



An exploration of consultation skills in community pharmacists

Mr Ahmed Al-Nagar MPharm MRPharmS

Submitted for the degree of Doctor of Philosophy

University of East Anglia
School of Pharmacy

Submitted in September 2014

This copy of the thesis has been supplied on condition that anyone who consults it is understood to recognise that its copyright rests with the author and that use of any information derived there from must be in accordance with current UK Copyright Law. In addition, any quotation or extract must include full attribution

Abstract

An exploration of consultation skills in community pharmacists

By: Ahmed Al-Nagar

Keywords

Community pharmacy, consultation skills, pharmacist consultations, pharmacist consultation skills, training of pharmacist

Background

The role of the community pharmacist has evolved from compounding and dispensing to providing patient focused services which require more patient interaction. Previous research has described pharmacist consultation skills as not optimal or patient centred. The aim of the thesis was to add an in depth understanding about the possible reasons behind this.

Method

The thesis comprises three studies; the first study used focus groups to investigate community pharmacists' experiences and perceptions of their consultations with patients. The second study was the first nationwide questionnaire based study to investigate consultation skills training received by community pharmacists. The final study was a feasibility study to investigate the use of an innovative interactional-analysis methodology known as the Roter Interactional Analysis to audio recorded community pharmacy consultations.

Results

The results showed while community pharmacists enjoy speaking to patients, a number of factors limit the quality of these interactions. The nationwide questionnaire results indicates that a large number of community pharmacists have not had any formal consultation skills training and seek more advanced consultation skills training. Analysis showed consultation skills training could influence confidence and had a positive impact on the delivery of more patient facing services. The use of an interactional analysis system is a useful tool to develop future consultation skills training in community pharmacy.

Conclusion

The thesis has provided a more in depth understanding of the consultation based challenges facing community pharmacists, community pharmacy as a profession and researchers investigating pharmacist-patient interaction. It has also identified many areas which require further development if community pharmacists are going to undertake high quality consultations. It will be important for these to be fully considered if any future proposed changes to community pharmacy roles are to be successful.

Contents

Abstract	ii
Contents	iii
List of Tables	vi
List of Figures	ix
List of conference proceedings from thesis	x
Glossary	xi
Acknowledgements	xii
Chapter 1 – Introduction	1
1.1 Changing World of Community Pharmacy	2
1.2 Government policies	3
1.3 Pharmacy contract	6
1.4 Stress in community pharmacy setting.....	12
1.5 Skill mix of the pharmacy team	14
1.6 Pharmacy Education	16
1.7 Pharmacist consultation skills.....	27
1.8 Conclusion.....	40
Chapter 2 – Focus Group Study	42
2.1 Introduction.....	43
2.2 Aims and objectives	46
2.3 Methodology, Procedure and Analysis.....	47
2.4 Focus group findings.....	58
2.5 Themes	59
2.6 Discussion of themes and conclusion	79
2.7 Conclusion.....	89
Chapter 3 – Consultation Skills Training Questionnaire	91
3.1 Introduction.....	92
3.2 Aims and objectives	93
3.3 Method	94
3.4 Results	102
3.4.4 Future training needs.....	127

3.5	Discussion	149
Chapter 4	– The Feasibility of using RIAS in Community Pharmacies.....	165
4.1	Introduction.....	166
4.2	Aims and objectives	169
4.3	Method	170
4.4	Results	188
4.5	Discussion	220
Chapter 5	– Overarching Discussion.....	230
Overarching Discussion	.....	231
Conclusions	.....	239
Recommendations for future work:	.....	241
References	.....	243
Appendices	.....	253
Appendix 1	– Focus Group Study.....	254
Appendix 1.1	– Focus Group Ethics Approval	255
Appendix 1.2	– Generic Fax Letter.....	257
Appendix 1.3	– Covering Letter.....	259
Appendix 1.4	– Participant Information Sheet.....	261
Appendix 1.5	– Basic Demographic Detail Survey.....	266
Appendix 1.6	– Preference Survey.....	268
Appendix 1.7	– Withdrawal Postcard.....	270
Appendix 1.8	– Consent Form	272
Appendix 1.9	– Confidentiality Agreement.....	274
Appendix 1.10	– Participant Validation Proforma.....	276
Appendix 1.11	– Participant Validation Report.....	278
Appendix 2	– Consultation skills questionnaire study	299
Appendix 2.1	– Approval letter from Ethics Committee	300
Appendix 2.2	– Initial Email.....	302
Appendix 2.3	– Reminder Email.....	305
Appendix 2.4	– Questionnaire and questions logic	308
Appendix 2.5	– Models that are not Valid	322
Appendix 2.6	– QQ Plot and Scatter Plot	329

Appendix 3 – Feasibility Study of Pharmacy Consultations	331
Appendix 3.1 – Ethical Approval	332
Appendix 3.2 – R&D Approval	341
Appendix 3.3 – Pharmacist invitation letter	345
Appendix 3.4 – Gateway Consent from Alliance Boots	348
Appendix 3.5 – Participant Information Sheet for Pharmacists	350
Appendix 3.6 – Pharmacist Basic Demographics Form	356
Appendix 3.7 – Pharmacist Consent Form	358
Appendix 3.8 – Pharmacist Withdrawal card	360
Appendix 3.9 – NHS MUR leaflet	362
Appendix 3.10 – Participant Information Sheet for Patients	379
Appendix 3.11 – Patient appointment letter	386
Appendix 3.12 – Patient invitation letter	388
Appendix 3.13 – Reply form for patients.....	391
Appendix 3.14 – Patient consent form.....	393
Appendix 3.15 – Pharmacist’s Questionnaire	395
Appendix 3.16 – Patient’s questionnaire	399
Appendix 3.17 – Permissions to use questionnaires	404
Appendix 3.18– Patient reminder letter	408
Appendix 3.19 – QQ Plot and Scatter Plot	410

List of Tables

Table 1.1	Current consultation skills expectation of a pharmacy professional.....	19
Table 1.2	Revised consultation skills related outcomes	21
Table 2.1	- Topic guide for subsequent focus groups following the first focus group ...	52
Table 2.2	- Participant demographic details (N=22)	59
Table 2.3	- List of themes and related subthemes	60
Table 3.1	- Participant Demographics	103
Table 3.2	- Qualifications	104
Table 3.3	- UK universities (N=595)	105
Table 3.4	- Strategic Health Authority regions where participants currently work (N=595).....	107
Table 3.5	- Knowledge based learning (N=202)	110
Table 3.6	- Median (IQR) of preparedness for each of the independent variables that were included in the ordered logistic regression model investigating information covered in undergraduate CST and preparedness (Table 3.7).	111
Table 3.7	- Summary of ordered logistic regression model to identify if information covered in undergraduate CST was associated with reported preparedness to hold consultations with patients.	112
Table 3.8	- UK Qualified Pharmacists	113
Table 3.9	- Methods of practicing consultation skills (N=213).....	113
Table 3.10	- Median (IQR) of preparedness for each of the independent variables that were included in the ordered logistic regression model investigating methods of practising consultation skills in undergraduate and preparedness (Table 3.11)	114
Table 3.11	- Summary of ordered logistic regression model if the way CS was practiced at undergraduate was associated with reported preparedness to hold consultations with patients.....	114
Table 3.12	- Assessment types (N=150)	115
Table 3.13	- Methods of training in the pre-registration year (N=220).....	117
Table 3.14	- Information covered in pre-registration year (N=220)	118
Table 3.15	- Median (IQR) of preparedness for each of the independent variables that were included in the ordered logistic regression model investigating information covered in pre-registration and preparedness (Table 3.16)	119
Table 3.16	- Summary of ordered logistic regression model to identify if information covered in preregistration CST was associated with reported preparedness to hold consultations with patients.	119

Table 3.17 - Assessment types in pre-registration (N=72)	120
Table 3.18 - Median (IQR) of preparedness for each of the independent variables that were included in the ordered logistic regression model investigating assessment type in pre-registration and preparedness (Table 3.19)	121
Table 3.19 - Summary of ordered logistic regression model to identify if the type of CS assessment undertaken at preregistration was associated with reported preparedness to hold consultations with patients.	121
Table 3.20 - Structure of training post registration (N=305).....	123
Table 3.21 - Information covered in the training received post-registration (N=305) .	124
Table 3.22 - Median (IQR) of preparedness for each of the independent variables that were included in the ordered logistic regression model investigating information covered in post-registration and preparedness (Table 3.23).	125
Table 3.23 - Summary of ordered logistic regression model to identify if information covered in post registration CST was associated with reported preparedness to hold consultations with patients.	125
Table 3.24 - Providers of Training (N=305)	126
Table 3.25 - Contents for future consultation skills training (N=422).....	127
Table 3.26 - Style of future consultation skills training (N=422)	128
Table 3.27 - Median (IQR) of the number of consultations reported to have been held in a week for each of the independent variable found in the final model shown in Table 3.28.	133
Table 3.28 - Summary of linear regression model to identify factors that is associated with reported number of consultations a pharmacist conducts in a standard week.....	134
Table 3.29 - Confidence in consultation skills as reported for each of the independent variable found in the final model shown in Table 3.30.	137
Table 3.30 - Summary of ordered logistic regression model to identify factors that have an association with reported confidence in consultation skills	137
Table 3.31 – The uptake of future consultation skills training as reported for each of the independent variable found in the final model shown in Table 3.32.....	139
Table 3.32 - Summary of logistic regression model to identify factors that was associated with the acceptance of future consultation skills training ...	139
Table 4.1 - Pharmacist RIAS categories	183
Table 4.2 - Patient grouped RIAS categories	184
Table 4.3 - Demographic detail of pharmacists	188
Table 4.4 - Patient recruitment and response rate.....	189
Table 4.5 - Demographic details of patients (n = 30)	190

Table 4.6 - Relationship of patient and pharmacist (n=30)	191
Table 4.7 - Results of matched-pair questionnaire (n=30)	194
Table 4.8 - Reliability of RIAS coding (n=10)	196
Table 4.9 - Total Time of consultations	197
Table 4.10 - Summary of Pharmacist Utterances (n=30)	199
Table 4.11 - Added proficiencies onto RIAS (N=30)	205
Table 4.12 - Summary of Pharmacist Utterances according to type of recruitment strategy used	208
Table 4.13 - Summary of Patient coding (N=30).....	211
Table 4.14 - Summary of Patient Utterances according to type of recruitment strategy used.....	217

List of Figures

Figure 2.1 - Analytic Cycle	57
Figure 3.1 - Flow of data collection	95
Figure 3.2 - Countries of degrees obtained from abroad (N=102)	106
Figure 3.3 - Additional roles (N=75)	108
Figure 3.4 - Participants' evaluation of consultation skills training in undergraduate education (N=271).....	109
Figure 3.5 - Participants' evaluation of consultation skills training in pre-registration (N=220)	116
Figure 3.6 - Participants' evaluation of consultation skills training provided in post-registration (N=304)	122
Figure 3.7 - Participants' view on future provision of consultation skills training.....	129
Figure 3.8 - Participants' confidence in consultation skills (N=585)	130
Figure 3.9 - Importance of consultation skills (N=585)	131
Figure 4.1 - Recruitment of pharmacists	171
Figure 4.2 - Recruitment of patients	175
Figure 4.3 - RIAS programme to analyse consultations	187

List of conference proceedings from thesis

- Al-Nagar A, Skinner J, Slater C, Desborough J (2014). A feasibility study to investigate community pharmacy consultations. . International Journal of Pharmacy Practice, 22 (Supplement 2) 31–32.

The poster for this abstract was the winner of the Practice Research Poster Award at the Royal Pharmaceutical Annual Conference 2014.

- Al-Nagar A, Skinner J, Salter C, Desborough J (2014). College training can influence preparedness of pharmacists to hold consultations with patients. Presented at the 10th Life Long Learning in Pharmacy International Conference, Orlando, Florida, USA.
- Al-Nagar A, Skinner J, Salter C, Desborough J (2013). Is building confidence in consultations the key to delivering more patient facing services in community pharmacy? International Journal of Pharmacy Practice, 21 (Supplement 2) 30-137
- Al-Nagar A, Constantine D, Thayaparan J, De-La-Mare N and Desborough J (2012). Views and experiences of community pharmacists about consultation skills training: a national survey. International Journal of Pharmacy Practice, 20 (Supplement 2) 3–30.
- Al-Nagar A, Salter C, Twigg MJ, Grassby P, Desborough JA (2012). “It’s the best part of the job” community pharmacist-patient consultations: A focus group study. International Journal of Pharmacy Practice 20 (Supplement. 1) 5-15.

Glossary

AUR	Appliance Use Review
CPD	Continuing Professional Development
CPPE	Centre for Pharmacy Postgraduate Education
CS	Consultation Skills
CST	Consultation Skills Training
GP	General Practitioner
GPhC	General Pharmaceutical Council
IQR	Interquartile Range
LRT	Likelihood Ratio Test
MEE	Medical Education England
MPC	Modernising Pharmacy Careers
MUR	Medicines Use Review
NHS	National Health Service
NICE	National Institute of Health and Clinical Excellence
NMS	New Medicine Service
OSCE	Objective Structured Clinical Examination
OTC	Over The Counter
PCT	Primary Care Trust
POM	Prescription Only Medicine
PSNC	Pharmaceutical Services Negotiating Committee
R&D	Research and Development
RIAS	Roter Interaction Analysis System
SAC	Stoma appliances customisation
SD	Standard Deviation

Acknowledgements

My PhD journey has been an exciting time of my life. I would like to thank my primary supervisor, James Desborough, for all his support throughout my journey. I would have not made it without his guidance and sincere support. I would like to thank Charlotte Salter and Jane Skinner for all the expert advice and for helping complete my studies. Special thanks go to the city of Norwich and to the best university in the world, UEA. Thank you to all the pharmacy practice team, I really enjoyed my years with you and you really made me feel welcome in your team.

To mom, dad, my sisters and my brother, thank you for everything that you have done for me. I would have never wished for better parents or a better family. Rasha, my beautiful wife, thank for your patience and for your support. We lived in 5 different addresses in the last 4 years and you were my happiness every time I came home.

Thank you to all the participants who have helped me complete my research and thank you to Harold and Marjorie Moss Charitable Trust for awarding me a grant to help me complete all the studies.

It has been an honour to be part of UEA and thank you to every single staff member from the canteen staff to the library staff for all their hospitality and support.

Chapter 1 – Introduction

1.1 Changing World of Community Pharmacy

Community pharmacy has changed considerably in the past few decades. New roles and services have been introduced to the profession and the role of pharmacist is changing to meet these new expectations. Most new services involve the pharmacist communicating with patients, and specifically, offering consultations. The aims of this PhD were to explore the consultation skills of community pharmacists using both quantitative and qualitative methods.

The emergence of the modern pharmacy profession occurred when the Pharmacy Act 1852 was introduced and it restricted certain titles (Anderson, 2005). The Act was lobbied for by the recently founded Pharmaceutical Society of Great Britain to establish a Register of Pharmaceutical Chemists, restricted to those who had taken the Society's exams. However, it did not restrict the practice of pharmacy to examined and registered people, nor did it provide a legal definition for the trade and practice of pharmacy (Rogers and Dewsbury, 2010). This act was later followed by The Pharmacy Act 1868, where it required registration in relation to the sale of poisons and set up the class of chemists and druggists as persons who had passed the Society's minor examination (Rogers and Dewsbury, 2010). The Pharmaceutical Society was responsible for registering pharmacists, and prosecuting them in cases relating to poisons. This Act was the seed for modern pharmacy regulation and practice; membership of the Pharmaceutical Society remained voluntary until the Pharmacy Act 1933 made it compulsory (Rogers and Dewsbury, 2010).

The 1911 National Insurance Act was the benchmark for the creation of the National Health Service (NHS); this act allowed certain members of the public to see a doctor and get a prescription dispensed by the pharmacist for no charge. This resulted in an

increase of dispensing load for community pharmacists and as a result pharmacists started to focus on dispensing process.

The NHS was introduced in 1948, which meant everyone was able to see a doctor and get prescriptions dispensed by the pharmacist free of charge. As the NHS expanded, the community pharmacy dispensing load has increased. Pharmacists focused their role on compounding medications for prescriptions provided from doctors.

As time moved on there has been a drastic reduction in instances where compounding is required, due to the introduction of pre-packed medicines. The decline in the role of pharmacists in the compounding of medications and the recognition of pharmacist skills from various reports & government policies has partly led to the emergence of other roles. The following section will discuss the various reports and government policies that helped shape the role of the community pharmacist today.

1.2 Government policies

This section will cover how the different policies and reports that have been introduced since the 1980s have influenced community pharmacy today, summarised in the quote below.

'The dispensing role of the community pharmacist is in unstoppable decline'

Sir Kenneth Clucas, Chairman of Nuffield Report 1986

The Nuffield Foundation Pharmacy Inquiry was the first inquiry to review pharmacy across all its sectors and was set up in 1984. The findings of this inquiry resulted in the Nuffield report which was published in 1986 (Nuffield Foundation, 1986). The report made 96 recommendations of which 26 were regarding the community pharmacy sector (Nuffield Foundation, 1986).

The community pharmacy recommendations suggested that pharmacists and general medication practitioners should co-operate on a systematic basis to increase the effectiveness and reduce the costs of prescribing. The report took a cautious approach on the possible contribution of community pharmacists in giving advice on symptoms, highlighting the need for appropriate training and education. It also recommended that undergraduate teaching of pharmacy should extend beyond its traditional science basis to include therapeutics, behavioural and social sciences to support these recommendations. The report also covered the need to restructure the NHS contract to reduce payment for dispensing and include payment for other professional activities such as for providing advice to patients and providing support to patients with long term diseases. The report also stated that *'we believe that the pharmacy profession has a distinctive and indispensable contribution to make to health care that is capable of still further development'* (Nuffield Foundation, 1986). The report worked as a catalyst to future changes in the pharmacy profession.

In the years following the Nuffield report being published, the role of pharmacy changed to include delivering public health messages such as smoking cessation and sensible alcohol limits. In the 1990s there was a greater emphasis on the pharmacist's role in reducing risk to patients. Such roles were only recognised in the 1998 White Paper 'Our healthier nation'. The White Paper identified 22 pharmaceutical health roles which could be provided by the community pharmacy (Department of Health, 1998). These roles ranged from core pharmacy activities, such as providing advice on how medicines work, to other roles such as retaining patient medication records, and participating in health promotion campaigns. Further recognition and support to community pharmacies came from the White Paper *'Choosing health: making healthy choices easier'* that was published in 2004 (Department of Health, 2004). The report recognised that community pharmacies are ideally located in neighbourhoods:

“For community pharmacies, their location in the heart of communities provides opportunities for community involvement and leadership (e.g. through school and workplace initiatives) and for supporting individuals to take control of their lives, their health and (if applicable) self-management of their long-term condition.” Following this White Paper, the Department of Health published a framework for community pharmacy with the title ‘Choosing Health through Pharmacy’ in April 2005. The framework provided a structure for the role of community pharmacy in improving health and reducing health inequalities, and recognised pharmacists as part of the wider public health workforce (Department of Health, 2005). As a result of these White Papers, the community pharmacy contract was re-negotiated in 2005 (Pharmaceutical Services Negotiating Committee, 2004). The contract will be discussed fully in the next section of this chapter.

A further White Paper for pharmacy was published in 2008, stating that while progress had been made in community pharmacy since previous White Papers, there was still room for improvement. The report suggested that in addition to the usual services that pharmacies provide, including dispensing and advice on taking medicines, they may provide additional services. These services covered weight management, sexual health, alcohol use, and support for patients with long term conditions. A number of changes to develop education and training were proposed to equip pharmacists to deliver the proposed services (Department of Health, 2008).

In July 2013, NHS England launched ‘The NHS belongs to the people: a call to action’ program (NHS England). The aim of the program was to stimulate debate in local communities as to how to develop future health services. The call to action included a debate about all the different professions, including general practitioners, dentists and pharmacists. In December 2013, a call to action for community pharmacy was initiated (NHS England, 2013b). The call to action aimed at enhancing the role of community

pharmacy to support patients, provide more personalised care, optimise the use of medicines, and optimise NHS spending on prescribing. The resource pack attached to this call to action pointed to the potential for the community pharmacy to provide further services, given its accessibility in the community, the medical and procurement expertise of pharmacists, and their central role in managing long term conditions (NHS England, 2013c). The resource pack sees the community pharmacy playing a role in many issues including reducing medicine wastage, reducing patient risk and providing support to patients to enable them to use their medicines correctly (NHS England, 2013c). According to the report, the community pharmacy can also play a bigger role in reducing pressure on GP services by having the correct skill mix and introducing automation processes. The call to action ended on the 18th of March 2014 with results due to be released at the end of 2014.

So far we can see that the community pharmacy is viewed by different governments as a vital player in the health service. Many reports still argue for a pharmacy that plays an even bigger role in addressing current NHS issues. All these new services and roles come with a significant increase in patient interaction and thus communication skills will be vital for optimising outcomes. The next section of this chapter will explain the Pharmacy contract which was introduced in April 2005.

1.3 Pharmacy contract

The introduction of a new pharmacy contract in April 2005 has been a catalyst for pharmacists to be increasingly remunerated for more patient focused services (Wilcock, 2010). The contract was largely based on local pharmaceutical services (LPS) contracts introduced in 2002 with the aim to diversify the role of community pharmacy (Kendall et al., 2005). Many of the services that were developed as part of the LPS were included in the new NHS pharmacy contract. There are 3 tiers to the

contract, Essential, Advanced and Locally Commissioned Services (formerly called Enhanced services). Pharmacy owners (contractors) must provide Essential services, but they can choose whether they wish to provide Advanced and Enhanced services (Pharmaceutical Services Negotiating Committee, 2013b). Payments for essential and advanced services are agreed at a national level.

1.3.1 Essential services

1. Dispensing medicines
2. Dispensing appliances
3. Repeat dispensing
4. Disposal of unwanted medicines
5. Public health
6. Signposting
7. Support for self-care
8. Clinical governance

Essential services have been widely used by the public. In the year of 2012-13 there was over one billion prescription items dispensed in pharmacies located in England. The number of dispensed items has been increasing year on year, a total increase of 62.2 per cent when compared to the year of 2002. The average figure of 2.7 million is dispensed daily in pharmacies based in England, this is an average of 18.7 items per head of population and in 2002 it was an average of 12.4 items (Health and Social Care Information Centre, 2013). These figures suggest the dispensing services of pharmacies are at an increasing demand year on year.

1.3.2 Advanced services

There are currently four approved advanced services as part of the pharmacy contract that can be provided in community pharmacies.

1. Medicines use review (MUR) and prescription intervention

The MUR is the first advanced service for pharmacy (Pharmaceutical Services Negotiating Committee, 2014). Pharmacist must complete an accredited course from a higher education institution and pass an assessment that examines the pharmacists' ability in five competencies (Pharmaceutical Services Negotiating Committee, 2005a). The five competencies are: clinical and pharmaceutical knowledge; identifying and making recommendations around therapeutic issues; accessing and applying information; ability to reach a shared agreement with patients and lastly, documentation and referral. The MUR service is for patients who have used the pharmacy for the previous three months and have long-term conditions and use multiple medicines. Each pharmacy can only conduct 400 MURs in a year (April to April) and 50% of MURs carried out, should be for patients belonging to one or more of three specified national target groups (people taking high risk medicines, those recently discharged from hospital with changes made to their medicines whilst in hospital, and those with respiratory diseases).

The prescription intervention MUR can be conducted on new patients that have not been to the pharmacy for three consecutive months. For both services, the pharmacist must have a consultation room for confidential consultations, which allows the patient and pharmacist to sit down together and have a conversation without being overheard (Pharmaceutical Services Negotiating Committee, 2005c).

The underlying purpose of the medicine use review (MUR) is to improve patients' knowledge and use of drugs. The service specifications of the MUR (Pharmaceutical

Services Negotiating Committee, 2013a) specify that this could be established through the following points:

- a) Establishing the patient's actual use, understanding and experience of taking drugs;
- (b) Identifying, discussing and assisting in the resolution of poor or ineffective use of drugs by the patient;
- (c) Identifying side effects and drug interactions that may affect the patient's compliance with instructions given to them by a health care professional for the taking of drugs; and
- (d) Improving clinical and cost effectiveness of drugs prescribed to patients, thereby reducing the wastage of such drugs.

2. Appliance use review (AUR)

The AUR is the second Advanced service approved for pharmacy (Pharmaceutical Services Negotiating Committee, 2014). The service is designed to help the patients who regularly use a medical device. The aim of the service is to help patients use their device effectively, identify any problems and give guidance on the correct usage. Pharmacist must have approval and appropriate training to provide this service. The service can be conducted at the patient's home and at the pharmacy.

3. Stoma appliances customisation (SAC)

The SAC is the third approved Advanced service (Pharmaceutical Services Negotiating Committee, 2014). The service is based on patient's measurements and the customisation of stoma appliances to ensure proper use and comfortable fitting. The main aim of the service is to improve the duration of usage by using the correct stoma appliance, thereby reducing waste. There is no requirement to accredit or otherwise approve the pharmacy before the

service commences. If the pharmacy does not provide this service, they must provide information to the patients using the stoma appliances of where they can get this service.

4. New medicines service (NMS)

The NMS is the fourth Advanced service (Pharmaceutical Services Negotiating Committee, 2014) it was added on the 1st October 2011 to the NHS community pharmacy contract. The aim of the NMS is to support patients with newly prescribed medicines to help improve medicines adherence. The service focused on patients taking new medicines for long-term conditions such as blood pressure and diabetes. Pharmacist must complete a self-assessment form and be MUR accredited in order to provide the service.

According to the service specification of the New Medicine Service (NMS) (Pharmaceutical Services Negotiating Committee, 2011), the purpose of the service is to promote the health and wellbeing of patients prescribed with new medicines for long term conditions. This is in order to achieve the following:

- (a) To help reduce symptoms and long term complications
- (b) To help the patients:
 - (i) Make informed choices about their care
 - (ii) Self-manage their long term conditions
 - (iii) Adhere to agreed treatment programmes
 - (iv) Make appropriate life style changes

Improving medication adherence is highly associated with both purposes of the MUR and the NMS services. This will be discussed further in section 1.7.4.

The uptake for all Advanced services has been rising year on year. In 2012-13, 92 per cent of community pharmacies in England provided the MUR compared to 62 per cent in 2006-07. A total of 2.8 million MURs were conducted in 2012-13 compared to 0.6 million in 2006-07 (Health and Social Care Information Centre, 2013). Similar results for the SAC, where uptake of services was 1,117,971 for 2012-13 compared with 1,027,684 SACs provided in 2010-11 (Health and Social Care Information Centre, 2013).

AURs had a total of 28,147 AURs in 2012-13, an increase of 54 per cent from 2011-12. Finally the NMS was provided by 82.3 (9,464) per cent of community pharmacies in 2012-13. A total of 646,859 NMSs were provided in England, an average of 68 NMSs per pharmacy (Health and Social Care Information Centre, 2013).

There are a growing number of patient consultations occurring in community pharmacy as a direct result of increased Advanced Services provision. The most widely used of these services is the MUR service undertaken in 92% of pharmacies (Health and Social Care Information Centre, 2013). The final tier of the community pharmacy contract is the Locally Commissioned Services

1.3.3 Locally Commissioned Services

Locally Commissioned Services are also known as Enhanced Services. These services are commissioned by local health authorities and primary care organisations in order to meet the health requirements of the local population. These include the supervised administration of Methadone to drug misusers, smoking cessation services, emergency hormonal contraceptives and minor ailments services. These services are not compulsory and the pharmacy contractor can choose whether to provide them or not.

The services are not all the same and each area can adjust the service to meet the needs of the local population, and may face competition from other healthcare providers who can tender competitive bids. There were 28,507 Enhanced services provided in England in 2012-13 which is slightly lower than in 2011-12, where a total of 29,283 services were provided (Health and Social Care Information Centre, 2013) this decrease may be due to many factors but it is likely that the change in Government and subsequent reorganisation of primary care affected the number of services commissioned.

Pharmacists are clearly providing different services and are having more and more interaction with patients; it is therefore vital that the education of future pharmacists changes to prepare them for such advancing roles. However, greater service provisions has been reported to increase stress within community pharmacy which is explored in section 1.4.

1.4 Stress in community pharmacy setting

Concerns over the increasing stress levels have been prompted due to the many changes that have occurred within the profession (Johnson et al., 2014). Community pharmacy has been dealing with escalating dispensing volumes and increased workloads from role expansion since the introduction of the pharmacy contract in 2005 (Jacobs et al., 2013). The Health and Safety Executive (HSE) formal definition of stress at a work place is "*the adverse reaction people have to excessive pressures or other types of demand placed on them at work.*" (The Health and Safety Executive, 2014). The causes of stress in pharmacy has been investigated in detail by a recent report (Jacobs et al., 2013). The report included interviews with stakeholders from different backgrounds working in community pharmacy and it also contained a detailed literature review. The report listed different themes for the stresses being experienced by community pharmacist and some of the themes are listed below:

- **Job content, workload and work pace**

This theme summarised the increase of the work volume pharmacists faced due to dispensing and providing patient focused services such as the MUR. The increasing of work load has caused conflicting demands on pharmacists' time. The increase of dispensing volume was reported as the most frequently reported source of stress for pharmacists.

- **Working hours**

Pharmacists reported the long hours in community pharmacy as a source of stress especially the inability of many to take a rest break during their shift. Some pharmacies were closed for lunch but the general expectation that community pharmacist did not take a break and were always readily available even when having their lunch break. The lack of breaks for pharmacists prompted concerns that this may affect their skills and whether they can provide a safe service.

- **Role in the organisation**

Many of the pharmacists who took part in this study also had different roles within the pharmacy organisation. In addition to their role as pharmacists, some of the participants were also managing the team and providing a management role. The setting of community pharmacy is open access to all patients with no appointment system thus participants were unable to organise their time effectively and this was also another source of stress to them.

- **Interpersonal relationships**

The relationship between co-workers and managers can be a stressful experience but conversely those who had strong supportive teams appeared to deal with pressure better. Community pharmacists reported professional isolation and the lack of relationships with local healthcare providers, particularly GPs, as a contributing factor.

As suggested in the last theme “Interpersonal relationships” having a supportive team can decrease the stress faced by pharmacists, the next section of this chapter will discuss the skill mix of the pharmacy team and how this can enhance the role of the pharmacist.

1.5 Skill mix of the pharmacy team

The term skill mix refers to a combination of different classes of workers that were actively involved in a particular field of work (Buchan and O'May, 2000). The team involved in setting up a community pharmacy encompasses the following possible members: Pharmacists, Pharmacy Technicians, Medicine Counter Assistants and Dispensing/Pharmacy Assistants (Mullen and Britain, 2004).

There is currently no legal guidance about staffing levels, except for a pharmacist to be present and responsible for running the pharmacy effectively and safely. Even though changes in skill mix have been successfully implemented in hospital pharmacy, its impact on community pharmacy practice are yet to be fully analysed by researchers. The ability of community pharmacists to deliver clinical services has been largely made possible through the involvement of pharmacy technicians. The roles being currently played by pharmacy technicians freed the pharmacists and enabled them to focus more on clinically orientated services (Mullen and Britain, 2004).

The whole application of skill mix in pharmacy service delivery was initiated when the Nuffield Inquiry recommended that pharmacists must delegate certain roles to other suitably trained staff (Nuffield Foundation, 1986). A study discovered that the common staffing shortages experienced in hospital pharmacy can be resolved by modifying the way hospital pharmacy staff were configured (Bevan et al., 1993). This discovery prompted the extension of the roles played by the pharmacy technicians in the pharmacy department. Some of the tasks that were being assigned to the pharmacy

technicians include: provision of medicine information, accuracy checking and reviewing in-patient medication.

Unfortunately, these breakthroughs are not being recorded for community pharmacy support staff, where studies have shown very little empirical evidence of role expansion (Hassell et al., 2002) . Since much is not known about support staff in community pharmacy, very little research was found in literature. However, the role of the pharmacist has been thoroughly investigated. For instance, many work sampling techniques have been employed by researchers to identify and quantify the amount of time pharmacists spend on a specific task (Savage, 1995, Rutter et al., 1998).

A study to determine the amount of time pharmacists spent on advising patients over the counter (Savage, 1995), discovered that pharmacists in the study were heavily involved in the dispensing process and spent little time advising patients. Rutter et al. (Rutter et al., 1998) investigated how community pharmacists spent their time. The study showed the largest proportion of pharmacist time was in dispensing, prescription monitoring and a bit of counselling patients. Another study (Bell et al., 1999), used a self-reporting method and discovered that the community pharmacists spent half of their time undertaking professional activities such as; verifying the appropriateness of the prescription and verifying the accuracy of the final product. The study also revealed that community pharmacists spent almost one-third of their activities on other roles such as assembling and labelling prescription medicines. Only 30 pharmacists participated in this study and the study was situated in Belfast which may not be reflective to all the pharmacies in the UK. Pharmacists who had a high prescription turnover were found to devote much less time to counselling patients regarding OTC products and in responding to patient symptoms. Pharmacists are therefore being reported to still be highly involved in the dispensing process of medication.

Some studies found pharmacy support staff to help pharmacists in reducing their role in the dispensing process (Savage, 1997). Another study discovered (Rutter, 2002) that the work patterns of pharmacists aren't affected by the staffing levels. The study showed that pharmacists continued to carry out their traditional tasks of dispensing medicines, checking prescriptions, communicating with patients and low engagement in patient focused services. However, the investigation conducted by Jones and Rutter showed that the inclusion of technicians, reduces the time pharmacists spent on dispensing medicines. Jones and Rutter believed that, this will enable pharmacists to spend more time in direct contact with patients (Jones and Rutter, 2002). A variety of skill mix can therefore influence on the time community pharmacists spend with their patients. (Jones and Rutter, 2002). Implementing this skill mix is hard in practice due to the diverse nature of community pharmacy and the different stakeholders involved in making such a decision.

Skill mix is directly linked to this thesis because if the correct skill mix is applied to community pharmacies then pharmacists might spend more time speaking to patients and if there is no support for the pharmacists then they must focus on dispensing rather than speaking to patients.

1.6 Pharmacy Education

The General Pharmaceutical Council (GPhC) is the current regulator of the pharmacy profession and looks after two educational regulatory stepping stones for pharmacists, the first being the pharmacy degree while the second is the pre-registration year.

The background to pharmacy education is science rather than practice based. The first school of pharmacy was established in 1842, founded by the Pharmaceutical Society of Great Britain to "elevate the profession of pharmacy by furnishing the means of proper instruction". The basis of the course was chemistry and an apprenticeship with a minor

exam after a period of lectures and a major exam after working as a chemist's assistant for a period of time.

Pharmacy education was completely transformed after the introduction of the following Acts: The Technical Instructions Act 1889, the Pharmacy Act 1908 and the National Insurance Act 1911 (Anderson, 2005). The results of these new acts meant future pharmacists had to train in accredited courses, undertake relevant work experience, and pass examinations set by the Pharmaceutical Society. The degree continued to be a science based degree and indeed it received criticism from the Nuffield Report (Nuffield Foundation, 1986), the report stated that the degree must cover social aspects of pharmacy as well as the core sciences.

The route to becoming a pharmacist continued to be a Bachelor of Science (BSc) degree followed by one year preregistration work (Anderson, 2005). In 1997 this was changed in order to include clinical teaching so that they were able to advise patients and prescribers appropriately and the degree became a 4 year degree. Consequently, up to 1997, the typical undergraduate curriculum was heavily based around science modules such pharmaceutical chemistry and pharmaceutics and lacked patient exposure. The pre-registration year continued to be 12 months (Anderson, 2005).

For current students studying in UK, there are three routes to registration as a pharmacist. The first route involved undergoing a four year MPharm degree then pre-registration training and finally undergoing a national registration assessment. The second route is similar to the first but involved the student to undergoing an additional foundation degree in pharmacy. The final route is a five-year MPharm degree, including integrated blocks of the preregistration year equalling 52 weeks; and the registration assessment.

Other routes to becoming a pharmacist is completion of the overseas pharmacists' assessment programme (OSPAP). This course is designed for pharmacists who

graduated in a non-EEA country and want to register in the UK. In order to be eligible for the 52 weeks of pre-registration training, they must pass and complete the one-year OSPAP diploma. After completion, they must undergo the 52 weeks pre-registration year and pass the registration assessment exam.

1.6.1 Current Pharmacy Degree

The current Pharmacy degree is the Master of Pharmacy (MPharm), a four year degree with standards set by the GPhC and provided by accredited Schools of Pharmacy. The MPharm standards act as bench marks that must be met by the school providing the training for students (The General Pharmaceutical Council, 2011). For example one of the outcomes set by the GPhC:

“The MPharm degree curriculum must include practical experience of working with patients, carers and other healthcare professionals. Practical experience should increase year on year. We are not suggesting that off-site placement visits are the only way to achieve this. Schools should articulate their strategy for meeting this criterion, which may include off-site placement visits, using patients, carers and other healthcare professionals in-class, and simulations.” (The General Pharmaceutical Council, 2011).

This outcome specifies that all schools of pharmacy must provide practical experience of working with patients. All of the benchmarks give guidance but not exact or direct teaching methods that the School of Pharmacy must provide to MPharm students. For example all the expectations regarding consultation skills are listed in Table 1.1.

Expectation	MPharm	Pre-registration
Engage in multidisciplinary team working	Knows how	Does
Promote healthy lifestyles by facilitating access to and understanding of health promotion information	Knows how	Does
Collaborate with patients, the public and other healthcare professionals to improve patient outcomes	Knows how	Shows how
Play an active role with public and professional groups to promote improved health outcomes	Knows how	Knows how
Identify inappropriate health behaviours and recommend suitable approaches to interventions	Shows how	Does
Communicate with patients about their prescribed treatment	Shows how	Does
Establish and maintain patient relationships while identifying patients' desired health outcomes and priorities	Shows how	Does
Communicate information about available options in a way which promotes understanding	Shows how	Does
Conclude consultation to ensure a satisfactory outcome	Shows how	Does
Provide accurate written or oral information appropriate to the needs of patients, the public or other healthcare professionals	Shows how	Does

Table 1.1 Current consultation skills expectation of a pharmacy professional (The General Pharmaceutical Council, 2011)

As listed above, the expectations are open to wide interpretation and the teaching can vary from one university to another.

The degree is currently considered as a science degree and not a clinical degree, in order for Higher Education Funding Council for England (HEFCE) to fund student placements, the degree must be classed as a clinical degree. In England, a reform of pharmacist's undergraduate education and pre-registration training was proposed by Modernising Pharmacy Careers (MPC) with many of the reforms focusing on expectations of teaching communications skills to undergraduate pharmacy students (Modernising Pharmacy Careers Programme, 2012).

The Modernising Pharmacy Careers Programme Board (MPCPB) part of the Medical Education England (MEE) commissioned the MPC to investigate whether there is a need to change the undergraduate degree for pharmacy. The MPC has concluded with proposals to change the pharmacy degree. Some of the MPC recommendations suggest changing the MPharm degree into a five year degree which incorporates the

52 week pre-registration period. The recommendations also include changing the MPharm degree from a science based degree into a clinical degree due to the fact that pharmacists are in contact with patients on a daily basis and the role of the pharmacist has considerably changed in the last 40 years (NHS Careers, 2014)

Since the Modernising Pharmacy Careers (MPC) Professional Board published its proposals for reform of pharmacist education and training in June 2011, the Department of Health has accepted the proposals in principle, subject to funding issues.

The recommendations made by the MPC have worked as a catalyst for the recent revised GPhC learning outcomes for the MPharm degree. The new learning outcomes are divided into four sections (General Pharmaceutical Council, 2013).

- Pharmacist as professional
- Pharmacist as scientist and researcher
- Pharmacist as leader and manager
- Pharmacist as clinician and prescriber

Although all these changes are not directly linked to the topic of this thesis, they are important to mention that the future will include much more training at university level. Such training will equip future pharmacist with different skills upon graduating but for the sake of this thesis we must focus on current graduates and what education they are receiving as part of their role. Table 1.2 contains all the new learning outcomes that are related to consultation skills. As you will see from the table, all outcome levels are classed as 'does', and not 'knows how' or 'shows how' as in the previous undergraduate learning outcomes.

Outcome	Outcome Level
<p>Adapts information and communication to meet the needs of particular audience: Identifies patient information needs and presents in a manner which is appropriate to individual needs. Provides open, honest, accurate and succinct information to patients, carers and healthcare professionals. Communicates in a way that is appropriate to the audience. Includes effective communication of risk versus benefit. Recognises opportunities and constraints associated with providing information from on-line pharmacies and adapts appropriately.</p>	Does
<p>Communicates and works effectively with other health and social care professionals: Works collaboratively, professionally and constructively with other health and social care professionals. Recognises individual roles within the health and social care team and utilises these to maximise patient care. Learns from other professionals and applies this to practice. Communicates with other health and social care professionals in a manner which instils confidence and respect. Effectively challenges decisions, pre-empts potential conflict and manages it when it occurs.</p>	Does
<p>Actively supports patients and their carers in the safe and effective use of their medicines and devices: Empowers patients by involving them in their care. Identifies appropriate support and enables patients to make informed choice. Supports self-management.</p>	Does
<p>Undertakes effective patient centred consultations: Builds rapport, identifies patient's beliefs and concerns and listens effectively. Explains possible unexpected outcomes and what to do if plan is not working. Explains when and how to seek help. Summarises and concludes consultations effectively. Instils confidence, utilising appropriate body language. Shows sensitivity for patients' emotions and concerns. Selects and ensures appropriate environments for consultations. Involves patients in decision making process, respects and supports patient decisions. Communicates a variety of messages in an empathetic manner showing an understanding of how the message may affect the patient.</p>	Does
<p>Identifies patient non-adherence and implements appropriate patient centred interventions: Effectively identifies non-adherence to medication regimens and its underlying causes. Utilises both simple and evidence based strategies to encourage and improve medicines taking. Utilises a holistic approach to assessment and applies health psychology models and techniques to the delivery of adherence based services.</p>	Does

Table 1.2 Revised consultation skills related outcomes (General Pharmaceutical Council, 2013)

Medical education has changed dramatically over the past twenty years with greater emphasis on consultation skills. Pharmacy education might be able to learn from all the changes that have occurred in the medical profession.

In 1993, the General Medical Council (GMC) introduced Tomorrow's Doctors, which set standards designed to equip future doctors with skills to meet the demands of modern medicine (Brennan et al., 2010). Tomorrow's Doctors has been updated twice since then, in 2003 and 2009. The updates emphasised on learning about the clinical realities faced by new doctors, clinical skills, and partnership with patients. Tomorrow's Doctors for the first time emphasised communication skills of future doctors. The GMC lists that among essential attributes of every independent practitioner regardless of speciality, possession of consultation skills, which include 'skills in sensitive and effective communication with patients and their families'. The communication skills that Tomorrow's Doctors expects from any graduate is listed below (General Medical Council, 2009b):

- (a) Communicate clearly, sensitively and effectively with patients, their relatives or other carers, and colleagues from the medical and other professions, by listening, sharing and responding.
- (b) Communicate clearly, sensitively and effectively with individuals and groups regardless of their age, social, cultural or ethnic backgrounds or their disabilities, including when English is not the patient's first language.
- (c) Communicate by spoken, written and electronic methods (including medical records), and be aware of other methods of communication used by patients. The graduate should appreciate the significance of non-verbal communication in the medical consultation
- (d) Communicate appropriately in difficult circumstances, such as when breaking bad news, and when discussing sensitive issues, such as alcohol consumption, smoking or obesity.
- (e) Communicate appropriately with difficult or violent patients.

- (f) Communicate appropriately with people with mental illness.
- (g) Communicate appropriately with vulnerable patients.
- (h) Communicate effectively in various roles, for example, as patient advocate, teacher, manager or improvement leader.

The outcomes that are requested from future doctors are more defined and set with less chance of wide interpretations, unlike the current pharmacy graduate expectations which is open to wide interpretation. The GMC states that curriculum of undergraduate medical students must include practical experience of working with patients throughout all years. The duration of placement should be increasing in duration with more responsibility so that graduates are prepared for their responsibilities and have the opportunity to meet all the expectations prior to graduating (General Medical Council, 2009b). All expectations are assessed throughout the curriculum through different means, the GMC purposes OSCEs are a good tool to ensure that students are assessed in relation to their engagement with patients, covering communication, empathy and sensitivity (General Medical Council, 2009a). Students who graduated from medical schools who implemented the recommendations of Tomorrow's Doctors reported feeling more prepared and those who disagreed fell year on year (Goldacre et al., 2010). The percentage of graduates who agreed that they had been well prepared increased from 36% for 1999/2000 to 50% for 2002 and 58% for 2005, before falling back to 49% for 2009. Those who disagreed fell in each of those cohorts from 41% to 31%, 21% and 16% respectively (Goldacre et al., 2010). The changes in medical education has emphasised on problem-based education and the development of skills for lifelong learning, such skills to be achieved via integrating applied sciences and clinical skills with communication skills and the legal and ethical aspects of medicine. It is similar to what the MPC is recommending for the pharmacy profession. The next section will discuss the education provided to pharmacists in the pre-registration year.

1.6.2 Pre-registration year

The pre-registration year is a mandatory training period that all pharmacy degree holders must complete in order to be registered as pharmacists.

Pre-registration pharmacists must complete a minimum of 52 weeks of training on a full-time basis (between 35 and 45 hours a week) (General Pharmaceutical Council, 2011b). Each trainee must have a local tutor that will be looking after them and make sure they meet the Performance Standards set by the GPhC. As part of the pre-registration year, the tutor must complete progress reports at 13, 26 & 39 weeks and inform the GPhC of the trainee's progress. The Performance Standards are a list of 76 performance outcomes which must be signed off by the pre-registration tutor. The outcomes are classed into three groups, Personal Effectiveness, Interpersonal Skills and Medicines & Health.

The Communicate Effectively outcomes of the Interpersonal Skills group of the Performance Standards are directly relevant to the topic of this thesis, the outcomes contain the following titles:

- Communicate effectively in English
- Behave in a polite and helpful manner
- Sensitively approach people who need or who may need assistance
- Elicit all relevant information by the use of appropriate questions
- Listen effectively to the whole message
- Respect and observe confidentiality
- Act appropriately in response to spoken and unspoken needs of others
- Behave in a manner which instils confidence
- Behave assertively
- Use appropriate body language
- Provide information and advice appropriate to the needs of the recipient(s)

- Handle conflict appropriately

The trainee must complete a portfolio that contains evidence to prove they have met the stated Performance Standards. The tutor then signs off each Performance Standard when they feel the trainee has met the required standard according to evidence provided or observations made. The tutor is responsible for sending updates to the GPhC regarding the trainee's progress on meeting the Performance Standards. In order to become a tutor you must meet the following three conditions (General Pharmaceutical Council, 2014):

- Registered pharmacist
- Practising in the sector of pharmacy for three years or more, and
- Not under investigation by the GPhC

Tutors currently do not take any course in order to provide training for pre-registration pharmacists. The registration assessment does not cover the Interpersonal Skills group of the Professional Standards and therefore there is no formal consultation skill examination prior to registration as a pharmacist. Assessment in consultation skills is only conducted by a tutor who does not necessarily have the required skills to make this assessment. Therefore, the standards of newly qualified pharmacist's consultations will vary widely. Since community pharmacists work in isolation and there are no compulsory training courses they must undertake, many pharmacists may be unaware of the ability to conduct consultations.

