clinical
practice. Potential drawbacks included the perception of this "abnormal" teaching method amongst the general public. Lay women volunteered due to the rewarding nature of teaching and the benefit provided to the students.

Conclusion

GTA teaching has been described as a positive experience by all stakeholders. Acceptability has been established with positive outcomes noted for students. GTA motivation was noted to be altruistic. There are some concerns documented, especially the ability to recruit and monitor an effective GTA teaching programme, as well as to ensure the safety of the GTAs themselves.

Keywords: Undergraduate medical education; Pelvic examination; Gynaecology Teaching Associates (GTAs); Manikin; Competence and Confidence

Introduction

Medical students require proficiency in female pelvic examination to pass both their Obstetrics and Gynaecology (O&G) placements and graduate medical school. Iyengar et al. (2012) have stated that some students complete their training without the opportunity to perform a female pelvic examination on a patient who is awake. Male students report feeling that their gender negatively impacted their undergraduate pelvic examination experience, with a greater degree of embarrassment or higher rate of patient refusal (Akkad et al., 2008; Chang et al., 2010).

Gynaecology Teaching Associates (GTAs) are women trained to teach pelvic examination skills. The undergraduate teaching faculty at the Birmingham Women's Hospital (BWH) recruited and trained a GTA faculty to provide independent teaching of clinical gynaecological examination to include instruction in technical aspects, psychological aspects and communication skills. GTA teaching has been incorporated into the O&G block at BWH for the past four years.

A literature search in three electronic databases: Medline; Embase and CINAHL found limited information on the social acceptability or experience of medical students, teaching faculty and GTAs within a curriculum where pelvic examination skills were taught by GTAs. Some authors have suggested that medical students may be embarrassed to undertake pelvic examinations as well as be concerned about inflicting unintentional pain on a patient, especially those who may already have underlying gynaecological pain. This in turn hinders the ability to obtain necessary skills required to undertake an effective pelvic examination. Utilising healthy knowledgeable GTAs has been recognised by a number of authors as being effective in promoting confidence and competence in pelvic examination, as well as developing interpersonal skills among medical students (Dabson et al., 2014; Pickard et al., 2003; Wanggren et al., 2010).

The GTA's experience of the pelvic examination teaching programme has been addressed to a limited extent in the literature. Limited reference to the disadvantages of such a programme, the difficulty of recruiting professional patients, attrition of GTAs and the latter's perceptions of the morality or social acceptance of such a programme do not appear to be addressed in the available literature. Moreover, the sensitive nature of genital tract examination may create prejudicial views from students, teachers and clinicians as to the stimulus for lay women to act as GTAs. Thus, we considered it worthwhile to explore the motivation of lay women to become GTAs.
Methods

Qualitative research methods included semi-structured interviews, a group interview and non-participant observations (NPO) with an interview topic guide. (Appendices 3-6) Stakeholder groups were identified and purposive sampling was used to identify as final year medical students who had received GTA teaching, Consultant faculty and GTAs for the study. A total of 20 students, out of 55 contacted, took part in an interview lasting 20 minutes. (Table 1)

Table 1: Demographics of students who participated in semi-structured interviews

|                          | Male | Female |
|--------------------------|------|--------|
| Number of students       | 8    | 12     |
| Age (years)              |      |        |
| Mean                     | 24.3 | 25.1   |
| Range                    | 23-26| 22-31  |
| GTA + GTA                | 7    | 11     |
| GTA + Chaperone teaching | 1    | 1      |

Footnotes

1 Chaperones included nurses or doctors qualified in performing female pelvic examination. They were called in to assist with teaching whilst the pelvic examination was performed on the GTA.

Semi structured interviews were conducted with four teaching faculty Consultants, who reviewed clinical activities, and four Consultants, who have students attached to them in the clinical environment but no regular formal teaching. (Table 2) As the educationalists behind the teaching programme itself, the insight of the GTAs was deemed invaluable. The acceptability perspective is also important from their personal, family and social point of view. Three GTAs participated in a group interview with a supplemental interview of one GTA.

Table 2: Demographics of teaching and non-teaching faculty who participated in semi-structured interviews

|                          | Teaching | Non Teaching |
|--------------------------|----------|--------------|
| Number of Consultants    | 4        | 4            |
| Age (years)              |          |              |
| Mean                     | 45.00    | 45.50        |
| Median                   | 43.50    | 45.00        |
All participants were provided with an information sheet and a signed consent form was obtained. (Appendix 1 and 2) Individual and group interviews were digitally recorded and took place over a period of 10 weeks in 2015. For the purposes of conducting NPO, GTAs and students were informed of the aim of the observing the teaching session, and consent was obtained. Verbal and non-verbal cues were observed and documented discretely as field notes. Saturation was reached after observing four teaching sessions where findings became repetitive and no new events or interactions were recorded.

### Thematic Analysis

Digital audio recording from all the interviews was transcribed to provide a written record, with the original recording preserved for reference. A sequential thematic analysis was then conducted to identify, analyse and report patterns within the data (Simons et al., 2008). This helped with refining questions for further interviews. Once all data collection was completed, content analysis (Baxter, 1991; Mayring, 2002) using a 'coding' system was used; this quantified the number of times a certain theme emerged. Reflexivity was undertaken throughout by discussions with an independent advisor in order to minimise researcher bias. Data from the three methods (field notes, medical student and GTA interviews) was triangulated to establish the validity of findings.

### Results

The findings are presented in ten identified themes, each with supporting evidence provided from participating stakeholders: GTA, Teaching Faculty (TF), Non-teaching faculty (NTF), and medical student (MS).

#### Theme 1: The importance of pelvic examination skills

All stakeholders considered a satisfactory pelvic examination essential in order to diagnose pathology. However the students suggested that much less teaching time was given to undertaking gynaecological examination compared with any other body system throughout their undergraduate curriculum.

The teaching faculty (TF#2) suggested that "an examination could easily give you the answer that you need and that would potentially cut delays in treatment for someone, avoid unnecessary referrals and cut down on stress for patients". NTF#4 stressed that "pelvic examination is mandatory. It is important today as trainees rely so much on imaging and basic skills are going out of the window. It should be part of your management”. Considering this is the "the bread and butter” (NTF#3) of gynaecology, there is an understandable fear amongst patients where the doctors
"is not happy to perform the examination" (TF#2).

**Theme 2: Exposure**

Five out of twenty students (25%) commented that there was minimal exposure to pelvic examination on the wards or in practice, particularly for male students. A male student (MS#14) mentioned access issues where "some days like yesterday, no-one wanted me in the room". NTF#4 noted that "the men do not get the opportunity as the patients do not generally allow them to do examinations". GTA teaching "deflates some of the embarrassment" of performing the examination on patients, which was noted by MS#8 who commented she was "glad I didn't do this for the first time on a real patient".

**Theme 3: Confidence**

All stakeholders mentioned improved confidence which enabled students to maximise opportunities available to them in the hospital placements. GTA#3 commented that provision of a safe, relaxed environment with positive feedback enhanced the learning experience of the students and commented that "in some respects it is quite nice when something doesn't go quite to plan, because you can give them the confidence and the ability to go in again and be more confident". When students appeared flustered with the abdominal examination aspect of the examination, the GTA herself was noted to say "relax, ask me what it's for" when referring to an abdominal incision.

**Theme 4: Communication Skills**

Students mentioned during their interview that "the hardest bit is the communication" where "(we) feel like we're stumbling (without the GTA teaching)"; and "don't want to sound technical" and "come out and say something you didn't want to say". TF#1 mentioned that following GTA teaching, "the student will explain the whole procedure, take consent, be polite and considerate to the patient and inform them of what will happen. I think they appreciate that the patient understands what they say". Furthermore NTF#2 mentioned how "in today's medicine communication is extremely important", which reinforces the importance of this skill being taught during the GTA session.

**Theme 5: Intimacy**

Students themselves highlighted "it's a bit intimate" after performing the examination on GTAs. They were noted to be slightly uncomfortable to begin with, and one male student was apprehensive of the intimacy during his peer examining the GTA, and was standing in the room in a position where he would not be able to observe. (Figure 1)

**Theme 6: Manikin examination compared with GTA teaching**

MS#8 highlighted the difference in examination, saying that "the feedback you get from doing it live on a person is important as you don't get that from a manikin". TF#3 commented that a manikin is "piece of plastic" with "no emotions" and is "built in the easiest possible way". GTA#1 stated "it is easy to find the cervix in a manikin" and therefore translating such into practice can be quite a stretch without the addition of GTA teaching. However building confidence on undertaking the procedure on a manikin initially may have some advantages before "removing the artificiality and giving the students the aspect of real life". (TF#3)