1.6.3 Post-registration education

Pharmacists must complete a minimum of nine continuing professional development (CPD) records in a year and the process is regulated by the GPhC (General Pharmaceutical Council, 2011a). Since 2005, undertaking and recording CPD has been a professional obligation for practising pharmacists and pharmacy technicians.

The CPD cycle contains four phases, reflection, planning, action and evaluation. At least three out of the nine required CPD entries for each full year of registration must start at “reflection”. Pharmacists can choose the subject they wish to learn about and according to their field of practice. Prior to 2005, pharmacists were expected undertake least 30 hours of continuing professional education per year (Anderson, 2002).

There are different providers of post-registration education for pharmacists but biggest provider is the Centre for Pharmacy and Postgraduate Education (CPPE). CPPE is funded by Health Education England and offers continuing professional development opportunities for all pharmacists and pharmacy technicians providing NHS services in England.

There are many postgraduate courses available for practicing pharmacists such as the Postgraduate Certificate, Diploma, and MSc. Hospital pharmacists generally must complete a postgraduate diploma in order to advance in their career as hospital pharmacists. There are less career rewards for community pharmacists completing a postgraduate degree. The post graduate degrees are not regulated by the GPhC and all the curriculum is decided by the different universities providing these courses. Although consultation skills training can be part of such courses, there are no national statistics for how many pharmacists that undergo such courses. There was also no national standards expected for consultation skills until the recently published competency framework (CPPE and HEE).

In summary, after registration with the GPhC, pharmacists have to maintain a record of their continuing professional development (CPD) and they may choose which areas to focus on. Consequently, it is possible that community pharmacists never undergo any additional consultation skills training after registration. The next section will focus on consultation skills of pharmacists.

1.7 Pharmacist consultation skills

According to the Oxford dictionary a consultation is “A meeting with an expert, such as a medical doctor, in order to seek advice”. As discussed in previous sections, pharmacists currently hold consultations with patients in a number of services. The skills involved in the process of conducting a consultation are called “Consultation Skills”. When we refer to consultation skills in this thesis, we are referring to the skills of the pharmacists in managing one to one meetings with the patient. Within such meetings, pharmacists can use communication skills to facilitate the patient’s input, understand the information gathered and assist with patient’s understanding and treatment of the problem.

This section of the chapter will explore models, training, assessment of consultation skills, and also medication adherence. We start this section with models to assess consultation skills

1.7.1 Models to assess consultation-communication skills

The Cambridge-Calgary guide has shown that it can be successfully applied to pharmacist–patient consultations with some minor alterations (Greenhill et al., 2011b). Greenhill et al. successfully used the Cambridge-Calgary guide to assess pharmacy consultations and proposed changes so that it is more applicable for pharmacy consultations. The study recruited eighteen patients and consultations were audio-recorded and observed. Transcripts were coded according to the use of skills within the guide and analysed thematically. The study concluded that The Calgary-Cambridge guide is well aligned with many aspects of pharmacist–patient consultations and that could help pharmacist improve their consultation skills. The sample size of the study was small and only from one area in the UK. There were only eighteen consultations from hospital and community but one pharmacist held ten of these consultations based in hospital. The data from such a study may not be generalisable and it does not give a

clear picture of how consultations are held whether in community or hospital due to the small number of consultations observed.

The Medication-Related Consultation Framework (MRCF) that has been adopted from the Cambridge-Calgary guide (Kurtz and Silverman, 1996) and has been specifically developed for teaching and evaluation of pharmacy-related consultation skills (Abdel-Tawab et al., 2011). The tool has so far been used to analyse simulated consultations and not in practice setting; therefore the observations which the tool has been adopted for may not occur in practice. The tool contains important features that might work as a model to help train pharmacy student to improve their consultation skills and also assess how good their skills are. This type of teaching and learning approach is already in practice with medicine students (Kurtz SM, 1998) and becoming more widely used with pharmacy students and post-graduate courses designed for pharmacists (Joint Programmes Board, 2014).

Both the MRCF and the Cambridge-Calgary guide focuses on pharmacists interactions and does not take into account what the patient is saying, such communication is called transmission assessment model (Shah and Chewing, 2006b). Another assessment model 'Transaction', conceptualises communication as a two-way process, usually a cooperative process, where shared meaning is negotiated between the two participants (Shah and Chewing, 2006a). In a recent review investigating the different tools available to assess pharmacy consultations, it concluded that future research must focus on the dyadic conversations between the patient and the pharmacist through the use of interaction analysis and conversational analysis (Shah and Chewing, 2006b). The review also looked at tools that can help with such analysis, and recommended assessment tools such as the Roter Interaction Analysis System (RIAS) (Roter and Larson, 2002) because it observes both the patient and the pharmacists.

RIAS is the most widely used system to assess interactions between physicians and patients (Roter and Larson, 2002). A recent article concluded that it presents a potentially useful tool in the pharmacy context because of its wide usage in physician interaction (Cavaco and Roter, 2010). It is a tool to analyse exchanges between patients and medical professionals. RIAS coding can be applied to the smallest unit (utterance) of expression or statement, generally any complete thought expressed by either the patient or medical professional. These units are assigned to categories via a database and this is then exported to a statistical software. There are forty categories in RIAS that reflect the content of a medical dialogue. Categories are primarily informative (information-giving), persuasive (counselling), interrogative (closed and open-ended questions), affective (social, positive, negative and emotional) and process-oriented (partnership-building, orientations and transitions) (Cavaco and Roter, 2010).

RIAS has been used to analyse pharmacy consultations in a few studies, the first study of which was based in Portugal. The first study to use RIAS illustrated that pharmacy consultations can be coded using a pharmacy customised tool (Cavaco and Romano, 2010) and it helped describe how pharmacists interact with patients in Portugal. The study concluded the feasibility of using RIAS to analyse checking blood pressure for patients and found pharmacists asked more questions (mainly closed ones), while customers gave more information. Pharmacists in this study controlled the consultations through closed questions. Eighty-three consultations were analysed (51 blood pressure checks and 32 cholesterol checks). The average blood pressure check lasted 5:35 min while the average cholesterol check lasted 7:05 min. The study used a service where the potential of speaking to the patient about their medications was very limited and the entire consultation focused on a specific test. It is therefore very limited observations and not generalisable.

A more recent study that used RIAS to measure the impact of a one-day depression-related training program on pharmacists' counselling (Liekens et al., 2014). RIAS was successfully used to analyse pharmacy consultations and it concluded that pharmacist training in depression care can positively affect the quality of patient care. The study only investigated over the counter conversations using unannounced "mystery shoppers" starting antidepressant therapy, therefore all patients were new to the pharmacists. The study only focused on the interaction and not on any measurable patient outcome.

Both of the studies that have used RIAS to analyse pharmacy consultations were outside the UK and where services such as the MUR does not exist. In the first study in Portugal, they failed to say whether the patients were known to the pharmacist and the second study explained that all patients were new to the pharmacist. We therefore don't have a clear picture of pharmacists and the patients interact when they already know each other and whether that has any influence on the interaction. We have discussed how consultations can be assessed, the next section of this chapter will focus on how pharmacists develop their consultation skills throughout the different educational stepping stones.

1.7.2 Development of Pharmacist Consultation Skills

The development of consultation skills can occur at the different stages of the pharmacist's education and career and some of the teaching methods will be discussed below. There is currently little literature relating directly to how pharmacists learn consultation skills. We already know that methods of teaching communication skills to healthcare professionals have been widely researched and in particular, the literature surrounding physician-patient communication is extensive. Some work has been done to assess the needs of pharmacists and to develop profession-specific training and many models / frameworks have been proposed for teaching

communication skills. Many studies show that the current pharmacy education programmes give great importance to patient counselling (Wallman et al., 2013) but little about the training provided to registered pharmacists.

We also know that training provided at undergraduate education level has been shown to improve pharmacy student's consultation skills. One such training is provided via exposing pharmacy students to simulated patients. The use of simulated patient or role play has been reported to offer many benefits for pharmacy students. A simulated patient is a term used to describe patients who are in need of advice or clinical input to enhance their clinical therapy. James et al. showed how the use of a structured teaching programme improves students' perceptions of ability and confidence in conducting consultations, using simulated patients (James et al., 2001). The study used Third year MPharm students and put them in groups of 12. The groups then participated in two 4 hour seminars. The seminars included simulated patients that needed pharmaceutical care; students were then given feedback on their performance. Feedback was also given to students on how to improve their consultation skills. This training helped third year pharmacy students to hold consultations and provided a good framework around which to practice providing pharmaceutical care (James et al., 2001). Other benefits of using simulator patients are that the instructor can adjust the level of the challenge they want to set for students (Wallman et al., 2013). This method also allows the instructor to give immediate expert feedback to the students (Wallman et al., 2013).

Another activity such as the interdisciplinary activities are also reported to be beneficial for pharmacy students' communication skills and organisational skills (Greene et al., 1996, Begley et al., 2009). Such activities involved pharmacy students working in groups with students from other health professions, including nursing, medicine, and physiotherapy (Wallman et al., 2013). Interdisciplinary activities are commonly

combined with a simulated or standardised patient scenario as part of a seminar; the students then work together to optimise health care for the patient. Such activities are helpful because pharmacist get to interact with other healthcare professionals and learn from such experience. Pharmacy practice experience, where pharmacy students get work experience within a pharmacy care setting, such as a dispensary, a hospital, and community pharmacy, to practice their communication skills has been reported to be a very important stepping stone to becoming pharmacists (Wallman et al., 2013). Such placements expose the students to real patients which allow them to learn a new set of skills when interacting with patients.

Most pharmacy schools also use Objective Structured Clinical Examinations (OSCEs), now embedded in many of the MPharm programs (Evans et al., 2011, Corbo et al., 2006). OSCEs are designed to facilitate the development of students' communication and allow the student to use clinical knowledge within a simulated and safe environment. Evans et al. have concluded that such activities are a valuable assessment method and allow pharmacy students to develop their judgment, professionalism and clinical competence (Evans et al., 2011). Also OSCEs have been widely reported to have many benefits for students, it must also be said that they are very difficult to organise and some have questioned whether 'textbook' scenarios mimic real-life situations (Zayyan, 2011).

We have so far discussed how pharmacy students learn consultation skills in undergraduate education, moving on to how registered pharmacists can possibly enhance or learn their consultation skills. One study explored providing a structured method of teaching communication skills to pharmacists, alongside training for supplementary prescribing. This training was based around the Cambridge-Calgary model (Kurtz SM, 1998) of structuring clinical consultations. The study then analysed pharmacists' written reflections on the communication skills learning programme.

Participants tended to reflect on their consultation in terms of negative events and positive events (where they could see that they had used a particular communication skill and it worked). Pharmacists who took part in that training programme seem to have reached a 'deeper understanding' of their communication skills in practice by writing reflectively and demonstrated a reflective approach to practice which in turn is likely to benefit patient care (Edwards et al., 2009b). The study only used reflection of the pharmacists to assess whether the pharmacists actually learnt anything; there was no real patient outcome or skill assessment. Therefore it is difficult to understand whether this actually happened in practice.

A recent national training and development programme was initiated as a response to the Modernising Pharmacy Careers (MPC) review of post-registration professional development across all England . The programme that has been developed by HEE, CPPE, and other key stakeholders across the profession. It was designed for pharmacists and technicians and for all sectors of pharmacy. The programme is ongoing and as part of this programme, the entire 60,000 workforce based in England has been mailed a learning pack titled "Consultation Skills for pharmacy practice: taking a patient-centred approach "Containing all the information and theory about consultation skills. Research suggests that it is essential for communication skills courses to provide opportunities to practice such skills and learn how to implement such skills in practice. Therefore such a campaign might not improve pharmacist consultation skills. A study where they provided students with only theory training regarding empathy as communication skill (LILJA et al., 2000) found students with increased knowledge regarding empathy but did not increase the use of empathy in practice. The study was held in community pharmacy and they provided a 20 hour course on empathy but they have concluded that staffs were set in their existing ways of communicating with patients that is based on practical experience. Therefore, the recent nationwide programme must find ways to provide current registered pharmacists

to practice their communication skills and get more detailed training and not only theory.

There is minimal literature about what consultation skills training has been provided to pharmacists and there is a possibility that the majority of pharmacist learnt their skills from experience. Berger et al. point out that misconceptions relating to communication can arise from learning skills in this way. In order for a pharmacist to successfully communicate, they must anticipate the meaning that patients may associate with particular words, and tailor their interaction accordingly (Berger et al., 1986), without expert training it would be difficult for pharmacists to learn. A more recent study found community pharmacists can develop highly empathic skills over time through observing others and reflective practice (Lonie, 2006).

The next section of this chapter will discuss current evidence regarding the effectiveness of pharmacy consultations.

1.7.3 Effectiveness of Pharmacy Consultations

Previous literature has identified many barriers faced by the community pharmacist when providing patient services such as lack of time (Rutter et al., 2000, Krska and Veitch, 2001, Amsler et al., 2001, Dunlop and Shaw, 2002), lack of space (Rutter et al., 2000), lack of privacy (Krska and Veitch, 2001, Amsler et al., 2001), and lack of staff (Krska et al., 2001). Such barriers seem to prohibit some community pharmacists from providing patient facing services, although we already know that more than 2.8 million MURs were conducted last year. Other research has also found that some pharmacists feel they have inadequate clinical knowledge limiting their willingness to provide further services (Krska and Veitch, 2001, Dunlop and Shaw, 2002) for example Sutters and Nathan (Sutters and Nathan, 1993) found 27% of community pharmacists thought that

they had inadequate clinical knowledge. Other pharmacist-related barriers include the perception that there is insufficient evidence of benefit of the pharmacy activities (Krska and Veitch, 2001, Dunlop and Shaw, 2002).

There is conflicting evidence in the literature in regards to the effectiveness of medication reviews by pharmacists in enhancing patient health (Krska et al., 2001, Zermansky et al., 2001, Mackie et al., 1999, Royal et al., 2006, Holland et al., 2005), one paper suggests some evidence that interventions by pharmacists are effective in reducing hospital admissions (Royal et al., 2006) while another paper, HOMER (home based medication review by pharmacists) was set up to investigate the effectiveness of pharmacist led medication reviews. The outcome measures included hospital admissions and home visits by GPs. The study, counter intuitively, found an increase in these outcomes (plus an overall self-reported decrease in quality of life) for the intervention group. In terms of numbers of deaths, results were not statistically significant but favoured the intervention group (Holland et al., 2005). A sub study to the HOMER trial which analysed some of the interviews between the patients and the pharmacist found weak communication skills from some pharmacists and some difficult interactions with patients.

The sub study surmised that these consultations may have served to unsettle the status quo and raise doubts for the older patients, potentially leading to increased need for healthcare intervention (Salter et al., 2007). Seven (six were women) out of the 22 pharmacists took part in this HOMER sub study. A total of 29 observed and taped consultations were analysed. The pharmacists did not know the patients. All participating pharmacists were community pharmacists with a minimum of 15 years' experience (range 15-40) and at least one postgraduate qualification each. The pharmacists were therefore highly experienced. The results showed many opportunities for the pharmacists to offer advice, information and instruction. Almost all

advice was initiated by pharmacists even when the patient showed deliberate displays of competence and knowledge. Patients often resisted or rejected the advice given to them by the pharmacists. The study questioned the relevance of the interventions made by the pharmacists and questioned the assumptions about the appropriateness of advice giving role of the pharmacists. The study also concluded that the pharmacy profession needed further training in communication skills and established that context and competence are very important factors for advice giving. The research study had valuable results but a few limitations must be taken into account. The first limitation was the presence of the researcher while the consultation was being conducted, we don't know how much this may have impacted on both patient and pharmacist. Another limitation was the number of consultations that was observed, only 29; therefore any finding might not be generalisable to all pharmacy consultations. The final limitation was the age of patients; all over 80 years of age therefore pharmacy consultation might be different if they were conducted with other age categories.

Another study that observed MURs in practice concluded that pharmacists' heavy commitment to the dispensing process meant there was poor integration of the MUR service into their routine workload and a review of the consultation skills training of pharmacists was needed (Latif et al., 2011). The study recruited two pharmacies and 54 MURs were observed and a qualitative approach was used to analyse the data. The observations of MURs identified that pharmacists generally follow a rigid structure to an MUR, determined by the paperwork which needs to be completed. The observations revealed minimal open questions used by pharmacists and a focus on the pharmacist's agenda (medicines) rather than the patient's illness. All MURs were conducted via opportunity and therefore pharmacists did not prepare and patients were not expecting to be involved in a consultation with the pharmacist. Although the findings of this study are important, it was only done in two pharmacies and therefore findings might not be generalisable to all the pharmacy consultations. This researcher

was present in all consultations and we do not know how this can affect the behaviour of pharmacists or patients.

The role of the pharmacist has changed as previously outlined and the government has a vision of an increased role for community pharmacists. It is therefore necessary learn more about what methods pharmacists use and they think has been most effective. In light of some papers that question the effectiveness of the quality of pharmacy consultation, it is important to explore the possible reasons behind such evidence (Latif et al., 2011, Salter et al., 2007, Greenhill et al., 2011b).

The aim of many pharmacy consultation (e.g. MURs) is to increase medication adherence, the next section will discuss this topic further.

1.7.4 Medication Adherence

Medication adherence refers to whether patients take their medications as agreed with their prescriber (e.g. once daily) or whether they continue to take it at all. Adherence to medicines is defined as the extent to which the patient's action matches the agreed recommendations by the prescriber.

Medication non-adherence can be classified as intentional and unintentional. Intentional non-adherence occurs when a patient makes a conscious decision to not to follow the agreed recommendations of their healthcare provider while unintentional non-adherence occurs when specific barriers prohibit adherence in patients who would otherwise take their medicines. Aspects that precipitate intentional non-adherence include beliefs that medicines are not needed (Ekedahl and Mansson, 2004, Matsui et al., 2000), lack of trust in the prescriber (Wroth and Pathman, 2006), and financial constraints (Wamala et al., 2007). Barriers that can lead to unintentional non-adherence include language barriers, lack of patient knowledge, physical and cognitive barriers.

Medication non-adherence has significant consequences on both patients and the health care system; in fact, it has been associated with an increase in morbidity and mortality, as well as an increase in overall health care costs (Ho et al., 2009, Ho et al., 2006). Counselling by pharmacists in both the inpatient and outpatient settings can improve medication adherence and persistence (Taitel et al., 2012, Sarangarm et al., 2013). Pharmacist must have the correct consultation skills in order to successfully improve patient adherence (Volino et al., 2014).

Applying effective consultation skills have been shown to improve adherence to treatment and made patients respond more effectively to advice given to them at the consultation (Kurtz et al., 2005). Applying more advanced consultation techniques such as motivational interviewing has shown in a scientific setting to outperform traditional advice giving in the treatment of a broad range of behavioural problems and diseases (Rubak et al., 2005, Easthall et al., 2013). A recent meta-analysis investigating behaviour change techniques concluded that such techniques are effective interventions eliciting improvements in medication adherence. Such techniques incorporated within pharmacy services such the MUR might provide improvement in medication adherence for patients especially when current literature suggests that pharmacist consultation skills are not ideal (Salter et al., 2007, Latif et al., 2011, Greenhill et al., 2011b). Many of these techniques are thought to be patient-centred.

Patient-centred communication is widely endorsed as a central component of high-quality healthcare and has been shown to be linked to increased adherence (Epstein et al., 2005, Griffin et al., 2004), but it is not clear what it is, upon what theories it is based, or how to measure it. The definition of patient-centred communication includes (Epstein et al., 2005):

(1) Eliciting and understanding the patient's perspective— concerns, ideas, expectations, needs, feelings and functioning.

- (2) Understanding the patient within his or her unique psychosocial context.
- (3) Reaching a shared understanding of the problem and its treatment with the patient that is concordant with the patient's values.
- (4) Helping patients to share power and responsibility by involving them in choices to the degree that they wish.

One way of calculating patient centredness is via RIAS coding (Roter and Larson, 2002). Roter's patient-centeredness index includes measuring a ratio of socio-emotional statements to biomedical ones (Vail et al., 2011). The score is equal ratio of all codes relating to socio-emotional and psychosocial elements of exchange (all partnership-building, psychosocial information and counselling, relationship-building, positive, negative, and social talk by providers and patients, all physician open-ended questions, and all patient questions) divided by codes that further the biomedical agenda (the sum of all physician and patient biomedical information and counselling, orientations, and physician closed-ended questions).

A few studies showed that patient centred consultations can affect chronic disease outcomes (Griffin et al., 2004). In one study where they trained patients to take a more active role in the consultation, those patients reported changes in the patient–physician encounter and had improved control of diabetes (Williams et al., 2005). Other Studies have demonstrated positive associations between elements of the patient-centred approach and patient compliance (Frederikson, 1995) and patient recall of the content of the health care visit (Bertakis, 1977). It is slightly difficult to compare the results as each study might have a different definition for patient centredness. It is therefore vital that a unified definition is applied to all future studies so that a direct comparison can be made between the studies.

The current courses available for pharmacists to complete in order to be accredited to conduct MURs do not assess consultation skills or skills for patient centredness. The

NMS and MUR require a one to one consultation with patients. The new services are therefore strong drivers for improved sophisticated communication skills in order to improve adherence and reach the purpose of the MUR and NMS services.

1.8 Conclusion

The summary of existing research suggests that the role of pharmacists is destined to continue changing thus the education and training of the pharmacist is also changing to meet the demand of new roles introduced. Community pharmacists are still widely involved in dispensing and checking medication but they are also providing millions of consultations with patients. It is important to explore what occurs within these consultations and how pharmacists are prepared and feel toward providing such patient facing services.

The overarching aim of this PhD was to explore community pharmacist consultation skills through three main projects. The first study held focus groups with community pharmacists where their perception on consultations with patients was investigated. After analysing the results of the focus groups, two further studies were designed. The second study of the PhD explored the training community pharmacist received at the different phases of their career, while the third and final study looked at the types of interaction pharmacist and patient have within a consultation using a novel methodological approach.

The thesis is divided into five different chapters; the current chapter (Chapter One) has explored and reviewed literature on pharmacist-patient communication and the recent changes to the pharmacy profession. The following chapters discuss the different studies undertaken as part of this PhD, so that each chapter has a small introduction, aims and objectives, methodology, results, discussion, and a conclusion. Chapter Two

covers the Focus Group Study, while Chapter Three covers the national questionnaire exploring consultation skills training and lastly Chapter Four covers the study that used an interactional analysing system to investigate pharmacist-patient consultations.

The final chapter of this thesis will be an overall discussion of the PhD projects and the main conclusion as results of all the studies.

Chapter 2 – Focus Group Study

Focus groups with community pharmacists

2.1 Introduction

The first study of this thesis begins with an exploration of community pharmacists' perceptions regarding communicating with patients. These perceptions will be vital in understanding how pharmacists conduct consultations and how they view such consultations. This will be central in designing future projects and useful as there is a lack of UK literature available to ascertain opinion of community pharmacists.

As discussed in Chapter One, over the past four decades the role and responsibility of the pharmacist has evolved from focusing on medication dispensing and compounding to include the provision of patient information, education and clinical care services (Lipton et al., 1995). The introduction of a new pharmacy contract in April 2005 has been a catalyst for this process as pharmacists are increasingly remunerated for more patient focused services (Wilcock, 2010).

Despite patient counselling (General Pharmaceutical Council, 2012) being one of the standards expected for pharmacists, there is little published research on the nature and type of these interactions (Pilnick, 2003). One qualitative study investigated the consultation approach of pharmacists with patients and patient representatives in one setting: a hospital paediatric oncology clinic (Pilnick, 2003). The paper identified four approaches that pharmacists used when counselling. These included stepwise approach and stepwise via questioning. Little consideration has been given to why pharmacists adopt different approaches in this setting. Importantly, while pharmacists in hospital clinics have full access to clinical information on the patient, community pharmacists are often holding consultations with limited information or prior knowledge of what the patients want from the consultation (Pilnick, 2003). Furthermore, there is little or no information in the literature regarding the view of pharmacists about communication barriers in practice and what communication approach pharmacists use when speaking to patients in community pharmacy.

Previous literature has identified many barriers faced by the community pharmacist when providing patient services such as lack of time (Rutter et al., 2000, Krska and Veitch, 2001, Amsler et al., 2001, Dunlop and Shaw, 2002), lack of space (Rutter et al., 2000), lack of privacy (Krska and Veitch, 2001, Amsler et al., 2001), and lack of staff (Krska et al., 2001). Such barriers seem to prohibit pharmacists from providing patient facing services. Other research has also found that some pharmacists feel they have inadequate clinical knowledge limiting their willingness to provide further services (Krska and Veitch, 2001, Dunlop and Shaw, 2002) for example Sutters and Nathan (Sutters and Nathan, 1993) found 27% of community pharmacists thought that they had inadequate clinical knowledge. Other pharmacist-related barriers include the perception that there is insufficient evidence of benefit of the pharmacy activities (Krska and Veitch, 2001, Dunlop and Shaw, 2002). So far, the barriers that have been referred to are all contextual such as lack of training, space and time. The availability of a pharmacy consultation room should encourage the introduction of other patient focused services, and literature advocates the importance of pharmacists having the appropriate communication skills (Greenhill et al., 2011b, Latif et al., 2011, Salter et al., 2007).

There have been a few studies that have examined the pharmacist-patient interaction (Latif et al., 2011, Greenhill et al., 2011b, Cavaco and Roter, 2010, Salter et al., 2007). Salter et al. demonstrated in their study pharmacists' need and desire for further training in communication skills when communicating with older patients (Salter et al., 2007). Another study that observed MURs in practice concluded that pharmacists' heavy commitment to the dispensing process meant there was poor integration of the MUR service into their routine workload and a review of the consultation skills training of pharmacists was needed (Latif et al., 2011). An observational study of MURs identified that pharmacists generally follow a rigid structure to an MUR, determined by the paperwork which needs to be completed (Latif et al., 2011). The observations revealed minimal open questions used by pharmacists and a focus on the pharmacist's

agenda (medicines) rather than the patient's illness. Another observational study researching pharmacist consultations in a hospital and community setting concluded that whilst pharmacists are utilising a large number of communication skills during consultations, there are several areas in which they may benefit from additional training (Greenhill et al., 2011b). Therefore the current literature suggests that pharmacists can improve their consultation skills but many barriers exist in current practice which prevents some of the necessary development.

The focus of my first study was to investigate pharmacists' consultation approaches and to discover possible barriers that can occur between the patient and pharmacist in a community pharmacy setting via focus group discussions with a purposive sample of community pharmacists. This was a first step on the road to better understanding the communication needs and skills of community pharmacists.

2.2 Aims and objectives

2.2.1 Aim

The aim of this study was to explore community pharmacists' experiences of conducting consultations with patients.

2.2.2 Objective

The objectives were to explore:

- Personal experiences of pharmacist in regards to patient consultations
- Current issues while conducting consultations in practice
- Perception of pharmacists regarding the different approaches used when communicating with patients
- Pharmacists' opinions about possible communication skills barriers
- Pharmacists' opinions about how to improve patient consultations

2.3 Methodology, Procedure and Analysis

Focus groups were selected as the ideal data collection method due to our study aims. Focus groups are designed to help access participant attitudes, feelings, beliefs, experiences and reactions. Discussions will explore pharmacists' perceptions and encouragement of debate can lead to explication of personal processes and norms that otherwise may have gone unchallenged in an individual interview. Supporting documentation for this study is included in Appendix 1. The study received ethical approval from the Faculty of Health Ethics Committee, University of East Anglia (Appendix 1.1). I attended training with a title of "Focus Group Facilitation" at the University of Surrey where it gave me the skills to hold focus groups.

2.3.1 Focus group rationale

Focus groups were chosen to be the ideal qualitative method for this study because of their unique strengths, such as the capacity to stimulate the exchange of ideas, enabling participants to "feed" off the ideas of others, recalling things they might not otherwise be recalled. Group interaction can also help participants define and frame their individual view point by comparing/contrasting it to other perspectives (Huston and Hobson, 2008). In-depth interviews would have limited discussion and may have not provided contrasting views as a focus group would (Kitzinger, 1995).

2.3.2 Participant recruitment

A generic fax letter/email (Appendix 1.2) was sent to all the pharmacies in Norfolk on the 16th of May 2011 through NHS Norfolk's automated system. The automated system contained either a fax number or an email for every pharmacy in the boundaries of the NHS Norfolk. It automatically generated an email or a fax once activated. At the time of the study there were a total of 124 pharmacies registered with NHS Norfolk. The letter invited pharmacists to contact the researcher if they were interested in participating in this research via email or phone.

After one week, the researcher contacted all potential participants via phone to pharmacy phone number which was provided by NHS Norfolk. Pharmacies were contacted to remind them of the purpose of the study and confirm whether there was an interest to participate. If a pharmacist expressed an interest to participate, a study pack was sent to the participant containing a covering letter (Appendix 1.3), participant information sheet (Appendix 1.4), basic demographic detail survey (Appendix 1.5), preference survey (Appendix 1.6), withdrawal postcard (Appendix 1.7), and a pre-paid envelope addressed to the researcher was sent to them.

2.3.3 Inclusion Criteria

- All practising Community pharmacists
- All ages
- All genders

2.3.4 Exclusion criteria

- Primary Care Trust (PCT) pharmacists, Hospital Pharmacists
- Not a member of the General Pharmaceutical Council (GPhC)

2.3.5 Participant selection

Pharmacists were asked to provide their age, gender, date of becoming a qualified pharmacist, employment status (Self-employed, Independent Pharmacy, Small Multiple Large Multiple), nationality, average number of MURs conducted in a year and whether they qualified in the UK or not by completing the basic demographic survey which was returned to the researcher.

Purposive sampling was used to get a reasonable representation of community pharmacists in practice for the first focus group. As there is a gap in the literature about the perceptions of community pharmacists, our purposive case sampling for the first focus group aimed to having an equal representation of gender, employer type and

years in registration. The reasons for selecting the three demographic characteristics on which to base sampling for the first focus group are detailed below:

Gender: There was no evidence to suggest there is a difference between gender in perceptions towards consultations with patients but there is evidence to suggest work stress affects women pharmacists and men pharmacists differently (Carvajal and Hardigan, 2000, Mott et al., 2004).

Employer type: There is evidence to suggest pharmacists who work in multiple pharmacies face more stress (Maio et al., 2004). The selection process aimed to get participants working in different pharmacy settings to check whether perception was different.

Years in registration: Pharmacists who have registered longer than others might have a different view from newly registered pharmacists. The alternative view will be pharmacists who are new graduates could have received a more up to date consultation skills training and might have a different view.

The results were then analysed to check whether there was a need to hold separate focus groups according to collected demographics, this was discussed with the supervisory team. However, after the first focus group there was no evidence to suggest one group of pharmacists might have an effect on other members from different backgrounds. Coincidentally, purposive sampling was not feasible for the later focus groups due to the limited size of our pool sample. Many participants could not have made it at the same time as the other participants. Participants to the three later focus groups were recruited according to preference of the time and date of the focus group and were not purposively sampled. All pharmacists that were interested in the focus groups were invited in the end.

2.3.6 Data collection

There was one moderator leading the discussions and one observer writing notes. The moderator was myself and the observer was Michael Twigg (MT), a fellow pharmacist and PhD student, for all four focus groups. All focus group discussions were recorded using two Philips DVT7000 digital voice recorders, one recorder at each end of a central table in the room. This was conducted as a backup in case one recorder failed. All meetings of focus groups happened in the same room at the University of East Anglia with the same set up of the table. The dates and venues of the focus groups were arranged according to a preference survey (Appendix 1.6) returned by the prospective participants. Participants received maps and directions on how to reach the venue prior to each meeting and food and refreshments were provided to participants before each focus group discussion started.

All participants signed a consent form (Appendix 1.8) and a confidentiality agreement (Appendix 1.9) on the day of the focus group. Focus groups were anticipated to last from 60 to 90 minutes.

Each participant was given a £20 voucher as a “thank you for your time” which was redeemable at Marks & Spencer for attending the focus group. The information collected including participants’ demographics, focus group recordings and non-anonymised results were stored securely and only the research team had access to it. Information had all identifiers removed and was stored securely in a locked filing cabinet/password protected file in accordance with the Data Protection legislation. All records are planned to be destroyed 3 years after study.

2.3.7 Topic guide

The first focus group had unstructured question sets to allow the flexibility to focus on the participants' view and enable the researcher to try and expand on the views expressed. The subsequent design of the focus group topic guide depended on the themes and hypotheses gathered from the initial focus group and refinements were applied to the topic guide and subsequent prompt list to capture the full perception of the participants until data saturation has been reached. Data saturation is reached when new categories, themes or explanations stop emerging from the data.

The first topic guide can be seen in Box 1. At the start of every focus group, the facilitator explained to participants that the discussions are being recorded but anything they would say will be anonymised and everyone was encouraged to participate. After the introduction of what focus groups and researchers, an 'icebreaker' question was asked, where participants needed to introduce themselves and describe what type of animal they felt they resembled. Such type of questions are normal practice for moderating focus group discussions (Huston and Hobson, 2008).

1. Can you tell me how do you structure your conversations when you speak to patients like in MURs?
2. Does anyone use any specific structure they can tell us about?
3. Please share any experiences of communicating with patients, for example easy or challenging patients?
4. Can you think of any communication barriers that you face when you speak to patients?
5. How do you think we can improve the way we speak to patients?

Box 1 First focus group topic guide

The questions were reviewed for the subsequent focus groups to aid the discussion and to expand on views that were illustrated from the first group. Some questions were based according to the different stages of the Calgary—Cambridge referenced observation guides (Kurtz and Silverman, 1996). In the initial focus group there was

confusion when asked about a consultation and most of the participants associated it with MURs. Refinements can be shown in Table 2.1.

Main Questions	Sub-questions
1. What is the most enjoyable part about speaking to patients?	<ul style="list-style-type: none"> • Would you like to share an enjoyable experience?
2. Do you face any challenges when speaking to patients?	<ul style="list-style-type: none"> • Would you like to share a challenging experience with a patient?
3. How do you start a consultation when conducting an MUR?	<ul style="list-style-type: none"> • How do you build rapport with a patient? • How do you get all the information from the patient? • How do you end a consultation? • Please tell us about any specific training, tool or strategy you use when you speak to patients? • Does the place where you speak to your patients influence the way you speak? i.e. over the counter or in a closed room?
4. How do you think we can improve patient-pharmacist consultations?	<ul style="list-style-type: none"> • What skills or training would you like to have?

Table 2.1 - Topic guide for subsequent focus groups following the first focus group

The main questions were initially asked and when the discussion went quiet or needed a question to aid the discussion to continue, sub-questions were used as prompts. The session was audio-recorded, transcribed by myself and then recordings were heard on a different day to confirm reliability of transcribing. All transcripts were then anonymised with the names of participants changed to Pharmacist 1, 2 etc. The transcripts were then analysed independently by myself and MT, using thematic analysis directed at identifying any common themes expressed over the course of the focus group discussions. All results and themes were discussed with supervisors. The process of data analysis will be discussed further in section 2.3.7. I also collected field notes at the time where I recorded my overall impression of the discussions and the atmosphere

(e.g. dominant and quiet participants) and built these reflections into my final analysis after discussion with my supervisors.

2.3.8 Data Analysis

All focus groups were transcribed verbatim and data analysed inductively and deductively to generate codes and themes using thematic analysis. Thematic analysis is a method for identifying, analysing and reporting patterns (themes) within data. It minimally organizes and describes a data set in rich detail (Braun and Clarke, 2006). An example of how the transcripts were analysed can be found in Paradigm 2.1. The yellow highlighted sentences are the extracted quotes and the blue box is the assigned code for that quote.

Ahmed: you said something about patients being more relaxed with pharmacists, what do you mean exactly?

Pharmacist 5: I mean that I could see, when I do an MUR, some people are little bit scared.

Code: Pharmacists think some patients are scared of MURs

First of all my accent they are a little bit scared they will not understand it and all these things,

Code: Patients can be scared from the accent of foreign pharmacists (Barrier in Language)

I don't blame them, but once this is broken most of the people. I cannot say a percentage but I will say that more than fifty percent of the people, oh I forgot to say this to the doctor, It's a sign they are more relaxed, right. I don't know why probably because I keep asking questions and we have to be a bit active, you see certain signs, and probably we are more relaxed as well than the doctor, and probably they can feel that so they relax more as well...

Code: Pharmacists feel patients are more relaxed with them then with their doctor

Ahmed: what would you guys think? (looking at a other side of the group)

Pharmacist 3: I think the key point would be that because we are readily accessible and there is not any need to make an appointment

Code: Pharmacists are readily accessible

Paradigm 2.1 – Example of Thematic Analysis (Continued next page)

Whereas you do with the GP that I think is a psychological factor which might help patient feel more relaxed because knowing that they have an appointment will immediately not quite like an interview but it gives you, it's a time slot, you know, you got to get whatever you need to tell the doctor, whatever you're going to talk to him about, you need to get that your point across in a sort of time slot.

Code: Pharmacists have no time slots which they feel allow the patient to speak more.

they can just come in just for advice whenever they need it,

Code: Pharmacists are readily accessible

That probably does help make them feel they can speak for longer without having necessarily to worry about, although it shouldn't be that way but the conscious of another appointment waiting for their slot to finish with the doctor, I think that helps a lot.

Code: Patients can speak for longer with pharmacist due to no appointments necessary

Paradigm 2.1 – Example of Thematic Analysis (Continued from previous page)

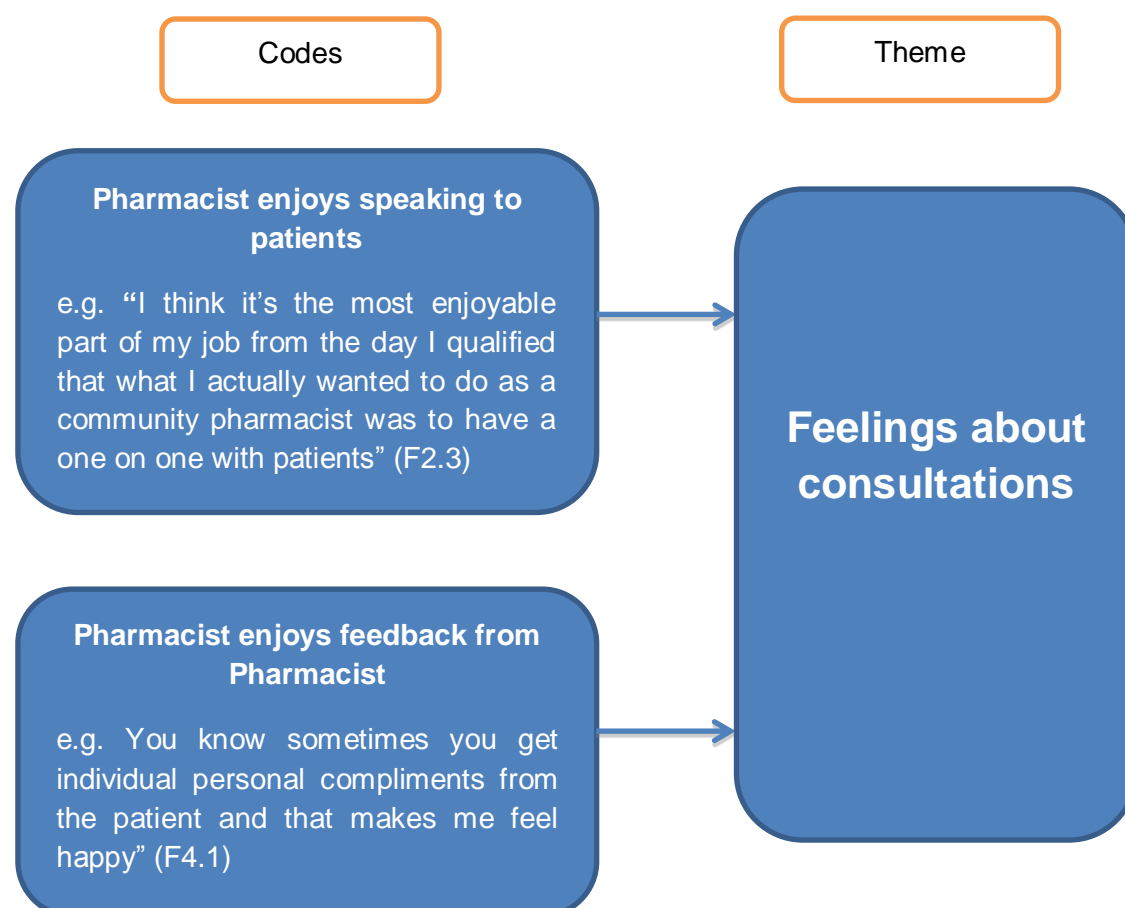
After thematic analysis, the codes were then grouped into themes. The process of analysing the content of the focus group transcripts followed the cycle as shown in Figure 2.1.

A participant validation proforma (Appendix 2.10) was then circulated via email to all focus group participants that agreed or requested to receive a copy and were given the opportunity to provide any feedback or ideas by returning the proforma via email. The circulation acted as a form of respondent validation of the descriptive themes that were gathered from the focus groups.

Codes were arranged to reflect their degree of conceptual commonality with others. A second researcher (MT) also coded the transcripts and identified themes independently of myself. We met to discuss emerging themes and to ensure all themes had been identified. After themes were discussed with me and the second researcher, several

meetings were held between, MT, JD and I, where the codes were categorised and conceptualised to help develop a theoretical understanding of the data and the consultation experiences of community pharmacists. Paradigm 2.2 an example of the process involved when categorising of codes into themes. During this process CS, qualitative expert, provided guidance and also read all the transcripts independently and discussed all themes that were developed from the data.

A participant validation proforma (Appendix 1.10) was then circulated via email to all focus group participants that agreed or requested to receive a copy and were given the opportunity to provide any feedback or ideas by returning the proforma via email. The circulation acted as a form of respondent validation of the descriptive themes that were gathered from the focus groups.



Paradigm 2.2 – Example of code grouping into a theme

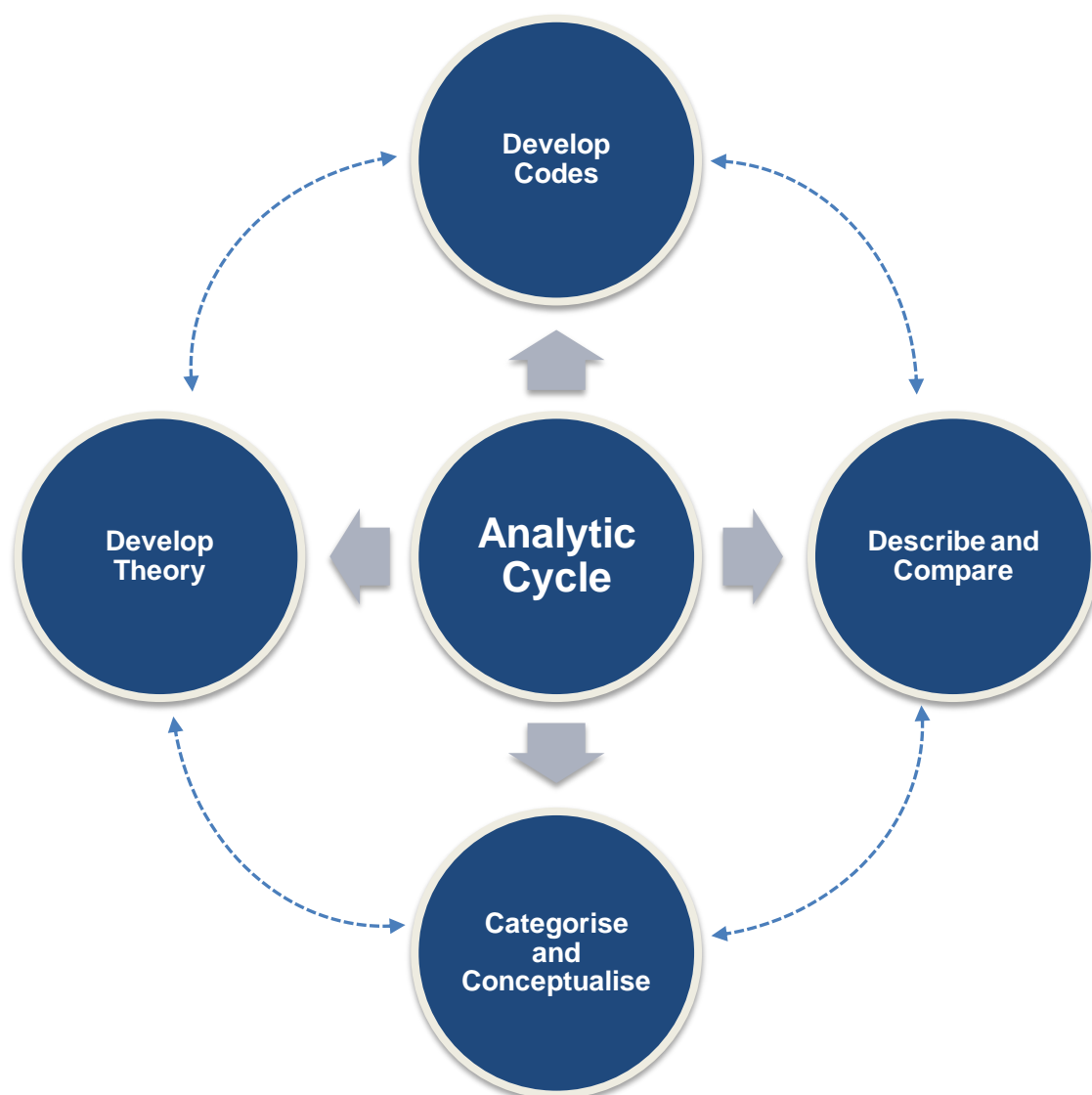


Figure 2.1 - Analytic Cycle (Adopted from Hennink et al., 2010)

The analysis of all the data followed the cycle as illustrated in Figure 2.1; this was adopted from Hennick et al. (Hennick et al., 2010). The transcripts were coded manually; coding started with the first line of the transcript and continued on every line until the last line of all four focus groups transcripts. All participants were anonymised with a study reference number. Some codes were short while other codes had more than one line. A total of 518 extracts were coded, each extract has been referenced so that it can be found easily in the original transcript. There were a total of 55 codes that were created from the 518 extracts. The codes were then categorised to reflect their degree of conceptual commonality with others. In the end we had 4 main themes.

2.4 Focus group findings

Initially following the recruitment process when an email/fax was sent out to pharmacies, only five pharmacists contacted the researcher to show interest. After the researcher contacted the pharmacies via telephone, 92 study packs were sent to potential participants. Of the 92, only 35 potential participants returned all forms needed to be included in the sample pool.

Four focus groups were organised with 3-8 participants attending each. A total of 22 participants attended the focus groups and discussions lasting from 60 to 90 minutes. The first focus group had eight participants while the second focus group had five participants. Then the third focus group had six participants and lastly the fourth focus group had 3 participants. Demographic details of participants can be found in Table 2.2. All focus groups took place at the University of East Anglia.