Practical tips such as "tie your hair up so you can see with the light behind (you)" or "look at my face (during abdominal examination)" are unique to the GTA experience compared with manikin teaching. Pelvic floor pressure also assists with speculum closure in real life, which is different to manikin teaching.
Theme 7: Impact on clinical practice

Practical application of academic knowledge was noted by NTF#2 who mentioned that "as far as GTA examinations are concerned, most will have normal pelvises and will have a normal pelvic examination. It is important to know what is normal before going on to understand what is abnormal". Students concurred that GTA teaching was a good step between theory and examining actual patients and promoted a thorough holistic approach which focused on ensuring patient comfort and dignity.

TF#3 commented that practice under general anaesthetic is "artificial" and that GTA practice is "as close as possible to real life scenario". Another advantage of GTA teaching was that by performing the examination better, this would reflect with fewer complaints from patients. Students were also encouraged to recognise their limitation, which is an attribute encouraged by the GMC for all clinicians. One of the GTAs mentioned to a student that "if (they have) not seen something don’t pretend (you have) seen it – ask for help".

Theme 8: Drawbacks

It was noted that "more medical aspects of it (teaching by GTAs) might be inappropriate", and "they could definitely train certain aspects, for example communication". (NTF#2) "One (potential) disadvantage is that if GTAs are not properly trained, it could perpetuate the cycle of bad examination technique". (NTF#4)

There are also a maximum number of speculum examinations that are comfortable for individual GTAs, and this could cause an issue if larger student group sizes were allocated to a pair of GTAs. GTA#4 felt that because of the intimate nature of the teaching being a GTA, it "takes a certain kind of person to do it" which could inhibit recruitment and hinder the expansion of such a programme.

Theme 9: Acceptability and morality

All students commented that GTA teaching was acceptable, where MS#9 considered that it was "immoral not to have the appropriate training" as female pelvic examination is an essential procedure that happened across healthcare settings on a regular basis. In addition, to undertake the procedure for the first time on a patient potentially as a qualified doctor raised more of an ethical question where it was better to practice initially on a volunteer. (TF#1)

Currently it was perceived by MS#2 that "outside of the healthcare setting the teaching would not be considered as normal". Family and friends would "think it strange that people would volunteer to do it but would rather they have medical students practice before doing it on a real patient". The students noted that it could be construed as an unusual experience requiring an explanation of the rationale, but that generally as a medical student many of their experiences were highly unusual compared to their contemporaries. Students reported that friends at other medical schools were quite envious of their opportunity and MS#9 commented that "if it was part of every medical student’s education, then it would be very normal" and that "people would be very grateful to have had it rather than not to have it because it seemed awkward or abnormal".

Interestingly, when considering the morality of such teaching, TF#3 commented that "if the examination under anaesthetic is morally acceptable then why should examination of a GTA not be?" TF#4 stated that "society demands that doctors be perfect and society demands that doctors never make mistakes and always get it right…I don’t see that GTAs are any less socially acceptable than cadaveric dissection. Society can only have it one way or another."
GTA#3 mentioned that when discussing her role in a non-medical setting she had experienced mixed reactions where "one person asked me did my husband know I was doing this? ….I said yes he does know, but why would my husband have any say as to my cervix, it's nothing sexual …but that (to some of the public) that you are going to let someone do that to you without a reason comes as a shock".

**Theme 10: Motivation to become a GTA**

Motivation to become a GTA predominantly focused on the rewarding nature of the work, feeling respected and valued as teachers and the subsequent benefit noted for the students. GTA#1 stated "that's my inspiration to come back when they (the medical students) have said yes, you really helped me". Additionally a keen interest in women's health and the altruistic aspect of the work was described, with GTA #2 declaring that "it is such an important examination for women because if someone has had a bad experience, they are unlikely to return readily for subsequent investigations (for a cancerous lesion) and it could be my Mum, daughter of friend and I would like it done in the best way."

**Discussion**

**Main study findings**

This qualitative study has highlighted the importance of GTA teaching for undergraduate medical students in O&G. All stakeholders, in particular male students, confirmed a positive experience during and after GTA teaching sessions. Both students and the undergraduate faculty agreed that this programme was an acceptable means of teaching. Students also reported that communication skills which are vital to examination and the establishment of a professional rapport to help relax the patient and improve the patient experience were enhanced after GTA teaching.