Focus Group	Study Code	Demographics			
		Gender	Employer	Qualification	Registration year
1	F1.1	Female	Independent pharmacy	UK	1979
	F1.2	Male	Self Employed And Independent Pharmacy	UK	2010
	F1.3	Female	Self-employed and Independent Pharmacy	UK	1974
	F1.4	Male	Large Multiple	UK	1991
	F1.5	Male	Independent	UK	1983
	F1.6	Female	Large Multiple	UK	1984
	F1.7	Female	Large Multiple	UK	2009
	F1.8	Male	Self Employed and Independent Pharmacy	Non-UK	2005
2	F2.1	Male	Self-employed	Non-UK	1990
	F2.2	Male	Large Multiple	UK	1971
	F2.3	Female	Small Multiple	UK	1987
	F2.4	Male	Large Multiple	UK	2006
	F2.5	Male	Large Multiple	UK	2009
3	F3.1	Female	Large Multiple	UK	2009
	F3.2	Male	Self-employed	UK	2004
	F3.3	Male	Large Multiple	UK	1994
	F3.4	Female	Self-employed	Non-UK	2007
	F3.5	Male	Small Multiple	Non-UK	2008
	F3.6	Male	Self-employed	UK	1965
4	F4.1	Male	Large Multiple	Non-UK	2008
	F4.2	Female	Large Multiple	UK	1979
	F4.3	Male	Large multiple	UK	1991

Table 2.2 - Participant demographic details (N=22)

2.5 Themes

The first theme relates to feeling about consultations: pharmacists expressed their enjoyment of speaking to patients. The second theme, the pharmacy environment, covers the environment in which community pharmacists hold consultations with patients. Some of the aspects in the community pharmacy environment acted as facilitators for them to speak to patients while other factors acted as inhibitors. The third theme covers consultation approaches where it describes participants' technique of holding consultations with patients. The final theme describes the discussions of how participants felt towards the professional relationship with their patients. Summary of themes and subthemes can be found in Table 2.3.

Theme	Subthemes
<p>Feelings about consultations: How pharmacists felt about holding consultations with patients</p>	<ul style="list-style-type: none"> • Not applicable
<p>Pharmacy Environment: The theme covers different aspects and issues that work as inhibitors and enablers for pharmacist to hold consultations with patients.</p>	<ul style="list-style-type: none"> • Pharmacy Layout • Staff • Accessibility of Pharmacy • Role of community pharmacist • Time
<p>Consultation Approaches: The theme covers how pharmacists hold consultations with patients and what barriers they face when they are one to one with patients. The theme also covers whether participants received any consultation skills training.</p>	<ul style="list-style-type: none"> • Initiating consultations • Rapport building • Ending consultations • Consultations Barriers • Consultation skills training
<p>Pharmacist-Patient relationship:</p> <p>The theme covers how pharmacist feel about the relationship they have with their patients and how they build it.</p>	<ul style="list-style-type: none"> • Not applicable

Table 2.3 - List of themes and related subthemes

2.5.1 Feelings about consultations

All participants enjoyed speaking to patients and described it as an important aspect of their job. They particularly enjoyed helping patients understand their medicines and solving their problems.

F1.1.C1 - "I think it's the most enjoyable part of my job from the day I qualified that what I actually wanted to do as a community pharmacist was to have a one on one with patients"

Most of the participants felt they had the motivation and skills to help patients with their enquiries.

F3.5.C4: "you have got the skills and the knowledge or that motivation to help them"

Participants from all types of employers had a positive perception towards speaking to patients. Participants enjoyed feedback from patients about advice they had given to them on previous visits. The feedback was used to legitimise their role and as a reward for their job.

F1.7.C7: "Having feedback as well is quite good because you have people coming back saying oh this and this was quite good for me and thank you for advice and the interaction"

F1.2.C13: "you get that feedback and it helps us as a learning tool as well"

F2.4.C4: "You know sometimes you get individual personal compliments from the patient and that makes me feel happy"

There were no negative feelings toward speaking to patients but some of the pharmacists working for multiple pharmacies reported barriers such as lack of time or staff, which limited their enjoyment of speaking to patients and at times meant they avoided speaking to patients because of such barriers. Participants from independent

pharmacies had a different perception as they did not feel as pressurised to speak to patients or meet targets set out in some multiple pharmacies.

2.5.2 The pharmacy environment

There are several factors in the community pharmacy surroundings that influenced pharmacist consultations. Some of the factors appear to have a positive influence while others had a negative influence.

2.5.2.1 Pharmacy layout

The pharmacy layout is different from pharmacy to pharmacy but generally it has a counter where pharmacy staff stand and behind and where pharmacy only medicines ([P] medicines) are kept and sold. The majority of community pharmacies now incorporate a consultation room to accommodate new services (e.g. MURs) after the introduction of the pharmacy contract in 2005. This is evident as there were 2.8 million MURs conducted in 2012-2013 (The Information Centre, 2011), and consultations rooms must be in place in order for the pharmacy to conduct MURs. The consultation room was reported as a useful space to use when speaking to patients.

F4.1.C93: “definitely patients can benefit more while having conversation in consulting room then over the counter then you can just not over the counter not seeing what is going behind your back, dispensary, phone calls, members of staff give you signs, (pharmacist breathes out loudly) there is prescription, in the consulting room, door shut, you just clean your mind and just concentrate on the patient and just get more information and just help more.”

F2.1.C89: “They usually pay attention when they are in the room”

F2.2.C43: “that’s very handy I must admit, some people get very shy and say can I have a quick word in there”

Some stated that the consultation room provided a better place for confidential and personal conversations to take place and patients appeared to be more focused when inside the room.

F4.1.C85: “Yea that true, in confidential room you can get much more information from the patient, you can ask your questions more easily than over the counter....”

Some participants showed concern about the design of the room stating it can sometimes be “scary” for the patient due to the small size of the room and also the lack of awareness from the public regarding the use of this room.

F2.1.C99: “but they are a bit claustrophobic when the room is small, when you go in and close the door behind you, they say what’s going on”

The design or ambiance of the consultation room was not always supportive for participants to hold consultations with patients.

F4.1.C94: “It depends on what consultation room you have, sometimes my room just smells and it’s just..... I wouldn’t invite anyone, my professional image is gone”

For a small number of pharmacists there was concern regarding confidentiality about over the counter consultations with patients. Pharmacists felt uncomfortable speaking about private medical matters when other patients were present in the queue waiting to be served.

F3.2.C47: “I sometimes find confidentiality quite challenging talking to patients on the counter, you’ve got 3, 4, other people sitting standing there that is particularly challenge to me, I don’t like it...”

A few participants made suggestions of providing an area in the pharmacy where pharmacists can speak to patients in an open yet confidential space.

F3.3.C56: “there isn’t really a separate confidential enough area for me where I am working to be able to speak as I would like to all the time”

This ‘ideal’ proposed area would/need not be in an enclosed room but still confidential. It was felt that such an area in the pharmacy layout will provide more support for the pharmacist to hold consultations over the counter.

F2.3.C140: “I sometimes feel if we can do with a half way stage, there is the counter which is always busy with customers and somebody who wants to ask something but they don’t want to go into the room they just want to ask you in a quiet corner and there isn’t really a quiet corner for them to go in”

2.5.2.2 Staff

This theme covers discussions raised regarding lack of staff and how this affected their work and consultations with patients. The theme also covers the importance of having the correct staff skill mix in order for the pharmacist to engage with the patients. The issue of lack of staff was reported in almost all focus group discussions with participants mostly working in multiple pharmacies.

F4.1.C96: “more staff to support us because when you’re in the consulting room and there are prescriptions you know, to be completed and checked, it’s always have this pressure and pressure and you know sometimes, most of the time I know I can’t spend quality time with patients that’s the problem lack of time and lack of staff. So that’s the main thing to improve, how to do that, I just don’t know”

F4.2.C97: “... one of the biggest is issues that we’ve always got and we do find in my pharmacy that on the day when we have double cover and a good counter assistant who is motivated to recruit our MURs then we can do wonderfully, quality MURs all day because there are two of us and we can take

it in turns and free to go to do the consultations all day and those are the best days for consultations...”

Participants working for multiple pharmacies reported lack of staff more often than pharmacists working for independent pharmacies. In both types of pharmacies, participants felt it was important to have the correct skill mix in the team and also reported that lack of staff and skill can restrain pharmacists from talking to patients because of other tasks they must take on to have a fully functional pharmacy.

F3.2.C67: “support definitely differs in different pharmacies, how much training they have the staff and you can trust leaving those people in charge of the counter and you can concentrate because you know some pharmacies you hardly even can hear what’s going on outside because it’s so far from you.”

F1.6.C74: “whole team is required in order to acquire that interaction and I think you do need the support of the entire team”

Participants were not able to define what would be the perfect skill mix in the focus groups but some participants reported that having motivated and experienced staff can allow the pharmacist to hold better consultations as they won’t be worried about the work building up when they are in the consultation room or speaking to patients. Some participants had worked in pharmacies that have two pharmacists on the premises; they reported holding better consultations with patients as they were able to focus only on the consultation, as the other tasks such as checking dispensed medication were being performed in the background.

F1.4.C3: “Actually in our branch we got one and half other pharmacists but I quite enjoy doing the MURs, so I tend to do most of the MURs because I enjoy that interaction with the patient”

A pharmacist who had worked with an accredited checking technician (ACT) before reported them as very useful.

F1.2.C82: “we’ve just started using an ACT a lot more and I find it’s giving me a bit more time with the patient then before I got a bench in the back filling up and trying to make it as quick as you can”

ACTs have the authority to accurately check dispensed medication for scripts that have been clinically checked by a pharmacist. Participants felt ACTs free up time for them to speak to patients, although some participants reported that not all ACTs were the same and some were underutilised because of other tasks such as large amounts of dispensing which took priority. Some participants were concerned that there should be more incentives for pharmacy technicians to become ACTs, as it was felt that ACTs were not remunerated enough for the increased responsibilities being given to them.

F3.3.C116: “if the responsibility was handed out to whoever had the final check then if it was an ACT then maybe it could be incentivised more money than they get a present to actually push more of them to actually wanting to study for it because I know a lot of at work I know a lot of staff who are quite capable of actually becoming you know progressing up but they just don’t want, they don’t have the desire to do it because maybe it’s not rewarding enough for them.”

2.5.2.3 **Accessibility of pharmacy**

Pharmacies have long opening hours and are open for most of the week. Participants felt that they were accessible to the public due to the opening hours and to the fact that patients can speak to a pharmacist without an appointment.

F3.6.C15: “I think one of the best things about pharmacy is that the pharmacist is usually available instantly, if they wanted to have a word when they think, they don’t have to make an appointment”

Participants therefore did not prepare for most consultations with patients: consultations were not planned and not always expected. Some participants felt patients were more comfortable speaking to them because it was not an appointment

and there were no time constraints, as there was no patient waiting for the next appointment.

The accessibility of the community pharmacist means time management is hard as they can't predict when patients will need to speak to them. The lack of ability to manage time can be stressful for some participants as their daily routine tasks such as dispensing medications don't stop when they have many patients requesting to speak to the pharmacist. Some participants felt that as a result of this, they can be perceived as being very busy by the public, which can lead to patients not approaching the pharmacist.

F1.5.C135: "... But if we went out down in the street about what is their perception, often I hear people say. We are perceived as really busy and somehow that got to change to a degree and at the moment what the economic forces aren't getting any better and I think that there got to be a stage where you become so stretched that you are not effective really and I don't see this necessarily in every pharmacy but I think certainly in some of the multiples its getting really difficult really."

2.5.2.4 Role of the community pharmacist

There were different perceptions of the role of the community pharmacist. Participants felt they had at least four main areas of work, which are dispensing, selling, managing and counselling patients. The vast amounts of responsibilities of the pharmacist don't stop when they are in consultation with a patient and this can affect the quality of the consultations.

F4.3.C31: "I think you are always aware when you are talking to patients, your time constraints, there is a point during a consultation with somebody, your

mind tends to, certainly mine does mine does to think about other things I got to do”

At times participants feel they have to rush consultations as they are aware that the work load of dispensing is building up. It was also reported that many patients perceived the pharmacist as a busy professional and this stopped them from approaching the pharmacist.

F3.1.C42: “I think my biggest challenge is my time, I feel like I got so many people want a piece of my time and I am talking to patient and I got an addict waiting to have their supervised methadone and the phone is ringing and there is a customer wants to talk to me and there is so many things going on at once and I think sometimes the patient can feel a little bit intimidated by it all, oh I am wasting your time but making them feel that they are not wasting your time and that you do give at them everything they deserve out of your time at that time and yeah just my time is just spread over so many different things all at once. It’s the same for all of us I am sure but yeah I think that is my biggest challenge”

Patient understanding of the pharmacist’s role has also been reported as a barrier in some consultations. When a patient views a pharmacy as just a “shop”, patients are reluctant to be involved in discussions of a medical nature with the pharmacist.

F1.7.C99: “Another thing that could be sometimes is they don’t understand what you role is and why are you asking about my medication you’re just a shop and why are you asking me about my medication...”

F2.4.C68: “they don’t have that idea pharmacists are also capable of knowing about these medications and counselling them and advising them.”

Some participants in consultations began by explaining what the aim of the pharmacy service was. Not all participants initiated their consultations in that manner and some

felt that patients should already know what the role of the pharmacist was. Some participants also expressed the view that their role should solely be clinical checking and counselling and not checking the accuracy of large amounts of scripts, because they felt that they should be able to pass on such tasks to ACTs. Participants felt that they had more to give and wanted to speak to patients more.

2.5.2.5 Time

Almost all participants reported that they had less time to counsel patients than they would like. It was also reported that pharmacists don't usually prepare to see the patients and that they don't have time to do so.

F3.2.C46: "Getting an accurate history and an accurate what the patient agenda is, is another challenge sometimes because you do need that time"
(Pharmacist referring to MUR consultations)

Time was reported as having a big impact on the pharmacist and the way daily tasks such as checking and dispensing were executed. Participants felt that if more time was provided it would enhance the relationship with the patient as they would be able to spend more time with them. Many participants felt the constraints on their time would only get worse as more services like the New Medicines Service being introduced.

F4.3.C100: "To find how you are going to do things better under the time constraints that you have at the moment which probably will get worse and it won't get any better "

The daily responsibilities for participants differed as some also managed the shop which brings in extra tasks that must be done. Those managers who were locums in other pharmacies felt they had better consultations with patients on those occasions as they didn't have to worry about their management responsibilities. Some participants felt there should be a review of the pharmacy contract as it does not provide a reward or enough incentives to make time to speak to patients.

2.5.3 Consultation Approaches

The consultation approaches theme was built according to the interview guide which asked participants to share how they conducted one to one consultations and how they built the different stages of the consultations. The guide also led the group to discuss consultation skills training and barriers they faced while conducting one to one consultations.

2.5.3.1 Initiating consultations

There wasn't a standardised approach described by participants to initiate consultations. Instead, many different approaches emerged from the discussion. For example, some started the consultation outside the room explaining the purpose of the consultation:

F3.3.C73: "I always ask them if they have heard of the service before, are they aware of it and I tell them the various names there might be for it, medicines check-up, medicine use review, medicines MOT even or whatever other chains or independents call them and if they are familiar with it and know what's about that how I always start off with every medicine use review that I have done just to find out to make sure they are happy for what they are about to come inside for"

Other participants just asked the patient whether they can have a word inside the consultation room before explaining the purpose of the consultation. Many of the pharmacists used the MUR template to initiate the consultation and most participants initiated the consultation with an open question, which they felt was the best way to start the conversation with the patient. One participant gave an example of what they considered to be an opener or open question but the example chosen was in fact a closed question.

F1.4.C30: "I tend to just ask my first question always because I am getting them on the PMR is you know like umm are you having any side effects from

any of the medication just an open question? and then they can start talking and hopefully by that time I have set up and ready to go with the first drug”

Some participants described how they used the initial response to gauge the intellect of patients and lead the consultation accordingly. MURs were described as being conducted ad hoc and this did not always allow the patient to have enough time to think about their agenda.

F3.3.C88 “a lot of the MURs that we have that I do most of them ninety five, ninety percent of them are a bit, you know sort of not on impulse but the patient hasn’t had an opportunity before we discussed it with them to think about what they would have wanted to say, yeah so a lot of the patients that are identified won’t know necessarily that they are going to be asked for an MUR that’s the biggest thing for me whether they might not realise they may have not had the chance to collect their thoughts because they have just been picked or they have just been asked about it”

2.5.3.2 Rapport building

Different approaches were used by participants to build rapport. Participants mostly used the MUR form as a way to progress through the consultation.

F2.2.C119: “yes I try to get the screen so the patient can see it. Those at the doctor surgery they sit there with the screen in front of you talking to the screen. (Pharmacist 3: No I angle it so we both see it) and we both look at it and that’s a great way of moving on because you got a list of drugs and you can go down to the next one and then moves it on and then you end up finishing on time with good results.”

Participants felt the type of question asked reflected the amount of information the patient replied with. For example, asking an open question will give you more information. Participants also felt they should make patients feel comfortable and making the MUR not too official by 'joking', using patient language and 'small talk'.

F1.8.C115: "I think we should make them feel comfortable so they can talk to you, try to not make it too official, have a joke sit down just start you know small things"

The perception of the participants is not to assume that the patient knows everything about their medicine and allowing patients to ask questions throughout the consultation, to help build a good rapport with the patient. Rapport building was reported as heavily influenced by the pharmacist-patient relationship. It is therefore different from patient to patient and it was felt the closer the relationship the better the rapport with the patient.

2.5.3.3 Ending Consultations

Pharmacists reported different approaches to ending a consultation with the patient. Participants did not illustrate a standardised approach to ending a consultation with the patient. A majority of participants reported that the consultation with the patient usually ended naturally by summarising and writing action plan and provided a way back to speak to the pharmacist if they had any further questions. The MUR form again is being reported as a template to ending the consultations just as it was being used to initiate the consultation. When the moderator asked if the patient was taking too long, some participants stated using a member of staff to end consultations with such patients or by taking fake phone calls.

F3.4.C70: "well if I am stuck in a consultation room long they call from mobile to the pharmacy phone"

Some participants also stated they used support staff to knock on the door if the patient was taking too long.

F1.8.C116: “usually if I am there more than ten minutes one of the girls will come and say Pharmacist 8 can you please, you know, if it’s ok then I say it’s fine but you know when they come in I just shake they know it’s fine. The girls they know when to come in”

2.5.3.4 Consultations Barriers

Several barriers were reported in one to one consultations with patients by some participants. Participants who’s English was not their first language, felt language can be a barrier in the consultations between patients and pharmacists, whether it’s the language skills of the pharmacist or language skills of the patient.

F1 .7.C90: “I find the language as well for me it’s quite it can be a bit of a challenge because sometimes they don’t understand the accent or understand what you’re saying”

Some participants also stated it was difficult to get patients to listen to them which again overlapped on the patient-pharmacist relationship and patient perception of the role of the community pharmacist. Some participants felt the reason patients didn’t listen to the pharmacist can be due to the lack of knowledge about the role of the pharmacist. The lack of access to patient notes can also cause a barrier for pharmacist consultations as some patients don’t know why they are on a specific medicine and it’s hard for the pharmacist to guess. Participants felt it would be useful if they had access to patient notes to learn about why the patient was taking the specific medicines which will help them hold better consultations with patients. Lack of access to medical notes was also identified as a barrier in one to one consultations with patients.

F2.1.C82: “the only thing I don’t like about MURs is you don’t know what the doctor is treating the patient for, you only guess from the drugs they’re prescribing and really you can’t challenge it, you can’t challenge its being

prescribed for the purpose of not. We just check can you swallow, is it irritating your stomach”

2.5.3.5 Consultation skills training

Consultation skills training in leading a consultation in different situations was reported as helpful by some pharmacists. However overall, participants had not received any formal consultation skills training.

F3.6.C94: “I didn’t have any consultation skills training whatsoever, therefore I don’t do any MURs”

Participants stated that training provided in the online MUR training does not cover consultation skills.

F1.4.C124: “on some of the workshops we’ve attended, you know some CPPE (The Centre for Pharmacy and Postgraduate Education) workshops you do get little a bit information on questioning techniques but not a whole formal session”

F2.4.C123: “when I learnt, I mean when I was training for this MUR, it was only an online test so it is about MURs rather than technique.”

Participants felt that consultation skills training should be provided to newly qualified pharmacists and not experienced pharmacists.

F2.4.C125: “perhaps the newly qualified pharmacists might find it useful because I still remember like when I was qualifying I was a bit anxious, what to do, how to talk about, how do I open up, how do I close so perhaps newly qualified pharmacist if they could have this training before accreditation.”

Although some pharmacists wanted more consultation skills training, generally, more consultation training was not welcomed by the majority of participants.

F4.2.C79: “I don’t think I need any more training as such because I’ve developed my own way of doing it and it works, people like it I think. It’s quite

interesting, it might be interesting to have an MUR from two different people on the same person and then to say which one they prefer, I don't know that might be quite interesting a bit of interesting research."

Some participants pointed out that new services like the New Medicines Service (NMS) requires new skills since counselling patients over the phone is not a normal procedure and it will take more from their time.

2.5.4 Pharmacist-patient relationship

All participants felt that building a good relationship with the patient was an important aspect that facilitated better consultations with patients. Pharmacists also expressed that any relationship should only be a professional relationship, although participants felt that the relationship between the doctor and the patient was more formal.

F4.2.C21: "yeah you do try and keep it professional, you can't get too personal and if you allow them to think of you as being too much of their friend rather than your then their sort of professional advisor on something"

Not all patients disclosed all the information requested by a few participants since it was felt that patients did not see the reason behind why the pharmacist needed all this information. This is highly linked to the previous themes whereby participants were not sure whether the public understood the role or expertise of the pharmacist.

F1 .1.C93: "I don't think they deliberately want to hold information but they don't see it as relevant to what you're talking about, it's not that they don't want to tell you but it's just they don't think there is any reason to tell you"

This is related to the fact that not all patients know the exact role of the pharmacist which affects rapport building within relationship building. It was also reported that

having a regular pharmacist is an advantage to building a good patient relationship since the relationship builds better and trust is built over time.

F1.1.C41: “..... if you actually had a conversation with the patient one week and you actually follow it up with a question or a comment the following week when they next come in to want to talk to a pharmacist they are much more relaxed and you will find the process is easier (Pharmacist 4 says: yea...) so that is good when you actually got a community pharmacy where you have the same person there perhaps on regular day of the week so that they know they can see the same person and you're not starting right in the beginning each time and we have an opportunity on progressing your relationship in different fields and they will come back more and more to ask a different enquires be it medication be it health, be it for a child, mother”

Participants shared different situations where keeping cool and professional with hostile patient can win their confidence and trust over time. Participants felt the patients see the pharmacist more than the doctors and therefore can have better relationships with their pharmacists. Patients tended to see their doctors when they needed to, while they see the pharmacist much more often for many things apart from picking up medication.

F3.1.C27: “...if you're the same pharmacist in the same store all the time, you can see the patient 2 to 3 times a week whilst they see their doctor every time they got a problem but I think they trust us a lot more because they do see us on a regular basis...”

Many different approaches emerged relating to how a relationship is built with the patient and trust was one of the most repeated words in the discussions. Participants had many different perspectives on how trust can be built e.g. some participants felt the

title of being a 'pharmacist' makes patients trust them, while others felt trust can be built by providing excellent customer services.

F2.5.C22: "I think our title of being a pharmacist on itself points to trusts without working hard for it just being a pharmacist I think or being a doctor or being sort of.. There is that trust in that name or that position"

Trust was also reported to be built by keeping all matters related to the patient confidential, thereby helping the patient to feel they could speak to the pharmacist about anything.

F2.1.C21: "Honesty, it's like with anybody really. If you are not honest with your partner, your children, your family, you wouldn't rip off your own family why would you rip of your customers and then lose their trust because you are there for the long term.

2.5.5 Results Validation

After sending the validation report (Appendix 1.11) to all participants of the four focus groups, only two participants replied. However both said that they agreed with all the themes that were established from the focus groups.

F1.7: "I enjoyed reading your report and recently saw your abstract *"It's the best part of the job" community pharmacist-patient consultations: a focus group study*. Well done - it brought the experience back."

F4.2: "Looks good. I don't think I can add anything else"

The report did not just include themes from particular focus groups but was a summary of all that was said in all four focus groups. The fact that a pharmacist from the first and last focus group agreed with the report supports the claim that themes developed summarise all that was said at these discussions. The proforma was used as a respondent validation of the themes.

2.6 Discussion of themes and conclusion

The study was exploratory in nature and it was unclear how participants felt about speaking to patients prior to focus group discussions. The results clearly show that pharmacists enjoy speaking to patients and enjoy providing patient focused services. Previous studies have shown that pharmacists welcome providing patient focused services such as the MUR serviced (Latif and Boardman, 2008, Wells et al., 2013), whilst these findings were unanimous this was a self-selecting sample and therefore potentially more likely to enjoy consultations with patients. However, although all participants welcome the patient interaction and showed enjoyment in the process, there were many issues that affected their enjoyment and worked as a barrier to engaging with patients.

2.6.1 Pharmacy Environment

On the theme of the pharmacy environment participants reported both barriers and facilitators when interacting with patients and providing patient focused services such as the MUR. The pharmacy layout, staff, accessibility of pharmacy, the role of community pharmacist and time played a major role in determining the quality and frequency of pharmacist-patient interactions.

The design layout of the community pharmacy typically consists of 3 different areas: the dispensary, the consultation room and the sales area (Rapport et al., 2009). The consultation area, which developed after the introduction of the new pharmacy contract in 2005 (Pharmaceutical Services Negotiating Committee, 2004), provides an area where the pharmacist conducts MURs and prescription-intervention services (Rapport et al., 2009). Our results show that participants utilize this room to their benefit and have claimed that it provides a confidential space to interact with their patients. The room therefore acts as a facilitator but this was not always the case for all participants. Some participants found their consultation room to be small and were embarrassed by

the design of the layout. The consultation area is also new to patients as this was only introduced recently to pharmacy; some participants were not sure how the public viewed such rooms and experienced situations where patients were confused about the nature of such rooms. A recent study concluded that the consultation rooms are mostly used by methadone service users (Gidman and Coomber, 2014). Previous research has also shown inconvenient workspaces may leave the pharmacist feeling unprofessional, frustrated and vulnerable (Rapport et al., 2009) and our results suggest the same. There are no real guidelines about the design of the consultation room and therefore they differ from pharmacy to pharmacy. The only guidance which was issued by the PSNC where it specifies conversations must not be over heard (Pharmaceutical Services Negotiating Committee, 2005c) but nothing about the size or design of the rooms. It is important that such guidelines should be introduced so pharmacists can utilise the room effectively and provide more services.

It was also noted that not all confidential discussions occurred in the consultation room and many discussion occurred in the sales area of the pharmacy. Indeed, the sales area is where most of the interactions occur between patients and the community pharmacist (Rapport et al., 2009). Our results show the layout of that area can be challenging for the pharmacist. Many felt that it is not confidential enough for holding sensitive discussions with patients who are in a rush. A previous study concluded that patients would not use the pharmacy as a source of public health advice, due to issues around confidentiality, privacy, space and busyness (Krska and Morecroft, 2010). Participants felt the layout could have been improved so that an in-between area of a consultation room and sales area is introduced to the pharmacy to allow for better interactions. More research is needed in to investigate this issue further as our data indicates that many aspects of the pharmacy design layout can act as a barrier to interacting with patients and potentially removing these barriers could allow better pharmacist-patient interaction.

Staff issues were discussed in all four focus groups, although there was no direct question regarding staff from the facilitator. Participants felt that having the appropriate staff can facilitate participants to hold more and better quality consultations with patients. Staff issues have been reported in previous research conducted in 2001 where participants felt they needed the appropriate staff to engage with patients (Krska and Veitch, 2001). Our results indicate that this is still an issue and that lack of staff or the correct skill mix is acting as an inhibitor for pharmacists to engage with patients. There was also a discussion about how when more than one pharmacist was on site, this enabled more consultations with patients, since while one pharmacist held consultations the other was able to perform other duties expected from a pharmacist. The right skills mix among the support staff can enable the pharmacist to engage more with patients as it frees the pharmacist from other duties such as dispensing. There was a different situation for pharmacists working for multiples and independents. Pharmacists working for multiples will not have the authority to employ more staff, while this will not be the case for those who own their pharmacy. Participants felt that the pharmacy technicians as a professional group could play a big role in helping the pharmacist engage with patient more. Participants however felt that there needs to be clarity with regard their professional responsibilities and appropriate remuneration to match greater responsibility. This was also reported in a recent study where participants felt technicians can play a big role in the future which agrees with our findings (Bradley et al., 2013).

The community pharmacy is easily accessed by the public without an appointment (Hassell et al., 2000) and this means patients can speak to the pharmacists whenever they want or need to. Although participants felt this was an important advantage for the pharmacy, it can sometimes impact on their work flow, as time management is not feasible and this unpredictability can act as a pressure on the participants: they simply cannot predict who will come and request their advice. Patients who seek help from the pharmacist at a time when the pharmacist might be engaged in other duties can make

the patient feel they are intruding on the pharmacist's time. The public does perceive the pharmacy as a very busy environment, which can inhibit them from requesting information from the pharmacist (Krska and Morecroft, 2010).

So far, we have discussed the pharmacy layout, staff and accessibility of the pharmacy. The next subthemes that of the pharmacist's role and time, are highly integrated. In fact, all subthemes under the theme of the pharmacy environment are coherent and are interlinked where one can influence the other.

Participants often referred to their role and responsibilities as barriers to having quality consultations with their patients. A previous observational study investigated the activity of community pharmacists. The study concluded that community pharmacists devote the majority of their time to dispensing medication (Bell et al., 1999). Pharmacists only spent about 10% of their time handing out medication and counselling patients (Bell et al., 1999). Other studies show that while pharmacy assistants spend 22% of their time in contact with patients pharmacist spend only about 14% (Emmerton et al., 1998). The lack of contact between pharmacists and patients could justify why the participants felt that patients did not understand their role. Emmerton *et al.*, in a study conducted in 1998, also concluded that the pharmacists are primarily concerned with the quick supply of medicines rather than the provision of a comprehensive patient-care service (Emmerton et al., 1998). The pharmacy contract that was introduced in 2005 is still based on prescription volume with little remuneration for the provision of patient-care activities (such as providing MURs). From the discussions in our focus group, participants reported being still highly involved in the dispensing process and this affects their time and the way they hold consultations with patients. Many of the participants were also managers of the pharmacy and had a retail responsibility on top of being pharmacists. Other roles on top of being pharmacists mean even less time for participants to spend speaking to patients. The role of the pharmacist that has been portrayed in these discussions is that of a barrier in terms of pharmacists holding consultations with patients. The barriers consists of many

responsibilities that do not stop when the pharmacist holds consultations with patients, responsibilities such as high volume dispensing can limit the pharmacist from speaking to patients. The theme of the pharmacist's role is highly associated with staff and time: if the pharmacy had the right staff then this would free the pharmacist, thereby providing more time for the pharmacist to hold consultations with patients. Savage (1995) reported that a pharmacist who employed one or more dispensary technicians spent 20% less time on dispensary activities compared to a pharmacist who had no dispensary support (Savage, 1995). Participants also indicated that when they had more than one pharmacist on-duty, this allowed one pharmacist to spend much more time engaging with patients and the other helping with the dispensing process.

Due to the nature of the pharmacist's role that has been portrayed in these discussions, all participants identified lack of time as a barrier to speaking to patients. Lack of time has been previously identified as a barrier to engaging with patients (Bell et al., 1997). Previous research has identified that time, staff, space, a suitable documentation system and access to the literature are needed in order for the pharmacist to provide more patient focused services (Krska and Veitch, 2001).

We can see that all the subthemes of the pharmacy environment theme are very highly associated with each other and one can influence the other. If the pharmacy had enough trained staff this would allow the pharmacist to delegate more roles, thus accessibility would not affect time management, thus allowing the pharmacist's role to include more patient engagement, which is something they enjoy doing.

A conclusion is slowly being created which is:

While community pharmacists enjoy speaking to patients, a number of factors limit the quality of these interactions.

2.6.2 Consultation approaches

The theme of consultation approaches includes initiating consultations, rapport building, ending consultations, consultation barriers and consultations training as subthemes. It was shaped from the discussions mostly because participants were asked to share how they conduct one to one consultations with patients. The questions were based according to the different stages of the Cambridge-Calgary referenced observation guides (Kurtz and Silverman, 1996). In the initial focus group there was confusion when asked about a consultation and most of the participants associated it with MURs. Therefore the question guide was changed to reflect on the different stages while they were conducting an MUR.

The first sub-theme was initiating consultations. Participants did not report a standardised approach when starting an MUR. Some participants explained the services while others just asked the patient whether they could speak to them inside the consultation room. The data shows that not all participants report establishing reason or purpose of the service or outline an agenda prior to starting the consultation, also found elsewhere (Greenwood et al., 2006, Greenhill et al., 2011b). Participants detailed how important it was to use open questions and one participant illustrated an example of an open question but in actual fact the example the pharmacist gave was a closed question. The importance of using both open and closed questioning techniques in pharmacist–patient consultations has been reported (Fisher, 1992). However, research has shown that just 1–3% of questions asked by community pharmacists were open in nature (Skoglund et al., 2003, Deschamps et al., 2003, Sleath, 1996). The fact that one participant illustrated an open question but in fact it was a closed question can show that more training might be useful. The same pharmacist who gave that flawed example did not consider needing any consultation skills training when asked about their view on further consultation skills training.

Consultations were described as being constructed differently with each patient depending on the relationship the pharmacist had with the patient. Most of the participants reported using the MUR form to navigate through the consultation, going through drug by drug and checking with the patient whether they understood why they were taking their medication. This is similar to a previous study where the MUR consultation was highly influenced by the way the MUR form was designed (Latif et al., 2011). Previous literature found that the standardised format of the MUR and pressure on the pharmacist to return to dispensing duties, contributed towards the pharmacist dominating the consultation (Latif et al., 2011). However, it is very difficult to know exactly how the consultations were conducted as the data that came from the focus groups can only give us an idea on how it is being conducted from a pharmacist perspective.

As with initiating the consultation, rapport building and ending the consultation, a standardised approach was absent from the conversations, with each participant using an approach that works best for them. Participants felt the consultation ended naturally but they were referring to the MUR form being fully complete. A key factor suggesting that more consultation skills training is needed was noticed when the moderator asked what they did when the consultation was lasting longer than they anticipated. Some participants referred to using their staff with making fake phone calls or getting staff to knock on the door after a specified amount of time to allow the pharmacist to exit from the consultation. Such examples given by participants highlight that further training might help them establish different skills that will allow them to close the consultation and agree a plan without help from their staff.

Consultation barriers were brought up in discussions. Some participants found it difficult to hold consultation with patients who did not understand the role of the pharmacist. Results of a recent study suggested that pharmacists believed that patients are not aware of the expertise of a pharmacist (Wells et al., 2013), seeing

them as shopkeepers more than health professionals. Participants felt the lack of understanding of the role worked as a barrier within the consultation and made some participants feel patients did not listen to them. Such barriers are linked to many themes because if the pharmacist- patient relationship was close then such a perception might not be relevant.

Overall, participants from the focus groups have not received any formal consultation skills training. Those who have received consultation skills training found it very useful. Some pharmacists wanted more consultation skills training but as a general message, more consultation skills training was not welcomed by the majority of participants. A recent study investigating the New Medicine Service found that the participating pharmacists felt that they only required training regarding the service structure and did not need further training in communication skills, as all competent pharmacists should possess good communication skills (Wells et al., 2013).

2.6.3 Pharmacist-Patient Relationship

Participants felt having a good relationship with their patients allows them to have better consultations. A good relationship with patients was reported as a useful factor in building rapport and discussing medications with patients. There is a lack of empirical literature that investigates the nature of the pharmacist-patient relationship. Literature on the doctor-patient relationship supports the importance of patient-centred and participatory relationships in improving patient satisfaction (Stewart, 2003), adherence (Stewart, 2003), and disease and illness outcomes (Schulman, 1979). The importance of the relationship is also widely accepted by patients: in a previous research patients felt their relationship with the pharmacy staff appeared to be an important factor for patients to accept the invitation for an MUR (Latif et al., 2013).

Many different examples were given to how this relationship was built over time. According to participants, the main ingredient to a good relationship was trust. A

previous study has affirmed trust and satisfaction in the pharmacist as a strong facilitator between pharmacist participative behaviour/patient-centeredness of relationship and relationship commitment (Worley, 2006). There was a discussion over how trust is built; some specified keeping confidentiality as the main aspect in building trust; alternatively, others said that the public automatically trusts the pharmacist due to their professional status.

It was obvious from the results that there were a few barriers in the pharmacist–patient relationship. Many participants thought patients were not aware of their role and that this limited their relationship. For example, some patients withheld information because of this lack of understanding about the role of the community pharmacist. Bissel *et al* (2008) concluded that patients in general welcome speaking to the pharmacist but expressed strong reservations about pharmacist’s recommendations about treatment and they preferred to leave such decisions to the GP (Bissell et al., 2008).

The research results and the literature indicate that pharmacists enjoy having a good relationship with patients and that patients also value this relationship. The lack of awareness of the role of the pharmacist by the public does act as a barrier but such a perception is expected as most of the pharmacy services are new and therefore time is needed for the public to fully understand the role of the community pharmacist.

The pharmacist-patient relationship is highly associated with consultation approaches, and the pharmacy environment themes. If the barriers reported in the pharmacy environment theme were improved there would be more time for the pharmacist to engage with the public; in turn, this would help change the perception of the public. At the same time, the use of the right consultation approach might allow the patient to be more trusting towards the pharmacist.

2.6.4 Strengths and Limitations

This study focused on the experiences and perceptions of community pharmacists. The data obtained has enabled us to fulfil the aims of the study using focus groups

methodology. We had data saturation and all participants had a chance to give feedback on the results obtained. All themes were reviewed by more than one researcher and results were discussed by supervisors until agreed, thus reducing any possible biased selection of quotes.

One of the limitations was the fact that our study is situated in Norfolk which may have impacted the findings therefore our results might be restricted only to this area and cannot be widely generalised. It is possible that the perspectives of our focus group participants may differ from other areas although many of themes developed from results also have been reported in literature from different areas of the world and United Kingdom. We had difficulties in recruiting more participants due to the work pattern of community pharmacists; at least 4-5 pharmacists cancelled attending the focus group on the day that it was taking place. The last focus group only had 3 participants and this may not have been the ideal set up for a focus group.

The facilitator and observer of all focus groups are both fellow pharmacists therefore participants may have felt inhibited about revealing aspects of their practice which they felt were poor or inadequate. However as a moderator I explained that no data could be traced to any individual and all data published would be anonymous. The focus groups were characterised by lively discussions, and participants seemed comfortable and open when sharing their thoughts.

A further limitation is the possibility that as pharmacists our view of the questions being discussed would be heavily influenced by our own training and practice. However, having a non-pharmacist as a member of the supervisory team (CS) helped question and challenge assumptions in developing this study.

2.7 Conclusion

After completing the analytic cycle, we can conclude the following:

While community pharmacists enjoy speaking to patients, a number of factors limit the quality of these interactions. Further consultation skills training might also improve the quality of such interactions.

Addressing the barriers that have been discussed, including providing correct staffing levels would allow more pharmacist-patient interactions and this interaction might be improved by providing more consultation skills training to community pharmacists. Pharmacists obviously enjoy speaking to patients but this enjoyment is hindered by the current pharmacy environment. Providing correct staffing levels with the correct skill mix will alleviate most of the factors reported as barriers to having good consultation with patients. More trained staff will allow the pharmacist to delegate the dispensing process and focus on delivering patient-centred services. At the moment providing extra staff might not be as easy as proposed; there is currently no statutory minimum level of staffing in a community pharmacy. It varies from pharmacy to pharmacy, for example; pharmacists working for multiples will not have the authority to employ more staff, while this will not be the case for those who own their pharmacy.

Evidence of lack of awareness of some of the accepted basic principles of good communication such as agenda setting, structure and closure suggest that the community pharmacist might find consultation skills training helpful. From the data gathered, it was hard to establish the exact way patient-pharmacist consultations were being conducted and a further study is needed to investigate this subject in detail. Consultation skills training was not welcomed by the overall majority of participants; those who wanted more training did not specify what type of training is needed nor how they wanted to receive this training.

This study has helped shape the next two studies as part of this PhD: the first one will investigate consultation skills training of the community pharmacist, while the final project will investigate consultations of the community pharmacist. The subsequent study, detailed in the following chapter, will investigate consultation skills training provided to community pharmacists.

Chapter 3 – Consultation Skills

Training Questionnaire

3.1 Introduction

The project initially came into the light after participants from the focus groups project reported not receiving any formal consultation skills training. Following from chapter two results we decided to investigate consultation skills training. This is the first nationwide questionnaire to capture consultation skills training undertaken by community pharmacists. There is very little information found in literature about the overall consultation skills training a community pharmacist receives during their career. As the preceding chapters explained the role of the pharmacist has been changing and majority of the pharmacies are now providing patient services where the pharmacists have to manage one to one consultations with patients in a consultation room. Good consultations skills are imperative if pharmacists are going to improve patient outcomes in these new services (Hargie et al., 2000).

As mentioned in chapter 1, Modernising Pharmacy Careers (MPC) programme has recommended many changes to the MPharm degree and pre-registration year. The recommendations are aimed to provide improvements in quality of care, public health, and pharmacy workforce planning. Registered pharmacists will not be able to gain from the new programme proposed by the MPC, therefore we must address how to train and increase the skill of the current registered work force.

The Centre for Pharmacy and Postgraduate Education (CPPE) is funded by Health Education England (HEE) to provide education to pharmacy professionals providing NHS services in England. Registrants of the General Pharmaceutical Council (GPhC) are allocated tokens which can be used to be educational programmes. These tokens have been funded by Health Education England (HEE). In order to access the services of CPPE, registrants of the GPhC must register first and part of that registration they would provide their email address. CPPE will circulate the questionnaires to the email addresses already provided by their members.

Pharmacists are providing new advanced services but evidence suggests the consultation skills of some of the pharmacist may not be optimal (Latif et al., 2011). Therefore with the lack of quality evidence to demonstrate good consultations in practice (DeYoung, 1996), it is appropriate to focus on the training of these skills by pharmacists. Understanding the extent of training already accessed by community pharmacists will guide further training initiatives.

3.2 Aims and objectives

3.2.1 Aim

To explore consultation skills training provided to community pharmacists.

3.2.2 Objectives

- For practicing community pharmacists during undergraduate, pre-registration and post registration periods to determine:
 - ◆ The format of the training received
 - ◆ The content of material taught
 - ◆ How useful participants perceived the training to be
 - ◆ How consultations skills were assessed
- To determine the importance of consultation skills training in participants
- To determine participants' confidence in performing consultations
- To determine whether participants' perceived need for further training
- To determine if there are any relationships between participant demographics and consultation skills.
- To determine if there are any relationships between the data using regression modelling

3.3 Method

The study was approved by the Faculty of Health Ethics Committee at the University of East Anglia (Appendix 2.1). An e-mail (Appendix 2.2) containing a link to an electronic questionnaire was sent out to 10,000 pharmacists based in England. The email was sent on behalf of the university by the Centre for Pharmacy Postgraduate Education (CPPE). The email addresses of 10,000 potential participants were randomly chosen by CPPE and an email containing a link to the questionnaire was sent on behalf of the university. CPPE was approached since it had the most up to date list of pharmacists in England.

3.3.1 Inclusion Criteria

- Practising community pharmacists who have a registered e-mail with the CPPE

3.3.2 Exclusion Criteria

- Pharmacists who do not practice in community pharmacy who have a registered e-mail with the CPPE

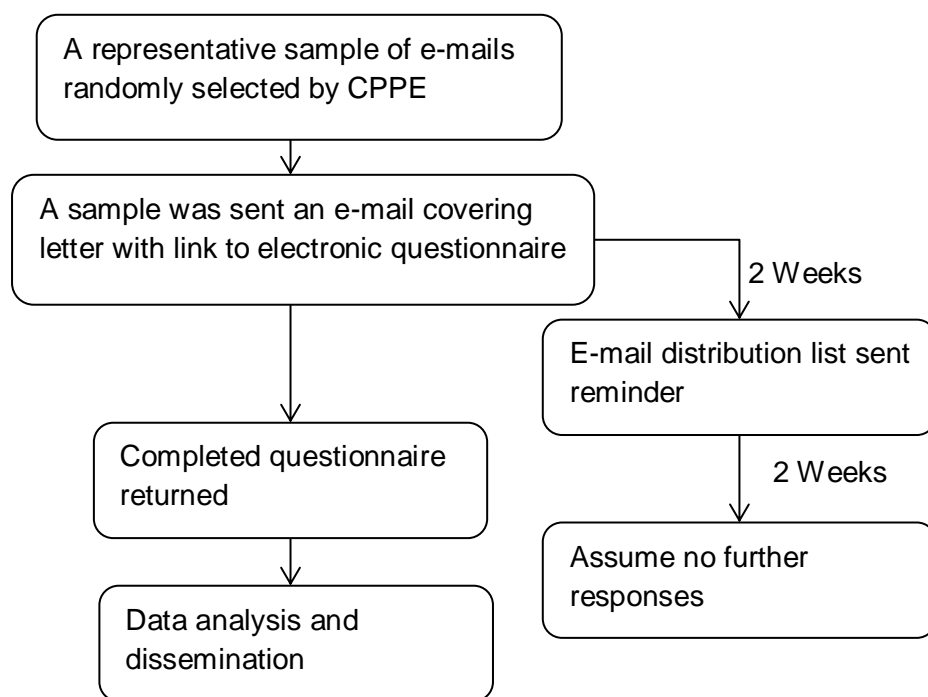


Figure 3.1 - Flow of data collection

3.3.3 Data collection process

An e-mail covering letter (Appendix 2.2) containing a link to the electronic version of the questionnaire on Survey Monkey™ was sent out to 10,000 e-mails sampled from the e-mail database of the CPPE on 30th of January 2012. After two weeks on the 13th of February 2012, a second e-mail covering letter (Appendix 2.3) was sent to the same sample except one who asked to be opted out of the second email. The initial email asked all those who did not want a reminder to write to the researcher so their email is removed. . After a further two weeks, it was assumed that no further responses will be received.

Electronic questionnaires were chosen as the ideal data gathering tool for this project. There are many benefits in using electronic questionnaires including eliminating the costs associated with printing and distribution of paper based questionnaires (Cobanoglu et al., 2001) and it provided access to a wider sample pool (Wright, 2005).

The questionnaire was also easily accessed from anywhere, whether at work or home. The electronic questionnaire was designed using a dedicated service, Survey Monkey; this infrastructure was a valuable source to design and collect data. On average, for an electronic survey response rates ranges from 10% to 30%, with many factors increasing the response rate (Deutskens et al., 2004). There are many factors that can influence response rate of questionnaires. Incentives such as money more than doubled response rate in previous studies (Edwards et al., 2002). The length of questionnaires can also play a role, shorter questionnaires are more likely to get a response (Edwards et al., 2002). The use of coloured ink and good formatting had a positive influence on the response rate of questionnaires. All these factors were addressed in the design process of our questionnaire.

The questions are retrospective and self-reporting on previous training received, this may introduce recall bias since memory is less reliable for previous life events, resulting in less accurate recall for the content they received at previous training (Coughlin, 1990). Recall bias is the tendency of participants to report past events in a manner that is different from what they actually encountered (van den Brink et al., 2001) and is higher when participants are asked about things that occurred a long time ago (Gmel and Daeppen, 2007).

Many methods were used to maximise response rate. Firstly the questionnaire was designed to be easy to complete, short and with question logic. The question logic meant that participants only saw questions that are applicable to the answers they have given. In to further maximise the response rate, participants completing the questionnaire were put in a raffle ticket draw, where three participants were chosen randomly and given a voucher of £100 M&S vouchers each. Six trials evaluated the effect of a non-monetary incentive (e.g. Amazon gift cards) on e-questionnaire response. The odds of response were almost doubled when a non-monetary incentive was used (OR 1.72; 95% CI 1.09 to 2.72) (Edwards et al., 2009a). A follow-up request

to complete the questionnaire is the most successful way to increasing response rate (Fox et al., 1988, Heberlein and Baumgartner, 1978), therefore a follow-up email was sent. Figure 3.1 illustrates the full process that was taken to collect the data.

3.3.4 Questionnaire development

At the time of the study there was no validated questionnaire designed which cover all the objectives of this study, therefore a questionnaire has been specifically designed. The questionnaire has also been developed with feedback and agreement on content and structure by the CPPE and provisional drafts were reviewed by colleagues in the School of Pharmacy at the University of East Anglia. The questions were first put together according to the education stages the pharmacist has to go through in order to become a registered pharmacist. The first stage is undergraduate education then pre-registration and finally what training they received post registration. Face validity was first sought via the by PhD supervisory team then it was sent to CPPE. CPPE then sent feedback and asked to add more questions about the exact modules they offer for pharmacists. After CPPE and supervisory team were happy with questionnaire, it was circulated to all 24 pharmacy practice team members to get feedback and understanding of the questions. Many of the pharmacy practice team are practicing pharmacists and it was important to get their opinion and understanding of the questionnaire in order to achieve face validity. All correspondence was made by email. All feedback was then discussed with supervisory team and CPPE. All unclear questions were changed to reflect feedback received from the pharmacy practice team. In the end the questionnaire consisted of five sections: demographic information, undergraduate education, pre-registration training, post registration training and general perceptions regarding consultation skills training. The questionnaire in Appendix 2.4 is only pictures of the PDF print out from Survey Monkey™ and does not represent how the questions were structured to the participants. The survey was designed to have question logic so that pharmacists only get the questions that were

applicable to them. The logics are found on each question as a text box to explain where the survey will jump if a specific answer is chosen.

The questionnaire contained closed multiple choice questions (one and multiple answer options), open comments boxes for free text and Likert Scale questions. The questionnaire used five item Likert scale with responses changing dependant on the statement or question asked. Responses to each statement were scored out of five with higher score indicating a more positive/beneficial response. The questionnaire flowed according to participants' responses which worked as an aid to assist the participants in completing the questionnaire. For example, where the participant does not remember learning about consultation skills in undergraduate education, the questionnaire skips all questions relating to that part of education.

3.3.5 Data storage

All data were kept confidential; all questionnaires were allocated a study number. The researchers did not extract any personal data (relating to participating in the prize draw) for analysis. Survey Monkey is password protected and all extracted data are stored on password protected computers. All data will be destroyed 5 years after completing the study. The data gathered regarding the prize draw was removed within two weeks of when the project was completed. Participant identifying information was not used in any of the data analysis. A random number generator in Microsoft[®] Excel 2007 was used to choose the three study numbers, the numbers chosen were then assigned as the winners for the three prizes. All data relating to the winners was deleted after the prizes were posted to the addresses provided.

3.3.6 Response estimation

CPPE sent 10,000 emails on our behalf to its members. Emails were randomly chosen from a CPPE census conducted in 2010, according to which 60% of its members are

female and 40% male. These percentages were reflected in the selection of emails sent: 6000 emails were sent to female members of CPPE and 4000 emails were sent to male members of CPPE. CPPE has advised us from previous research that up to 1/3rd of e-mail addresses may be no longer active and that only 50 % of the remaining e-mail addresses are for practising community pharmacists. Therefore it was predicted that response rate will be between 10-30%, and between 333-1000 responses will be returned (Deutskens et al., 2004).

3.3.7 Data Analysis

All data were analysed using Microsoft Excel, Statistical Package for the Social Sciences (SPSS), and STATA® 12 SE. Data were summarised using the appropriate descriptive statistics, mean (standard deviation) or median (inter-quartile ranges) for numeric data and numbers (percentages) for categorical variables.

Free text data were analysed inductively and deductively to generate codes and themes using thematic analysis. Thematic analysis is a method for identifying, analysing and reporting patterns (themes) within data. It minimally organizes and describes a data set in rich detail (Braun and Clarke, 2006). The themes were identified by me and then discussed with supervisory team to clarify themes and discuss. During all this process CS, qualitative expert, provided guidance and also read all the transcripts independently and discussed all themes that have been developed from the data.

Appropriate regression analysis was used to investigate predictors of the following dependent variables, the number of consultations in a standard week, confidence in consultation skills and other key dependent variables were investigated. There were three different types of regression analysis that were used: linear regression, binary regression and ordinal logistic regression. In all regression models, a backward elimination was selected as it was the most suitable option for our study (Field, 2009).

Ordinal logistic regression is designed to investigate an ordinal dependent variable. It is thought to be an extension of the binary logistic model that applies to dichotomous variables, allowing for more than two (ordered) response categories.

All data points had to have 10 or more responses in order to be included in any regression model. Where a scale was included in the model, some individual levels were combined so that the N value is more than 10 to avoid excessively small groups.

Backward elimination starts with all of the predictors in the model. The variable that is least significant according to P value is removed and the model is refitted. After each subsequent step, STATA removes the least significant variable in the model until all remaining variables have individual P values smaller than the significance level to stay and the model is complete. The significance level for a variable to stay in the model was a P value of less than 0.2, for all models. This P value and the stepwise selection method, is unlikely to fit highly collinear predictors, therefore it was deemed not necessary to conduct correlation matrices.

The type of regression used was according to variable being investigated and appropriate validity testing was performed to ensure the model fitted was a valid one.

3.3.8 Validity for linear regression

Two graphical testing methods were used to check validity of linear regression models:

1. Scatter plots of the residuals vs. x or the fitted value
2. Normal probability plots of the residuals.

The graph of residual vs. fitted values should be scattered and other patterns can indicate that a linear regression model may not be appropriate for the data. Normal probability plot of the residuals should show the residuals linear to the inverse normal.

3.3.9 Validity for binary regression

There are no validity tests available for binary regression apart from making sure the dependent variable is actually binary in nature where only two choices of data are present in the data set e.g. yes and no.

3.3.10 Validity for ordinal logistic regression

The approximate likelihood ratio test (LRT) of proportionality was used to check the validity of the logistic models fitted. If the value of the approximate LRT of proportionality was significant, the results of the model were then used with caution.

3.4 Results

There were 700 responses in total, with 78 of those responses coming from non-community pharmacists, whose responses were therefore excluded. A further 27 responses were excluded due to the fact that participants did not complete the demographic details section and closed the electronic questionnaire before reaching any other sections of the questionnaire.

3.4.1 Participants' Background

3.4.1.2 Demographic

The majority of participants were female (66.3 %) and 27.8 % of participants were from the age group 46-55 years old, see Table 3.1. Nearly half of the participants were working in large multiples (48.9 %). The questionnaire defined small multiple as pharmacies that have 2 – 19 branches and large multiples with more than 20 branches.

Characteristics	N	Measure		
Female	587	N (%)	389	(66.3)
Age	594	N (%)		
Under 25			31	(5.2)
26-35			143	(24.1)
36-45			132	(22.2)
46-55			165	(27.8)
56-65			96	(16.2)
Over 65			27	(4.5)
Pharmacy Type*	595	N (%)		
Large Multiple			291	(48.9)
Locum			236	(39.7)
Independent			122	(20.5)
Small Multiple			72	(12.1)
Years Qualified	595	Median (IQR)	20	(7, 31)

* Percentage does not equal 100% as participants can work in more than one type of pharmacy.

Table 3.1 - Participant Demographics

3.4.1.3 Qualifications

The majority of participants either had a BSc. or a BPharm for their undergraduate pharmacy degree, see Table 3.2. About a quarter of participants had additional qualifications (155 (26.1 %)) for example 9.6 % had a pharmacy postgraduate diploma.

Characteristics	N	Measure
Degree Type	594	N (%)
BSc (Pharmacy)		185 (31.1)
BPharm		177 (29.8)
MPharm		130 (21.9)
Non UK Qualification		102 (17.2)
Additional qualifications	595	N (%)
Pharmacy		57 (9.6)
Postgraduate Diploma		
Pharmacy		35 (5.9)
Postgraduate Certificate		
MSc		34 (5.7)
PhD		31 (5.2)
BSc		18 (3.0)
BA		7 (1.2)
Other*		73 (12.3)

*Other includes the following qualifications: MBA, Independent prescriber, PGCE and supplementary prescriber.

Table 3.2 - Qualifications

3.4.1.4 Undergraduate degrees

Table 3.3 demonstrates the UK universities where participants obtained their pharmacy undergraduate degree. The majority of responses came from well-established pharmacy schools while very few from pharmacy courses that were started since 2003.

University	N	(%)
University of Bradford	58	(12.6)
University of Manchester	52	(11.3)
London School of Pharmacy	46	(10.0)
Bath University	36	(7.8)
Aston University	34	(6.9)
University of Portsmouth	34	(7.4)
University of Nottingham	33	(7.2)
University of Sunderland	32	(7.0)
Liverpool John Moores University	31	(6.8)
De Montfort University	29	(6.3)
Cardiff University	27	(5.9)
King's College London	26	(5.7)
University of Brighton	26	(5.7)
Other*	29	(6.3)

* Any university with less than 2% reported as other.

Table 3.3 - UK universities (N=595)

3.4.1.5 Overseas undergraduate degrees

One hundred and two participants received their pharmacy undergraduate degree from abroad. Poland with 19.8% was the most cited country from which overseas undergraduate degrees were obtained. Figure 3.2 illustrates the non-UK countries of study, any country that had a percentage of less than 5 % was classified as other.

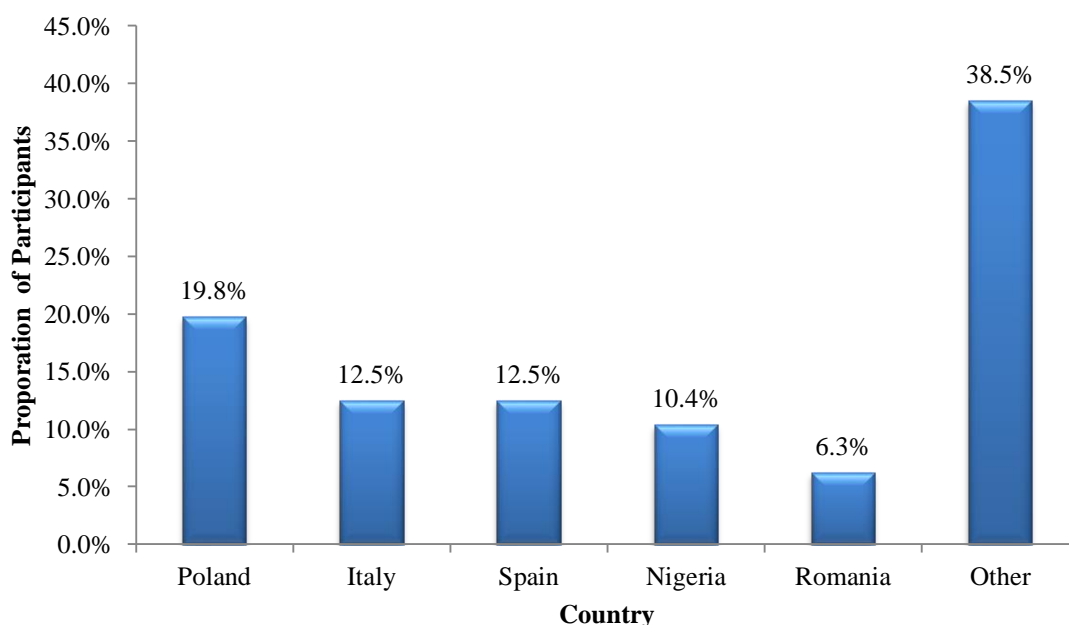


Figure 3.2 - Countries of degrees obtained from abroad (N=102)

The majority of overseas qualified participants did not need to complete the Overseas Pharmacist Applied Programme (OSPAP), since only 34.3 % of participants graduated from a Non-EEA country, with Nigeria being the only country that had more than 5%. Non-EEA pharmacists must complete the OSPAP course and then a pre-registration year in order to practice as a pharmacist in the UK.

3.4.1.6 Regions of UK

Table 3.4 provides the regions where the participants are currently working, according to the Strategic Health Authority (SHA) areas in 2011. Responses demonstrate all English regions were represented but there was only one response from Scotland and none from Wales. The largest proportion of participants (20.5 %) currently work in London. CPPE only covers England and therefore it was expected not to have large response rate from Wales and Scotland.

Region	N (%)
London	122 (20.5)
North West	90 (15.1)
South West	79 (13.3)
Yorkshire and The Humber	67 (11.3)
East Of England	47 (7.9)
South Central	47 (7.9)
East Midlands	43 (7.2)
South East Coast	38 (6.4)
West Midlands	37 (6.2)
North East	24 (4.0)
Scotland	1 (0.2)

Table 3.4 - Strategic Health Authority regions where participants currently work (N=595)

3.4.1.7 Additional roles

Seventy five participants currently have additional roles apart from community pharmacy. Figure 3.3 illustrates what additional roles participants have. For those who have additional roles the median (IQR) percentage time working as community pharmacists was 37.5 % (10, 76.25). The other significant area in which they work was as a primary care pharmacist.

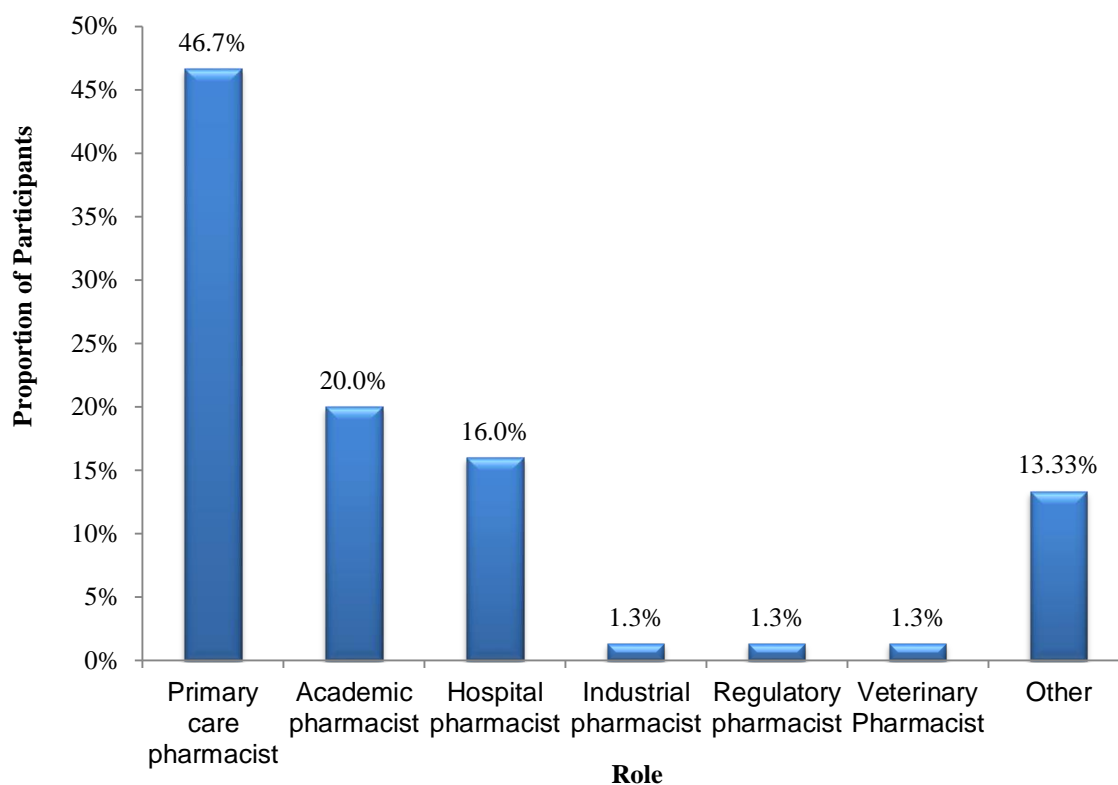


Figure 3.3 - Additional roles (N=75)

3.4.1.8 MUR accreditation and consultations

Nearly all pharmacists were MUR accredited (90.1 %). The median (IQR) for the number consultations performed in a standard week was 5 (3, 10), these include MURs, NMS and additional enhanced services such as emergency contraception.

3.4.2 Training in the undergraduate degree

3.4.2.1 Evaluation of undergraduate training

Participants were asked to rate how the consultation skills training they received during undergraduate education prepared them to hold consultations with patients on a scale where 1 was not prepared and 5 was fully prepared. The results demonstrated a mean (SD) rating of 3.1 (0.969).

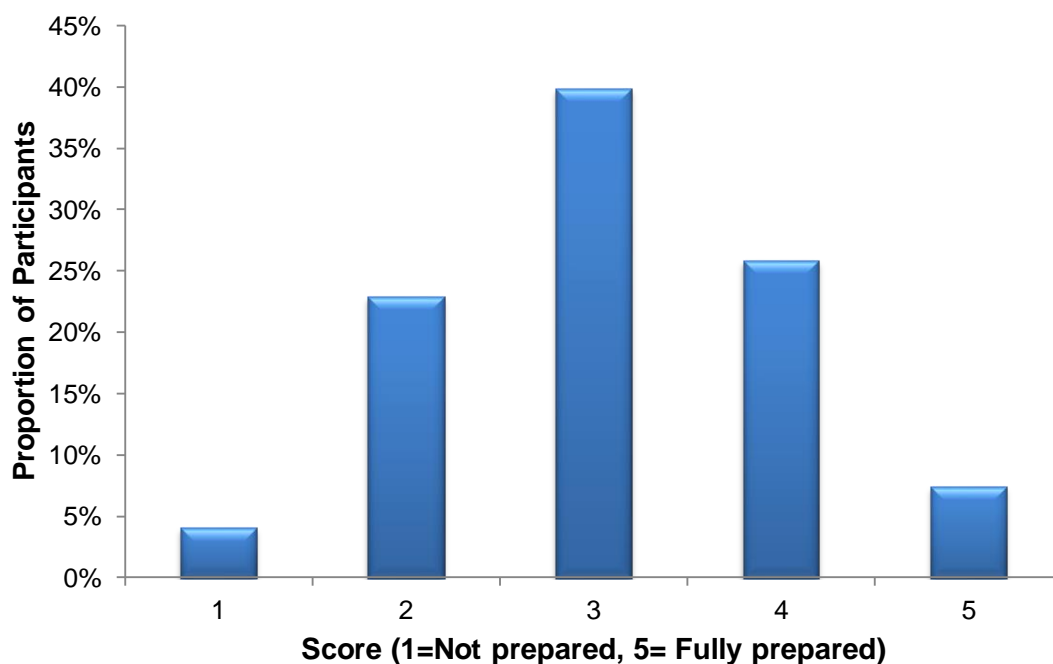


Figure 3.4 - Participants' evaluation of consultation skills training in undergraduate education (N=271)

3.4.2.2 Knowledge based learning

The results for this section only relate to 274 (46.2 %) participants who remembered studying consultation skills in their undergraduate degree. Two hundred and two of these participants (74%) remember receiving knowledge based teaching about communication skills (e.g. lectures). The majority have had basic communication skills training (90.1%) while advanced communication skills being the least reported (11.9 %), see Table 3.5.

Knowledge based learning	N	(%)*
Basic communication skills (e.g. use of open and closed questions)	182	(90.1)
Responding to symptoms	156	(77.2)
Patient counselling (e.g. when a new medicine is dispensed)	147	(72.8)
Drug History Taking	120	(59.4)
Taking a patient-centred approach	79	(39.1)
Dealing with difficult discussions	73	(36.1)
Addressing challenges within the consultation	48	(23.8)
Advanced communication skills (e.g. Motivational interviewing)	24	(11.9)
Models of counselling techniques (e.g. Cambridge-Calgary model)	22	(10.9)
I don't remember	7	(3.5)
Other	4	(2.0)

* Percentage does not equal 100% as participants can choose more than 1 option.

Table 3.5 - Knowledge based learning (N=202)

3.4.2.2.1 Information covered at undergraduate Level

A backward elimination ordinal logistic model was used to investigate whether the information covered in undergraduate level had an association on the preparedness of participants to hold consultations with patients. The model included all the options available to participants as shown in Table 3.5 with more than 10 responses. Table 3.6 illustrates the median (IQR) of preparedness of the independent variables that were included in the final model shown in Table 3.7.

Information Covered	N	Median (IQR)
Addressing challenges within the consultation	48	4 (3.5, 4)
Advanced communication skills	24	4 (3, 4.5)
Patient counselling	147	3 (3, 4)
Models of counselling techniques	22	3 (3, 5)
Responding to symptoms	156	3 (3, 4)
Basic communication skills	182	3 (3, 4)

Table 3.6 – Median (IQR) of preparedness for each of the independent variables that were included in the ordered logistic regression model investigating information covered in undergraduate CST and preparedness (Table 3.7).

Information Covered	Odds Ratio	Std. Err.	P	[95% Conf. Interval]	
Addressing challenges within the consultation	4.018	1.418	0.000*	2.012	8.025
Advanced communication skills (e.g. Motivational interviewing)	3.571	1.557	0.003*	1.520	8.391
Patient counselling	3.211	1.123	0.001*	1.618	6.373
Models of counselling techniques	3.118	1.447	0.014*	1.255	7.745
Responding to symptoms	1.948	0.688	0.059*	0.975	3.891
Basic communication skills	0.251	0.122	0.005*	0.097	0.653

Note: Pseudo $R^2 = 0.138$, Approximate LRT of proportionality of odds across response categories, $p = 0.4120$, *P value = <0.05

Table 3.7 - Summary of ordered logistic regression model to identify if information covered in undergraduate CST was associated with reported preparedness to hold consultations with patients.

Advanced information seems to have a significant positive factor in the participants' perception to hold consultations with patients while information covering basic communication had a negative effect on their perception to hold consultation with patients, see table above.

The majority of those who reported receiving consultation skills training at undergraduate education have an MPharm degree with 50.9% (Table 3.8).

Degree Type	Received training in Undergraduate N (%)	
	No	Yes
MPharm	21 (7.6)	109 (50.9)
BPharm	130 (46.8)	47 (21.9)
BSc (Pharmacy)	127 (45.7)	58 (27.1)

Table 3.8 - UK Qualified Pharmacists

3.4.2.3 Methods of practicing consultation skills

The majority of participants who remembered studying consultations skills had a chance to practice their consultation skills (N=213, 78.6 %). Eighty five percent practiced their consultation skills by role play with peers, see Table 3.9.

Method	N (%)*
Role play with peers	181 (85.0)
Watching media (e.g. short videos)	83 (39.0)
Role play with patient actors	71 (33.3)
Written task (e.g. describe how you can consult a patient?)	62 (29.1)
E-learning (e.g. patient simulators)	16 (7.5)
Other	15 (7.0)
I don't remember	7 (3.3)

* Percentage does not equal 100% as participants can choose more than 1 option.

Table 3.9 - Methods of practicing consultation skills (N=213)

Only a few participants reported practicing with real patients, but other methods mentioned include visiting patients' home with community nurses, role play with lecturers, ward duties with medical students and simulated pharmacy workshops.

3.4.2.3.1 Methods of practicing consultation skills and preparedness to hold consultation in undergraduate education

A backward elimination ordinal logistic model was used to investigate whether the practice structure in undergraduate level had an association on the preparedness of participants to hold consultations with patients.

The model included all the options available to participants with more than 10 responses (Table 3.9). Table 3.10 illustrates the median (IQR) of preparedness of the independent variables that were included in the final model shown in Table 3.11.

Practice structure	N	Median (IQR)
E-learning (e.g. patient simulators)	16	5 (3, 5)
Role play with patient actors	71	3 (4, 4)
Other	15	4 (3, 4)

Table 3.10 - Median (IQR) of preparedness for each of the independent variables that were included in the ordered logistic regression model investigating methods of practising consultation skills in undergraduate and preparedness (Table 3.11)

Table 3.11 shows the outcome of the investigation.

Practice structure	Odds Ratio	Std. Err.	P	[95% Conf. Interval]	
E-learning (e.g. patient simulators)	4.208	2.170	0.005*	1.531	11.563
Role play with patient actors	1.625	0.436	0.070	0.961	2.749
Other	2.965	1.452	0.026*	1.136	7.740

Note: Pseudo $R^2 = 0.0270$, Approximate LRT of proportionality of odds across response categories, $p = 0.8950$, *P value = < 0.05

Table 3.11 - Summary of ordered logistic regression model if the way CS was practiced at undergraduate was associated with reported preparedness to hold consultations with patients

The end results of the model showed three variables that have a relationship on their perception to hold consultations. For “Other”, where the participant had to write what type of training they received, most free-hand writing was about practical training e.g.

observed real patient consultations or practising with real patients. All these variables are based on practical experience which might be something we need to focus on regarding future training of pharmacist if we were going to enhance perception of pharmacists' preparedness to hold consultations with patients.

3.4.2.3.2 Assessment of consultation skills in undergraduate degree

One hundred and fifty (55.4 %) participants were assessed on their consultation skills while at their undergraduate pharmacy degree. Assessed role play was the most common type of assessment (Table 3.12).

Assessment	N (%) [*]
Assessed role play	81 (54.0)
Staff Feedback	71 (47.3)
Objective Structured Clinical Examination (OSCE)	58 (38.7)
Peer Marking	40 (26.7)
Coursework/Written Exam	38 (25.3)
Collection of evidence in portfolio	16 (10.7)
I don't remember	15 (10.0)
Other	2 (1.3)

* Percentage does not equal 100% as participants can choose more than 1 option.

Table 3.12 - Assessment types (N=150)

A backward elimination ordinal logistic model was used to investigate whether the assessment type in undergraduate level had an association on the preparedness of participants to hold consultations with patients, the end model was invalid and can be found in Appendix 2.5.

3.4.3 Pre-registration consultations skills training

3.4.3.1 Participant evaluation

Participants were asked to rate the how the consultation skills training received at pre-registration level prepared them to hold consultations with patients on a scale where 1 was not prepared and 5 was fully prepared. Participants rated the training with a median (IQR) rating of 4 (3, 4).

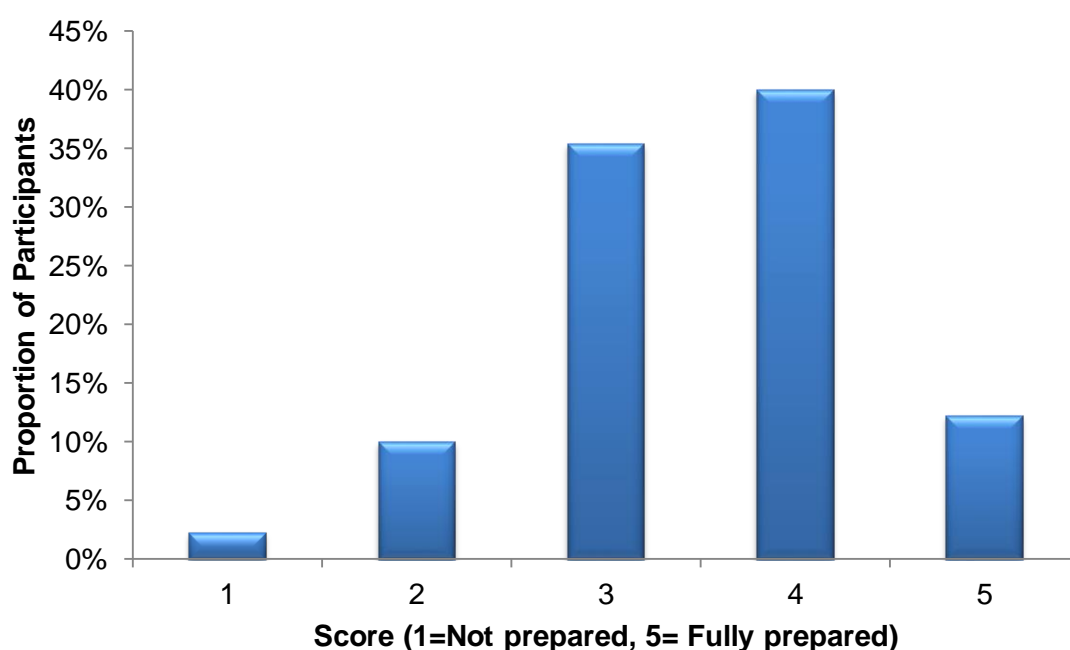


Figure 3.5 - Participants' evaluation of consultation skills training in pre-registration (N=220)

3.4.3.2 Methods of consultation skills training

Two hundred and twenty participants (37.3 %) remembered receiving consultation skills training during their pre-registration. Just over half remember receiving workshops (52.3 %) and practising with real patients (52.3 %) (Table 3.13).

Method	N (%) [*]
Workshops	115 (52.3)
Practised with real patients (observed by tutor)	115 (52.3)
Peer role plays	107 (48.6)
Watched media	49 (22.3)
Lectures	40 (18.2)
Role play with patient actors	35 (15.9)
Video recording	22 (10.0)
E-learning	12 (5.5)
Other	11 (5.0)
I don't remember	7 (3.2)

* Percentage does not equal 100% as participants can choose more than 1 option.

Table 3.13 - Methods of training in the pre-registration year (N=220)

A backward elimination ordinal logistic model was used to investigate whether the training structure at pre-registration level had an association on the preparedness of participants to hold consultations with patients, the end model was found invalid (Appendix 2.5).

3.4.3.3 Information covered

During the pre-registration year responding to symptoms training and basic communication skills were the most common information covered at training (Table 3.14).

Information	N (%*)
Responding to symptoms	171 (77.7)
Basic communication skills (e.g. use of open and closed question)	167 (75.9)
Patient counselling (e.g. when a new medicine is dispensed)	157 (71.4)
Drug History Taking	90 (40.9)
Dealing with difficult discussions	81 (36.8)
Taking a patient-centred approach	71 (32.3)
Addressing challenges within the consultation	60 (27.3)
Advanced communication skills (e.g. Motivational interviewing)	23 (10.5)
Models of counselling techniques (e.g. Cambridge-Calgary model)	7 (3.2)
I don't remember	15 (6.8)
Other	2 (0.9)

* Percentage does not equal 100% as participants can choose more than 1 option.

Table 3.14 - Information covered in pre-registration year (N=220)

3.4.3.3.1 Information covered in CS training at pre-registration Level

Two hundred and twenty participants (37.3 %) remembered receiving consultation skills during their pre-registration training year. A backward elimination ordinal logistic model was used to investigate whether the information covered in pre-registration level had an association on the preparedness of participants to hold consultations with patients. The model included all the options available to participants that had more than 10 responses. Table 3.15 illustrates the median (IQR) of preparedness of the independent variables that were included in the final model shown in Table 3.16.

Information covered	N	Median (IQR)
Taking a patient centred approach	71	4 (4, 5)
Basic communication skills	167	4 (3, 4)
Advanced communication skill	23	4 (4, 5)
Patient counselling	157	4 (3, 4)
Dealing with difficult discussion	81	4 (3, 4)
Drug History Taking	90	4 (3, 4)
I don't remember	15	3 (3, 4)

Table 3.15 - Median (IQR) of preparedness for each of the independent variables that were included in the ordered logistic regression model investigating information covered in pre-registration and preparedness (Table 3.16)

Information covered	Odds Ratio	Std. Err.	P	[95% Conf. Interval]	
Taking a patient centred approach	2.427	0.811	0.008*	1.261	4.671
Basic communication skills	2.148	0.748	0.028*	1.085	4.250
Advanced communication skill	2.078	0.944	0.108	0.852	5.064
Patient counselling	1.835	0.606	0.066	0.961	3.504
Dealing with difficult discussion	1.826	0.534	0.04*	1.029	3.240
Drug History Taking	1.780	0.554	0.064	0.967	3.275
I don't remember	2.691	1.597	0.095	0.841	8.610

Note: Pseudo $R^2 = 0.0974$, Approximate LRT of proportionality of odds across response categories, $p = 0.3038$, *P value = <0.05 , **other included observing senior pharmacists speaking to patients and tutor group sessions

Table 3.16 - Summary of ordered logistic regression model to identify if information covered in preregistration CST was associated with reported preparedness to hold consultations with patients.

Most of the variables seem to have a positive association on the preparedness of the pharmacist even when the participant did not remember what information was covered. This can suggest any training received at pre-registration stage has enabled to feel more prepared to hold consultations with patients.

3.4.3.4 Assessment of consultation skills at pre-registration level

Only 72 (32.7 %) remember being assessed in their consultation skills. The most common assessment type was staff feedback. Table 3.17 shows the different assessment types encountered during pre-registration training.

Assessment Type	N (%)*
Staff Feedback	42 (58.3)
Assessed role play	28 (38.9)
Collection of evidence in portfolio	23 (31.9)
Objective Structured Clinical Examination (OSCE)	21 (29.2)
Coursework/Written Exam	6 (8.3)
I don't remember	4 (5.6)
Other	1 (1.4)

* Percentage does not equal 100% as participants can choose more than 1 option.

Table 3.17 - Assessment types in pre-registration (N=72)

3.4.3.4.1 Assessment type of consultation skills at pre-registration level

Of those who remembered receiving consultation skills training during their pre-registration year, only 72 (32.7 %) remember being assessed in their consultation skills at pre-registration level. A backward elimination ordinal logistic model was used to investigate whether the assessment type in pre-registration level had an association on the preparedness of participants to hold consultations with patients. The model included all the options available to participants with more than 10 responses (Table 3.17).

Assessment Type	N	Median (IQR)
Staff Feedback	42	4 (4, 5)
Assessed role play	28	4 (4,5)
Objective Structured Clinical Examination (OSCE)	21	4 (3, 4)

Table 3.18 - Median (IQR) of preparedness for each of the independent variables that were included in the ordered logistic regression model investigating assessment type in pre-registration and preparedness (Table 3.19)

Table 3.19 shows the outcome of the investigation.

Assessment Type	Odds Ratio	Std. Err.	P	[95% Conf. Interval]	
Staff Feedback	15.109	10.573	0.000*	3.833	59.552
Assessed role play	3.480	1.840	0.018*	1.234	9.811
Objective Structured Clinical Examination (OSCE)	3.149	1.992	0.070	0.911	10.883

Note: Pseudo $R^2 = 0.2288$, Approximate LRT of proportionality of odds across response categories, $p = 0.1616$, *P value = <0.05

Table 3.19 - Summary of ordered logistic regression model to identify if the type of CS assessment undertaken at preregistration was associated with reported preparedness to hold consultations with patients.

Assessment at pre-registration has a strong positive relationship on the preparedness of pharmacists to hold consultations with patients. Staff feedback had the highest odds ratio from all the different types of assessment.

3.4.4 Training since registration as a pharmacist

3.4.3.1 Participant evaluation of training received since registration

Participants rated the consultation skills training received post registration year with a median (IQR) rating of 4 (3, 4) on a scale where 1 was not prepared and 5 was fully prepared (Figure 3.6).

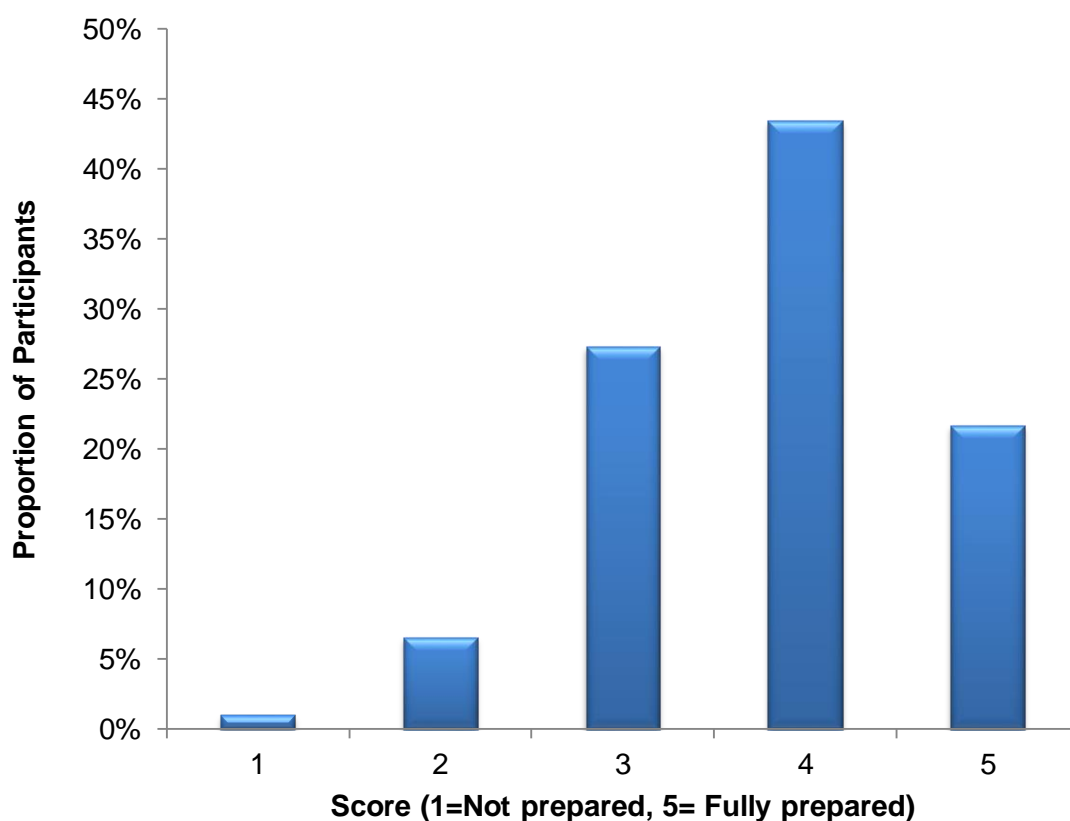


Figure 3.6 - Participants' evaluation of consultation skills training provided in post-registration (N=304)

3.4.3.2 Method of training post registration

Just over half of the participants received training since registering as pharmacists (52.1 %). One hundred and sixty five participants (58.1 %) reported that the training received was as an element of another learning topic (e.g. clinical training). The structure of the training can be found in Table 3.20. Majority of the training was structured in a workshop/seminar setting.

Structure Type	N (%)*
Workshops/Seminars	263 (86.2)
Practical Experience	105 (34.4)
Lectures	65 (21.3)
Distance learning	56 (18.4)
Defined reading	44 (14.4)
E-learning	32 (10.5)
Other	14 (4.6)
I don't remember	12 (3.9)

* Percentage does not equal 100% as participants can choose more than 1 option.

Table 3.20 - Structure of training post registration (N=305)

A backward elimination ordinal logistic model was used to investigate whether the training structure at post-registration level had a positive association on the preparedness of participants to hold consultations with patients; the model was found not valid (Appendix 2.5).

3.4.3.3 Information covered in training post-graduation

The most common information that was covered in this training was basic communication skills (Table 3.21)

Information	N (%) [*]
Basic communication skills (e.g. use of open and closed question)	259 (84.9)
Patient counselling (e.g. when a new medicine is dispensed)	194 (63.6)
Responding to symptoms	161 (52.8)
Taking a patient-centred approach	156 (51.1)
Addressing challenges within the consultation	149 (48.9)
Dealing with difficult discussions	141 (46.2)
Advanced communication skills (e.g. Motivational interviewing)	89 (29.2)
Drug History Taking	86 (28.2)
Models of counselling techniques (e.g. Cambridge-Calgary model)	55 (18.0)
I don't remember	15 (4.9)
Other	7 (2.3)

* Percentage does not equal to 100% as participants can choose more than 1 option.

Table 3.21 - Information covered in the training received post-registration (N=305)

3.4.3.3.1 Information covered at CS training at post-registration level

Just over half of the participants received training since registering as pharmacists (52.1 %). A backward elimination ordinal logistic model was used to investigate whether the information covered at post-registration level had an association on the preparedness of participants to hold consultations with patients. The model included all the options available to participants with 10 or more Responses. Table 3.22 illustrates the median (IQR) of preparedness of the independent variables that were included in the final model shown in Table 3.23.

Information covered	N	Median (IQR)
Dealing with difficult discussion	141	4 (4, 5)
Advanced communication skills (e.g. Motivational interviewing)	89	4 (4, 5)
Taking a patient centred approach	156	4 (4, 5)
Responding to symptoms	161	4 (3, 5)
Patient counselling (e.g. when a new medicine is dispensed)	194	4 (3, 5)
Basic communication skills (e.g. use of open and closed question)	259	4 (3, 4)
I don't remember	15	3 (3, 5)

Table 3.22 - Median (IQR) of preparedness for each of the independent variables that were included in the ordered logistic regression model investigating information covered in post-registration and preparedness (Table 3.23).

Table 3.23 shows the outcome of the investigation.

Information covered	Odds Ratio	Std. Err.	P	[95% Conf. Interval]	
Dealing with difficult discussions	2.745	0.674	0.000*	1.696	4.443
Advanced communication skills (e.g. Motivational interviewing)	2.716	0.712	0.000*	1.625	4.541
Taking a patient-centred approach	2.030	0.494	0.004*	1.260	3.272
Responding to symptoms	1.534	0.379	0.083	0.946	2.489
Patient counselling (e.g. when a new medicine is dispensed)	1.520	0.401	0.113	0.906	2.549
Basic communication skills (e.g. use of open and closed question)	0.594	0.223	0.164	0.285	1.238
I don't remember	2.416	1.572	0.175	0.675	8.651

Note: Pseudo R²= 0.1069, Approximate LRT of proportionality of odds across response categories, p= 0.2948, *P value = <0.05

Table 3.23 - Summary of ordered logistic regression model to identify if information covered in post registration CST was associated with reported preparedness to hold consultations with patients.

The more advanced information covered see to have the highest association of how well prepared the participants felt to hold consultations with patients.

3.4.3.4 Providers of Training Post-registration

Majority of training was provided by CPPE and employers came at second (Table 3.24).

Providers	N (%)*
CPPE	157 (51.5)
Employer training	124 (40.7)
Pharmaceutical company sponsored training	110 (36.1)
Self-training (e.g. reading books)	75 (24.6)
University (e.g. diploma)	46 (15.1)
I don't remember	12 (3.9)
Other	56 (18.4)

* Percentage does not equal to 100% as participants can choose more than 1 option.

Table 3.24 - Providers of Training (N=305)

A backward eliminating ordinal logistic model was used to investigate whether the provider of consultation skills at post-registration level had an association on the preparedness of participants to hold consultations with patients, the model was found not valid (Appendix 2.5).

3.4.4 Future training needs

The majority of participants wanted more consultation skills training (n=423 (72.3 %)).

3.4.4.1 Content for future consultation skills training

The most reported future training content those participants reported wanting was advanced communication skills (Table 3.26). Participants wanted almost all the training that was listed, including ones they have already received at the different stages of their career.

Contents	N (%)*
Advanced communication skills (e.g. Motivational interviewing)	282 (66.8)
Dealing with difficult discussions	279 (66.1)
Addressing challenges within the consultation	247 (58.5)
Models of counselling techniques (e.g. Cambridge-Calgary model)	237 (56.2)
Responding to symptoms	170 (40.3)
Taking a patient-centred approach	163 (38.6)
Patient counselling (e.g. when a new medicine is dispensed)	162 (38.4)
Drug History Taking	128 (30.3)
Basic communication skills (e.g. use of open and closed question)	90 (21.3)
Other	8 (1.9)

* Percentage does not equal 100% as participants can choose more than 1 option.

Table 3.25 - Contents for future consultation skills training (N=422)

3.4.4.2 Preferred method of future training

Table 3.27 illustrates the preferred style of future training. The greatest preference for future training was tutor led workshops (62.1 %).

Style of training	N (%)*
Workshop (Tutor led)	262 (62.1)
E-learning programme	183 (43.4)
Role play (e.g. practical scenarios)	162 (38.4)
Face to face	112 (26.5)
Lectures (Tutor led)	101 (23.9)
Use of 'real' patients	101 (23.9)
Use of video recordings for feedback	101 (23.9)
Written format	96 (22.7)
Use of actors as patients	87 (20.6)
E-lecture format	77 (18.2)
Workshop (Peer led)	76 (18.0)
Webinar	63 (14.9)

* Percentage does not equal 100% as participants can choose more than 1 option.

Table 3.26 - Style of future consultation skills training (N=422)

3.4.4.3 Statements for Future Training

Participants were asked to give their view on future training using a scale as shown in Figure 3.7. Majority of participants welcomed all four statements but they were less keen to be formally observed and majority of participants wanted practice in a workshop setting.

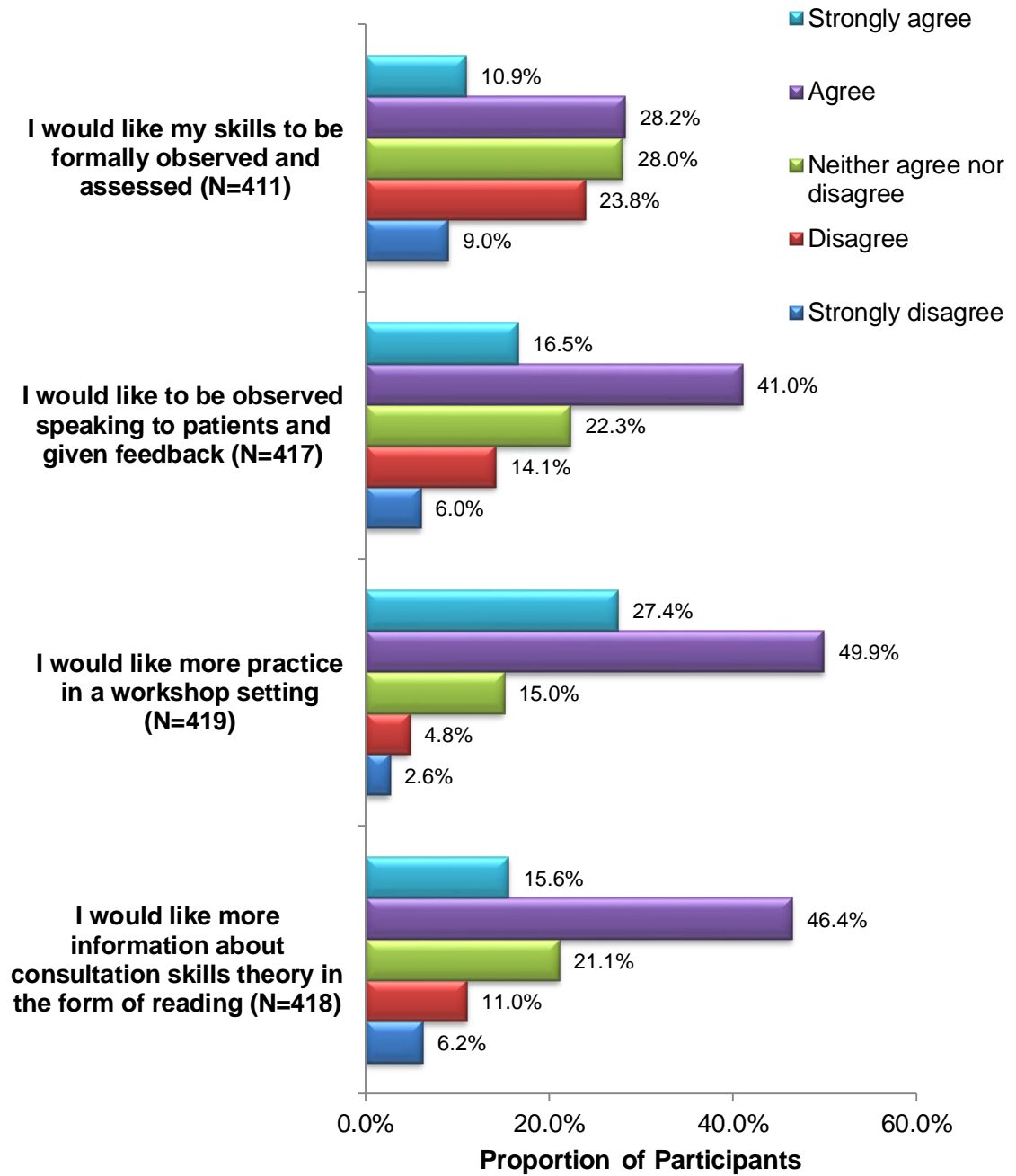


Figure 3.7 - Participants' view on future provision of consultation skills training

3.4.5 Confidence and importance of consultation skills

3.4.5.1 Confidence of participants

Most of the participants were very confident with their consultations skills with a median of 4 (4, 4) on a scale where 1 was not confident and 5 was fully confident (Figure 3.8).