However, students opined that their friends, relatives and non-medical colleagues may find the nature of the teaching method difficult to comprehend and relate to. This finding reflects the difficulty in recruiting women to become GTAs from the general population. The undergraduate faculty also had concerns about the training and monitoring of GTA teaching, including safety of the GTAs themselves. One very promising aspect from the study is that GTAs are a highly motivated group of educators who have altruistic intentions and are keen to provide excellent teaching to students, which will consequently benefit patients.

**Strengths of the study**

This qualitative research paper explores the opinions and actions of a wide stakeholder group. Both experience and acceptability of the teaching programme are comprehensively studied. A range of investigative methods were used for data collection, from semi-structured individual interviews to a group interview, and the use of NPO, where triangulation was used to check for common themes. The advantage of using NPO was that it "helped overcome the discrepancy between what people say and what they actually do" (Mays and Pope, 1995). The use of triangulation with multiple 'vantage points' has helped answer the research questions with greater clarity and reduced the overall margin of error (Beitmayer et al., 1993).

**Weaknesses of the study**

The teaching fellow for the O&G department performed the NPO, which could contribute an element of bias to the field notes. There is a possibility of the "Hawthorne effect", where the presence of the investigator at a small teaching session can modify the dynamics of the group including aspects of psychical actions, interactions and
dialogue (Holloway and Wheeler, 2010). Students may be encouraged to appear more interested, listen carefully and perform conscientiously (Roethlisberger and Dickson, 1939).

Due to work commitments, all eight members of the GTA faculty were unable to attend the group interview. The room set up for the discussion was also not ideal, with seating around a table, rather than the preferred option of having the chairs in a circle to create a more conducive and informal environment for dialogue.

Comparison with other studies

In comparison with other studies, our study reflects similar findings. The students highlighted the importance of the examination and the need for sensitivity and proficiency regarding the procedure which has been reflected by other authors (Moore et al., 2000; Robertson et al., 2003). Additionally they felt more comfortable initially practicing the procedure on healthy volunteers rather than clinical patients especially as they had felt they were less likely to cause pain to the healthy GTAs rather than patients who may have pathology. The utility of feedback to medical students regarding their performance from GTAs and the noted limitations of manikin teaching were seen in this study as well as previous studies (Jha et al., 2010). The ethics of undertaking of the procedure for the first time on clinical patients has also been raised in the literature (Coldicott et al., 2003).

The medical students estimated that their confidence and competence in performing pelvic examination increased following the GTA teaching which had been reflected comprehensively in similar studies (Grankvist et al., 2014; Wanggren et al., 2005). The teaching and non-teaching faculty highlighted the benefits of the GTA programme for the students that had the teaching during their O&G placement particularly regarding their ability to seek out additional opportunities to practice and their confidence in discussing the procedure with patients, an outcome also identified in previous studies (Dabson et al., 2014; Robertson et al., 2003; Wanggren, Fianu Jonassen et al 2010).

The GTA group and supplemental interview findings confirmed some of the themes highlighted by other studies. The GTAs mentioned the satisfaction involved in seeing the students confidence increase during the teaching sessions and providing a safe environment in which they could practice their communication skills and the technical aspects of the procedure. The rewarding nature of the GTA role had been reflected by previous studies (Siwe et al., 2006).

The GTAs also mentioned practical difficulties, such as larger than optimum student groups reducing time available for each individual to practice the procedure in this setting, which may be exacerbated by the difficulties of recruiting individuals to work in this role, which is a unique finding from the study. Other new findings include the issues relating to acceptability of GTAs within the public’s perception were mentioned by participants from all groups which may prohibit the recruitment of individuals to this type of employment.

This novel aspect of universal social and moral acceptability and normality of the programme amongst the medical students, GTAS and O&G consultants compared to the perceived public perception by study participants had not been addressed in the literature. Individuals in the non-teaching faculty and medical students groups both mentioned the potential awkward and embarrassing nature of the procedure that is reflected in literature which may inhibit learning (Dabson et al., 2014). However the aspect of limited opportunities for male students to undertake pelvic examination has not been examined to any degree in previous studies. Negative aspects of the provision of GTA teaching highlighted in systematic reviews, such as personal relationship problems for GTAs and physical discomfort caused during the procedure were not apparent in this study (Jha et al., 2010).