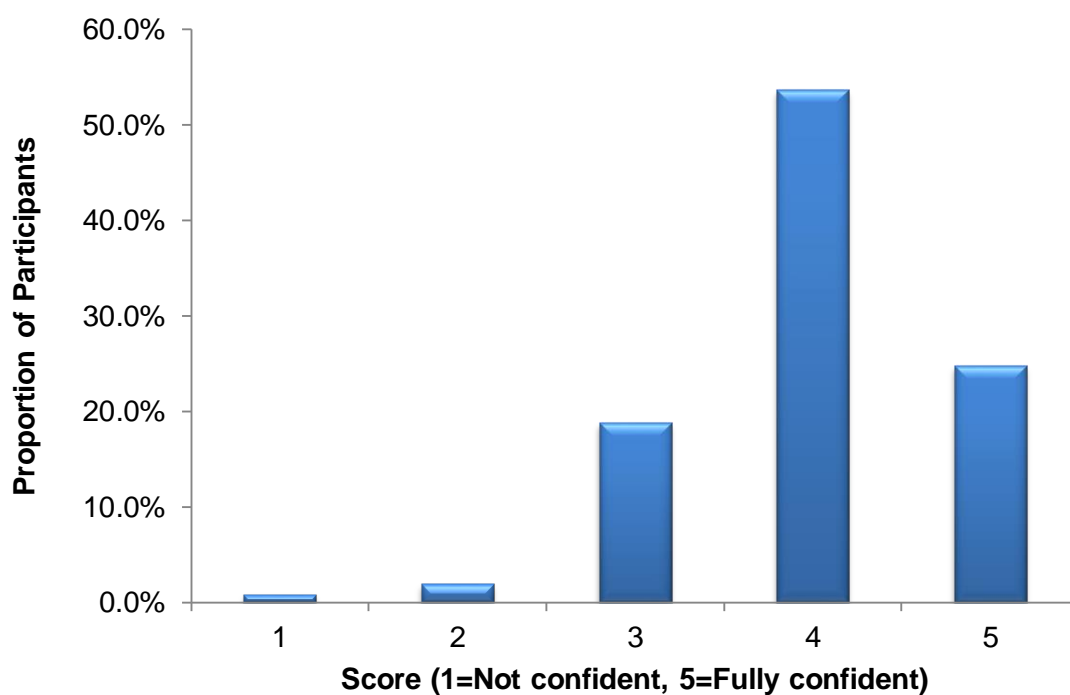


Figure 3.8 - Participants' confidence in consultation skills (N=585)

3.4.5.2 Importance of consultation skills

Participants rated the importance of consultation skills for a pharmacist with a median (IQR) rating of 5 (5, 5) on a scale where 1 was not important and 5 was very important, see Figure 3.9. Nearly 80 percent of participants rated consultation skills as very important for their role.

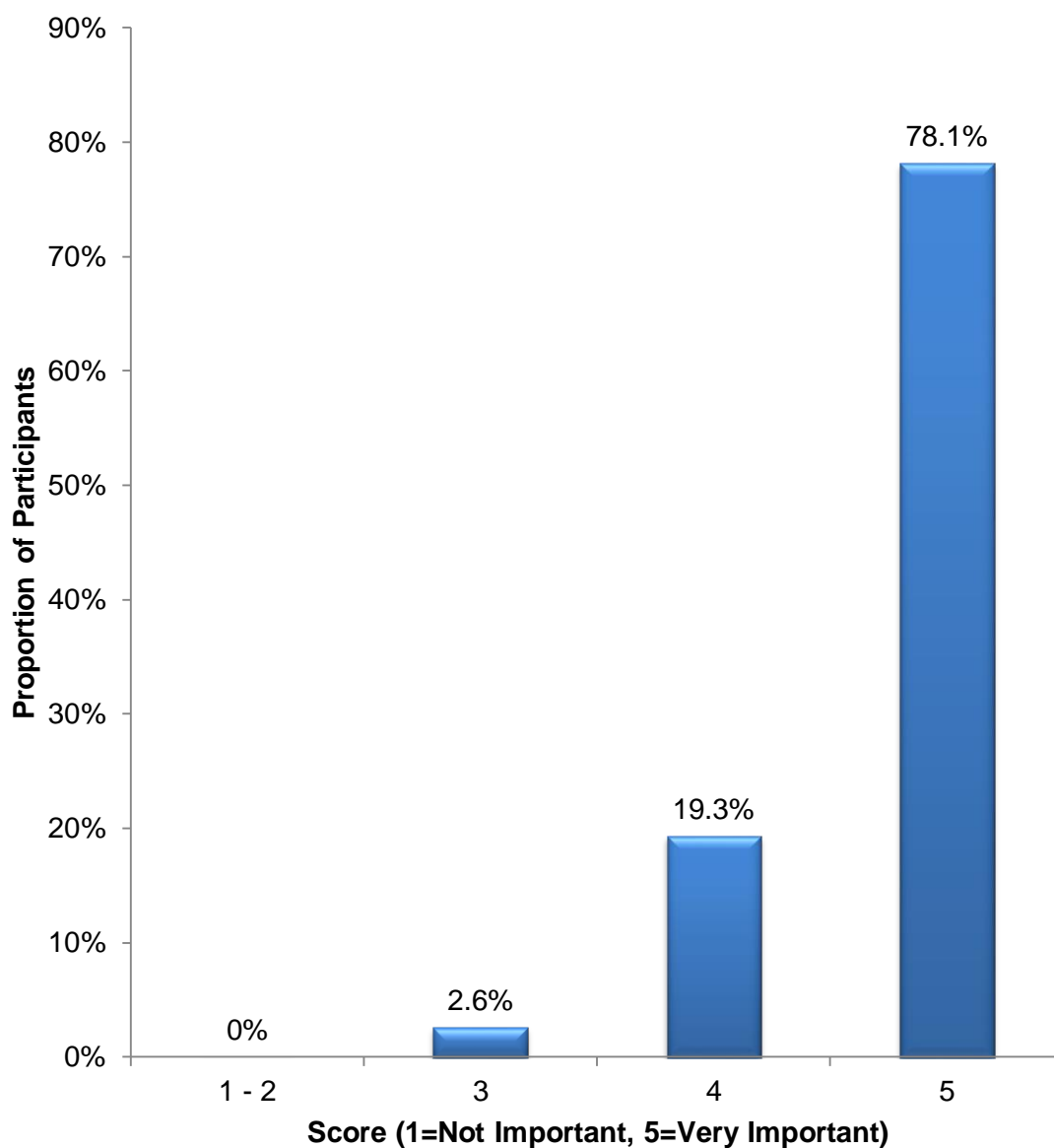


Figure 3.9 - Importance of consultation skills (N=585)

3.4.6 Relationships between the variables

3.4.6.1 Factors that have a relationship with the number of patient consultations reported

The median (IQR) for the number consultations performed in a standard week was 5 (3, 10), these include MURs, NMS and additional enhanced services such as emergency contraception. A backward elimination linear regression model was conducted to identify any factors that may have a relationship on the number of consultation reported.

A model was used to investigate the number of consultations as the dependent variable with following independent variables:

1. Gender
2. Years in registration
3. Type of pharmacy
4. MUR accreditation
5. Any post graduate education
6. CST at undergraduate level
7. CST at pre-registration level
8. CST at post - registering level
9. Request for more CST
10. CS confidence
11. Importance of CS

Table 3.27 illustrates the median (IQR) of the number of consultations for each of the independent variable found in the final model shown in Table 3.28.

Independent Variables	N	Median (IQR)
Reported Confidence 1-2 in CS*	16	1 (0, 5)
Reported Confidence 3 in CS*	126	5 (2,8)
Reported Confidence 4 in CS*	314	5 (3, 10)
Reported Confidence 5 in CS*	145	8 (4, 15)
Type of Pharmacy- Small Multiple	72	7.5 (3.5, 13.5)
Type of Pharmacy - Locum	236	3 (1, 6)
Sex- Male	198	6 (3, 12)
MUR accredited	541	6 (3, 10)
More CST** Requested	423	6 (3, 10)
Received CST** at pre-registration	220	6 (3, 11)
Received CST** post -registration	307	6 (3, 12)
Degree Type- BSc Pharmacy	18	6 (2, 10)

*CS = consultation skills, **CST= consultation skills training

Table 3.27 - Median (IQR) of the number of consultations reported to have been held in a week for each of the independent variable found in the final model shown in Table 3.28.

Table 3.28, includes the variables that had an overall significant association on the reported number of consultations.

Independent Variables	Coef.	% increase	Std. Err.	P	% increase on 95% Conf. Interval	
Reported Confidence 1-2 in CS**	1					
Reported Confidence 3 in CS**	0.294	34.165	0.130	0.025*	3.87	73.33
Reported Confidence 4 in CS**	0.445	56.031	0.126	0.000*	21.90	99.77
Reported Confidence 5 in CS**	0.594	81.128	0.129	0.000*	40.49	133.50
Type of Pharmacy- Small Multiple	0.144	15.479	0.049	0.004*	4.81	27.25
Type of Pharmacy - Locum	-0.272	-23.788	0.036	0.000*	-28.97	-18.29
Sex- Male	0.119	12.589	0.037	0.002*	4.60	21.17
MUR accredited	0.113	12.015	0.081	0.160	-4.40	31.26
More CST*** Requested	0.101	10.617	0.039	0.011*	2.33	19.48
Received CST*** at pre-registration	0.099	10.405	0.036	0.006*	2.84	18.53
Received CST*** post - registration	0.063	6.515	0.035	0.073	-0.60	14.11
Degree Type- BSc Pharmacy	-0.066	- 6.368	0.036	0.071	-12.80	0.60

Notes: R-squared = 0.2715, *P value = <0.05, **CS = consultation skills, ***CST= consultation skills training

Table 3.28 - Summary of linear regression model to identify factors that is associated with reported number of consultations a pharmacist conducts in a standard week

Gender had an influence on the reported number of consultations conducted, where male participants reported more consultations than female participants. Participants who had a BSc degree in pharmacy seem to have reported doing fewer consultations as did those who reported being locum pharmacists. Participants who reported working in a small multiples reported conducting more consultations. Those who received training at pre-registration and post registration reported doing more consultations in a standard week. Requesting more consultations skills training was associated with

higher number of reported consultations. Reported confidence in consultation skills had a direct positive relationship on the number of consultations reported such that the higher the participant perceived their consultation skills, the larger number of reported consultations. Gender, training received, request for more training, type of pharmacy and confidence were the only variables that had a positive relationship of the reported number of consultations. These variables can be associated with each other e.g. confidence could have increased because of training received. QQ Plot and Scatter Plot of residuals suggested that normality was not violated therefore suggesting that this is a valid model can be found in Appendix 2.6.

3.4.6.2 Factors that have a relationship with confidence in consultation skills

Most of the participants were very confident with their consultations skills with a median of 4 (4, 4) on a scale where 1 was not confident and 5 was fully confident. A backward elimination ordinal logistic regression model was used to investigate reported confidence of the participants as the dependent variable with following independent variables:

1. Gender
2. Years in registration
3. Type of pharmacy
4. MUR accreditation
5. Any post graduate education
6. CST at undergraduate level
7. CST at pre-registration level
8. CST at post-registering level
9. Request for more CST
10. Importance of CS

Table 3.29 illustrates the median (IQR) of confidence in consultation skills as reported for each of the independent variable found in the final model shown in Table 3.30.

Independent Variables	N	Median (IQR)
Rated importance of CS* 1 to 3	15	3 (3, 3)
Rated importance of CS* - 4	113	4 (3, 4)
Rated importance of CS* - 5	457	4 (4, 5)
MUR accredited	541	4 (4, 5)
Additional Qualifications	155	4 (4, 5)
Sex – Male	198	4 (4, 5)
Received CST** at Post registration	307	4 (4, 5)
Type of Pharmacy- Small Multiple	72	4 (4, 5)
Received CST** at Undergraduate	274	4 (4, 5)
Type of Pharmacy- Large Multiple	291	4 (4, 5)
Degree Type- BSc Pharmacy	18	4 (4, 5)

CS*=Consultation Skills, CST**= consultation skills training.

Table 3.29 – Confidence in consultation skills as reported for each of the independent variable found in the final model shown in Table 3.30.

Independent Variables	Odds Ratio	Std. Err.	P	[95% Conf. Interval]	
Rated importance of CS** 1 to 3	1				
Rated importance of CS** - 4	5.067	2.980	0.006*	1.600	16.044
Rated importance of CS** - 5	15.269	8.736	0.000*	4.975	46.860
MUR accredited	2.481	0.913	0.014*	1.206	5.105
Additional Qualifications	2.360	0.531	0.000*	1.519	3.667
Sex – Male	2.264	0.464	0.000*	1.515	3.384
Received CST*** at Post registration	1.670	0.321	0.008*	1.146	2.433
Type of Pharmacy- Small Multiple	1.450	0.410	0.189	0.833	2.525
Received CST*** at Undergraduate	1.406	0.276	0.082	0.958	2.065
Type of Pharmacy- Large Multiple	1.326	0.259	0.148	0.904	1.944
Degree Type- BSc Pharmacy	1.314	0.262	0.170	0.890	1.942
More CST*** Requested	0.213	0.046	0.000*	0.140	0.325

Note: Pseudo $R^2 = 0.1438$, Approximate LRT of proportionality of odds across response categories, $p = 0.5559$, *P value = < 0.05 , CS**=Consultation Skills, CST***=consultation skills training.

Table 3.30 - Summary of ordered logistic regression model to identify factors that have an association with reported confidence in consultation skills

Participants who belonged to a small or a large multiple reported having more confidence in their consultation skills. Male participants were also twice as confident in their consultation skills as the female participants. Participants who had a BSc degree and were MUR accredited also showed to report higher confidence in their consultation skills. Additional qualification had more than a double effect on their reported confidence in their consultation skills and those who rated consultation skills as important also seem to have a higher confidence. The only variable that had a negative relationship on confidence was participants who seek more training, those who seek more consultation skills were almost five times less confident in their skills.

A backward elimination ordinal logistic regression model was used to investigate participant perception in the importance of consultation skills as the dependent variable but the end model was found not valid (Appendix 2.5).

3.4.6.3 Factors that have a relationship with uptake of future consultation skills training

Majority of participants wanted more consultation skills training (n=423 (72.3 %)). A backward elimination binary logistic model was used to investigate whether there is an association between wanting more consultation skills training as the dependent variable with following independent variables:

1. Gender
2. Years in registration
3. Type of pharmacy
4. MUR accreditation
5. Any post graduate education
6. CST at undergraduate level
7. CST at pre-registration level
8. CST at post-registering level
9. Reported confidence in CS
10. Importance of CS

Table 3.31 illustrates the uptake of future consultation skills training as reported for each of the independent variable found in the final model shown in Table 3.32. Table 3.31 also specifies the number of responses for each of the independent variable and the number that would like future consultation skills training.

Table 3.32, includes the variables that had an overall significant relationship on uptake of future consultation skills training.

Characteristics	N	Measure	Acceptance of Future CS Training
Rated importance of CS* 1-2-3	15	N (%)	10 (66.67)
Rated importance of CS* - 4	113	N (%)	81 (71.68)
Rated importance of CS* - 5	457	N (%)	332 (72.65)
Received CST** at post registration	307	N (%)	222 (72.37)
Registered years as pharmacist	423	Median (IQR)	18 (6, 30)
Reported Confidence 1-2 in CS*	16	N (%)	15 (94.00)
Reported Confidence 3 in CS*	110	N (%)	105 (95.45)
Reported Confidence 4 in CS*	314	N (%)	236 (75.16)
Reported Confidence 5 in CS*	145	N (%)	68 (46.90)

CS*=Consultation Skills, CST**= consultation skills training

Table 3.31 – The uptake of future consultation skills training as reported for each of the independent variable found in the final model shown in Table 3.32.

Independent Variables	Odds Ratio	Std. Err.	P	[95% Conf. Interval]
Rated importance of CS** 1-2-3	1			
Rated importance of CS** - 4	5.707	4.581	0.030*	1.183 27.521
Rated importance of CS** - 5	8.241	6.522	0.008*	1.747 38.869
Received CST*** at post registration	1.672	0.387	0.027*	1.061 2.633
Registered years as pharmacist	0.970	0.009	0.001*	0.953 0.987
Reported Confidence 1-2 in CS**	1			
Reported Confidence 3 in CS	2.228	2.119	0.400	0.345 14.369
Reported Confidence 4 in CS**	0.233	0.203	0.095	0.042 1.286
Reported Confidence 5 in CS**	0.074	0.066	0.003*	0.013 0.421

Note: Pseudo R^2 = 0.1381, *P value = <0.05, CS**=Consultation Skills, CST***= consultation skills training.

Table 3.32 - Summary of logistic regression model to identify factors that was associated with the acceptance of future consultation skills training

Participants who received training after registering as pharmacists and those who perceive consultation skills as important were more likely to want more consultation skills in future. Confidence in consultation skills showed a negative effect on wanting more consultation skills training. Those who rated their confidence skills as 3 were more than twice likely to want future consultation skills training while participants who rated their confidence in their skills as 5 were 10 times less likely to want more training.

3.4.7 Qualitative analysis on free-text

The questionnaire contained free text boxes with an open ended question on whether participants had anything else to add. There were a total of 92 comments and these comments have been analysed using thematic analysis. Four themes were developed, Consultation skills training, skills through experience, confidence and other roles.

3.4.7.1 Consultation skills training

This theme contains all the comments that were left regarding consultation skills training provided to them at different stages. From the comments, the different stages referred to previous consultation skills training, current consultation skills training and what they would like for future consultation skills training.

3.4.7.2 Previous CST

Participants from older generations explained how there was no formal training to consultation skills and most of the skills that have been acquired have been through experience. One participant described previous pharmacy training as “purely technical” referring to the lack of patient contact and spent his pre-registration year entirely in a dispensary, “mostly alone and un-supervised”. This lack of formal training made some feel receiving consultation skills training via new structures might not be so welcomed.

As one participant said:

Ph12: “I assume new pharmacists receive video/actors/feedback training in their consultation skills, where as we who qualified 28 years ago just use experience and would not like to be watched or filmed”

3.4.7.3 Current CST

The curriculum of the MPharm degree is designed according to the GPhC standards but it is then taught in different ways and according to the different institution providing the degree. The MPharm graduate then undertakes a pre-registration placement which will provide training to meet the GPhC standards. One participant pointed out that there is often great variation between the different pharmacists due to the different ways training is being provided at the MPharm degree and at pre-registration level. The participant also felt that consultation skills training should be uniform across all institutions providing the MPharm and the pre-registration year. Another participant also felt that consultation skills should be addressed as early as the interviewing stage for pharmacy students quoting:

Ph285: “Some people are natural communicators, others are not. It is very difficult to train someone if the basic skill isn't there, the result is often unnatural and stilted...”

Other participants are happy with the improvements that have been made with consultation skills training. Two participants shared how the extra training they have undergone in the independent prescribing course has developed and enhanced their consultation skills and enabled them to be more “patient centred”

One participant was unhappy with the current training provided feeling that it was mostly broad generic soft skills while they should be more specific training relating to services like the MUR and NMS. Another participant described the training received at

the MPharm degree only lasted 30 minutes and this was not sufficient to build confidence to hold consultations with patients.

3.4.7.4 Future CST

Many comments were left about how future consultation skills training should be shaped. Many have welcomed more training for example a participant wrote down

Ph246: "Very keen - more training the better".

Conflicting opinions in regards to the structure of future training, one participant wrote:

Ph67: "Being video'd or observed would be too intimidating!"

While another wrote:

Ph92: "It is a long time since my degree and pre-reg years. It would be good to be assessed as I'd like to know where I can improve"

Some participants found being observed as intimidating and this can possibly explain why there seems to be a majority of comments requesting to have the training structured in a workshop setting. Other comments have all emphasised that training must reflect on real scenarios e.g. dealing with difficult and demanding patients and looking at real video footages on how to deal with such patients. One participant found

a workshop setting as an ideal place to improve because of other peers being present and that allowed them to reflect on practice and find out how others would have dealt with the situation. One participant wrote a statement that might add all proposals into one training session:

Ph247: “I would like consultation skills workshop to concentrate on delivering clinical information in a role play scenario and to be assessed on one’s ability to deliver information in a simple way for patients to understand.”

Therefore not all participants wanted the same structure but a possible combination of structures might be a good idea to include in one training session that would suite the majority.

Ph563: “I am very passionate about this subject and this is why i have completed this questionnaire. Without the correct consultation skills, the outcome for any patient may be very different depending on what is said or not said in a consultation. I have seen very poor examples of communication with patients and it worries me that there has never been enough focus on consultation skills in the pharmacy profession and yet our doors are open for everyone to come in and chat!! Are we 'chatting' as we should?”

3.4.7.5 Skills through experience

Consultations skills built through experience was emphasised in many comments. Many of these participants felt although they have not received any formal consultation skills training they have perfected their style with practice. As one participant stated:

Ph154: “Consultation skills developed over time, with a lot of practice”

Another participant felt that their style again was all from experience and it has worked well for them.

Ph391: “Confidence in consulting with patients (for me anyway) has come almost entirely from experience. When first qualified I was a little nervous but this quickly subsided and I developed my own style of consultation which works well.”

Even when participants received training, the training received was felt not adequate to conduct an actual consultation; one participant described the process of learning how to conduct MURs when it was first commissioned:

Ph49: “I have always felt fairly confident consulting with patients over the counter. However when MURS were introduced that was a different ball game and training provided was negligible in terms of actually conducting an MUR. Only after doing a couple of hundred do I feel reasonably confident!”

Another participant even felt that experience was much more important than any training, while another participant feared that training might make consultation a mechanical procedure quoting:

Ph134: “.... One must be careful not to make consultation a mechanical procedure; it's all about relationship in the community.”

These comments show that many pharmacist empathise the fact that many pharmacist have not received any formal consultation skills training and most of the skill have been acquired through experience.

4.6.3 Confidence

There were many comments about confidence and how this helped participants hold better consultations with patients. One participant felt that pharmacists have the knowledge yet they lack the confidence:

Ph125: “Pharmacists are ideally placed in location, knowledge and skills to support patients to make the right healthcare choices. They just need more confidence to do it!”

Another participant felt that pharmacists are professionals and should already have consultation skills but it is the lack of knowledge that causes communication barriers:

Ph407: “It is not the communication skills that really needs to be addressed, as professionals we should have that anyway, what is suffering is the knowledge behind it, because if we are confident in what we are talking about or discussing, a lot of the barriers to consulting or communicating are lost as the pharmacist is more at ease.”

Some have requested more consultation skills training and this will help them with their confidence.

Ph345: “... This programme will definitely improve self confidence in pharmacists. CPPE please go ahead and launch this as it’s very important in our day to day lives as a pharmacist”

3.4.7.5 Other Roles

The issue of the many roles a community pharmacist is responsible for and how that affected their consultations has come up many times in the comments. One participant stated:

Ph341: “Knowing the theory is more difficult than the performing of it. One of the major problems I find is the time pressure when, as a responsible pharmacist, I am supposed to be in two places at once. Being aware of work mounting up outside is detrimental to concentrating on any consultation in hand. Oh to be a doctor with an appointment system and a secretary”

Due to the nature of community pharmacy consultations, there is no formal appointment system in place to speak to patients, thus it affects time management. One participant felt time was the biggest barrier as well as patient perception of pharmacists quoting:

Ph339: “I think that the biggest barrier to effective communication is lack of time of the pharmacist unwillingness for patients to want to wait to speak to a pharmacist, as they have the perception that a pharmacist is not like other health professionals”

As a way forward, many participants suggested that having the right skill mix in the staff and possibly a second pharmacist can help them deliver better consultations. One participant described the situation:

Ph307: “I am totally in favour of pharmacists improving and using their consultation skills. It helps patients, raises our profile and makes the job more interesting. However I have strong reservations about neglecting our supervision of dispensing role in order to be available for consultations. The 'skill mix' in pharmacies is so variable, and we cannot rely entirely on ACTs. I feel we have reached the stage where, in order to extend our roles, a second pharmacist is needed, at least part of the time”

Another participant felt the current workload does free up the pharmacists to hold consultations and extra training will not add any value to their day, quoting:

Ph502: "...more training is not going to help unless the daily job changes enough so pharmacists are free to be in the consultation room regularly. You want to train for a job we are not able to add to our day."

From the comments, pressures seem to affect the participant's view of consultations and make it seem as an extra task they have to do. An alternative view, one participant felt private consultations should only be for other healthcare professionals and not for pharmacists because of the tasks related in a pharmacy.

Ph492: "...I don't believe pharmacists should be shutting themselves away with patients - especially in a single handed pharmacy. If you want to do that - go and retrain as a doctor, dentist or nurse."

3.5 Discussion

This was the first nationwide questionnaire that explored the consultation skills training undertaken by community pharmacists. Just over half of the participants had received training since registering as pharmacists. A smaller proportion of participants remember receiving training at pre-registration and at university undergraduate level. There is a positive relationship between consultation skills training and participants' confidence in holding consultations with patients. A positive relationship was also identified between confidence and the number of consultations the pharmacists reported conducting in a standard week. There are still a large number of registered pharmacists for whom further training in consultation skills could help increase their confidence, potentially resulting in the delivery of more patient face to face services. These results give guidance and insights for future consultation skills training although causality cannot be assumed.

3.5.1 Electronic questionnaire

Electronic questionnaires were in fact easy to design and circulate to a nationwide sample. As discussed in the introduction, there were many ways in order to increase response rate. Participants completing the questionnaire were put in a raffle ticket draw, where three participants were chosen randomly and given a voucher of £100 M&S vouchers each. Although follow-up requests to complete the questionnaire is the most successful way to increasing response rate (Fox et al., 1988, Heberlein and Baumgartner, 1978) and so decided on a follow-up email.

The use of a third party – in this case CPPE - to distribute a questionnaire has its advantages and disadvantages. The main advantage of distributing our questionnaires through CPPE was that it provided us with a much greater sample size than we would be able to get from any other source. All registered pharmacists can register with CPPE to use its services for free. The main disadvantage of using a third party is that

not all pharmacists are registered with CPPE and some might not engage with CPPE. It reduces generalisability and introduces selection bias. Furthermore the fact that they are explicitly asked to comment on postgraduate training (which is usually provided by CPPE) may introduce social desirability bias. There is also a chance that the email they gave at registrations is no longer in use.

3.5.2 Participant demographics

More than 60% of the responses came from female participants; this is due in part to the study design, since 60% of the emails were to female members of CPPE, but this data is also comparable to a recent review of GPhC members where more than 60% registered pharmacists were females (Hassell, 2012). Participants came from all age categories, but the largest group - 27.8% - came from those who were in the 46-55 years age group. There is no published data to compare this to, although historically, electronic questionnaires tend to be completed by younger participants (Edwards et al., 2002), in our case, almost half of the participants were over 46 years old. It can be said that pharmacists are highly educated professionals and are more likely to engage with technology.

More than 60% of participants worked for a large or small multiple pharmacy, which is representative of pharmacies in England: in 2011-2012, 61% of all pharmacies in England were part of a multiple of 6 or more pharmacies (The Health and Social Care Information Centre, 2012). In the year of 2011-2012, only 39% of pharmacies in England were independent (The Health and Social Care Information Centre, 2012), with only 20.5% of participants reporting working for independents, suggesting that independent pharmacies are under presented in our sample.

Participants held a variety of undergraduate degrees but the majority held a BSc in Pharmacy. The MPharm degree was introduced only in the late 90s (Sosabowski and Gard, 2008), it is obvious that lower percentages of pharmacists will hold a MPharm

and a majority will hold a BSc, which is what our sample reflects. Participants graduated from a large number of universities, with the majority from large well established schools of pharmacy such as University of Manchester and University of Bradford, while other universities e.g. Kingston University only had a small representation in the sample of participants. This is due to the fact that newer universities have fewer graduates and therefore are likely to have fewer pharmacists participating in the study e.g. Kingston University had its first pharmacy graduates in 2008.

The majority of participants were either UK qualified or EU qualified, but a small amount of pharmacists had to take the OSPAP program to register as pharmacists. According to a recent analysis of the GPhC register (Hassell, 2012) only 3.9% of pharmacists qualified with an undergraduate degree from a non-EU country. In our sample 5.7% graduated from a non-EU country and 11.4% had an EU pharmacy undergraduate degree, which is slightly higher than the average of 5.8% in the GPhC register. The total UK graduates of our sample size is 82.8% which is comparable to the GPhC register of 88.2% (Hassell, 2012).

Participants from all over England with different demographics completed the questionnaire but the majority of the participants worked in London. According to a freedom of information requested by myself from the GPhC, London has the highest amount of pharmacy contractors in England which is quite represented in our sample.

The overall demographics of participants is a good representation of the population of registered community pharmacists in England.

3.5.3 Undergraduate training

This study is a retrospective study and asked participants whether they remembered receiving consultation skills training throughout their career path to becoming a qualified pharmacist. There was a low response to participants remembering learning

about consultation skills in their undergraduate degree, less than half in fact. The majority of participants either had a BSc or a BPharm in pharmacy. Therefore, the likelihood of them remembering the training they received during their undergraduate degree is low and this fact might introduce recall bias.

The majority of those who remembered learning about consultation skills studies were MPharm degree holders. Those who have an MPharm degree would have graduated more recently than participants who hold a BSc in pharmacy and therefore this can be seen as further evidence of recall bias or alternatively could reflect the fact that consultation skills training is being introduced in current pharmacy undergraduate degrees. Certainly there has been an increase in focus on the training of pharmacy students to hold consultations with patients (James et al., 2001) over recent years which may not have existed for those who graduated with a BPharm or with a Bachelor of Pharmacy degree.

Our analysis shows that the training reported as received at this stage consisted mainly of basic communication skills and less advanced courses; for example, 90.1% remember receiving basic communication skills. A recent study reported some students finding the consultation skills training courses too easy and found it hard to understand why this might be important to learn (Kimberlin, 2006). A majority of participants recalled receiving basic consultation skills while only 39.1% received training about drug history taking. Skills such as drug history taking are used every day in community pharmacies, especially in patient focused services such as the MUR. A majority of participants reported practising consultation skills with peers and only a few reported using the skills with real patients. Students being exposed to patients encourages them to take a patient-centred approach and develops their consultation skills (Sansom and Cox, 2013).

Previous studies have found that the practical application of consultation skills is hugely beneficial and the lack of application in the MPharm degree could detrimentally affect

future patient interactions (James et al., 2001). There is a paucity of literature about the exact way consultation skills are being taught in the UK. A study conducted in the United States explored the way schools of pharmacy teach consultation skills (Kimberlin, 2006). The study concluded that there was a lack of training at the beginning of the degree and lecturers felt there was a lack of support for teaching consultation skills.

Only half of the participants in this research who received consultation skills training at university remember being assessed on the skills. Objective Structured Clinical Examinations (OSCEs), staff feedback and assessed role play were the most frequently identified ways of assessment. OSCEs offer the opportunity to assess students in their handling of real life pharmacy practice scenarios, and allow students to develop and hone their communication and problem-solving skills (Evans et al., 2011). This method of teaching is relatively new and could explain why a very small number of our participants had experienced it. OSCEs are costly and requires many staff in order to run (Evans et al., 2011). OSCEs provide an artificial ideal environment which many not be the case in real practice. Further studies must investigate such teaching methods in real practice and the real value it adds when students graduate and practice as pharmacists.

A few qualitative comments pointed to the fact that there is often great variation between the different pharmacists due to the different ways training is provided in the MPharm degree. Although the GPhC sets out graduate outcomes for Schools of Pharmacy in Great Britain, there is some freedom to develop a curriculum to match the requirements of pharmacists (Evans et al., 2011). However, in the open questions some participants stated that they wanted training to be unified and that future pharmacists should be provided with the same set of skills rather than being dependent on the university attended. As mentioned in Chapter 1, learning outcomes for undergraduate have recently changed and a consultations skill is a big aspect of the

new changes. Previously the students were expected to know how or show most of the consultation skill outcomes but new outcome level specifies that the student must know how to do all outcomes and not only know the theory as previously required. The new outcomes also specify detailed description of what needs to be taught and provides less ambiguity when compared to previous outcomes.

Participants rated the training received at undergraduate level with a mean (SD) rating of 3.1 (0.969) out of 5 on a scale where 1 was not prepared and 5 was fully prepared. There is a limitation when using self-reported data as participants may have limited insight or received poor quality training which did not prepare them. Furthermore those who scored themselves low may have received good quality training which identified their lack of preparedness i.e. they may have greater insight. Nevertheless the self-reported data may provide useful insights or guidance but not evidence. The next step of our analysis was to use regression analysis to investigate what predictors had a relationship for participants to feel more prepared to hold consultations with patients from the education obtained at undergraduate education. The first analysis was to see what information might have predicted the preparedness of participants to hold consultations with patients; those who received advanced skills such as taking a patient approach tended to report being more prepared to hold consultations with patients.

A high positive association was found with feeling prepared and when receiving more advanced consultation skills training. Those who had experience of patient simulators and role play with patient actors seemed to report higher on being prepared to speak to real patients. These findings provide an insight about future degree changes and how increasing exposure of pharmacy students to real patients might make them feel more prepared to hold consultations with patients after graduating. Previous studies found, find some of the current teaching too easy (Kimberlin, 2006), although this study is relatively old and many changes to the degree has happened. The newly published

GPhC undergraduate outcomes provide an in depth description for universities to follow and make sure students have prior to graduating.

3.5.4 Pre-registration training

Only 37.3% of participants remember receiving consultation skills in their pre-registration year. As mentioned in chapter 1, training has been changing and currently is being governed by the GPhC. One participant described previous pharmacy training as “purely technical”, referring to the lack of patient contact and describing his pre-registration year spent as having been spent entirely in a dispensary, “mostly alone and un-supervised”.

As previously mentioned, the GPhC sets the competencies that participants must obtain while in pre-registration. The GPhC does not dictate how the competencies are taught and therefore training will differ from work place to work place. 52% of participants reported receiving consultation skills training mostly from workshops and practising with real patients. The information covered in training was very similar to the training reported being received at undergraduate level. Only 32.2% of the participants remembered being assessed in their consultation skills, with staff feedback being the most popular assessment type.

The data gathered from this questionnaire shows that only 220 (37.3 %) of the participants remembered receiving training and those who did, had received mostly basic training, with only 72 (32.7 %) remember being assessed in their consultation skills. Participants rated consultation skills training received at pre-registration level higher than at undergraduate level. Participants who received basic communication skills, advanced communication skills and taking a patient-centred approach felt almost twice as prepared as those who have not received any training.

Participants who observed senior pharmacists speaking to patients and attended tutor group sessions also reported being much more prepared than participants who did not

receive such training sessions. Similar to the results found in the undergraduate section of the questionnaires, there seems to be a high association between feeling prepared to hold consultations and when those who reported receiving more advanced consultation skills training. Staff feedback and assessed role play were the highest predictors of being prepared to hold consultations. The results suggest formal assessment for consultation skills might enable future pharmacists to feel more prepared to hold consultations with patients.

3.5.5 Post-registration training

Only half of participants remember receiving any consultation skills training after registering as pharmacists. The majority of participants had training through workshops and seminars, while practical experience came second. The content of the information that was received at this stage was similar to the training received at undergraduate and pre-registration levels, the majority of which was basic communication skills. However, almost half of the participants also stated having undertaken advanced courses such as addressing challenges with the consultations and taking a patient-centred approach. Providers of the courses varied with the majority receiving their training from CPPE and their employers. CPPE was used to send this questionnaire through its member database; therefore, those who replied would have had engagement with CPPE.

Participants rated the consultation skills training received higher in their post registration year when compared to the rating in undergraduate education and pre-registration. This is a high score, so we then wanted to investigate further as we did in the undergraduate education and pre-registration stages, using regression analysis. The initial regression analysis was to investigate the information covered and the relationship with preparedness. Participants who took advanced courses, such as dealing with difficult discussions and advanced communication skills, were reporting almost three times more prepared to hold consultations. Advanced courses seem to a

have strong relationship for participants reporting feeling more prepared to speak to patients, just like in undergraduate and pre-registration education.

3.5.6 Number of consultations

Pharmacists who work as part of a multiple pharmacy are usually set with a target to reach with regards to providing a service such as the MUR. A study that looked at the determinants that influence the uptake of MURs concluded that the ownership category of the pharmacy was shown to be the most significant determinant of MUR uptake (Bradley et al., 2008). Pharmacists that were working for a multiple pharmacy had rates of MUR provisions almost twice that of independent pharmacies (Bradley et al., 2008). Therefore, it is no surprise that our analysis shows participants who work for multiple pharmacies report conducting more MUR consultations and locums reporting about a quarter less.

Pharmacists who received consultation skills training at pre-registration and post-registration reported a higher number of consultations conducted in a standard week. This is an important finding as this might help prove that training can increase the uptake of certain services. As shown in our data, not all training is associated with preparedness of participants; for example, one participant described the training received at the MPharm degree as only lasting 30 minutes and this was not sufficient to build confidence to hold consultations with patients. Confidence in consultation skills had the highest positive relationship with number of consultations.

3.5.7 Confidence of Participants

Self-confidence is an attitude that allows individuals to have a positive and realistic perception of themselves and their abilities. This has implications for job satisfaction and performance (Foulkrod et al., 2010, Linn and Zeppa, 1985).

Most of the participants reported being very confident with their consultations skills. This exploratory analysis suggests that the more confident a participant is in their consultation skills, the more consultations they conduct. A value of 3 on the confidence scale was modelled as having an increase of 34% in the number of consultations compared to the reference group of confidence 1 or 2 ($p=0.025$); a value of 4, an increase of 56% ($p<0.001$) and a confidence rating of 5 an 81% increase on the reference group ($p<0.001$). The data suggests that confident pharmacists are likely to have more interaction with patients. A previous study investigating some of the barriers to providing an enhanced pharmacy service, showed lack of confidence as being one of the major barriers (Berbatis et al., 2007).

Confidence was also a theme that was picked up from the open answers left by participants. One participant wrote:

Ph.125: "Pharmacists are ideally placed in location, knowledge and skills to support patients to make the right healthcare choices. They just need more confidence to do it!"

All these insights cannot comment on the quality of pharmacist-patient consultations being reported. It could be the case where confidence is high pharmacists may have less self-awareness of poor practice or poor consultations. The final chapter of this thesis will look into this further.

A regression model was used to analyse the predictors for reported confidence in consultation skills. Participants who were male, hold a BSc pharmacy degree, MUR accredited, received CST at post registration, hold additional qualifications and felt

consultation skills as important has a higher associating with feeling more confident in their consultation skills. Male participants usually rate their confidence higher than female participants (Bucholz et al., 2011). Participants who hold an additional qualification such as a clinical diploma reported twice the confidence as those who did not hold an additional qualification. This is an interesting finding and how the additional qualifications may lead to increased confidence which can lead to an increased number of consultations with patients. Participants who have undergone further education would have had gained further skills and clinical knowledge therefore could have made them feel more confident to hold consultations with patients.

Our analysis suggests that confidence in consultation skills has predictors that can be addressed, such as more training, which in turn can have a significant influence on the number of interactions the pharmacist has with patients. However, it needs to be borne in mind that reported feelings of confidence do not necessarily correlate with objective measures of competence and skills (Hassett et al., 2006).

3.5.8 Future training

Participants clearly consider consultation skills very important for their current role as community pharmacists. The majority of participants (72.3 %) want more consultation skills training. Few studies have examined the pharmacist-patient interaction (Greenhill et al., 2011a, Cavaco and Romano, 2010, Weiss et al., 2010, Higgins and Hattingh, 2013, Latif et al., 2011). These studies have highlighted pharmacists' poor consultation skills when interacting with patient and the need for additional training.

Participants are seeking to develop their consultation skills and this is backed up by the literature, which suggests that consultation skills training might benefit pharmacists. Advanced courses are being requested by participants and our data shows such training to have a positive effect on the preparedness to hold consultations. Training in

consultation skills also has a positive effect on the consultation skills confidence of participants.

Participants as a majority requested e-learning and workshops as the preferred options for any future training. Some participants found being observed “intimidating” and this can possibly explain why there seems to be a majority of comments requesting training which is structured in a workshop setting. Previous research also shows that providing formative and summative feedback on a personal level might be more beneficial for pharmacists than receiving e-learning or workshops (Evans et al., 2011). A recent review of literature found the majority of studies had an assessment focus, aimed at documenting the counselling behaviour of practising pharmacists, rather than an educational focus aimed at equipping pharmacists with effective communication skills (Weiss et al., 2010). Future studies must be conducted to help find more effective methods to develop communication skills and to ascertain how different methods might affect the quality of pharmacist-patient consultations.

The results also suggest that future training should focus on providing more advanced consultation skills courses to pharmacists. This lack of formal training for many pharmacists makes the new structures of consultation skills training not very welcome; for example the majority favoured workshop settings and fewer wanted a video recorded method, one of the possible reasons behind this result can be due to the fact that video recording as a teaching method is a new method to undergraduate education.

Developing consultations skills through experience was emphasised in many comments, but the literature and analysis of results suggest otherwise, suggesting that advanced consultation (e.g. breaking bad news to patients) skills training might benefit pharmacists with all levels of experience. Community pharmacists usually work in isolation and hardly any feedback on their skills is given. One participant commented “...Are we 'chatting' as we should?” It is therefore hard to predict that experience alone

is enough in developing adequate consultation skills. It is therefore important to emphasise the benefits of training to future trainees so that more participants will seek training (James et al., 2001, Mackellar et al., 2007).

Future advanced consultations skills training should start as early as the undergraduate degree and continue onwards after registration as pharmacists. As explained in the introduction, many proposed changes have made to the MPharm degree to incorporate consultation skills training but all changes are still pending due to the extra costs involved. There are still a large number of registered pharmacists for whom further training in consultation skills could help increase their confidence, leading to the delivery of more patient facing services.

3.5.9 Strengths and Weaknesses

Participant recruitment

CPPE was approached since it had the most up to date list of pharmacists in England. The use of a third party to distribute a questionnaire has its advantages and disadvantages. Its very easy and cheap to distribute 10,000 emails, which was the main advantage. On the other hand, this strategy may have missed the participants who don't engage with CPPE and reduced generalisability of the data. This type of distribution can also introduce selection bias thereby ensuring that the sample obtained is not representative of the population intended to be analysed and in this case community pharmacists. Our overall demographics of participants are a good representation of the total registered pharmacists in England. CPPE is also a provider of post graduate training and we have asked participants to comment on postgraduate training, this may introduce social desirability bias were participants answer questions in a manner that will be viewed favourably by others. The results from our questionnaire that more than 50% of participants received training from CPPE but they have also reported about training received at University, Self-training and other.

There is also no way of finding out how many of the emails were sent to an incorrect email address and the proportion of community pharmacists within the 10,000 emails. This could be one of the reasons we did not have a higher response rate. A better approach might have been to conduct a mixed method approach so that we send electronic questionnaires and at the same time we send a paper version to randomly chosen pharmacies and this is in order to capture those who have limited access to computers or those who have computers that does not allow them to access the questionnaire.

Electronic questionnaires

There was no validated questionnaire and all the questions were developed and piloted with the staff and students at the university. The questionnaire was sent to many practicing pharmacists who are also staff at university but due to time restrictions, a pilot was not conducted with only community pharmacists. In hindsight it would have been better to send these questionnaires to practicing pharmacists who are not associated with the university because they likely to have had different views.

The questions were then changed according to feedback to make the questions clearer. More extensive tests would be needed for future work in order to ascertain the validity and reliability of the questions used in the questionnaire. In order to check for validity, we could use a qualitative method such as holding focus groups with practicing pharmacist to test what they understood from the questions and answers available to choose from could have been a better approach to validate the questionnaire. There was also no formal content validity for the questionnaires. Future work would need techniques such as proposed by Bland and Altman (Bland and Altman, 2002) to validate the scales in the questionnaires to achieve content validity. Although we did pilot our questionnaire there was still a possibility for misinterpretation of some our questions and this can lead to having biased or improper answers. We tried to minimise this risk by carefully reading the questions and piloting it with peers at the university. We also used CPPE names linked to existing training, engaged CPPE users should be able to understand most of the terms but those who are not engaged with CPPE may not.

The questions in the questionnaire were assembled according to the career of an ordinary community pharmacist, from university education to post-registration. Limiting the responses to stages of career helped make the questionnaire clear to the

participants but it also limited the scope of the information. The desire was to get the overall consultation skills training provided to community pharmacists. In order for us to limit missing information or opinion of the participant, we added many free text boxes for the participants who could choose to add more information.

Conclusions

While many changes have been implemented in pharmacy education to include consultation skills training during undergraduate and pre-registration year, there are still a large number of registered pharmacists for whom further training in consultation skills might be beneficial for community pharmacists. The study provided a good insight regarding current and previous consultations skills training at the different level of pharmacy education.

Chapter 4 – The Feasibility of using RIAS in Community Pharmacies

4.1 Introduction

This chapter covers the final research project of my PhD. It was built from ideas gathered from the pharmacist focus groups and the questionnaire investigating consultation skills training. Results from the focus groups indicated that more information was needed to understand what happens within a consultation. This gap was also evident in the questionnaires: based on the responses, it was not possible to clearly define what occurs between the patient and the pharmacist within a consultation. It has been widely acknowledged that communication skills for pharmacists are very important, (General Pharmaceutical Council, 2012b). Research has shown that the use of good communication skills can improve patient health outcomes (Stevenson et al., 2004) but there has been limited research into understanding how community pharmacists are undertaking consultations and the influence of consultation skills on patient outcomes.

The MUR service was the first nationally agreed service where pharmacists are remunerated for holding private consultations with patients. In order to be eligible for a free MUR, patients must be on multiple medicines for long term conditions and have been collecting prescriptions from the pharmacy for at least three months. These reviews can occur annually or more frequently if a significant adherence problem with a patient's medication is identified by the pharmacist (Pharmaceutical Services Negotiating Committee, 2004). The overall aim of the MUR service is to improve patients' knowledge and use of medicines. While the pharmacist should possess the clinical knowledge to conduct these consultations, current MUR accreditation does not assess their consultation skills (Pharmaceutical Services Negotiating Committee, 2005b).