Implication for clinicians and policy makers
The implications of this study for clinicians and policy makers is to consider developing the GTA pelvic examination teaching programme further within the O&G curriculum. It is also important that education leaders in universities around the country consider the advantages of such a programme within their own medical schools.

The commonly held misconception that GTA teaching would not be acceptable has been addressed through this study. It is easy to see why there may be wider social barriers to this method of education for medical students. However, there may also be ethical barriers to cadaveric dissection which is used across universities for the purposes of education. Medical student experiences are different and somewhat unconventional to what society would expect generally. Wide stakeholder participation has demonstrated that GTA teaching provides a good experience and is acceptable for all individuals concerned.

It is also important to consider the emotional impact on patients who have had pelvic examinations performed badly or the ones that develop anxieties for future pelvic examinations as a result of poor skills training in performing pelvic examination. The increasing burden of litigation is also important to consider where inappropriate communication or physical examination in this intimate area can lead to a greater long term burden on the NHS. There could also be future costs of unnecessary investigations through performing poor or incomplete examinations due to a lack of skill of detecting the presence or absence of pathology.

Unanswered questions and future research

Future research will be required to investigate patient perspective of GTA teaching, including rapport. This could be done as a quantitative or a qualitative study exploring their opinions. Ethical approval would need to be sought for randomising patients during clinics to students who have received either manikin, or GTA teaching and studying the level of patient perceived competence at the end. This form of trial would need a thorough protocol to overcome the multiple avenues of bias such as patient characteristics and their previous experiences. A consequential positive effect on patients would be a good motivator for educational curriculum change.

Public participation through focus groups could be held within the women’s health department of hospitals to clarify what GTA training and teaching for medical students entails, and allow investigation into the public’s opinions and perceptions.

Conclusion

Qualitative research with stakeholders for the innovative GTA-led female pelvic examination teaching programme has demonstrated a positive experience for students and widespread acceptability within the medical faculty.

There was recognition of the importance of good pelvic examination skills, and the clinical impact of the teaching for the patients’ experience and safety. Students in particular confirmed an improved confidence in performing pelvic examination in the clinical environment and developing improved communication skills, which are both key to putting the patient at ease during an intimate examination.

Although there are some benefits of manikin teaching, the holistic nature and life-like experience of performing the examination on a real person has been noted to have a significant benefit. There are some concerns documented, especially the ability to recruit and monitor an effective GTA teaching programme, as well as to ensure the safety of the GTAs themselves. One very promising aspect from the study is that GTAs are a highly motivated group of educators who have altruistic intentions and are keen to provide excellent teaching to students, which will consequently benefit patients.
Take Home Messages

1. Medical students require proficiency in female pelvic examination to pass both their Obstetrics and Gynaecology (O&G) placements and graduate medical school.

2. There is a reported lack of opportunity for medical students, in particular male medical students, to obtain exposure to and experience of female pelvic examination teaching.

3. Female pelvic examination teaching by Gynaecological Teaching Associates (GTAs) has been described as a positive experience by both medical students and faculty.

4. GTAs are shown to be an acceptable means of teaching female pelvic examination skills.

5. Lay women volunteer to be GTAs due to the rewarding nature of teaching and the benefit provided to the students.
and patients.

Notes On Contributors

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All authors meet the criteria for authorship, in detail: AJ and LB designed and conducted the study; AJ and LB collected and analysed the data. AJ and LB wrote and revised the manuscript. TJC supervised the study and assisted in analysis and review of the manuscript.

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Details of ethics approval

University of Birmingham and Birmingham Women's Hospital ethical approval granted: ERN_14-1414

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Appendices
APPENDIX 1: EASTT Participation Information Sheet

Participant Information Sheet

We would like to invite you to take part in a study to explore the experience and acceptability of incorporating gynaecology teaching associates (GTAs) in the final year medical student curriculum to teach pelvic examination skills.

Before you decide whether to take part we would like you to understand the reason for this research and what it would involve for you. One of our team will go through the information sheet with you and answer any questions that you have.

What is the purpose of the study?

The purpose of this study is to explore the experience of medical students, teaching faculty and GTAs during the GTA led curriculum for teaching pelvic examination skills in the final year O&G clinical placement.

Why have I been invited?