There have been a few studies that have examined the pharmacist-patient interaction (Greenhill et al., 2011a, Cavaco and Romano, 2010, Latif et al., 2011). An observational study of MURs identified that pharmacists generally follow a rigid

structure to an MUR, determined by the paperwork which needs to be completed (Latif et al., 2011). The observations revealed minimal open questions used by pharmacists and a focus on the pharmacist's agenda (medicines) rather than the patient's illness. Another observational study investigating pharmacist consultations in a hospital and community setting concluded that whilst pharmacists are utilising a large number of communication skills during consultations, there are several areas in which they may benefit from additional training (Greenhill et al., 2011b). For example, pharmacists broke explanations down into manageable sections but they did not check out the patients' understanding of the information provided (Greenhill et al., 2011b). A recent literature review has suggested that in order to understand the dynamics of pharmacist-patient consultations, researchers should use experimental designs along with methodologies that will allow for interaction analysis and conversational analysis (Shah and Chewning, 2006b, Cavaco and Roter, 2010). The review also looked at tools that can help with such analysis, and recommended assessment tools such as the Roter Interaction Analysis System (RIAS) (Roter and Larson, 2002) because it observes both the patient and the pharmacists. Since then, RIAS has been used to analyse pharmacy consultations in a few studies, the first study of which was based in Portugal. The study concluded the feasibility of using RIAS to analyse checking blood pressure for patients and found pharmacists asked more questions (mainly closed ones), while customers gave more information. Pharmacists in this study controlled the consultations through closed questions. The study used a service where the potential of speaking to the patient about their medications was very limited and the entire consultation focused on a specific test. It is therefore very limited observations and not generalisable. There have been calls to use this interactional system for future pharmacy studies (Cavaco and Roter, 2010).

Roter Interaction Analysis System (RIAS) (Roter and Larson, 2002) is the most widely used method of coding medical interactions across the spectrum of medical and health

contexts around the world (Salmon and Young, 2005, Heritage and Maynard, 2006). Verbal communication units are defined as "utterances" the smallest discriminable speech segment to which a classification may be assigned. The unit may vary in length from a single word to a lengthy sentence. There are 34 communication categories to distinguish and classify practitioner communication and 28 to classify patient communication. The categories are then clustered into groups to help facilitate interpretation of the data. The purpose of RIAS in this study is to study pharmacist-patient consultation in detail to understand what happens within the MUR.

The aim of this study was to explore the feasibility of using RIAS in a community pharmacy setting in the UK and identify the potential impact of consultation behaviours on patient perceptions of the consultation.

4.2 Aims and objectives

4.2.1 Aims

- ❖ To investigate the feasibility of using RIAS to analyse community pharmacy consultations

4.2.1 Objectives

- ❖ To determine practicability of RIAS utilisation in the community pharmacy workplace
- ❖ To determine recruitment and attrition rates of patients and pharmacists
- ❖ To describe an appropriate approach to recruitment of patients in community pharmacy
- ❖ To assess reliability of coding pharmacist consultations
- ❖ To explore any relationships between patient reported outcomes and consultation behaviours
- ❖ To test the feasibility of using adapted questionnaires in community pharmacy

4.3 Method

Research governance and ethical committee approval was obtained before commencement of this feasibility study. The study was reviewed and given a favourable opinion by Cambridge East Research Ethics Committee (see letter in Appendix 3.1) and given NHS research governance approval from Brent Clinical Commissioning Group (see letter in Appendix 3.2). Community pharmacies were recruited to audio record medicine use review consultations with consenting patients. Following the consultation, both the pharmacist and the patient completed a questionnaire exploring their satisfaction with the consultation.

4.3.1 Recruitment of pharmacies and pharmacists

A generic letter was sent to all the pharmacies in the Borough of Hammersmith and Fulham. The contact details of pharmacies were acquired from the NHS Direct website. The letter (Appendix 3.3) invited pharmacists to contact the researcher if they were interested in participating in this study. The rationale behind sending it to all the pharmacies in the Hammersmith and Fulham was due to the fact the researcher lived in the area. After one week, the researcher called every pharmacy that had not yet responded to the letter, to explore potential interest and where required, explain the study in more detail. If a pharmacist expressed interest in participating, appropriate gateway consent was then obtained from the employer of the pharmacist. The recruitment of pharmacies followed Figure 4.1.

Many of the pharmacies based in the Borough of Hammersmith and Fulham are independent pharmacies; therefore, where the respondent was the pharmacist owner, gateway consent was not necessary. If gatekeeper consent was not granted within four weeks the pharmacy was not included in the study and an alternative pharmacy sought. Alliance Boots had over 10 pharmacies in the area and in order to ease the

process of pharmacist recruitment, gateway consent was sought prior to the project starting (Appendix 3.4).

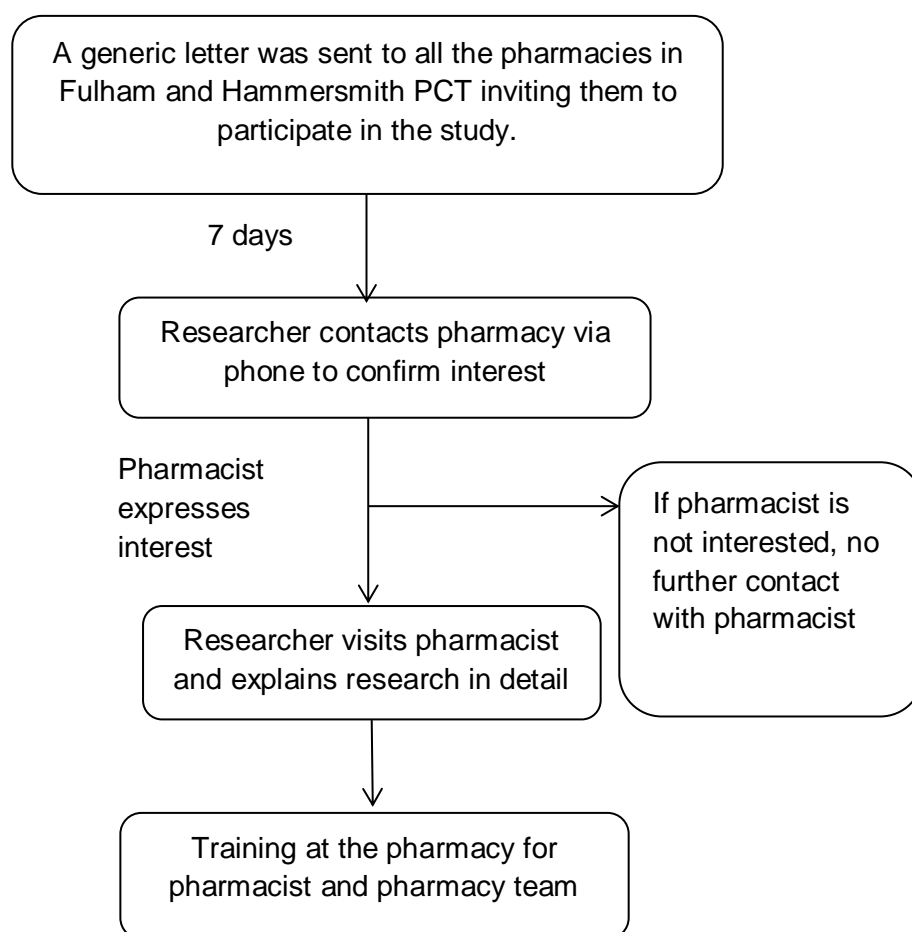


Figure 4.1 - Recruitment of pharmacists

Once gateway consent was obtained, the researcher visited the pharmacy. The aim of the visit was to explain the study and provide a study pack containing a pharmacist information sheet (Appendix 3.5), basic demographic details questionnaire (Appendix 3.6), and consent form (Appendix 3.7). While it was envisaged that most pharmacists would decide to participate at this meeting they were also given more time to consider involvement and were left with a pre-paid reply envelop to return the consent form and basic demographic details questionnaire or a withdrawal postcard (Appendix 3.8). After two weeks, all pharmacists who expressed interest and had not yet returned the

withdrawal postcard or the consent form and basic demographic questionnaire were contacted to confirm whether they still wanted to participate. In the event where there were two pharmacists in one pharmacy and one wanted to take part while the other did not, all research and recruitment was suspended while the pharmacist who did not want to take part was on duty, this was requested as part of the ethical approval for the study, the situation did not arise for this approach to be used.

If this method failed to recruit four pharmacists then alternative Boroughs of London were going to be approached using the same method. If the method obtained more than four pharmacists interested, then four pharmacists would be chosen using a random generator on Excel.

The recruitment process started with a postal letter that was sent to every pharmacy in the borough of Hammersmith and Fulham, London on 01/05/2013. A total of 40 letters were sent on the same day to all pharmacies; the letter was addressed to the pharmacist. The letter had a project mobile number and the researcher's email address. If any of the pharmacists were interested, they needed to contact the researcher using the details provided. After a week of sending the letters, the researcher contacted all the other 39 pharmacies via a phone call to check interest and arrange a visit to the pharmacy. The study was aiming at recruiting pharmacists who spent the majority of their working week within community pharmacy and have had experience conducting MURs therefore we had the following inclusion and exclusion criteria.

4.3.1.2 Inclusion criteria for pharmacies

- ❖ Gateway consent approval from an appropriate senior manager / owner
- ❖ Completed more than 100 MURs in the year of 2011/2012

4.3.1.3 Exclusion criteria for pharmacies

- ❖ Not accredited to conduct the MUR service

4.3.1.4 Inclusion criteria for pharmacist

- ❖ Completed more than 100 MURs in the year of 2011/2012
- ❖ Working as a community pharmacist for at least 30 hours a week

4.3.1.5 Exclusion criteria for pharmacist

- ❖ Not MUR accredited

4.3.1.6 Training for staff

The researcher delivered a training session for the pharmacist and appropriate members of the pharmacy team. Training provided the team with information about the recruitment to the study and the processes involved in gaining informed consent from eligible patients. Training was arranged for all pharmacies and did not last for more than an hour. Each pharmacy was also given a folder which had the information about the study, the researchers' contact phone number and all relevant information.

4.3.1.7 Reimbursements for pharmacy and team

The pharmacy team received £50 worth of vouchers from Amazon (or an alternative £50 voucher according to pharmacy team preferences) as compensation for attending the training. The pharmacy was entitled to claim up to £100 for costs involved in recruitment. Participating pharmacists were reimbursed £5 for each completed questionnaire following an MUR consultation.

4.4.2 Recruitment of patients

The aim was to recruit 30 patients onto this study. No formal sample size calculation was performed for patient recruitment. This is a feasibility study and therefore partly designed to estimate parameters that will be needed to inform sample size calculations in larger studies.

Two separate methods were used for patient recruitment (see Figure 4.2). The main reason why we adopted two recruitment strategies was due to the fact that previous

research recruiting patients in community pharmacy has failed to recruit effectively when left to the participating pharmacy (Twigg et al., 2013, Desborough J. et al., 2008). So in order to have a safety net, we used two methods to ensure we recruit the target sample number needed for this study.

Four sealed envelopes were used to randomly allocate the recruitment strategy to each pharmacy, to ensure two pharmacies used strategy A (Ad hoc recruitment) and two used strategy B (Letter recruitment) . If the study had failed to obtain more than 10 recorded consultations, then the most successful recruitment strategy was going to be allocated to the pharmacies that used the least successful strategy, e.g. if strategy A was more successful B then it would have been conducted in the other 2 pharmacies that used strategy B as a recruitment strategy.

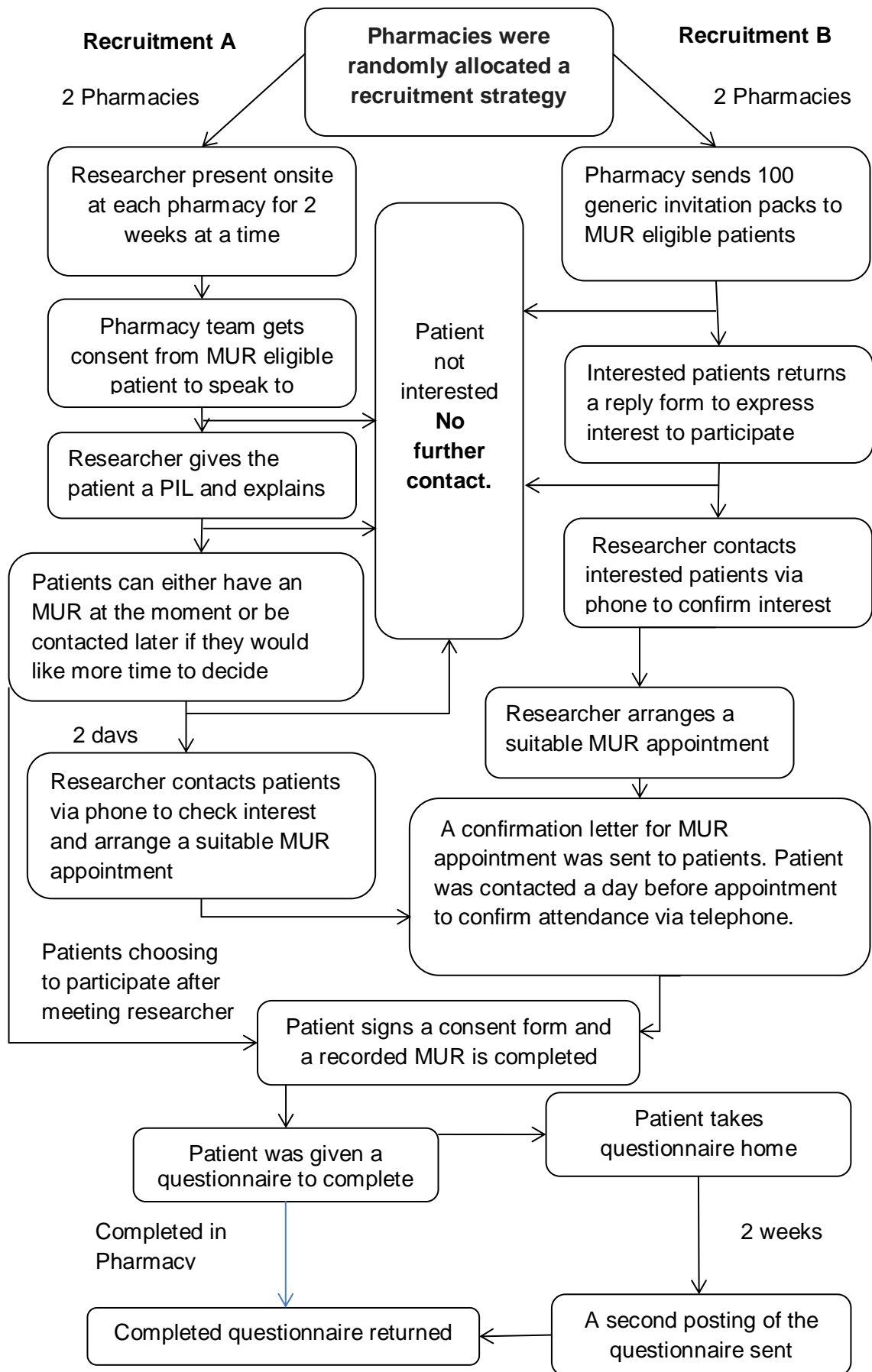


Figure 4.2 - Recruitment of patients

For recruitment strategy A, the pharmacy team obtained consent from an MUR eligible patient to speak to myself. In order for a patient to be MUR eligible, only patients who have received pharmaceutical services from the community pharmacy for a period of at least three consecutive months can be approached. Patients must not have more than one MUR in any 12-month period unless the registered pharmacists have justification due to changes to the patient to offer it again within 12 months. An MUR should only be provided to patients who have more than one drug prescribed, unless the only drug they are being prescribed is a high risk medicine (Pharmaceutical Services Negotiating Committee, 2005c).

Once the patient consented, the researcher spoke to the patient and invited them to the study. Patients interested in participating in the study were given a study pack containing an NHS MUR information sheet (Appendix 3.9) and a patient information leaflet (Appendix 3.10). Patients were able to choose to participate straight away or be contacted after 24 hours for those who wanted more time to decide or ask questions. After obtaining verbal consent, the researcher called the patient after 24 hours to check interest and allocate a suitable MUR appointment. A letter to confirm the MUR appointment was sent to the patient's address (Appendix 3.11). The patient's medication record (PMR) at the pharmacy was updated with the consent decision of the patient.

For recruitment strategy B the pharmacy team were able to send up to 100 generic invitation packs to MUR eligible patients. The invitation pack contained a covering letter from the pharmacy (Appendix 3.12), a patient information leaflet (Appendix 3.10), reply form (Appendix 3.13), NHS MUR information sheet (Appendix 3.9) and a prepaid envelope. The letter explained the study to the patient and the choices available, the patient could either have a normal MUR booked by the pharmacy team or an MUR as part of the study. If the patient wanted to participate in the study, the reply form had to

be posted back using the prepaid envelope which was addressed to the researcher. Once the researcher received the reply form, the patient was contacted via phone to book an appointment for the MUR. A letter to confirm the MUR appointment was sent to the patient's address (Appendix 3.11). All patients signed a consent form (Appendix 3.14) before commencement of the recorded MUR consultation with the pharmacist. Pharmacies were supported via telephone communication and regular visits from the researcher to ensure all the procedures were being followed and the paper work was being completed correctly.

Patients were given £5 pounds to help with the costs of traveling and attending the MUR appointment. The following inclusion and exclusion criteria applied for the recruitment of patients: if participants lost capacity during the study and the pharmacy was contacted then they were withdrawn and any data collected from them was destroyed.

Recruitment strategy A (Ad hoc recruitment) started on the 3rd of June 2013 in Pharmacy One and, I was onsite for 2 weeks. As for Pharmacy Four, which also was allocated strategy A, recruitment started on 17th of June and I was onsite for two weeks. Recruitment B (Letter recruitment) was allocated to Pharmacy Two and Three. The letters were sent to patients on 10th of June 2013 for Pharmacy Two and Pharmacy Three sent the letters on the 17th of June 2013.

4.3.2.1 Patient inclusion criteria

- ❖ MUR eligible (Pharmaceutical Services Negotiating Committee, 2005b)
 - ❖ Received pharmaceutical care from the same pharmacy for at least three consecutive months
 - ❖ Patients who are taking more than one drug (Unless high risk medicine)
 - ❖ Recently discharged from hospital and changes made to their drugs

4.3.2.2 Patient exclusion criteria

- ❖ Under 18 years of age
- ❖ Considered by the healthcare team to be unable to provide written informed consent
- ❖ Patients unable to attend the pharmacy
- ❖ Unable to read or speak English fluently.

The first 30 patients that consented across all the sites were included in this study. Since not all the pharmacies started recruitment at the same time, we put a maximum of 10 consultations per pharmacy.

4.3.4 Questionnaires

Two questionnaires, with parallel content, were developed for pharmacist (Appendix 3.15) and patient (Appendix 3.16) completion following each MUR. The questionnaires were adopted from a similar study that was conducted with doctors and patients and both questionnaires were validated (Campbell et al., 2007). The word 'doctor' was replaced with pharmacist and one of the questions was not relevant to an MUR consultation (physical examination) and was therefore left out from the pharmacist and patient version of the questionnaire. Permission to use and adapt the questionnaires was sought and received from the authors of the questionnaires. (Appendix 3.16)

After an extensive search, we could not locate a questionnaire that was developed for pharmacy specifically. A review (Evans et al., 2007) investigated the tools available but most of the tools were too long and we did not want a generalised assessment of patient satisfaction recalled over time; instead, we wanted to explore patient's satisfaction with a single interaction.

A few tools exist to explore patient's satisfaction over a single visit with the doctors including an 11 item Patient Satisfaction Scale recommended by the Royal College of General Practitioners during GP training (Royal College of General Practitioners), a

consultation satisfaction questionnaire (Poulton, 1996) and the questionnaire that we decided to use in the end (Campbell et al., 2007). The questionnaire that was chosen also involves the review of pharmacist's consultations skills and provides a way for the pharmacist to self-reflect on their skill, this we felt as an important thing to investigate as part of our study.

The pharmacist questionnaire included 18 items to be completed immediately after conducting the MUR. The patient questionnaire includes three parts, basic demographics, depth of relationship scale and a consultation evaluation. The Patient-Doctor Depth-of-Relationship Scale is a 9 item self-completion questionnaire (Ridd et al., 2011), adapted so that the word 'doctor' is replaced with 'pharmacist'.

The depth of relationship questionnaire was added onto the patient questions in order to investigate whether patient-pharmacist relationship had any impact on the style of communication. There isn't a pharmacy specific relationship test questionnaire. There are a few questionnaires available for doctors (Freeman and Richards, 1994, Howie et al., 1999). A systematic review of qualitative studies of patients' perspectives on patient-doctor relationships (Ridd et al., 2009) described three key elements: longitudinal care (seeing the same doctor), consultation experiences (patients' encounters with the doctor), and patient-doctor depth of relationship. The questionnaire covers all the three elements with a good internal reliability (Cronbach's $\alpha = .93$) (Ridd et al., 2011) and was developed by the same authors of the systematic review (Ridd et al., 2009). This is included to help understand the relationship between the patient and the pharmacist and if that has any influence on the style of communication of both the patient and the pharmacist. Earlier data from the focus groups with pharmacists suggested that they had better rapport with patients they knew already and we wanted to explore that theory.

Once the MUR consultation ended, the pharmacist left the patient in the consultation room and allowed 5-10 minutes for the patient to complete the questionnaire. The

questionnaires were then handed back to the pharmacy team in sealed envelopes. The participant was also given a free-post envelope in case the patient wanted to take the questionnaire home. Patients who did not return the questionnaire after two weeks of the MUR consultation were sent a reminder letter (Appendix 3.17) with another copy of the questionnaire. After a further two weeks and if the questionnaire was not returned, we assumed no response and the patient was not contacted again.

4.3.5 Consultations recording

All conversations between the pharmacists and the patient were audio recorded using a Philips DVT7000 digital voice recorder that was supplied by the researcher to every pharmacy. The pharmacist was responsible for pressing the record button once the MUR began and the stop button when the MUR was completed. The patient provided verbal consent in addition to original written consent prior to starting the recording of the consultation.

4.3.6 Data storage

All patients were coded with a study number and all patient characteristics recorded are encrypted with the study number and the coding sheet is kept separately in locked storage at the pharmacy. All participant sensitive data were initially stored at the respective pharmacy under usual storage procedures for confidential information. Audio recording devices were stored securely until files were downloaded onto a secure computer and files were deleted from the audio recording devices. Only anonymised data were analysed by researchers and stored on password protected computers. All data will be destroyed after five years.

4.3.7 Analysis of Data

Data were analysed using STATA® 12^{SE} and descriptive statistics were calculated to identify the recruitment and dropout rate of patients, and describe scoring patterns on questionnaire items.

We used the Roter Interaction Analysis system (RIAS) to code the consultations. This system, which is based on Bales Process Analysis (Bales, 1950), is a widely used system for the assessment of medical interaction and has been used in over 75 communication studies (Roter and Larson, 2002). RIAS coding for the consultations was conducted in conjunction with the RIAS training and coding experts, based at Warwick Medical School, University of Warwick.

In preparation for this study, my supervisor and I attended a two day training that was organised by Professor Roter, the developer of RIAS. As part of that training we coded two full doctor consultations to experience how coding needs to be completed. I also was given more practice consultations where I spent coding over 7 consultations to practice RIAS coding. Since this was a feasibility study, it was important to get a coder that has used the system before to reduce the risk of errors caused by the user. University of Warwick has used RIAS in analysing medical consultations in numerous studies and it was decided that an experienced coder will analyse all consultations.

Four face to face meetings were arranged during the coding and analysis phase, in which I visited University of Warwick and met with the RIAS coder and trainer. This ensured all coding was accurate and gave us the opportunity to discuss any uncertainties in the coding manual applied specifically to pharmacy consultations. Any utterance that the coder was not sure of was discussed between ourselves to reach a specific code for the utterance. In order to show examples of the codes, I listened to

every consultation and transcribed the specific examples to explain how coding was conducted.

University of Warwick coded 30 consultations and I coded a random sample of 10 consultations to order to test for reliability. Most RIAS studies have reported adequate intercoder reliability, generally with a Pearson correlation coefficient higher than 0.80 for both patient and physician codes (Roter and Larson, 2002). To ensure reliability a random sample of 10 consultations was chosen to be double coded and compared using Pearson's correlation test as has been used in many of the RIAS consultation studies. Codes were assigned for each utterance.

RIAS has four primary functional groupings, which are data-gathering skills, patient education and counselling skills, relationship skills, and partnering skills. Each grouping also has different communication behaviour codes e.g. open question and closed question (Cavaco and Roter, 2010). The coder used functional grouping with its unique behaviour codes to analyse the conversations between the patient and the pharmacist. As there were two types of recruitment, we compared the data between the consultations for the two recruitment strategies. We noticed there was a significant difference and therefore we have also reported the codes separately for each of the recruitment strategies.

RIAS was adapted to adjust the codes to pharmacy consultations. For example, pharmacists do not perform a physical exam in an MUR and RIAS was adopted to reflect that. Physical exam coding was removed from the RIAS tool as pharmacy consultations do not include any physical examination. RIAS categories are for pharmacists are listed in Table 4.1.

Group	Combination of RIAS categories
Data gathering—biomedical	Asks closed-ended question—medical condition Asks closed-ended question—therapeutic regimen Asks closed-ended question—other Asks open-ended question—medical condition Asks open-ended question—therapeutic regimen Asks open-ended question—other Bid for repetition
Data gathering—lifestyle/ psychosocial	Asks closed-ended question—lifestyle Asks closed-ended question—psychosocial Asks open-ended question—lifestyle Asks open-ended question—psychosocial
Patient education and counselling—biomedical	Gives information—medical condition Gives information—therapeutic regimen Gives information—other Counsels—medical condition/ therapeutic regimen
Patient education and counselling—lifestyle/ psychosocial	Gives information—lifestyle Counsels—lifestyle/psychosocial
Facilitation and patient activation	Asks for opinion Asks for permission Asks for reassurance Asks for understanding Back-channel responses Paraphrase/check for understanding
Rapport building—positive	Laughs, tells jokes Shows approval—direct Gives compliment—general Shows agreement, understanding
Rapport building—emotional	Empathy/legitimation Shows concern or worry Reassures encourages or shows optimism Partnership statements Self-disclosure statements
Rapport building—negative	Shows disapproval—direct Shows criticism—general
Rapport building—social	Personal remarks, social conversation.
Procedural	Transition words Gives orientation, instructions Unintelligible utterances

Table 4.1 - Pharmacist RIAS categories

Patient categories are listed in Table 4.2.

Grouped categories	Combination of RIAS categories
Question asking—biomedical	All questions medical All questions therapeutic regimen All questions other Bid for repetition
Question asking—lifestyle/ psychosocial	All questions lifestyle All questions psychosocial
Information giving—biomedical	Gives information—medical condition Gives information—therapeutic regimen Gives information—other
Information giving— lifestyle/psychosocial	Gives information—lifestyle Gives information—psychosocial
Patient activation and engagement	Asks for service Asks for reassurance Asks for understanding Paraphrase/check for understanding
Rapport building/positive	Laughs, tells jokes. Shows approval—direct Gives compliment—general Shows agreement, understanding
Rapport building/emotional	Empathy/legitimizing statements Shows concern or worry Reassures encourages or shows optimism
Rapport building/negative	Shows disapproval—direct Shows criticism—general
Rapport building/social	Personal remarks, social conversation
Procedural	Transition words Gives orientation, instructions Unintelligible utterances

Table 4.2 - Patient grouped RIAS categories

We also added extra proficiencies to the RIAS program to record whether the underlying purpose of the MUR was discussed. The proficiencies allowed extra tagging to the basic RIAS codes which were tailored for the pharmacy consultations. These included the underlying purpose of the MUR service (Pharmaceutical Services Negotiating Committee, 2013a):

- A. Establishing the patient's actual use, understanding and experience of taking drugs
- B. Identifying, discussing and assisting in the resolution of poor or ineffective use of drugs by the patient
- C. Identifying side effects and drug interactions that may affect the patient's compliance with instructions given to them by a health care professional for the taking of drugs
- D. Improving clinical and cost effectiveness of drugs prescribed to patients, thereby reducing the wastage of such drugs.

RIAS already had the codes to identify point A and B. Point C and D were added as extra proficiencies but were also indirectly covered by other codes. Any talk regarding side effects or drug interaction from patient or pharmacist was coded to cover point C. Any discussion regarding changing drug regime from patient or pharmacist was also recorded to cover point D.

An equation was applied to calculate a patient centeredness score for each consultation. The patient centeredness score has been applied to previous research and has been approved by the original developers of the RIAS system. (Vail et al., 2011). The patient centeredness equation was as follows:

[Sum of the patient's utterances related to biomedical/psychosocial/lifestyle information giving, lifestyle/ psychosocial question asking, and the pharmacists lifestyle/psychosocial questions and counselling statements, and emotional statements] **divided** by [the sum of the pharmacist's utterances related to medical/therapeutic regimen questions, medical/therapeutic regimen information giving and counselling statements, procedural statements, and patient utterances related to medical/therapeutic regimen question asking]. Figure 4.3 simplifies the process of how the consultations were analysed.

The relationship questionnaire had an equation which helps calculate how close the patient felt towards the pharmacists (Ridd et al., 2011). It is calculated with the following equation:

$$\text{Depth-of-relationship} = \frac{\text{Mean score of completed questions}}{\text{Scale score maximum question range (4)}} \times 32$$

The data ranged from 0 (no relationship) to 32 (very strong relationship), as long as 6 or more items were completed.

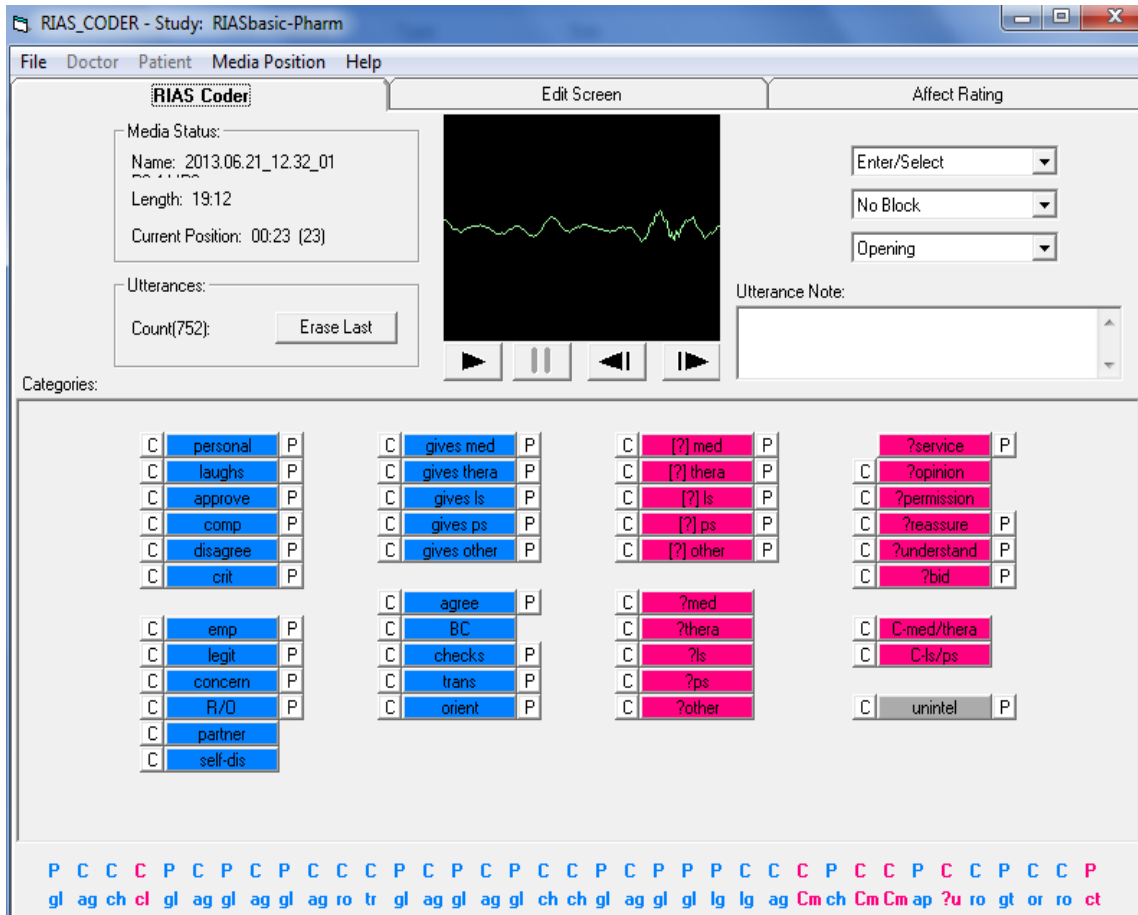


Figure 4.3 - RIAS programme to analyse consultations

Figure 4.3 illustrates how RIAS programme is designed. As the audio recording of the consultation is played, the coder clicks on the relevant box that stands for a specific RIAS category (e.g. “gives ls” means gives information about lifestyle) for any utterance spoken by the pharmacist or patient. This information is then exported to an Excel file and analysed using a statistical package (STATA).

4.4 Results

4.4.1 Recruitment of Pharmacies and Patients

After sending the initial letter, only one pharmacist contacted the researcher to express interest. After contacting them via phone a further 5 expressed interest for more information. In the end four pharmacies were recruited for the study. Two pharmacies decided not to take part in the study. Four pharmacies and a total of five pharmacists took part with one pharmacy having two pharmacists. All pharmacists worked full time in community pharmacy. Demographic details of the pharmacists can be found in Table 4.3.

Pharmacist Code	Years registered	MUR accredited	Average in a year	MURs in 2011-2012	Number of MURs conducted as part of this study
P1	3	Yes	200	More than 100	3
P1-2	0	Yes	200	More than 100	1
P2	6	Yes	380	More than 100	10
P3	2	Yes	200	More than 100	7
P4	19	Yes	400	More than 100	9

Table 4.3 - Demographic detail of pharmacists

Pharmacy one where P1 and P1-2 were based was inside a shopping centre; it was a very busy pharmacy and many new patients brought in their prescriptions for the first time. P1 stands for pharmacist one and P1-2 stands for pharmacist two, both pharmacists were based in Pharmacy one. Pharmacy one was the only pharmacy that had more than one pharmacist take part.

Pharmacy Two where P2 was based is a part of a small multiple on the high street; they have been there for over 20 years and the majority of patients have been going

there for a long time. Pharmacy Three where P3 is based is also a multiple that is based within a shopping centre but has been there for over 10 years and has many regular patients. Pharmacy Four where P4 is based is a multiple that is on the high street and has been there for more than 30 years; almost all patients are regulars.

Table 4.4 illustrates the type of strategy used and the response rate. No apparent difference was found between the two recruitment strategies.

Pharmacist Code	Recruitment Type	Patients contacted/approached	Percentage Response Rate
P1 and P1-2	Ad hoc recruitment	17	23.53 (n=4)
P2	Letter to patients	25	40.00 (n=10)
P3	Letter to patients	45	15.55 (n=7)
P4	Ad hoc recruitment	22	40.90 (n=9)

Table 4.4 - Patient recruitment and response rate

Ad hoc recruitment took place where the researcher was onsite; a majority of patients were happy to give consent to speak to the researcher. When the researcher explained the study and invited them to take part, many reasons were specified on why they declined to participate. Some of the reasons why patients declined to take part in the study were: "Sorry I don't have time", "I am happy with my medicines" and "my doctor has gone through all of it recently".

As a researcher I had many difficulties when recruiting patients via Ad hoc strategy. It was difficult to put research alongside the dispensing work load. Although pharmacists were not doing anything extra but for the sake of the project getting enough patients to participate, they screened every patient who came in the pharmacy for a possible MUR. At times I felt I was adding extra pressure on the team by just being present as the dispensary space was already small. At times I had to step in to help the pharmacists with putting orders away and doing what I could to help with the increasing

workload. I also noticed when the pharmacist was inside the consultation room, the prescriptions were piling up and patients were getting anxious to get their medication so they could leave the pharmacy. The pharmacist had to rush out from the consultation room to start with dispensing the prescriptions that was left for them while they were conducting the MUR. All Ad hoc patients led to immediate reviews and none of the patients requested to have it another day.

As for the recruitment via letter, all patients that sent their reply letter to the university were invited to take part in the study except one. The reply letter had an incorrect mobile phone number and the participant could not be contacted. All invited patients made it to the allocated appointment slot as indicated in the appointment confirmation letter sent to them.

A total of 30 participants were recruited and had their MURs. Demographic details of participants can be found in Table 4.5. The majority of patients were female and of an age of 60 and above.

Characteristics	N (%)
Female	21 (70)
Age (years)	
18 - 21	2 (3.33)
30 - 39	2 (6.67)
40 - 49	4 (13.33)
50 - 59	1 (3.33)
60 or older	22 (73.33)

Table 4.5 - Demographic details of patients (n = 30)

4.4.2 Relationship of patient and pharmacist

The following section was only found on the patient's questionnaire. Patients were asked whether it was their regular pharmacist that they were seeing; 27 (90%) patients answered with a yes. Patients were also asked about their relationship with the pharmacist. The results can be found in Table 4.6.

Statement	Scale, N (%)				
	Disagree	Neither agree nor disagree	Slightly agree	Mostly agree	Totally agree
I know this pharmacist very well	2 (6.67)	2 (6.67)	1 (3.33)	5 (16.67)	20 (66.67)
This pharmacist knows me as a person	3 (10)	1 (3.33)	1 (3.33)	5 (16.67)	20 (66.67)
This pharmacist really knows how I feel about things	0 (0)	4 (13.33)	1 (3.33)	8 (26.67)	17 (56.67)
I know what to expect with this pharmacist	1 (3.33)	3 (10)	0 (0)	8 (26.67)	18 (60)
This pharmacist really cares for me	0 (0)	2 (6.67)	1 (3.33)	9 (30)	18 (60)
This pharmacist takes me seriously	0 (0)	0 (0)	2 (6.67)	5 (16.67)	23 (76.67)
This pharmacist accepts me the way I am	0 (0)	0 (0)	2 (6.67)	6 (20)	22 (73.33)
I feel totally relaxed with this pharmacist	0 (0)	0 (0)	1 (3.33)	3 (10)	26 (86.67)

Table 4.6 - Relationship of patient and pharmacist (n=30)

The majority of patients knew the pharmacist that they were seeing well and knew what to expect. Over 90% of patients mostly and totally agreed that the pharmacist cared, took them seriously, accepted them as they are and felt relaxed around the pharmacist.

A depth-of-relationship score was then calculated where it ranges from 0 (no relationship) to 32 (very strong relationship). Most of the patients scored their relationship with the pharmacist as a strong with a median (IQR) of 30 (26, 32).

A Wilcoxon-Mann-Whitney test was conducted to test whether there was a significant difference between the relationship score of two groups of patients, those who saw their regular pharmacists (n=27) and those who didn't (n=3). The results suggest that there is a statistically significant difference between the underlying distributions of those who had their consultation with their regular pharmacist and those who didn't ($p = 0.0093$). The sum of ranks of the patients who saw their regular pharmacist was higher while those who didn't see their regular pharmacists were lower. Thus patients who saw their regular pharmacists reported a higher depth-of-relationship with their pharmacist.

We investigated whether gender of pharmacist, gender of patient, age of patient, recruitment type and overall satisfaction of consultation had any influence on the relationship score: no significant difference was observed.

4.4.3 Matched-pair pharmacist-patient questionnaire

After each consultation the pharmacist and patient were asked to complete match-pair questionnaires. Results with questions can be found in Table 4.7. Scores were relatively high for all the questions but patients scored the pharmacist higher on every question

Statements	Pharmacist		Patient	
	Mean	SD	Mean	SD
Greeted the patient in a way that made them feel comfortable (Pharmacist form)	4.76	0.43	4.93	0.25
Greeted me in a way that made me feel comfortable (Patient form)				
Discussed the patient's reason(s) for coming today	4.59	0.56	4.93	0.25
Discussed my reason(s) for coming today				
Encouraged the patient to express his or her thoughts concerning his or her health problems	4.66	0.48	4.80	0.48
Encouraged me to express my thoughts concerning my health problems				
Listened carefully to what the patient had to say	4.72	0.45	4.93	0.25
Listened carefully to what I had to say				
Understood what the patient had to say	4.62	0.49	4.90	0.40
Understood what I had to say				
Discussed treatment options with the patient	4.31	0.88	4.57	1.27
Discussed treatment options with me				

Continued next page

Continued from previous page

Statements	Pharmacist		Patient	
	Mean	SD	Mean	SD
Gave the patient as much information as he or she wanted	4.34	0.77	4.90	0.31
Gave me as much information as I wanted				
Responded to the patient's questions and concerns	4.45	0.63	4.87	0.35
Responded to my questions and concerns				
Checked with the patient to see if the treatment plan(s) was acceptable	4.24	0.78	4.53	0.97
Checked to see if the treatment plan(s) was acceptable to me				
Involved the patient in decisions as much as he or she wanted	4.45	0.68	4.77	0.43
Involved me in decisions as much as I wanted				
Checked to be sure the patient understood everything	4.38	0.56	4.87	0.35
Checked to be sure I understood everything				
Showed care and concern about the patient as a person	4.52	0.51	4.77	0.43
Showed care and concern about me as a person				
Spent the right amount of time with the patient	4.55	0.57	4.87	0.35
Spent the right amount of time with me				
Overall, I was satisfied with this consultation today	4.59	0.50	4.93	0.25
Overall, I was satisfied with my visit to the pharmacist today				

* SD standard deviation

Table 4.7 - Results of matched-pair questionnaire (n=30)

4.4.4 RIAS coding

Table 4.8 shows the results for Pearson's Test for the different code groups for both the pharmacist and the patient. The data is highly reliable with an overall median (IQR) of 0.9719 (0.9269, 0.9948).

Pharmacist RIAS Categories	Code Group	Reliability	Overall Summary median, range, inter-quartile range (25%, 75%)
	Question asking—biomedical	0.9766	Median: 0.9719 Range: 0.743 – 1.000 Inter-quartile range: 0.9269, 0.9948
	Question asking—lifestyle/ psychosocial	0.9772	
	Information giving—biomedical	0.9269	
	Information giving— lifestyle/psychosocial	0.9948	
	Patient activation and Engagement	0.9719	
	Rapport building/positive	0.7463	
	Rapport building/emotional	0.7975	
	Rapport building/negative	0.9689	
	Rapport building/social	1.0000	
	Procedural Transition words	0.9617	
	Total number of Utterances	0.9954	
Patient RIAS categories	Question asking—biomedical	0.7625	Median: 0.9874 Range: 0.6667 – 1.000 Inter-quartile range: 0.8214, 0.9903
	Question asking—lifestyle/ psychosocial	0.9883	
	Information giving—biomedical	0.9903	
	Information giving— lifestyle/psychosocial	0.9979	
	Patient activation and Engagement	0.8214	
	Rapport building/positive	0.9874	
	Rapport building/emotional	0.8788	
	Rapport building/negative	1.0000	
	Rapport building/social	0.6667	
	Procedural Transition words	0.8729	
	Total number of Utterances	0.9888	

Table 4.8 - Reliability of RIAS coding (n=10)

4.4.4.1 Pharmacist communication

The total time of the consultations had a median (IQR) 8 minutes and 42.5 seconds (4 minutes and 32 seconds - 18 minutes and one second). The total pharmacist utterances of all consultations was 6815, a median (IQR) of 185.5 (86-309) There was a significant difference when comparing the time for the two different types of recruitment. Consultations from letter recruitment lasted almost three times more. Table 4.9 contains the information for the total time of consultations.

	Time of consultations in minutes (m) and seconds (s). Median, range, inter-quartile range (25%, 75%)
Both Recruitment Strategies (n=30)	Range: 1m:6s – 39m:51s Median: 8m:46.5s Inter-quartile range: 4m:52sec – 18m:6s
Letter Recruitment (n=17)	Range: 2m:39s - 39m:51s Median: 15m:42s Inter-quartile range: 8m:24s, 18m:24s
Ad hoc recruitment (n=13)	Range: 1m:6s – 21m:58s Median: 4m:52s Inter-quartile range: 3m:19s, 6m:45s

Table 4.9 - Total Time of consultations

Descriptive statistics for the content of pharmacists' consultations can be found in Table 4.10.

Communication category	Number of utterances per consultation: median, range, inter-quartile range (25%, 75%)	Number of utterances (% total utterances)	Combination of RIAS categories (With total number of utterances)
Question asking—biomedical	Range: 4 - 59 Median: 19 Inter-quartile range: 13, 35	706 (10.37%)	Asks closed-ended question—medical condition : 163 Asks closed-ended question—therapeutic regimen: 364 Asks closed-ended question—other :1 Asks open-ended question—medical condition: 39 Asks open-ended question—therapeutic regimen :133 Asks open-ended question—other: 0 Bid for repetition: 6
Question asking—lifestyle/psychosocial	Range: 0-18 Median:2.5 Inter-quartile range: 0, 12	134 (1.96%)	Asks closed-ended question—lifestyle: 85 Asks closed-ended question—psychosocial : 2 Asks open-ended question—lifestyle : 45 Asks open-ended question—psychosocial : 2
Information giving—biomedical	Range: 0 - 208 Median: 26.5 Inter-quartile range: 17, 49	1123 (16.45%)	Gives information—medical condition : 96 Gives information—therapeutic regimen : 497 Gives information—other : 18 Counsels—medical condition/therapeutic regimen : 512
Information giving—lifestyle/psychosocial	Range:0 - 68 Median: 3.5 Inter-quartile range: 0, 68	250 (3.67%)	Gives information—lifestyle: 55 Counsels—lifestyle/psychosocial: 195
Patient activation and engagement	Range: 7 - 125 Median: 35 Inter-quartile range: 17, 66	1382 (20.28%)	Asks for opinion: 101 Asks for permission: 7 Asks for reassurance: 0 Asks for understanding: 39 Back-channel responses: 343 Paraphrase/check for understanding: 892

Continued next page

Continued from previous page

Communication category	Number of utterances per consultation: median, range, inter-quartile range (25%, 75%)	Number of utterances (% total utterances)	Combination of RIAS categories (With total number of utterances)
Rapport building/positive	Range: 7 - 348 Median: 63 Inter-quartile range: 20, 121	2412 (35.39%)	Laughs, tells jokes: 106 Shows approval—direct: 356 Gives compliment—general: 3 Shows agreement, understanding: 1947
Rapport building/emotional	Range: 0 - 74 Median: 9 .5 Inter-quartile range: 4, 18	407 (5.97%)	Empathy/legitimation: 16 Shows concern or worry: 52 Reassures encourages or shows optimism: 329 Partnership statements: 0 Self-disclosure statements:10
Rapport building/social	Range: 0 - 4 Median: 0 Inter-quartile range: 0, 0	9 (0.13%)	Personal remarks, social conversation: 9
Procedural	Range: 2 - 32 Median: 9 Inter-quartile range: 7, 18	360 (5.28%)	Transition words: 84 Gives orientation, instructions: 249 Unintelligible utterances: 27

Table 4.10 - Summary of Pharmacist Utterances (n=30)

As indicated, the majority of pharmacists' utterances were concerned with positive rapport building with 35.9% of total utterances. An example of such utterances (Ph stands for pharmacist and P stands for patient):

Ph3.3: "It comes in all sorts of boxes, just to keep you on your toes"
(RIAS Category: Laughs, tells jokes)

Ph1.1: "oh that's good"
(RIAS Category: Shows approval—direct)

Ph1.3: "that's very good"
(RIAS Category: Gives compliment—general)

Ph1.1: "slow release, yes"
(RIAS Category: Shows agreement, understanding)

Patient activation and engagement was 20.28% of total utterances; example of utterances are:

Ph2.2: "what do you think about quitting smoking?"
(RIAS Category: Asks for opinion)

Ph1.1: "would you like that?"
(RIAS Category: Asks for permission)

Ph2.2: "do you have any problems using the inhaler?"
(RIAS Category: Asks for understanding)

Ph2.2: "Is it like cracked heels?"
(RIAS Category: Back-channel responses)

Ph3.1: "we haven't got them here (referring to medicines) but are you familiar with the names?"
(RIAS Category: Paraphrase/check for understanding)

The pharmacist gave biomedical-related information in 16.45% of total utterances; see below for examples:

Ph1.3: "Calcichew is good that it combines vitamin D and calcium together not only does it correct vitamin d deficiency it also prevents episodes of osteoporosis in future"

(RIAS Category: Gives information—medical condition)

Ph3.3: "It is quite common to have such side-effects like you said that sort of muscle aches"

(RIAS Category: Gives information—therapeutic regimen)

Ph4.5: "These pages are from the study, so they are yours"

(RIAS Category: Gives information—other)

Ph4.4: "Maybe you should take this at night so that the next day you don't feel so drowsy"

(RIAS Category: Counsels—medical condition/therapeutic regimen)

Pharmacists also spent about 10% of utterances asking about biomedical information; examples are as follows:

Ph3.2: "Is it for asthma or COPD?"

(RIAS Category: Asks closed-ended question—medical condition)

Ph2.2: "Clenil inhaler, do you know what that one is for?"

(RIAS Category: Asks closed-ended question—therapeutic regimen)

Ph4.5: "do you want me to write for sleeping on it?"

(RIAS Category: Asks closed-ended question—other)

Ph2.2: "How are the headaches now?"

(RIAS Category: Asks open-ended question—medical condition)

Ph1.2: “Do you have any problems with that inhaler?”

(RIAS Category: Asks open-ended question—therapeutic regimen)

Ph2.2: “Yes that is correct, that is a year old”

(RIAS Category: Bid for repetition)

Emotional rapport building and procedural utterances were each around 5% of the overall utterances in the consultations. Examples of emotional rapport building:

Ph3.1: “I am sorry to hear that they took so long”

(RIAS Category: Empathy/legitimation)

Ph3.3: “Sorry if you think I am asking you silly questions”

(RIAS Category: Shows concern or worry)

Ph3.1: “I am glad that you’re ok now”

(RIAS Category: Reassures encourages or shows optimism)

Ph1.1: “I went to visit two weekends ago, it’s beautiful I agree”

(RIAS Category: Self-disclosure statements)

While examples of procedural utterances are:

Ph4.6: “Yeah OK”

(RIAS Category: Transition words)

Ph1.1: “I need you to fill up that form”

(RIAS Category: Gives orientation, instructions)

Ph1.3: “Auto sensitivity activated” (referring to the audio recorder)

(RIAS Category: Unintelligible utterances)

Other types of utterances such as social and negative rapport building were less than 1%. An example of a social rapport utterance:

Ph1.1: “How’s your day today, is it still sunny outside?”

(RIAS Category: Personal remarks, social conversation)

While an example of negative rapport building utterances:

Ph4.4: “No this is short term use only!”

(RIAS Category: Shows disapproval—direct)

Ph3.1: “That’s surprising”

(RIAS Category: Shows criticism—general)

Question asking and information giving regarding lifestyle/ psychosocial matters were also only a small proportion of the pharmacist utterances. Examples of questions asked regarding lifestyle and psychosocial matters:

Ph2.2: “Are you a morning person?”

(RIAS Category: Asks closed-ended question—lifestyle)

Ph1.1: “so you sound relieved?”

(RIAS Category: Asks closed-ended question—psychosocial)

Ph3.1: “because you’re diabetic and you’re on blood pressure tablets, do you watch a bit of what you eat?”

(RIAS Category: Asks open-ended question—lifestyle)

Ph1.3: “So you have a good relationship with your doctor?”

(RIAS Category: Asks open-ended question—psychosocial)

While examples of utterances regarding information giving of lifestyle and psychosocial matters:

Ph1.2: “You can walk around in this sunshine and get Vitamin D”

(RIAS Category: Gives information—lifestyle)

Ph2.2: “when you are ready to quit smoking, just speak to us because we are also ready to give out nicotine replacements and additional counselling required if necessary”

(RIAS Category: Counsels—lifestyle/psychosocial)

Added proficiencies that were added to the RIAS tool as discussed in section 4.3.7 can be found in Table 4.11.

Communication category	Number of utterances per consultation: median, range, inter-quartile range (25%, 75%)	Number of utterances	Combination of RIAS categories (With total number of utterances)
Added proficiencies	Range: 0 - 8 Median: 3 Inter-quartile range: 1, 4	95	Pharmacist purposes change to regime: 4 Patient purposes change to regime: 5 Side-effect of medication: 86

Table 4.11 - Added proficiencies onto RIAS (N=30)

Examples of when the pharmacist asked the patient about side effects are below; this was also coded as a therapeutic related question.

Ph4.3: “So are you ok with your medicines, do you suffer from any side effects?”

Ph3.1: “do you have any problems with your medicines?”

An example of when a patient discussed side effects about their medication:

P3.1:” I am suffering from muscle weakness, I couldn’t press the break properly while I was cycling”

The examples may have been coded more than once due to the fact that one example may cover more than one category. The second added proficiency that was added onto RIAS was when the pharmacist suggested change to the medication regime of the patient:

Ph3.1: “If you’re suffering from that then let the doctor know so they can put you on something better”

Ph1.1: “I will send a copy to your GP and perhaps he will look into reducing your dose”

Ph2.5: “I probably advise you to speak to your doctor to see if you still need to be on the brown one (referring to the steroid inhaler)”

The last added proficiency was when the patient suggested changing their medication regime; examples of such a code are below:

P1.1: “the doctor said to me, we might be able to take one tablet down”

P3.1 “I could try something else” (after complaining about side effects of simvastatin”

Positive rapport building had the highest percentage from the entire communication category. In that category most of the utterances came from when the pharmacist showed agreement with what the patient was saying. The second largest communication category was patient activation and engagement; the majority of the utterances came from the paraphrase/check for understanding group. Utterances relating to question-asking mostly regarded therapeutic information while very few regarded life-style.

4.4.4.1.2 – Pharmacist utterances according to recruitment

As there were two types of patient recruitment, we divided the utterances of the pharmacist consultations into each recruitment type. The utterances of pharmacists that recruited patients via sending letters and the utterances from the ad hoc recruitment can be found in Table 4.12.

Communication category	Letter recruitment (N= 17)		Ad hoc recruitment (N = 13)	
	Number of utterances per consultation: median, range, inter-quartile range (25%, 75%)	Number of utterances (% total utterances)	Number of utterances per consultation: median, range, inter-quartile range (25%, 75%)	Number of utterances (% total utterances)
Question asking—biomedical	Range: 7 - 59 Median: 21 Inter-quartile range: 14, 43	474 (9.44)	Range: 4 - 35 Median: 16 Inter-quartile range: 13, 24	232 (12.95)
Question asking—lifestyle/ psychosocial	Range: 0 - 17 Median: 3 Inter-quartile range: 1, 9	98 (1.95)	Range: 0 -18 Median: 0 Inter-quartile range: 0, 3	36 (2.00)
Information giving—biomedical	Range:0 - 208 Median: 32 Inter-quartile range: 21 - 55	798 (15.89)	Range: 3 - 72 Median: 22 Inter-quartile range: 7, 72	325 (18.13)
Information giving—lifestyle/ psychosocial	Range:0 - 50 Median: 5 Inter-quartile range: 2, 15	153 (3.05)	Range: 0 - 68 Median: 0 Inter-quartile range: 0, 4	97 (5.41)
Patient activation and engagement	Range: 11 - 125 Median: 55 Inter-quartile range: 32, 76	1042 (20.74)	Range: 7 - 67 Median: 17 Inter-quartile range: 10, 33	340 (18.97)
Rapport building/ positive	Range: 13 - 348 Median: 90 Inter-quartile range: 59 – 135	1882 (37.47)	Range: 7 - 157 Median: 20 Inter-quartile range: 8, 39	530 (29.58)
Rapport building/ emotional	Range: 3 - 76 Median: 15 Inter-quartile range: 9, 22	329 (6.55)	Range: 0 - 20 Median: 4 Inter-quartile range: 2, 8	78 (4.35)

Continued next page

Continued from previous page

Communication category	Letter recruitment (N= 17)		Ad hoc recruitment (N = 13)	
	Number of utterances per consultation: median, range, inter-quartile range (25%, 75%)	Number of utterances (% total utterances) 5023	Number of utterances per consultation: median, range, inter-quartile range (25%, 75%)	Number of utterances (% total utterances) 1792
Rapport building/ negative	Range: 0 - 4 Median: 0 Inter-quartile range: 0, 0	9 (0.18)	Range: 0 - 4 Median: 1 Inter-quartile range: 0, 2	15 (0.84)
Rapport building/ social	Range: 0 , 1 Median: 0 Inter-quartile range: 0, 0	3 (0.06)	Range: 0 - 4 Median: 0 Inter-quartile range: 0, 0	6 (0.33)
Procedural	Range: 4 - 32 Median: 9 Inter-quartile range: 8, 20	229 (4.56)	Range: 2, 24 Median: 8 Inter-quartile range: 5, 14	131 (7.31)

Table 4.12 - Summary of Pharmacist Utterances according to type of recruitment strategy used

A total of 5023 utterances were recorded for the 17 consultations that were recruited via letter, with a median (IQR) of 249 (178–355) utterances per consultation.

There was a total of 1792 utterances for all 13 consultations that were from the ad hoc recruitment with a median (IQR) utterances of 86 (51-147). The average utterance per consultation via this route was considerably lower than the consultations that were recruited via letter.

Biomedical questioning in the letter recruitment consultations had a lower percentage of the total utterances. Questions about lifestyle/psychosocial were at a similar percentage for both recruitment strategies. Consultations from the letter recruitment had a higher positive rapport building (10% higher) with the majority coming from 'shows agreement and understanding' code, which suggests that the pharmacists in the letter recruitment might have spent more time listening to patients.

4.4.4.2 Patient coding

Descriptive statistics for the content of patients' communication can be found in Table 4.13.

Communication category	Number of utterances per consultation: median, range, inter-quartile range (25%, 75%)	Number of utterances (% total utterances)	Combination of RIAS categories (With total number of utterances)
Question asking—biomedical	Range: 0 - 22 Median: 2 Inter-quartile range: 0, 4	110 (2.07%)	All questions medical: 10 All questions therapeutic regimen: 79 All questions other: 2 Bid for repetition: 19
Question asking—lifestyle/ psychosocial	Range: 0 - 4 Median: 0 Inter-quartile range: 0, 0	13 (0.24%)	All questions lifestyle: 12 All questions psychosocial: 1
Information giving—biomedical	Range: 6, 303 Median: 72.5 Inter-quartile range: 36, 124	2661(50.02%)	Gives information—medical condition: 994 Gives information—therapeutic regimen: 1665 Gives information—other: 2
Information giving—lifestyle/psychosocial	Range: 0 - 115 Median: 14.5 Inter-quartile range: 1, 48	803 (15.09%)	Gives information—lifestyle: 735 Gives information—psychosocial: 68
Patient activation and engagement	Range: 0 - 29 Median: 1.5 Inter-quartile range: 1, 3	110 (2.07%)	Asks for service: 0 Asks for reassurance: 2 Asks for understanding: 60 Paraphrase/check for understanding: 48
Rapport building/positive	Range: 3 - 128 Median: 28.5 Inter-quartile range: 13, 66	1359 (25.55%)	Laughs, tells jokes: 112 Shows approval—direct: 26 Gives compliment—general: 18 Shows agreement, understanding: 1193

Continued next page

Continued from previous page			
Communication category	Number of utterances per consultation: median, range, inter-quartile range (25%, 75%)	Number of utterances (% total utterances) 5023	Combination of RIAS categories (With total number of utterances)
Rapport building emotional	Range: 0 - 21 Median: 2 Inter-quartile range: 0, 5	119 (2.24%)	Empathy/legitimizing statements: 0 Shows concern or worry: 82 Reassures, encourages or shows optimism: 37
Rapport building/negative	Range: 0 - 15 Median: 0 Inter-quartile range: 0, 1	37 (0.70%)	Shows disapproval—direct: 17 Shows criticism—general: 20
Rapport building/social	Range: 0 - 6 Median: 0 Inter-quartile range: 0, 0	8 (0.15%)	Personal remarks, social conversation: 8
Procedural Transition words	Range: 0 - 15 Median: 2.5 Inter-quartile range: 1, 5	100 (1.88%)	Transition words: 52 Gives orientation, instructions: 11 Unintelligible utterances: 37

Table 4.13 - Summary of Patient coding (N=30)

There were a total of 5023 patient related utterances with a median (IQR) of 136 (67 – 253) per consultation. This is lower than the median of the pharmacist utterances. Like in the pharmacist utterances, we noticed there was a difference between the consultations that resulted from the two recruitment strategies. The utterances were then divided between the different recruitment strategies.

As indicated, the majority of patient' utterances were concerned with giving biomedical information, with 50.02% of total utterances. Examples of such utterances are as follows:

P2.2: “it started off as asthmatic and still is asthmatic”

(RIAS Category: Gives information—medical condition)

P2.2: “That’s a steroid; I take two in the morning and two at night”

(RIAS Category: Gives information—therapeutic regimen)

P4.5: “can you put for sleeping on it?”

(RIAS Category: Gives information—other)

Utterances regarding patient questions on biomedical issues were only 2.07% of total patient utterances; examples are below:

P2.5: “what can make your blood pressure rise up sometimes?”

(RIAS Category: All questions medical)

P2.2: “is that what amitriptyline for?”

(RIAS Category: All questions therapeutic regimen)

P1.3: “do I sign here or there”

(RIAS Category: All questions other)

P2.2: “Pardon?”

(RIAS Category: Bid for repetition)

A big proportion of the consultations from patient utterances were positive rapport building with 25.55% of total utterances; examples are below:

Ph3.4: “Your one of our best patients!”

P3.4: (patient laughs)

(RIAS Category: Laughs, tells jokes)

P3.4: “Yeah, thank you”

(RIAS Category: Shows approval—direct)

P2.5: “When you tell me what this is what that is, it’s quite good quite good!”

(RIAS Category: Gives compliment—general)

P2.5: “yeah”

(RIAS Category: Shows agreement, understanding)

Emotional, social and negative rapport building utterances had low percentages; some examples of patient emotional rapport building utterances are below:

P3.5: “I have not been walking correctly”

(RIAS Category: Shows concern or worry)

P1.1: “And that’s great!”

(RIAS Category: Reassures encourages or shows optimism)

While examples of social rapport building:

P1.1: “Yes at last it’s sunny”

(RIAS Category: Personal remarks, social conversation)

Finally, examples of negative rapport building:

P1.1: “its two sprays and not one”

(RIAS Category: Shows disapproval—direct)

P1.1: “the new doctor doesn’t appear to listen to what I got to say”

(RIAS Category: Shows criticism—general)

Lifestyle and psychosocial information giving came in third of the total proportion of patient utterances, at 15.09%; below are some examples:

P1.3: “it’s something to do with my age and the work that I am doing”

(RIAS Category: Gives information—lifestyle)

P4.5: “tablets are meaningless to me and you control it”

(RIAS Category: Gives information—psychosocial)

Patient questions regarding lifestyle and psychosocial information were less than 1% of the total patient utterances; examples are below:

P1.2: “what’s a big portion?” (Referring to food portions)

(RIAS Category: All questions lifestyle)

P2.5: “Is it stress or something?”

(RIAS Category: All questions psychosocial)

Other utterances such as patient activation and procedural were also only a small percentage of the total utterances. Examples of patient activation:

P2.2: “Otherwise I have done ok yeah?”

(RIAS Category: Asks for reassurance)

P2.2: “you know”

(RIAS Category: Asks for understanding)

P2.2: “If I take them, they stop me from going to the toilet init?”

(RIAS Category: Paraphrase/check for understanding)

Examples of patients’ procedural transition utterances:

P2.7: “mmmm”

(RIAS Category: Transition words)

P4.3: “Look, the doctor said to stop that one”

(RIAS Category: Gives orientation, instructions)

P2.4: “yeah I went to my doctor”

(RIAS Category: Unintelligible utterances)

4.4.4.2.1 – Patient Utterances from different recruitment strategies

The utterances of patients that were via a letter and the utterances from the ad hoc recruitment can be found in Table 4.14.

Communication category	Letter Recruitment N = (17)		Ad Hoc Recruitment N = (13)	
	Number of utterances per consultation: median, range, inter-quartile range (25%, 75%)	Number of utterances (% total utterances)	Number of utterances per consultation: median, range, inter-quartile range (25%, 75%)	Number of utterances (% total utterances)
Question asking—biomedical	Range: 0 - 22 Median: 3 Inter-quartile range: 1, 4	69 (1.81)	Range: 0 - 16 Median: 2 Inter-quartile range: 0, 3	41 (2.70)
Question asking—lifestyle/ psychosocial	Range: 0 - 3 Median: 0 Inter-quartile range: 0, 1	8 (0.21)	Range: 0 - 4 Median: 0 Inter-quartile range: 0, 0	5 (0.33)
Information giving—biomedical	Range: 18 - 303 Median: 99 Inter-quartile range: 72, 139	1989 (52.29)	Range: 6 - 138 Median: 36 Inter-quartile range: 28 - 138	672 (44.33)
Information giving—lifestyle/psychosocial	Range: 0 - 104 Median: 21 Inter-quartile range: 14 - 49	557 (14.64)	Range: 0 - 115 Median: 4 Inter-quartile range: 1, 6	246 (16.22)
Patient activation and engagement	Range: 0 - 29 Median: 36 Inter-quartile range: 25, 66	83 (2.18)	Range: 0 - 9 Median: 2 Inter-quartile range: 0, 3	27 (1.78)

Continued next page

Continued from previous page

Communication category	Ad Hoc Recruitment N = (13)		Letter Recruitment N = (17)	
	Number of utterances per consultation: median, range, inter-quartile range (25%, 75%)	Number of utterances (% total utterances)	Number of utterances per consultation: median, range, inter-quartile range (25%, 75%)	Number of utterances (% total utterances)
Rapport building/ positive	Range: 10 - 128 Median: 36 Inter-quartile range:	917 (24.11)	Range: 3- 107 Median: 13 Inter-quartile range:9, 49	442 (29.16)
Rapport building/ emotional	Range: 0 - 21 Median: 3 Inter-quartile range:1, 6	83 (2.18)	Range: 0 - 16 Median: 1 Inter-quartile range:0, 4	36 (2.37)
Rapport building/ negative	Range: 0 - 15 Median: 0 Inter-quartile range:0, 1	30 (0.79)	Range: 0 - 3 Median: 0 Inter-quartile range:0, 1	7 (0.46)
Rapport building/social	Range: 0, 1 Median: 0 Inter-quartile range:0, 0	1 (0.03)	Range: 0 - 6 Median: 0 Inter-quartile range:0, 0	7 (0.46)
Procedural Transition words	Range: 0 - 15 Median: 3 Inter-quartile range:1, 6	67 (1.76)	Range: 0 - 7 Median: 2 Inter-quartile range:1, 4	33 (2.18)

Table 4.14 - Summary of Patient Utterances according to type of recruitment strategy used

The total patient utterances that were recruited by letter were 3804, which translates into a median (IQR) of 190 (125 – 303) utterances per consultation. The total patient utterances that were recruited by ad hoc were 1516, which translates into a median (IQR) of 67 (54 – 132) utterances per consultation. The median of the total ad hoc recruitment consultation's utterances are considerably lower when compared to consultations recruited by letter. When both recruitments are compared to the summary results, minimal differences can be observed. Consultations from letter recruitment have a higher percentage of biomedical information giving when compared to the consultations from ad hoc recruitment. The main difference is that the median of utterances per consultation is considerably higher.

4.4.3 – Patient Centeredness Score

The overall median (IQR) of patient centeredness score was 1.27 (0.88 – 2.26). The calculation for patient centeredness score according to recruitment showed a median (IQR) for consultations recruited by letter as 1.84 (1.19, 2.47) and by Ad hoc it was 0.94 (0.59, 1.37). A backward elimination linear regression model was conducted to identify any factors that may have an influence on the patient centeredness score.

A model was used to investigate patient centeredness score as the dependent variable with following independent variables:

1. Patients' age
2. Patients' gender
3. Relationship depth score
4. Regular pharmacist or not
5. Patients' overall satisfaction of consultation
6. Total time of consultation
7. Type of recruitment

The only variable that was left in the equation was the type of recruitment used in the study, recruitment by letter had a significant positive influence on the patient

centeredness score with a coefficient (95% confidence interval) of 0.7839 (.02582-1.542) (P= 0.043).

QQ Plot and Scatter Plot of residuals suggested that normality was not violated therefore suggesting that this is a valid model can be found in Appendix 3.19.

4.5 Discussion

The feasibility of using RIAS to analyse community pharmacy consultations in the UK has successfully met the study objectives with a total of 30 consultations fully analysed. There were differences between the way MUR consultations were being conducted and the type of recruitment had a significant positive impact on the patient centeredness score. Additional research is needed to explore whether patient centeredness score can improve a patient outcome (e.g. blood pressure control).

4.5.1 Recruitment of Pharmacists

Recruitment via letters in the initial phase did not yield a high number of participants. The results are similar to the first study of the PhD, where the recruitment rate via sending letters was low and the majority of the recruitment of participants only occurred after the researcher spoke to them via phone. The possible reason for this occurrence is the fact that pharmacies are very busy places and receive many letters by post, adding a personal touch by phoning them helped to get the attention of the pharmacist. It is not ethical to constantly contact potential participants via phone calls especially if an interest was not placed, a system like the one in our study worked quite well. Future studies must explore more than one option when recruiting potential participants to increase rate of participants.

Gateway consent was obtained from one of the major multiples prior to starting the project; this saved us a lot of time and helped us recruit pharmacies from that multiple. As I contacted pharmacists from this multiple via phone in the initial step, many of them said we have to check with head office, when the conversation went forward and I explained to them that the company has already given consent for the project. After getting interest from the pharmacies at that multiple, I emailed the liaison office from the company the interested pharmacies that wanted to take part in the study. The liaison officer sent emails to the relevant pharmacist to inform them that head office has

approved this study. Such consent from employers prior to starting a project has been and I would highly recommend it for future studies to put into consideration.

From all the forty pharmacies based in Hammersmith and Fulham, only six pharmacies expressed any interest to participate in this study. This will play a major concern if we are going to expand and try to recruit more pharmacies. The study did not collect information about why pharmacists did not want to take part.

4.5.2 Recruitment of Patients

In total 30 patients were recruited onto this study, the exact number that we wanted to achieve. Two different strategies were used to recruit patients. The first recruitment strategy involved myself being present at a pharmacy for at least two weeks to help recruit patients directly (Ad hoc recruitment). While the second strategy was writing to MUR eligible patients to invite them to take part, if there was an interest then they sent back their contact information to the researcher then they were contacted and offered an appointment.

Many difficulties were faced when recruiting patients via Ad hoc strategy. As explained in the results of the focus group study, the environment of community pharmacy is extremely busy and the work load in the pharmacies recruited was quite high. It was difficult to put research alongside the dispensing work load. The workload at the pharmacies recruiting Ad hoc showed exactly the same picture drawn from our focus group study. Pharmacists were very busy and patients were waiting as the pharmacist was conducting the consultations. Such pressure might affect the way the pharmacists conducts consultations and might influence its duration depending on the workload in the dispensary, something was also mentioned in our focus group study.

The pharmacist had to rush out from the consultation room to start with dispensing the prescriptions that was left for them while they were conducting the MUR. It was interesting to see how the pressure of community pharmacy is still around dispensing

workload as previously explained in the focus group study in Chapter Two. Patients declined on many occasions due to time restraints or not knowing what the service was about. It was difficult to grasp why patients declined and whether it was because they didn't understand what an MUR is or they were scared to take part in a research study. Many said to me that they had never heard of what a medicine use review was and this was the first time it was explained to them. Even though the MUR is a free service, patients did not want to take part and not speak with the pharmacist.

The main strength of recruiting patients by letter from my point of view, it was easier to organise and have sent all the intended invitation letters, we would have more patients than we needed for this study. The main weakness, it was more expensive as we had to cover for extra staffing to send letters to patients. The two pharmacies had volunteers to come on their day off and spend all day to look into the patient medication record to randomly identify MUR eligible patients. Pharmacy Three sent a total of 45 letters and Pharmacy Two sent only 25 letters; neither were able to find 100 MUR eligible patients. The current IT systems in place are not setup to search for patients that are eligible and manual processes were used to identify MUR eligible patients. Such an issue might be an inhibitor for future services that are targets for specific patients. Once the patient sent the reply letter back to the researcher, the patient was contacted and given an appointment to come attend the pharmacy. The invitation letter contained an information pack designed by the department of health explaining what an MUR was and what they could expect from this service. Therefore the patient could had more time to understand what an MUR was and it is possible that pharmacists found it easier to put it in their working plan as they were expecting the patient at a particular time and arranged their work load according to the appointments.

All patients that were given an appointment attended, we had no cancelations and this might be due to flexible appointments to accommodate the patient's needs with some

being at evenings and other appointments taking place the morning. It's an important learning point for future studies and a good way to reduce cancelations from patients.

4.5.3 Questionnaires

The pharmacist and the patient completed a questionnaire after the completion of the MUR. This is the first time these questionnaires have been used in pharmacy.

The scores all have an average of more than 4 which is extremely difficult to analyse because of the high ceiling effect and this hindered finding patterns to reflect whether there is any trends in the data.

Future studies need to investigate better ways to get patient feedback and alternative data gathering tools. It is possible patient could have rated the pharmacist with high scores because of fear they might offend the pharmacist and therefore scored them with higher scores. Future data gathering might introduce web based questionnaires that the patient can access from home. Although this will help with reducing the risk of bias, it might cause the patient to have recall bias and forgetting what happened at the consultation. Not all patients will have access to computers therefore no clear understanding whether they will be able to access a web based questionnaire.

Data suggests patients who saw their regular pharmacist had a better relationship score ($p= 0.0093$). The data coincides with the data we gathered from pharmacists in our focus group study. Pharmacists at the focus groups felt it was important to see the patient regularly to form a relationship. We investigated whether there was a difference in the relationship score between the different groups of patients: no significant difference was found in the relationship score between patient gender, patient age and how satisfied the patients were with the overall consultation. The questionnaire was used successfully in pharmacy due 100% return rate of questionnaires with no missing data.

4.5.4 RIAS Analysis

This study is among the first to examine community pharmacy consultations using RIAS. This section will first discuss the total time taken in the consultations and will then look at the content of the consultation and the kinds of interactions that occurred between the pharmacist and the patient.

The total time of the consultations had a median (IQR) 8 minutes and 42.5 seconds (4 minutes and 32 seconds - 18 minutes and one second). There was a significant difference when comparing the time for the two different types of recruitment. Consultations arising from the letter recruitment had a median of almost three times the median of the ad hoc recruitment. Ultimately this had an impact on the number of utterances: the letter recruitment had a greater number of utterances when compared to the ad hoc recruitment because more discussions were taking part within that MUR. According to one study, the average time of a general practitioner (GP) consultation across different practices was found to be a mean of 5.7 min to 8.5 min for (Carr-Hill et al., 1998) while another study found the average to be slightly higher, at around 9 minutes (Ogden et al., 2004). Pharmacy consultations, according to the literature, can last from 15 to 90 minutes (Greenhill et al., 2011a, Chen and Britten, 2000) and other studies have found that pharmacy consultations can last longer than 45 min when conducted in patients' homes (Greenwood et al., 2006). Our study findings show the consultation can last as little as 1 minute and 6 seconds and up to 39 minutes and 51 seconds. The end results of consultation coding for our study are considerably different to what is currently in the literature. Our results also show that the consultations with patients recruited via letter and ad hoc are considerable different: the letter recruitment strategy consultations lasted a median of almost 16 minutes while the ad hoc consultations lasted a median of almost 5 minutes.

There could many reasons why this is the case. First of all, when we conducted our study and the researcher was present at the pharmacy, all patients were recruited as they came along to pick up their medication. The pharmacist did not have an idea about who would be coming when and therefore very little time management was involved; this led to the dispensing work load piling up while the pharmacist was inside the consultation room. Patients were observed getting upset and wanted to get their medication checked so that they could leave. No observation were made on how the workload affected pharmacies recruiting via letter, from the feedback of the pharmacists, they really appreciated having a set time for the MUR as they knew when the patient was arriving and could make plans for what would happen while the pharmacist was inside the consultation room. Therefore, although the duration for the ad hoc recruitment consultation was shorter, there may be many justifications for why the pharmacist completed the consultations very quickly. Some consultations were so short and rushed so that any benefit the patient is put into doubt. As previously discussed in the focus group chapter (Chapter Two), the dispensing work load for the pharmacist does not stop when they are in the consultation room and therefore future studies need to address how pharmacist can hold consultations without pressure on them from the outside duties they are also responsible for. The results from the focus group study helps to suggest that having two pharmacists in some pharmacies might help ease the pressure and therefore allow the pharmacist to spend more time with the patient. Now that the consultation duration has been discussed, let's see what actually occurred in the consultations between the pharmacist and the patient using RIAS analysis.

Pharmacist interaction was mostly based around showing understanding of what the patient was telling them regarding their medication. The questions asked and the information covered was constructed around therapeutic and medical issues. The

conversation usually started with the pharmacist asking the patient about each individual drug the patient was taking; the patient then responded with an answer. This is why almost 36% of the total utterances of the pharmacist conversations showed positive rapport building where they are agreeing to what the patient was saying. The patient spent almost 50% of the utterances giving information regarding their therapeutic regimen and another 26% showing understanding to what the pharmacist was saying to them. The conversations were heavily based on compliance in how they took their medication and the consultation went through medicine by medicine like a tick-box exercise, making sure all the medicines had been covered and the patient understood how to take them; during this time the pharmacist was taking notes down on the MUR form.

The findings are similar to a study conducted by Latif et al. (Latif et al., 2011) where they characterised MUR consultations as 'brief encounters', which largely involved closed questions, the majority of which were medical or therapeutic in nature and allowed the pharmacist to complete the MUR forms quickly. Pharmacists asked most of the questions while the patient had only 2% of their total utterances to ask questions and most questions were again mostly therapeutic in nature. Only some of the pharmacists touched on whether patient had any side effects from their medicine and some did not even ask the patient anything regarding side effects of their medication. Discussing side effects within an MUR is one of the aims of the MUR; therefore, some of the pharmacists are not actually meeting the aims of the consultation. Some MUR consultations, especially the longer ones, also included advice about healthy living and how to minimise side effects from the medication.

A comparison of the consultations from the Ad hoc recruitment and letter recruitment showed differences in content, in terms of the RIAS grouping of utterances as well the duration time. The significant time difference had an impact on the number of utterances in each consultation, with both the pharmacist and the patient having more

utterances in the letter recruitment as a result. There was also less question asking about biomedical information by the pharmacist in the letter recruitment strategy. These differences led to different scores in terms of patient centeredness.

Patient-centeredness scores of the consultations are similar findings to a recent study where the pharmacist consultation was explored using simulated patients. Their median patient-centeredness score for all encounters was 1.34 (Chong et al., 2013). When comparing the findings of the consultation to doctor consultations, a study that investigated breaking bad news to patients by oncologists had a range of patient centeredness scores from 0.34 to 2.5 (Vail et al., 2011). Letter recruitment had a significant positive influence on the patient centeredness score. If we examine how the equation of the patient centeredness score works, pharmacists from the letter recruitment strategy had a lower percentage for giving biomedical information, and a higher patient activation percentage and less procedural statements; this in turn affected the patient centeredness score. The coding of data was highly reliable between the checker and the coder. The coding reliability was similar to RIAS studies (Vail et al., 2011).

Although our findings show that our consultations are in line with findings in the literature, the technique of how the patient centeredness score equation was developed is questionable. The authors of RIAS have not specified how they have developed this equation and how valid these results are. As explained in section 1.7.4, the definition for patient centredness is not uniform yet. RIAS uses patient's perspective over biomedical information to calculate a score. The equation is useful in that it allowed us to compare consultations between our study and other studies, but on the other hand, the lack of knowledge regarding how the equation was developed and therefore what the score actually means is a limitation. In the MUR consultations where exploring the patient's perspective appropriately focuses on their understanding on how they take their medications and less inquiries into other issues; this review might

include a well-placed empathic statement, but the communication during this visit will appear predominantly biomedical while still accomplishing patient centred goals.

As shown in this study, RIAS can be used to analyse pharmacy consultations and provide a patient centredness score. Such a tool will be vital for future studies. The RIAS-based patient-centeredness score can reflect whether training has been successful for participants. The results of the analysis can also identify where any improvements has been made or a need for more improvements.

4.5.5 Strengths and Limitations

One of the limitations of this study was that it was solely done in one area within London and this might have impacted on our data; we might have observed different consultation patterns throughout the UK. For a feasibility study the sample size was ideal but a further larger study would be needed to check whether data gathered from this study is generalizable. Only a small number of pharmacists were interested in taking part in this study from the 40 invitations that were sent out; only six pharmacists showed any interest and only four pharmacies were recruited, it would been a good idea to document why pharmacists did not want to take part.

All pharmacists' part of this research were self-selected and this can cause self-selection bias to our data. Due to self-selection, there may be a number of differences between the pharmacist that were part of this study and those who choose not to, such as motivation, more experience and more confidence. It is important to keep this in mind when reading this chapter as it may not be generalisable to the overall pharmacist work force.

Some limitations of RIAS is that it only focuses on recordings of the consultations and does not include non-verbal behaviours such as face gestures; this can lead to misinterpreting the meaning of individual utterances as they are taken out of the

context of the face to face interaction. One of the main strengths of the data is its reliability, which is considerably high and therefore the quality of our RIAS coding is high. We invited every pharmacy within the specified area, giving anyone who was interested a chance to take part.

4.5.6 Conclusion

The aim of this study was to see the feasibility of using RIAS to analyse community pharmacy consultations. All 30 consultations were analysed and most utterances were categorised accordingly without any difficulty. These findings help us in concluding that RIAS is a valuable tool to assess pharmacy consultations and can be used as a tool to help identify training needs and establish standards for pharmacy consultations. Further research is needed to assess the impact of pharmacist communication behaviours on patient care outcomes (e.g. effect of the consultation patterns on control of blood pressure). The findings from this study has provided an insight of how RIAS can be used as a tool to analyse consultations therefore would be a vital component to determine future consultation skills training can change consultations to be more patient centred.

Chapter 5 – Overarching Discussion

Overarching Discussion

The overarching aim of this thesis was to explore consultation skills of community pharmacists. There were three primary subjects that were investigated in this thesis, the perception of community pharmacist towards consultations, consultation skills training received at the different levels of pharmacist education and lastly using an interactional analysis tool to analyse community pharmacy consultations. The findings from these projects suggest that many areas require further development if community pharmacists are going to undertake high quality consultations. It will be important for the areas of development identified to be fully considered before any further role changes are implemented in community pharmacy, this is to ensure pharmacists will be equipped with the correct skills to conduct any new service or role change.

Government policies in the past three decades have vastly changed the role of the community pharmacist. The current government vision for community pharmacy is to widen its role to provide further services taking advantage of their medical and procurement expertise, their accessibility and give them a central role in managing long term conditions. Pharmacists currently hold millions of consultations with patients in services such as the MUR and NMS. Previous undergraduate training provided to qualified pharmacists may not have equipped pharmacists with skills to hold consultations with patients. Furthermore courses such as the ones needed in order to be accredited to provide the MUR does not assess consultation skills of the pharmacists. The MUR services uptake has been increasing year on year but with little focus on whether these consultations are of high quality. Changes to the learning outcomes of the undergraduate degree have been widely overhauled and teaching will focus much more on consultation skills. More is expected from the undergraduate training and many of the new outcomes request the student to not only 'show how' but 'does'. This change expects students to be able to perform the role of the pharmacist directly after graduating from university. This is a change from previous outcomes where students were expected to show how but now are expected to do and perform

the role of the pharmacist. This can mean that universities will have to introduce much more patient interaction at the undergraduate level in order to achieve the new learning outcomes set by the GPhC.

The changes to the outcomes and proposed changes of the MPC will build a different pharmacy workforce in the future, a workforce that may have much better consultations skills with much more patient exposure. This will then directly lead to a better consultations being held between the pharmacist and the patient. These changes are similar to the changes that happened to the medical profession. 'Tomorrow's Doctors' (General Medical Council, 2009b) as discussed in Chapter one, led to graduate doctors feeling more prepared to do their role. The pharmacy profession can therefore learn from the medical profession changes and aim in equipping future pharmacists with better skills that will enable them to feel more prepared to hold consultations with patients.

The first study in these PhD used focus groups with community pharmacist and explored their perceptions on consultations in community pharmacy. The evidence gathered from these focus groups demonstrated community pharmacists enjoy interacting with patients. However these consultations were affected by the environment in which the pharmacists work. The majority of pharmacists were still focussed on their dispensing role and this was either due to lack of appropriate skill mix or not taking advantage of the skill mix available to them. Consequently some reported being unable to spend sufficient time focussed on the needs of individual patients within a consultation. If there is a further increase the number of roles or services that need to be provided by community pharmacy it is likely that this will increase stress which then may adversely affect the conduct of a consultation.

Pharmacists at the focus groups described approaches which may not be optimal when conducting consultations, such as using staff to interrupt and hence end the consultation, as well as sticking rigidly to the format of the MUR documentation to structure the consultation. The pharmacist recognised the importance of building a

rapport with patients and this was focussed around the ongoing relationship built up with patients over time rather than recognising how this could be achieved within a single consultation. One of the major limitations with this study was the facilitator and observer of all focus groups are both fellow pharmacists therefore participants may have felt inhibited about revealing aspects of their practice which they felt were poor or inadequate. However the focus groups were characterised by lively discussions, and participants seemed comfortable and open when sharing their thoughts. All pharmacists were based in Norfolk therefore data might not be generalisable and pharmacists from different parts of the country might have different perceptions.

The focus group study helped shape the next two studies of the PhD: the first investigated consultation skills training of the community pharmacist. The idea behind this project was due to the fact that the results of the focus group could not determine what consultation skills training the pharmacist have received and the overall perception on whether community pharmacist seek further consultation skills training. The final project was a methodological study of innovative methods to investigate the consultations of community pharmacist using an interactional analysis tool.

In study two, electronic questionnaires were sent nationwide to explore consultation skills training received by community pharmacists at the different stages of their pharmacy education. The study sort to identify what training they had received and then self-reported how prepared they were to deliver consultations following that training. The study did not consider quality or effectiveness. The evidence gathered from this study identified that not all pharmacists have received consultations skills training and only half of the pharmacists had undertaken additional consultation skills training post registration. The majority of participants welcomed more advanced consultation skills training and therefore more training should be provided to pharmacists and that might increase the standards of community pharmacy consultations. Although in this study the majority of pharmacists welcomed more training, this could not be said for the participants who took part in the focus groups.

The conflicting results in this thesis shows not all pharmacists are open to the idea of further training but it could be the method of gathering data. The focus groups were made up of all pharmacists, it could be that not pharmacists were comfortable to admit to needing more training but when asked through a questionnaire, they would feel more comfortable requesting it. It may also be that pharmacist in the focus group have had extensive consultation skills training hence not requesting any future training but from the incorrect examples given by some of the participants this may not be the case. It must also be stated that not all the participants in the focus group rejected further consultation skills training.

An exploratory analysis suggested a strong relationship between confidence in consultation skills and an increased number of consultations with patients. Furthermore, those who had received training also demonstrated a relationship with being more confident. Therefore training could be a driver for multiples (pharmacies that have more than 20 branches) who want to engage in any future agenda of retraining pharmacists towards more advanced consultation skills. It is important to note that although in our studies confidence was seen to have a relationship with an increase in reporting of consultations with patients, we cannot guarantee the quality of these consultations or assume causality.

As part of this study, participants were given the opportunity to write free text on anything they wanted to add to the questionnaire. The themes developed from the free text have many parallel findings to the focus group study. Participants who have described themselves from the “older generations” explained how there was no formal training to consultation skills and most of the skills that have been acquired have been through experience. One participant described previous pharmacy training as “purely technical” referring to the lack of patient contact and spent his pre-registration year entirely in a dispensary, “mostly alone and un-supervised”. Many other participants wrote how they learnt their consultations skills through experience and without any formal training. Other free text although emphasised on having the correct skills mix

and how that will reduce the pressure on them to provide better quality consultations which is directly related to the pharmacy environment theme from the focus groups.

While there are many proposed changes in pharmacy education to include consultation skills training during undergraduate and pre-registration year, there are still a large number of registered pharmacists for whom further training in consultation skills might be of use. The evidence gathered from questionnaires suggests that if we are to improve pharmacist's consultation skills then pharmacy education must change. At the time of writing this thesis, the GPhC has approved an updated learning outcome for undergraduate education to include more consultation skills training.

The future proposed changes by the MPC to incorporate the pre-registration year within the pharmacy degree has also been provisionally agreed on pending financial issues that are yet to be resolved. As it stands pre-registration training is provided by tutors that have not gone through any formal training therefore we cannot guarantee the quality of training the pre-registration pharmacist receive. As previously mentioned, pre-registration pharmacists do not get examined on their consultation skills and the registration examination does not assess their ability to speak to patients. Pre-registration pharmacist must meet the GPhC competencies and some of these competencies cover the need to have correct consultation skills, each pre-registration tutors might have a different view on whether a specific competency has been met and such views will be influenced by the training and experiences they have.

As suggested from our questionnaire evidence almost 50% of our participants have not had any formal consultation skills training therefore with no formal checks or examination. It is therefore possible that some of these tutors might not have the correct skills to examine the consultation skills of pre-registration pharmacists. In order to advance the skills of future pharmacists it is important that this issue is revised and a quality control step is introduced for all pre-registration tutors for example an exam to become a tutor. A possible solution to this would be introducing a course that all pre-registration tutors must partake. The course would have outcomes that are set by the

GPhC and an assessment to confirm outcomes have been met. All existing tutors must complete such a course and any future tutor must complete before taking on any pre-registration pharmacists. It also must be noted that many pharmacists also qualify from abroad and register to work as pharmacists in the UK. All the proposed changes in undergraduate education will not have an impact on overseas qualified pharmacists and therefore this must be addressed and highlighted in any future changes to pharmacy post-graduation education. All European Economic Area (EEA) qualified pharmacists currently do not get assessed or have to prove their English language competency in order to work as a pharmacist in the UK. In the interest of patient safety, all EEA qualified pharmacists should be assessed to ensure consultation skills and clinical skills are of the same quality of UK qualified pharmacists and the skills required should be change in accordance with requirements needed from UK graduates. In the case of non-EEA graduate pharmacists, they must complete an OSPAP course as discussed in Chapter One, therefore this course can include all the changes and requirements from a UK graduate. Such assessments must be implemented and governed by the GPhC.

In 2014, all the pharmacy workforce (Pharmacist and technicians) received a booklet explaining consultation skills from CPPE and HEE. The booklet was developed after the recommendations of the MPC. The booklet contained theory and definitions of consultation skills and introduced a new website: consultationskillsforpharmacy.com. The part of a pathway designed to improve pharmacist and technician consultation skills. The pathway also includes self-assessment but acknowledges the limitations when used in isolation therefore also recommends considering feedback from peers, other healthcare professionals and patients. The assessment contains videos of pharmacist providing good consultations and provides offers advice about how to rate the skills and behaviours demonstrated in the videos. The guidelines considers what good versus poor practice and provide examples of the different skills and behaviours.

According to the data from our second study, community pharmacists requested more advanced training such as motivational interviewing. Although sending information to all the pharmacy workforce is welcomed, from the results of our study we are not sure how this will help pharmacist achieve better consultation skills. The pathway of learning consultations skills from CPPE and HEE might help in improving consultation skills of the existing pharmacy workforce. Incorporating this pathway into MUR accreditation courses might force pharmacists to complete but currently it is optional. The GPhC might also play a role where it can specify mandatory CPDs that specify that all pharmacist must complete this pathway in order to capture pharmacists that are not in community but based in hospital.

The final study of this thesis was a feasibility study that explored MUR consultations using an interactional analysis system, RIAS. This study was a methodological investigation and to test whether a specific interactional analysis system would be compatible for community pharmacy consultations. The evidence within this study showed that such a system can successfully be used for community pharmacy. Such a system can be used to identify approaches and also identify what happens exactly within a pharmacy consultation. Such data will be beneficial to identify patient centredness and whether certain approaches can alter a specified patient outcome or improve medication adherence.

MURs were being conducted slightly different when comparing the results between the five pharmacists. The type of patient recruitment had an impact on the consultation style and duration, patients who were recruited via a letter and given an appointment had their MUR last longer and more was discussed within the allocated sessions. The patient was highly involved in the consultation and the patient centeredness score was higher for letter appointment consultations. Such recruitment of patient for MURs should be more widely used in pharmacies as we suspect that it allowed the pharmacist to time manage and possibly prepare for the MURs more conveniently with their other roles and from our results it may lead to more patient centred consultations.

As part of this study we also asked the patient to rate their relationship with the pharmacist that conducted their consultation, our analysis suggests patients who saw their regular pharmacists score a better relationship score. The data coincides with the evidence we gathered from pharmacists in our focus group study. Pharmacists at the focus groups felt it was important to see the patient regularly to form a relationship helped build rapport in their consultations. Consultations can therefore differ according to the relationship they have with their pharmacist. Due to the small number of consultations we were not able to expand on the analysis to see whether the interaction was different or unique with the patients who saw their regular pharmacists.

Pharmacists reported in the focus groups and questionnaire to be highly involved with dispensing process. Although the final study did not intend to investigate this issue, the researcher indirectly observed the same situation and at times when the pharmacist was conducting an MUR, the dispensing process stopped and patients were left waiting. This observation and the focus group results make a strong case that community pharmacists are still highly involved in the dispensing process and they must somehow reduce their involvement in the dispensing process or provide an appointment base system for future MURs so they can manage their time. It can also be reduced by managing their skill mix better, for example hiring an ACT that can check all the prescriptions that has been clinically cleared by the pharmacist. Many patients declined to have a consultation with the pharmacist and it might be related to the results found from our focus groups, where patient were being reported to have a negative approach to giving pharmacists more information about their medication, it would have been great if we could have held interviews with these patients to understand why they have declined to have a consultations, it can also be not wanting to take part in research. Future studies will need a larger number of consultations to investigate whether consultation skills or different approaches can significantly improve a patient outcome. RIAS however has many benefits and can provide data for every component of the consultations. Such a tool would be very useful to identify whether

change has occurred or change is needed in a pharmacist's consultation. The feedback from the analysis can be used in future to train pharmacists and provide specific training according to RIAS scores, for example a pharmacist can hold a consultation with a simulated patients. The consultation is then coded and a patient centredness score is calculated for this consultation. Training is then designed for that pharmacist to help them overcome any of the weaknesses identified from the different consultation components. After that a repeat of the consultation with the same simulated patients and we can then identify if any improvements has been achieved.