You have been invited as you are a stakeholder within the teaching programme conducted by GTAs at Birmingham Women’s hospital. You have been invited to provide your opinion in the setting of a one-to-one interview or a focus group with a facilitator. In order to put forward the case for using GTAs to teach pelvic examination skills, we have to explore the acceptability and experience of those involved in this aspect of the final year curriculum.

Do I have to take part?

It is up to you to decide to join the study. We will describe the study and go through this information sheet. If you agree to take part we will ask you to sign a consent form. You are free to withdraw your participation at any point. You will be given 24 hours between reading the information sheet and signing the consent form. If you are not able to sign the consent form prior to attending the interview or focus group, you can sign it on the day itself.

What will happen if I choose to take part?

Interview: You will have a semi-structured interview by either trial co-ordinator, who is interested in understanding your views on the GTA involvement in the teaching of pelvic examination skills for final year medical students.
Focus Group: You will participate in a focus group with your GTA peers. The trial co-ordinator / facilitator will ask questions to encourage group discussion on GTA involvement in the teaching of pelvic examination skills for final year medical students.

Your interviews / focus groups will be recorded on a digital recorded so that thematic analysis for this qualitative study can take place. Unfortunately, as we are recording the examination there can be no anonymisation of voice, but once transcribed onto paper, each participant will be given a participant number rather than documenting their name e.g GTA 1, Medical Student 2.

You can choose to withdraw from the study. If you have participated in an interview, the recording can be destroyed if you so wish. However, if you have participated in a focus group, the ability to remove your contribution from the discussion is not feasible.

What are the disadvantages of participating in the study?

The only disadvantage for you is the time given up to participate in the interview or focus group.

What benefits can come from participating in the study?

If you choose, the Chief Investigator can provide you with results of the study after its completion and analysis.

For further information:

The UK Clinical Research Collaboration has produced a guide entitled, ‘Understanding clinical Trials’. This can be downloaded from their website: [www.ukcrn.org.uk](http://www.ukcrn.org.uk) and maybe useful if you require general information about research. If you require specific information about the research project please contact any of the following trial staff listed below:

Aisha Janjua (Clinical Teaching Fellow) email: aisha.janjua@bwnft.nhs.uk

Mr J Clark (Consultant Obstetrician and Gynaecologist) email: justin.clark@bwhct.nhs.uk

Birmingham Women’s hospital, Mindelsohn Way, Edgbaston, Birmingham B15 2TG

Tel: 0121 667 4712
APPENDIX 2: EASTT Consent Form

Birmingham Women’s NHS Foundation Trust

EASTT: What is the Experience and Acceptability of Students, Teaching faculty and gynaecology Teaching associates (GTAs) of the pelvic examination teaching programme.

1. I confirm that I have read and understood the information sheet relating to the study dated [13/10/2014] version 1. I have had the opportunity to consider the information and ask questions and these have been answered satisfactorily.

2. I understand that my participation is voluntary and that if I take part, I am free to withdraw at any time, without giving reason, and without my medical education being affected.

3. I accept that the researchers may telephone or email me.

4. I understand that the information will be used for medical research only and that I will not be identified in any way in the analysis and reporting of the results. I understand that any information relating to the trial will be held in confidence within Birmingham Women’s Hospital and the University of Birmingham and only be accessible by the researchers.

5. I understand what is involved in the EASTT Study, agree to participation in the interview or focus group as required.

_________________________  ______________________  ______________________
Name of student              Date                           Signature

_________________________  ______________________  ______________________
Name of person Taking consent Date                           Signature

When completed: 1 for participant; 1 for researcher site file; 1 (original) to be kept in Student University Site File.

Participant Number

TF - Teaching Faculty

ST – Student

GTA - Gynaecology Teaching Associate
APPENDIX 3: Interview Questions for Medical Students

Demographics: Age; Gender; GTA+GTA or GTA+Chaperone teaching

Why do you think pelvic examination skills are important?

What do you think constitutes good pelvic examination teaching? And bad ones?

What are your experiences of pelvic examination teaching?

During GTA teaching, please could you explain if and how the following were affected / improved?

- Knowledge
- Skill
- Behaviour during pelvic examination

How did you feel during the GTA teaching of pelvic examination skills?

How do you think GTA teaching of pelvic examination skills affected / improved your experience during your O&G block?

Do you think GTAs are adequate to satisfy pelvic examination teaching, or should they be used in conjunction with manikin teaching?

What is your opinion of employing GTAs to teach pelvic examination skills?

Do you have any objections towards GTA teaching? If so, please discuss.

Do you think GTAs teaching is considered morally acceptable? Please rationalise your answer.

Do you think GTAs teaching is considered normal? Please rationalise your answer.

Do you think GTAs teaching is considered socially acceptable? Please rationalise your answer.

Have you informed your family members you participate in GTA teaching? Please explain?

Have you informed your friends you participate in GTA teaching? Please explain?

APPENDIX 4: Interview Questions for Teaching and Non-Teaching Faculty

Demographics: Age; Gender; Years as a Consultant; Years involvement in formal medical education

Why do you think pelvic examination skills are important?

What do you think constitutes good pelvic examination teaching? And bad ones?

What are your experiences of pelvic examination teaching?

What is your involvement in teaching pelvic examination skills to medical students?
In your opinion, please could you explain if and how you think GTA teaching affects / improves the following?

- Knowledge
- Skill
- Behaviour during pelvic examination

What is your opinion of employing GTAs to teach pelvic examination skills compared to the traditional manikin (pelvic model)?

Do you think GTAs are adequate to satisfy pelvic examination teaching, or should they be used in conjunction with manikin teaching?

In your opinion, what are the drawbacks of traditional manikin teaching?

In your opinion, what are the drawbacks of GTA pelvic examination teaching?

What are the barriers to implementing a curriculum wide GTA teaching programme? (within University of Birmingham; or expand to national medical school O&G curriculum)

What is your opinion of employing GTAs to teach pelvic examination skills?

Do you have any objections towards GTA teaching? If so, please discuss.

Do you think GTAs teaching is considered morally acceptable? Please rationalise your answer.

Do you think GTAs teaching is considered normal? Please rationalise your answer.

Do you think GTAs teaching is considered socially acceptable? Please rationalise your answer.

Have you informed your family members the medical students receive GTA teaching? Please explain?

Have you informed your friends the medical students receive GTA teaching? Please explain?

APPENDIX 5: Interview Questions for GTA Group Interview and Supplemental Interview

Why do you think pelvic examination skills are important?

What do you think constitutes good pelvic examination teaching? And bad ones?

What are your experiences of pelvic examination teaching?

What are your experiences of pelvic examination teaching prior to entering this programme?

What is your view on the current method of GTA teaching compared to traditional manikin (pelvic model) teaching?

How did you hear about the GTA programme?

What made you consider to become a GTA / What are your motivations for becoming a GTA?
How do you feel as a GTA during teaching of pelvic examination skills?

What are the positive experiences of the GTA teaching programme?

What are the drawbacks of the GTA teaching programme?

Do you think GTAs are adequate to satisfy pelvic examination teaching, or should they be used in conjunction with manikin teaching?

Do you think GTAs teaching is considered morally acceptable? Please rationalise your answer.

Do you think GTAs teaching is considered normal? Please rationalise your answer.

Do you think GTAs teaching is considered socially acceptable? Please rationalise your answer.

Have you informed your family members you participate in GTA teaching? Please explain?

Have you informed your friends you participate in GTA teaching? Please explain?

APPENDIX 6: Non Participant Observation Points to Note for Investigator

Demographics: Age of students being taught; Gender; GTA+GTA or GTA + Chaperone teaching

Who?

- Who and how many people are present at the GTA teaching?
- Is the session taught by GTA+GTA or GTA + Chaperone?
- What are their characteristics?
- What is their role?

What?

- What is happening during the teaching?
- What are the actions or behaviours by the GTAs and medical students?
- What are the rules of behaviour observed during the PowerPoint teaching and out-patient teaching?
- What are the variations in the behaviour observed?
- Are there any signs of disinterestedness or boredom?
- What are the verbal responses and physical behaviours exhibited during GTA teaching?
- What is the reaction to feedback given by the GTA or chaperone?
- What do the other students do whilst their colleague if performing the examination?

Where?

- Where are the interactions taking place?
- Where are medical students and GTAs located in the physical space?

When?
When do conversations and interactions take place?
What is the sequence and timing of PowerPoint teaching and pelvic examination teaching of all the medical students?

Why?

- Why are the medical students acting in a particular way?
- Why are the GTAs acting in a particular way?
- Why are there variations in behaviour?
(These can be investigated further during the medical student interview and GTA focus group. Further questions added to the respective topic guides.)

Declarations

The author has declared that there are no conflicts of interest.

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