Conclusions

The thesis has provided an in depth understanding of the challenges facing community pharmacists relating to conducting consultations, community pharmacy as a profession and researchers investigating pharmacist-patient interaction.

There are many changes proposed for pharmacy education and the role of the community pharmacists. As the situation stands pharmacists are providing consultations but concerns on the quality of such consultations have been raised before and this thesis has provided some of the possible reasons of why consultations in community pharmacy has been portrayed as poor in some studies. The RIAS suggests that some of the consultations from self-selected pharmacists may not be patient-centred and therefore this suggests that there is a significant training need. The proposed changes of the MPC might help address such training needs for future pharmacists but it does not address current practicing pharmacists but there courses that have been designed to enable pharmacist to improve their consultation skills.

The main conclusion from this thesis is pharmacists clearly enjoy providing consultations with patients but barriers and the fact that not all community pharmacists may have received the correct consultation skills training may have an effect on the quality of consultations being provided. Those who have received training might have receive it from individuals who are not formally trained themselves. Although many

changes are proposed for undergraduate education, it is also important to propose and provide training for existing registered pharmacists. There is currently very little regulatory input into the quality of consultations provided by community pharmacists; for the sake of patient safety, pharmacists must be examined on their consultation skills from an independent body prior to them holding consultations with patients. Organisations such as CPPE in conjunction with the GPhC might be able to address the training needs for current practicing pharmacists.

Recommendations for future work:

- Focus groups with patients on their perception of consultations at community pharmacy. This will help with the current literature gap, where patients have not yet been approached to discuss their perception of pharmacist consultation skills and patient-centred consultations. We can then reflect on the RIAS equation for patient-centred scoring.
- Following on the RIAS study from this thesis, perform a large-scale randomised control trial on whether providing advanced consultation skills training to community pharmacists can affect a patient outcome. The trial will need to be conducted into different phases:
 - Phase 1: A pilot for the randomised control trial to investigate whether providing consultation skills training to one group of pharmacists can affect their consultations to be more patient centred. All participants prior to any training would be audio-taped with a simulated patient at baseline and again after training with same patient. The scores can then be compared and our methods solidified for the bigger trial.
 - Phase 2: Building on the pilot study, provide training to a larger group of pharmacists and investigating whether this can affect a defined patient outcome. RIAS scores will then be used to explore the outcome in the different patient groups. The study will also look into whether patient centredness approach is different between the two pharmacist groups and whether consultations skills training has a positive relationship on the defined patient outcome.
 - Phase 3: The patient outcome is then mapped against RIAS analysis to figure whether a specific component of the consultations has a higher positive relationship with a specified patient outcome. Defining the consultation component that has the highest positive relationship on a patient outcome will

enhance future consultation skills training. This will also help us define patient centredness for pharmacist led consultations thus allowing future training to focus on these specific consultation components.

References

- ABDEL-TAWAB, R., JAMES, D. H., FICHTINGER, A., CLATWORTHY, J., HORNE, R. & DAVIES, G. 2011. Development and validation of the Medication-Related Consultation Framework (MRCF). *Patient Educ Couns*, 83, 451-7.
- AMSLER, M. R., MURRAY, M. D., TIERNEY, W. M., BREWER, N., HARRIS, L. E., MARRERO, D. G. & WEINBERGER, M. 2001. Pharmaceutical care in chain pharmacies: beliefs and attitudes of pharmacists and patients. *J Am Pharm Assoc (Wash)*, 41, 850-5.
- ANDERSON, S. 2002. The state of the world's pharmacy: a portrait of the pharmacy profession. *Journal of Interprofessional Care*, 16, 391-404.
- ANDERSON, S. (ed.) 2005. *Making Medicines. A brief history of pharmacy and pharmaceuticals.*, London: Pharmaceutical Press.
- BALES, R. F. 1950. Interaction process analysis. Cambridge, Mass. Addison Wesley Press.
- BEGLEY, K., HADDAD, A. R., CHRISTENSEN, C. & LUST, E. 2009. A health education program for underserved community youth led by health professions students. *Am J Pharm Educ*, 73, 98.
- BELL, H., MCELNAY, J., HUGHES, C. & WOODS, A. 1997. Pharmacists' attitudes towards pharmaceutical care: a qualitative approach. *Pharmaceutical Journal*, 259, R29.
- BELL, H. M., MCELNAY, J. C. & HUGHES, C. M. 1999. A self-reported work sampling study in community pharmacy practice. *Pharm World Sci*, 21, 210-6.
- BERBATIS, C. G., SUNDERLAND, V. B., JOYCE, A., BULSARA, M. & MILLS, C. 2007. Enhanced pharmacy services, barriers and facilitators in Australia's community pharmacies: Australia's National Pharmacy Database Project. *International Journal of Pharmacy Practice*, 15, 185-191.
- BERGER, B., MCCROSKEY, J., RICHMOND, V. & BALDWIN, H. 1986. Cognitive change in pharmacy communication courses: need and assessment. *Am J Pharm Educ*, 50, 51-55.
- BERTAKIS, K. D. 1977. The communication of information from physician to patient: a method for increasing patient retention and satisfaction. *The Journal of family practice*.
- BEVAN, S., STREBLER, M. & YEATES, J. 1993. Skill mix and working practices in hospital pharmacy (report 241). London: Institute of Manpower Studies (now IES).
- BISSELL, P., BLENKINSOPP, A., SHORT, D. & MASON, L. 2008. Patients' experiences of a community pharmacy-led medicines management service. *Health Soc Care Community*, 16, 363-9.
- BLAND, J. M. & ALTMAN, D. G. 2002. Statistics Notes: Validating scales and indexes. *BMJ*, 324, 606-7.
- BRADLEY, F., SCHAFHEUTLE, E. I., WILLIS, S. C. & NOYCE, P. R. 2013. Changes to supervision in community pharmacy: pharmacist and pharmacy support staff views. *Health Soc Care Community*, 21, 644-54.
- BRADLEY, F., WAGNER, A. C., ELVEY, R., NOYCE, P. R. & ASHCROFT, D. M. 2008. Determinants of the uptake of medicines use reviews (MURs) by community pharmacies in England: a multi-method study. *Health Policy*, 88, 258-68.
- BRAUN, V. & CLARKE, V. 2006. Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3, 77-101.
- BRENNAN, N., CORRIGAN, O., ALLARD, J., ARCHER, J., BARNES, R., BLEAKLEY, A., COLLETT, T. & DE BERE, S. R. 2010. The transition from medical student to junior doctor: today's experiences of Tomorrow's Doctors. *Med Educ*, 44, 449-58.
- BUCHAN, J. & O'MAY, F. 2000. Determining skill mix: practical guidelines for managers and healthcare professionals. *Human Resources Development Journal*, 4, 111-118.
- BUCHOLZ, E. M., SUE, G. R., YEO, H., ROMAN, S. A., BELL JR, R. H. & SOSA, J. A. 2011. Our trainees' confidence: results from a national survey of 4136 US general surgery residents. *Archives of Surgery*, 146, 907-14.
- CAMPBELL, C., LOCKYER, J., LAIDLAW, T. & MACLEOD, H. 2007. Assessment of a matched-pair instrument to examine doctor-patient communication skills in practising doctors. *Med Educ*, 41, 123-9.

- CARR-HILL, R., JENKINS-CLARKE, S., DIXON, P. & PRINGLE, M. 1998. Do minutes count? Consultation lengths in general practice. *Journal of health services research & policy*, 3, 207-213.
- CAVACO, A. & ROTER, D. 2010. Pharmaceutical consultations in community pharmacies: utility of the Roter Interaction Analysis System to study pharmacist-patient communication. *Int J Pharm Pract*, 18, 141-8.
- CAVACO, A. M. & ROMANO, J. 2010. Exploring pharmacists' communication with customers through screening services. *Patient Education and Counseling*, 80, 377-383.
- CHEN, J. & BRITTEN, N. 2000. 'Strong medicine': an analysis of pharmacist consultations in primary care. *Family practice*, 17, 480-483.
- CHONG, W. W., ASLANI, P. & CHEN, T. F. 2013. Pharmacist-patient communication on use of antidepressants: A simulated patient study in community pharmacy. *Res Social Adm Pharm*, 10, 419-37.
- COBANOGLU, C., WARDE, B. & MOREO, P. J. 2001. A comparison of mail, fax and web-based survey methods. *International journal of market research*, 43, 441-452.
- CORBO, M., PATEL, J. P., TAWAB, A. & DAVIES, J. G. 2006. Evaluating clinical skills of undergraduate pharmacy students using objective structured clinical examinations (OSCEs). *Pharmacy Education*, 6, 53-58.
- COUGHLIN, S. S. 1990. Recall bias in epidemiologic studies. *J Clin Epidemiol*, 43, 87-91.
- CPPE & HEE. 2014. *Consultation skills for pharmacy practice* [Online]. Available: <http://www.consultationskillsforpharmacy.com/> [Accessed 25/06/2014].
- DEPARTMENT OF HEALTH 1998. Our healthier nation: a contract for health. London: The Stationery Office.
- DEPARTMENT OF HEALTH 2004. Choosing health: making healthy choices easier. London: The Stationery Office.
- DEPARTMENT OF HEALTH 2005. Choosing health through pharmacy: a programme for pharmaceutical public health 2005-2015. London: The Stationery Office.
- DEPARTMENT OF HEALTH 2008. Pharmacy in England: building on strengths - delivering the future. London: The Stationery Office.
- DESBOROUGH J., WRIGHT D.J. & HOLLAND R. 2008. Medicines use reviews (MURs): what is their effect on adherence and satisfaction? A pilot study. *The International Journal of Pharmacy Practice*, 16, C16-C17.
- DESCHAMPS, M., DYCK, A. & TAYLOR, J. 2003. What are we saying? Content and organization of patient counseling by community pharmacists. *CPI, Canadian pharmaceutical journal*, 136, 42-47.
- DEUTSKENS, E., DE RUYTER, K., WETZELS, M. & OOSTERVELD, P. 2004. Response rate and response quality of internet-based surveys: an experimental study. *Marketing letters*, 15, 21-36.
- DEYOUNG, M. 1996. A Review of the Research on Pharmacists' Patient-Communication Views and Practices. *American Journal of Pharmaceutical Education*, 60, 60-77.
- DUNLOP, J. A. & SHAW, J. P. 2002. Community pharmacists' perspectives on pharmaceutical care implementation in New Zealand. *Pharm World Sci*, 24, 224-30.
- EASTHALL, C., SONG, F. & BHATTACHARYA, D. 2013. A meta-analysis of cognitive-based behaviour change techniques as interventions to improve medication adherence. *BMJ open*, 3, e002749.
- EDWARDS, P., ROBERTS, I., CLARKE, M., DIGUISEPPI, C., PRATAP, S., WENTZ, R. & KWAN, I. 2002. Increasing response rates to postal questionnaires: systematic review. *BMJ*, 324, 1183.
- EDWARDS, P. J., ROBERTS, I., CLARKE, M. J., DIGUISEPPI, C., WENTZ, R., KWAN, I., COOPER, R., FELIX, L. M. & PRATAP, S. 2009a. Methods to increase response to postal and electronic questionnaires. *Cochrane Database Syst Rev*, MR000008.
- EDWARDS, R. M., CLELAND, J., BAILEY, K., MCLACHLAN, S. & MCVEY, L. M. 2009b. Pharmacist prescribers' written reflection on developing their consultation skills. *Reflective Practice*, 10, 437-450.

- EKEDAHL, A. & MANSSON, N. 2004. Unclaimed prescriptions after automated prescription transmittals to pharmacies. *Pharm World Sci*, 26, 26-31.
- EMMERTON, L., BECKET, G. & GILLBANKS, L. 1998. The application of electronic work sampling technology in community pharmacy. *Journal of Social and Administrative Pharmacy*, 15, 191-197.
- EPSTEIN, R. M., FRANKS, P., FISCELLA, K., SHIELDS, C. G., MELDRUM, S. C., KRAVITZ, R. L. & DUBERSTEIN, P. R. 2005. Measuring patient-centered communication in patient-physician consultations: theoretical and practical issues. *Social science & medicine*, 61, 1516-1528.
- EVANS, B. W., ALINIER, G., KOSTRZEWSKI, A. J., LEFTERI, K. A. & DHILLON, S. 2011. Development and design of objective structured clinical examinations (OSCE) in undergraduate pharmacy education in a new School of Pharmacy in England. *Currents in Pharmacy Teaching and Learning*, 3, 216-223.
- EVANS, R. G., EDWARDS, A., EVANS, S., ELWYN, B. & ELWYN, G. 2007. Assessing the practising physician using patient surveys: a systematic review of instruments and feedback methods. *Family Practice*, 24, 117-127.
- FIELD, A. 2009. *Discovering statistics using SPSS*, Sage publications.
- FISHER, R. C. 1992. Patient education and compliance: a pharmacist's perspective. *Patient Educ Couns*, 19, 261-71.
- FOULKROD, K. H., FIELD, C. & BROWN, C. V. 2010. Trauma surgeon personality and job satisfaction: results from a national survey. *Am Surg*, 76, 422-7.
- FOX, R. J., CRASK, M. R. & KIM, J. 1988. Mail survey response rate a meta-analysis of selected techniques for inducing response. *Public Opinion Quarterly*, 52, 467-491.
- FREDERIKSON, L. G. 1995. Exploring information-exchange in consultation: the patients' view of performance and outcomes. *Patient education and counseling*, 25, 237-246.
- FREEMAN, G. K. & RICHARDS, S. C. 1994. Personal continuity and the care of patients with epilepsy in general practice. *The British Journal of General Practice*, 44, 395.
- GENERAL MEDICAL COUNCIL. 2009a. *Assessment in undergraduate medical education* [Online]. Available: [http://www.gmc-uk.org/Assessment in undergraduate medical education 1114.pdf](http://www.gmc-uk.org/Assessment%20in%20undergraduate%20medical%20education%201114.pdf) 56439668.pdf [Accessed 16/02/2015].
- GENERAL MEDICAL COUNCIL. 2009b. *Tomorrow's Doctors* [Online]. Available: [http://www.gmc-uk.org/Tomorrow s Doctors 0414.pdf](http://www.gmc-uk.org/Tomorrow%20s%20Doctors%200414.pdf) 48905759.pdf [Accessed 15/02/2015].
- GENERAL PHARMACEUTICAL COUNCIL. 2011a. *CPD Frequently Asked Questions* [Online]. Available: <http://www.pharmacyregulation.org/sites/default/files/Continuing%20professional%20development%20FAQ.pdf> [Accessed 11/02/2014].
- GENERAL PHARMACEUTICAL COUNCIL. 2011b. *Pre-registration Manual* [Online]. Available: [http://www.pharmacyregulation.org/sites/default/files/GPhC%20pre-reg%20manual Oct 11.pdf](http://www.pharmacyregulation.org/sites/default/files/GPhC%20pre-reg%20manual%20Oct%2011.pdf) [Accessed 29/03/2015].
- GENERAL PHARMACEUTICAL COUNCIL. 2012. *Standards of conduct, ethics and performance* [Online]. Available: <http://www.pharmacyregulation.org/sites/default/files/Standards%20of%20conduct,%20ethics%20and%20performance.pdf> [Accessed 19/11/2012].
- GENERAL PHARMACEUTICAL COUNCIL. 2013. *Meeting of the Council Minutes - September 2013* [Online]. Available: <http://www.pharmacyregulation.org/sites/default/files/2013-09-12%20Council%20-%20complete%20set%20of%20public%20papers.pdf> [Accessed 01/03/2014].
- GENERAL PHARMACEUTICAL COUNCIL. 2014. *Pre-registration Tutors* [Online]. Available: <http://www.pharmacyregulation.org/education/pharmacist-pre-registration-training/tutors> 01/08/2014].

- GIDMAN, W. & COOMBER, R. 2014. Contested space in the pharmacy: public attitudes to pharmacy harm reduction services in the West of Scotland. *Res Social Adm Pharm*, 10, 576-87.
- GMEL, G. & DAEPEN, J.-B. 2007. Recall bias for seven-day recall measurement of alcohol consumption among emergency department patients: implications for case-crossover designs. *Journal of studies on alcohol and drugs*, 68, 303.
- GOLDACRE, M. J., TAYLOR, K. & LAMBERT, T. W. 2010. Views of junior doctors about whether their medical school prepared them well for work: questionnaire surveys. *BMC medical education*, 10, 78.
- GREENE, R. J., CAVELL, G. F. & JACKSON, S. H. 1996. Interprofessional clinical education of medical and pharmacy students. *Med Educ*, 30, 129-33.
- GREENHILL, N., ANDERSON, C., AVERY, A. & PILNICK, A. 2011a. Analysis of pharmacist-patient communication using the Calgary-Cambridge guide. *Patient Educ Couns*, 83, 423-31.
- GREENHILL, N., ANDERSON, C., AVERY, A. & PILNICK, A. 2011b. Analysis of pharmacist-patient communication using the Calgary-Cambridge guide. *Patient Education and Counseling*, 83, 423-431.
- GREENWOOD, K., HOWE, A. & HOLLAND, R. 2006. The use of consultation skills assessment tools in pharmacist patient consultations. *International Journal of Pharmacy Practice*, 14, 277-282.
- GRIFFIN, S. J., KINMONTH, A.-L., VELTMAN, M. W., GILLARD, S., GRANT, J. & STEWART, M. 2004. Effect on health-related outcomes of interventions to alter the interaction between patients and practitioners: a systematic review of trials. *The Annals of Family Medicine*, 2, 595-608.
- HARGIE, O. D. W., MORROW, N. C. & WOODMAN, C. 2000. Pharmacists' evaluation of key communication skills in practice. *Patient Education and Counseling*, 39, 61-70.
- HASSELL, K. 2012. GPhC register analysis 2011. *London: General Pharmaceutical Council*.
- HASSELL, K., ROGERS, A. & NOYCE, P. 2000. Community pharmacy as a primary health and self-care resource: a framework for understanding pharmacy utilization. *Health & social care in the community*, 8, 40-49.
- HASSELL, K., SHANN, P. & NOYCE, P. 2002. *Pharmacists in the New NHS: A Review Of, Roles, Responsibilities, Developments, and Innovative Schemes in Skill Mix*, University of Manchester, Centre for Pharmacy Workforce Studies.
- HASSETT, J. M., ZINNERSTROM, K., NAWOTNIAK, R. H., SCHIMPFHAUSER, F. & DAYTON, M. T. 2006. Utilization of standardized patients to evaluate clinical and interpersonal skills of surgical residents. *Surgery*, 140, 633-8; discussion 638-9.
- HEALTH AND SOCIAL CARE INFORMATION CENTRE. 2013. *General Pharmaceutical Services in England: 2003-04 to 2012-13* [Online]. Available: <http://www.hscic.gov.uk/catalogue/PUB12683/gen-pharm-eng-200304-201213-rep.pdf> [Accessed 02/05/2014].
- HEBERLEIN, T. A. & BAUMGARTNER, R. 1978. Factors affecting response rates to mailed questionnaires: A quantitative analysis of the published literature. *American Sociological Review*, 447-462.
- HENNINK, M., HUTTER, I. & BAILEY, A. 2010. *Qualitative research methods*, Sage.
- HERITAGE, J. & MAYNARD, D. W. 2006. Problems and prospects in the study of physician-patient interaction: 30 years of research. *Annu. Rev. Sociol.*, 32, 351-374.
- HIGGINS, S. J. & HATTINGH, H. L. 2013. Requests for emergency contraception in community pharmacy: an evaluation of services provided to mystery patients. *Res Social Adm Pharm*, 9, 114-9.
- HO, P. M., BRYSON, C. L. & RUMSFELD, J. S. 2009. Medication adherence its importance in cardiovascular outcomes. *Circulation*, 119, 3028-3035.
- HO, P. M., RUMSFELD, J. S., MASOUDI, F. A., MCCLURE, D. L., PLOMONDON, M. E., STEINER, J. F. & MAGID, D. J. 2006. Effect of medication nonadherence on hospitalization and mortality among patients with diabetes mellitus. *Archives of internal medicine*, 166, 1836-1841.

- HOLLAND, R., LENAGHAN, E., HARVEY, I., SMITH, R., SHEPSTONE, L., LIPP, A., CHRISTOU, M., EVANS, D. & HAND, C. 2005. Does home based medication review keep older people out of hospital? The HOMER randomised controlled trial. *BMJ*, 330, 293.
- HOWIE, J. G., HEANEY, D. J., MAXWELL, M., WALKER, J. J., FREEMAN, G. K. & RAI, H. 1999. Quality at general practice consultations: cross sectional survey. *Bmj*, 319, 738-743.
- HUSTON, S. & HOBSON, E. 2008. Using focus groups to inform pharmacy research. *Research in Social and Administrative Pharmacy*, 4, 186-205.
- JACOBS, S., HASSELL, K. & JOHNSON, S. 2013. Managing workplace stress to enhance safer practice in community pharmacy: a scoping study. *Manchester, UK: The University of Manchester*.
- JAMES, D., NASTASIC, S., HORNE, R. & DAVIES, G. 2001. The design and evaluation of a simulated-patient teaching programme to develop the consultation skills of undergraduate pharmacy students. *Pharm World Sci*, 23, 212-6.
- JOHNSON, S., O'CONNOR, E., JACOBS, S., HASSELL, K. & ASHCROFT, D. 2014. The relationships among work stress, strain and self-reported errors in UK community pharmacy. *Research in Social and Administrative Pharmacy*, 10, 885–895.
- JOINT PROGRAMMES BOARD. 2014. *Medication Related Consultation Framework (MRCF)* [Online]. Available: <http://www.jpbsoutheast.org/assessment-tools/medication-related-consultation-framework-mrcf/> [Accessed 05/08/2014].
- JONES, W. & RUTTER, P. 2002. The introduction of a checking technician programme in community pharmacy and its impact on pharmacist activities. *International Journal of Pharmacy Practice*, 10, R90-R90.
- KENDALL, J., SIBBALD, B., ASHCROFT, D., BRADLEY, F., ELVEY, R., HASSELL, K. & NOYCE, P. 2005. Role and uptake of local pharmaceutical services contracts in commissioning community pharmacy services. *Pharmaceutical Journal*, 274, 454-457.
- KIMBERLIN, C. L. 2006. Communicating with patients: skills assessment in US colleges of pharmacy. *Am J Pharm Educ*, 70, 67.
- KITZINGER, J. 1995. Qualitative research. Introducing focus groups. *BMJ*, 311, 299-302.
- KRSKA, J., CROMARTY, J. A., ARRIS, F., JAMIESON, D., HANSFORD, D., DUFFUS, P. R., DOWNIE, G. & SEYMOUR, D. G. 2001. Pharmacist-led medication review in patients over 65: a randomized, controlled trial in primary care. *Age Ageing*, 30, 205-11.
- KRSKA, J. & MORECROFT, C. W. 2010. Views of the general public on the role of pharmacy in public health. *Journal of Pharmaceutical Health Services Research*, 1, 33-38.
- KRSKA, J. & VEITCH, G. 2001. Perceived factors influencing the development of primary care-based pharmaceutical care in Scotland. *International Journal of Pharmacy Practice*, 9, 243-252.
- KURTZ, S. M., SILVERMAN, D. J., DRAPER, J., VAN DALEN, J. & PLATT, F. W. 2005. *Teaching and learning communication skills in medicine*, Oxford, Redcliffe Medical Press.
- KURTZ, S. M. & SILVERMAN, J. D. 1996. The Calgary-Cambridge Referenced Observation Guides: an aid to defining the curriculum and organizing the teaching in communication training programmes. *Med Educ*, 30, 83-9.
- KURTZ SM, S. J., DRAPER J 1998. *Teaching and Learning Communication Skills in Medicine*, Oxford, Redcliffe Medical Press.
- LATIF, A. & BOARDMAN, H. 2008. Community pharmacists' attitudes towards medicines use reviews and factors affecting the numbers performed. *Pharmacy world & science*, 30, 536-543.
- LATIF, A., BOARDMAN, H. F. & POLLOCK, K. 2013. Understanding the patient perspective of the English community pharmacy Medicines Use Review (MUR). *Res Social Adm Pharm*, 9, 949-57.
- LATIF, A., POLLOCK, K. & BOARDMAN, H. F. 2011. The contribution of the Medicines Use Review (MUR) consultation to counseling practice in community pharmacies. *Patient Education and Counseling*, 83, 336-344.

- LIEKENS, S., VANDAEL, E., ROTER, D., LARSON, S., SMITS, T., LAEKEMAN, G. & FOULON, V. 2014. Impact of training on pharmacists' counseling of patients starting antidepressant therapy. *Patient Educ Couns*, 94, 110-5.
- LILJA, J., LARSSON, S., HAMILTON, D. & ISSAKAINEN, J. 2000. Empathy as a communication strategy in the pharmacy—a study based on cognitive and behavioural analysis. *International Journal of Pharmacy Practice*, 8, 176-187.
- LINN, B. S. & ZEPPA, R. 1985. Student attitudes about medical care and choice of a career in surgery. *Annals of surgery*, 202, 600.
- LIPTON, H., BYRNS, P., SOUMERAI, S. & CHRISCHILLES, E. 1995. Pharmacists as agents of change for rational drug therapy. *International journal of technology assessment in health care*, 11, 485-508.
- LONIE, J. M. 2006. From counting and pouring to caring: the empathic developmental process of community pharmacists. *Res Social Adm Pharm*, 2, 439-57.
- MACKELLAR, A., ASHCROFT, D. M., BELL, D., JAMES, D. H. & MARRIOTT, J. 2007. Identifying criteria for the assessment of pharmacy students' communication skills with patients. *Am J Pharm Educ*, 71, 50.
- MACKIE, C., LAWSON, D., CAMPBELL, A., MACLAREN, A. & WAIGH, R. 1999. A randomised controlled trial of medication review in patients receiving polypharmacy in general practice. *Pharm J*, 263, R7.
- MATSUI, D., JOUBERT, G. I., DYKXHOORN, S. & RIEDER, M. J. 2000. Compliance with prescription filling in the pediatric emergency department. *Arch Pediatr Adolesc Med*, 154, 195-8.
- MODERNISING PHARMACY CAREERS PROGRAMME. 2012. *Review of pharmacist undergraduate education and pre-registration training and proposals for reform* [Online]. Available: http://hee.nhs.uk/wp-content/uploads/sites/321/2012/10/MPC_WSI_Discussion_Paper.pdf [Accessed 01/04/2014].
- MULLEN, R. & BRITAIN, R. P. S. O. G. 2004. *Skill mix in community pharmacy: exploring and defining the roles of dispensary support staff*, Royal Pharmaceutical Society of Great Britain.
- NHS CAREERS. 2014. Available: <http://www.nhscareers.nhs.uk/explore-by-career/pharmacy/pharmacist/> [Accessed 04/05/2014].
- NHS ENGLAND. 2013a. *Call to Action* [Online]. NHS England Available: <http://www.england.nhs.uk/ourwork/qual-clin-lead/calltoaction/> [Accessed 15/01/2014].
- NHS ENGLAND. 2013b. *Improving care through community pharmacy – a call to action* [Online]. Available: <http://www.england.nhs.uk/ourwork/qual-clin-lead/calltoaction/pharm-cta/> [Accessed 15/01/2014].
- NHS ENGLAND. 2013c. *Improving health and patient care through community pharmacy - Evidence resource pack* [Online]. Available: <http://www.england.nhs.uk/wp-content/uploads/2013/12/comm-pharm-res-pack.pdf> [Accessed 25/01/2014].
- NUFFIELD FOUNDATION 1986. *Pharmacy: The Report of a Committee of Inquiry Appointed by the Nuffield Foundation*. London: Nuffield Foundation.
- OGDEN, J., BAVALIA, K., BULL, M., FRANKUM, S., GOLDIE, C., GOSSLAU, M., JONES, A., KUMAR, S. & VASANT, K. 2004. "I want more time with my doctor": a quantitative study of time and the consultation. *Family Practice*, 21, 479-483.
- PHARMACEUTICAL SERVICES NEGOTIATING COMMITTEE 2004. *The new contract for community pharmacy*, Aylesbury, PSNC.
- PHARMACEUTICAL SERVICES NEGOTIATING COMMITTEE. 2005a. *Competency Framework for the Assessment of Pharmacists providing the Medicines Use Review (MUR) and Prescription Intervention Service* [Online]. Available: http://psnc.org.uk/wp-content/uploads/2013/07/advanced_service_competency_framework.pdf [Accessed 14/04/2014].

- PHARMACEUTICAL SERVICES NEGOTIATING COMMITTEE. 2005b. *Competency Framework for the Assessment of Pharmacists providing the Medicines Use Review (MUR) and Prescription Intervention Service* [Online]. Available: http://www.psn.org.uk/data/files/advanced_service_competency_framework.pdf [Accessed 25/11/2012].
- PHARMACEUTICAL SERVICES NEGOTIATING COMMITTEE. 2005c. *MUR premises requirements* [Online]. Available: http://www.psn.org.uk/pages/mur_premises_requirements.html [Accessed 23/03/2012].
- PHARMACEUTICAL SERVICES NEGOTIATING COMMITTEE. 2011. *The New Medicine Service (NMS)* [Online]. Available: <http://www.psn.org.uk/pages/nms.html#spec> [Accessed 16/12/2011].
- PHARMACEUTICAL SERVICES NEGOTIATING COMMITTEE. 2013a. *Medicines Use Review and Prescription Intervention service* [Online]. Available: http://psn.org.uk/wp-content/uploads/2013/06/MUR-service-spec-Aug-2013-changes_FINAL.pdf 01.07.2014].
- PHARMACEUTICAL SERVICES NEGOTIATING COMMITTEE. 2013b. *The Pharmacy Contract* [Online]. Available: <http://www.psn.org.uk/pages/introduction.html> [Accessed 01/04/2014 2014].
- PHARMACEUTICAL SERVICES NEGOTIATING COMMITTEE. 2014. *Advanced Services* [Online]. Pharmaceutical Services Negotiating Committee. Available: <http://psn.org.uk/services-commissioning/advanced-services/> [Accessed 01/05/2014].
- PILNICK, A. 2003. "Patient counselling" by pharmacists: four approaches to the delivery of counselling sequences and their interactional reception. *Social Science & Medicine*, 56, 835-849.
- POULTON, B. C. 1996. Use of the consultation satisfaction questionnaire to examine patients' satisfaction with general practitioners and community nurses: reliability, replicability and discriminant validity. *Br J Gen Pract.*, 46, 26-31.
- RAPPORT, F., DOEL, M. A. & JERZEMBEK, G. S. 2009. "Convenient space" or "a tight squeeze": insider views on the community pharmacy. *Health Place*, 15, 315-22.
- RIDD, M., SHAW, A., LEWIS, G. & SALISBURY, C. 2009. The patient–doctor relationship: a synthesis of the qualitative literature on patients' perspectives. *The British Journal of General Practice*, 59, e116.
- RIDD, M. J., LEWIS, G., PETERS, T. J. & SALISBURY, C. 2011. Patient-Doctor Depth-of-Relationship Scale: Development and Validation. *The Annals of Family Medicine*, 9, 538-545.
- ROGERS, R. & DEWSBURY, C. 2010. FASTtrack: Law and Ethics in Pharmacy Practice. *The Annals of Pharmacotherapy*, 44, 1861.
- ROTER, D. & LARSON, S. 2002. The Roter interaction analysis system (RIAS): utility and flexibility for analysis of medical interactions. *Patient Educ Couns*, 46, 243-51.
- ROYAL COLLEGE OF GENERAL PRACTITIONERS. *The Patient Satisfaction Questionnaire* [Online]. Available: <http://www.rcgp-curriculum.org.uk/mrcgp/wpba/psq.aspx> [Accessed 05/01/2012].
- ROYAL, S., SMEATON, L., AVERY, A. J., HURWITZ, B. & SHEIKH, A. 2006. Interventions in primary care to reduce medication related adverse events and hospital admissions: systematic review and meta-analysis. *Qual Saf Health Care*, 15, 23-31.
- RUBAK, S., SANDBAEK, A., LAURITZEN, T. & CHRISTENSEN, B. 2005. Motivational interviewing: a systematic review and meta-analysis. *Br J Gen Pract*, 55, 305-12.
- RUTTER, P. 2002. Pharmacist work patterns: are they affected by staffing levels and prescription numbers? *International Journal of Pharmacy Practice*, 10, R49-R49.
- RUTTER, P., HUNT, A., DARRACOTT, R. & JONES, I. 1998. A subjective study of how community pharmacists in Great Britain spend their time. *Journal of Social and Administrative Pharmacy*, 15, 252-261.

- RUTTER, P., HUNT, A. & JONES, I. 2000. Exploring the gap: community pharmacists' perceptions of their current role compared with their aspirations. *International Journal of Pharmacy Practice*, 8, 204-208.
- SALMON, P. & YOUNG, B. 2005. Core assumptions and research opportunities in clinical communication. *Patient Educ Couns*, 58, 225-34.
- SALTER, C., HOLLAND, R., HARVEY, I. & HENWOOD, K. 2007. "I haven't even phoned my doctor yet." The advice giving role of the pharmacist during consultations for medication review with patients aged 80 or more: qualitative discourse analysis. *BMJ*, 334, 1101.
- SANSOM, V. E. & COX, E. A. 2013. Student pharmacists' perspective on actual vs. simulated pharmacy practice experiences. *Currents in Pharmacy Teaching and Learning*, 5, 146-148.
- SARANGARM, P., LONDON, M. S., SNOWDEN, S. S., DILWORTH, T. J., KOSELKE, L. R., SANCHEZ, C. O., D'ANGIO, R. & RAY, G. 2013. Impact of Pharmacist Discharge Medication Therapy Counseling and Disease State Education Pharmacist Assisting at Routine Medical Discharge (Project PhARMD). *American Journal of Medical Quality*, 28, 292-300.
- SAVAGE, I. 1995. Time for customer contact in pharmacies with and without a dispensing technician. *International Journal of Pharmacy Practice*, 3, 193-199.
- SAVAGE, I. 1997. Time for prescription and OTC advice in independent community practice. *Pharmaceutical journal*, 258, 873-877.
- SCHULMAN, B. A. 1979. Active patient orientation and outcomes in hypertensive treatment: application of a socio-organizational perspective. *Med Care*, 17, 267-80.
- SHAH, B. & CHEWNING, B. 2006a. Conceptualizing and measuring pharmacist-patient communication: a review of published studies. *Research in Social and Administrative Pharmacy*, 2, 153-185.
- SHAH, B. & CHEWNING, B. 2006b. Conceptualizing and measuring pharmacist-patient communication: a review of published studies. *Res Social Adm Pharm*, 2, 153-85.
- SKOGLUND, P., ISACSON, D. & KJELLGREN, K. I. 2003. Analgesic medication—communication at pharmacies. *Patient education and counseling*, 51, 155-161.
- SLEATH, B. 1996. Pharmacist-patient relationships: authoritarian, participatory, or default? *Patient Educ Couns*, 28, 253-63.
- SOSABOWSKI, M. H. & GARD, P. R. 2008. Pharmacy education in the United Kingdom. *Am J Pharm Educ*, 72, 130.
- STEVENSON, F. A., COX, K., BRITTEN, N. & DUNDAR, Y. 2004. A systematic review of the research on communication between patients and health care professionals about medicines: the consequences for concordance. *Health Expectations*, 7, 235-245.
- STEWART, M. 2003. *Patient-centered medicine: transforming the clinical method*, Oxford, Radcliffe Pub.
- SUTTERS, C. A. & NATHAN, A. 1993. The community pharmacist's extended role: GPs' and pharmacists' attitudes towards collaboration. *Journal of Social and Administrative Pharmacy*, 10, 70-70.
- TAITEL, M., JIANG, J., RUDKIN, K., EWING, S. & DUNCAN, I. 2012. The impact of pharmacist face-to-face counseling to improve medication adherence among patients initiating statin therapy. *Patient Prefer Adherence*, 6, 323-329.
- THE GENERAL PHARMACEUTICAL COUNCIL. 2011. *Standards for the initial education and training of pharmacists* [Online]. Available: http://www.pharmacyregulation.org/sites/default/files/GPhC_Future_Pharmacists.pdf [Accessed 01/05/2014].
- THE HEALTH AND SAFETY EXECUTIVE. 2014. *What is stress?* [Online]. Available: <http://www.hse.gov.uk/stress/furtheradvice/whatisstress.htm> [Accessed 14/07/2014].
- THE HEALTH AND SOCIAL CARE INFORMATION CENTRE. 2012. *General Pharmaceutical Services in England 2002-03 to 2011-12* [Online]. Available: <https://catalogue.ic.nhs.uk/publications/primary-care/pharmacy/gen-pharm-eng-2002-03-2011-12/gen-pharm-eng-2002-03-2011-12-rep.pdf> [Accessed 28/07/2013].

- THE INFORMATION CENTRE. 2011. *General Pharmaceutical Services in England* [Online]. London. Available: <http://www.ic.nhs.uk/statistics-and-data-collections/primary-care/pharmacies/general-pharmaceutical-services-in-england-2001-02-to-2010-11>.
- TWIGG, M. J., POLAND, F., BHATTACHARYA, D., DESBOROUGH, J. A. & WRIGHT, D. J. 2013. The current and future roles of community pharmacists: views and experiences of patients with type 2 diabetes. *Res Social Adm Pharm*, 9, 777-89.
- VAIL, L., SANDHU, H., FISHER, J., COOKE, H., DALE, J. & BARNETT, M. 2011. Hospital consultants breaking bad news with simulated patients: an analysis of communication using the Roter Interaction Analysis System. *Patient Education and Counseling*, 83, 185-194.
- VAN DEN BRINK, M., BANDELL-HOEKSTRA, E. N. & ABU-SAAD, H. H. 2001. The occurrence of recall bias in pediatric headache: a comparison of questionnaire and diary data. *Headache*, 41, 11-20.
- VOLINO, L. R., DAS, R. P., MANSUKHANI, R. P. & COSLER, L. E. 2014. Evaluating the Potential Impact of Pharmacist Counseling on Medication Adherence Using a Simulation Activity. *American Journal of Pharmaceutical Education*, 78.
- WALLMAN, A., VAUDAN, C. & SPORRONG, S. K. 2013. Communications training in pharmacy education, 1995-2010. *Am J Pharm Educ*, 77, 36.
- WAMALA, S., MERLO, J., BOSTROM, G., HOGSTEDT, C. & AGREN, G. 2007. Socioeconomic disadvantage and primary non-adherence with medication in Sweden. *Int J Qual Health Care*, 19, 134-40.
- WEISS, M. C., BOOTH, A., JONES, B., RAMJEET, S. & WONG, E. 2010. Use of simulated patients to assess the clinical and communication skills of community pharmacists. *Pharmacy world & science*, 32, 353-361.
- WELLS, K. M., THORNLEY, T., BOYD, M. J. & BOARDMAN, H. F. 2013. Views and experiences of community pharmacists and superintendent pharmacists regarding the New Medicine Service in England prior to implementation. *Res Social Adm Pharm.*, 10, 58-71.
- WILCOCK, M. 2010. The community pharmacy contract explained. *Practice Nurse*, 39, 31-34.
- WILLIAMS, G. C., MCGREGOR, H., ZELDMAN, A., FREEDMAN, Z. R., DECI, E. L. & ELDER, D. 2005. Promoting glycemic control through diabetes self-management: evaluating a patient activation intervention. *Patient education and counseling*, 56, 28-34.
- WORLEY, M. M. 2006. Testing a pharmacist-patient relationship quality model among older persons with diabetes. *Res Social Adm Pharm*, 2, 1-21.
- WRIGHT, K. B. 2005. Researching Internet-based populations: Advantages and disadvantages of online survey research, online questionnaire authoring software packages, and web survey services. *Journal of Computer-Mediated Communication*, 10, 00-00.
- WROTH, T. H. & PATHMAN, D. E. 2006. Primary medication adherence in a rural population: the role of the patient-physician relationship and satisfaction with care. *J Am Board Fam Med*, 19, 478-86.
- ZAYYAN, M. 2011. Objective structured clinical examination: the assessment of choice. *Oman Med J*, 26, 219-22.
- ZERMANSKY, A. G., PETTY, D. R., RAYNOR, D. K., FREEMANTLE, N., VAIL, A. & LOWE, C. J. 2001. Randomised controlled trial of clinical medication review by a pharmacist of elderly patients receiving repeat prescriptions in general practice. *BMJ*, 323, 1340-3.

Appendices

Appendix 1 – Focus Group Study

Appendix 1.1 – Focus Group Ethics

Approval

Ahmed Al-Nagar
Medicines Management Research Group
School of Pharmacy
University of East Anglia
Norwich
NR4 7TJ

Faculty of Medicine and Health Sciences
Elizabeth Fry Building, Room 2.30
University of East Anglia
Norwich NR4 7TJ

Email: margaret.rhodes@uea.ac.uk
Direct Dial: +44 (0) 1603 59 7190
Research: +44 (0) 1603 59 1720
Fax: +44 (0) 1603 59 1132

Web: <http://www.uea.ac.uk>

23rd March 2011

Dear Ahmed

**Communicating with patients, perceptions of community pharmacists: A focus group study –
Reference 2010/11-025**

The amendments to your above proposal have now been considered by the Chair of the Faculty Ethics Committee and we can now confirm that your proposal has been approved.

Please could you ensure that any amendments to either the protocol or documents submitted are notified to us in advance and also that any adverse events which occur during your project are reported to the committee. Please could you also arrange to send us a report once your project is completed.

The committee would like to wish you good luck with your project.

Yours sincerely



Maggie Rhodes
Research Administrator

Appendix 1.2 – Generic Fax Letter

Invitation to participate in a focus group

To all **Community Pharmacists**,

Introduction

One of our research projects is looking at ways to improve pharmacist consultation skills. We are interested in what community pharmacists think and are inviting you to participate in a focus group to discuss your experiences of 'communicating with patients'.

What does it involve?

Each focus group will involve 6 -10 community pharmacists from Norfolk. **All you need to do is share your opinion and discuss your views and experiences regarding 'communicating with patients' in a group discussion setting lasting up to 90 minutes.**

We aim to minimise any travel and inconvenience caused when participating in these focus groups. We will arrange time, venue and day according to preferences. Each participant will be given a **£20 pound voucher** which can be redeemed at Marks & Spencer for attending a focus group. A **CPD certificate** and refreshments will also be provided for attendees.

If interested in participating

Please contact **Ahmed Al-Nagar** at **(0) 1603 591973** or email a.al-nagar@uea.ac.uk to express interest in participating or ask any questions that you may have. In one week's time we will telephone all pharmacies that have not yet responded to confirm any interest in participating in the study.

Appendix 1.3 – Covering Letter

Dear [Name]

**Re: Communicating with patients, perceptions of community pharmacists:
A focus group study**

Thank you for expressing interest in participating in this research study which aims to investigate community pharmacists' perception of communicating with patients. Following on from our telephone conversation I am now sending you further details about the study and the documents you will need to complete should you wish to participate or withdraw. Enclosed with this pack you will find the following:

- 1- Participant Information Sheet
- 2- Preliminary questionnaires (Basic demographics survey & Preference survey)
- 3- Withdrawal Postcard
- 4- Pre-paid Envelope

Please read the Participant Information Sheet and if you're still happy to take part in this study, please complete the Preliminary questionnaires and return it to us in the Pre-paid reply envelope (no stamp required). Alternatively, if you decide you do not wish to participate in this study, please return the Withdrawal postcard and we will not contact you again regarding this study (no stamp needed).

If after two week we have not received the preliminary questionnaires or a withdrawal postcard will phone to confirm whether you still wish to participate in this study.

All participants will be contacted to finalise details (times and dates) of the focus group or to state you were not required if uptake exceeds expectations. We look forward to hearing from you, should you have any questions or concerns please don't hesitate to contact me.

Kind Regards,

Ahmed Al-Nagar *MPharm MRPharmS*

**Appendix 1.4 – Participant Information
Sheet**



Centre for Medicines Management

Appendix -



Participant Information Sheet

Communicating with patients perceptions of community pharmacists

You are being invited to participate in a research project. Before you decide we would like you to understand why the research is being done and what it would involve. Please take your time to read this information sheet.

Background Information:

As you are all aware there has been an increase in the patient focused services provided by pharmacy. Patient consultations are now a core activity for pharmacists. This is part of a PhD student project which is designed to develop pharmacist consultation skills.

The objectives of the focus groups will be to understand:

- Personal experiences of pharmacist in regards to patient consultations
- Current issues while conducting consultations in practice
- Perception of pharmacists regarding the different approaches used when communicating with patients
- Pharmacist opinion about possible communication skills barriers
- Pharmacist opinion about how to improve patient consultations

Why you are being invited to take part?

You have been chosen because you practice as a pharmacist in community pharmacy.

What happens if I am interested to take part?

We need you to complete two surveys; the Preference Survey and the Basic Demographic Survey.

- Preference Survey: This survey will be used to help us organise a venue and a time that is suitable for the majority of the participants and we aim to minimise travel. All participants once chosen to take part will receive a phone call to check availability on a prospective date and venue for a focus group and if you agree, you will receive a confirmation letter.
- Basic Demographic Survey: The initial focus group will invite the first 10 pharmacists that can make it on a specific date and these pharmacists might have different demographic backgrounds. However if it becomes apparent from the first focus group an alternative make up of the focus groups may contribute to more open discussion we will use the demographics to help structure those groups. For example more inexperienced pharmacists may not contribute when experienced pharmacists are present

What happens if I agree to take part?

You will be invited to attend a focus group, a focus group is where individuals meet together to discuss and express their views on a given topic. A moderator guides the discussion accordingly. There will be approximately six to ten other community pharmacists. The focus group will last approximately 90 minutes and the timing will be according to the preference survey but we aim to arrange a time that is suitable for everyone. The focus group discussion will be audio-recorded, listened to, and transcribed verbatim by the research team at the UEA. This information will be stored securely and only the research team will have access to it. All records will be destroyed 3 years after study.

Participation is entirely voluntarily and you can withdraw from the focus group at any time without penalty, you can also withdraw in the middle of a focus group discussion but Information collected may still be used prior to your withdrawal. If you agree to take part, you will need to sign a consent form and a confidentiality agreement on the day of the focus group.

Compensation for taking part:

- Each participant will be given a £20 pound voucher which can be redeemed at Marks & Spencer for attending a focus group. Marks & Spencer is not associated or sponsoring any of this study.
- Refreshments will be provided on the day.

Why the study is being undertaken?

This study is being conducted as part of a post graduate study and has been reviewed and approved by the Faculty of Health Ethics Committee, East Anglia University. The data collected will be used in a Ph.D thesis and possible publications.

Possible benefits of taking part:

- Participants may find it a useful experience as thoughts and ideas will be shared with others that work in the same field.
- A certificate of attendance will be given to all participants, which could subsequently be used to form a continuing professional development entry.

After the study

- The results will be analysed and key themes identified
- Data interpretation will be verified by two research facilitators
- An interim report will be produced of all key findings and themes. This will be circulated to the participants that agreed or requested to receive a copy and you can provide any feedback or extra ideas that you may have.
- The data gathered from these focus groups may contribute to publications
- The data will be used to design future studies

What disadvantages are there?

We do not anticipate any disadvantages to you participating in this focus group, apart from the time taken to complete the discussion.

Do you have to take part?

No – participation is entirely voluntary though your help will be very much appreciated.

Confidentiality

The research team at UEA will maintain confidentiality when referring to the findings of the focus group. Any data that can identify you will not be published and nobody outside the research team will be able to access any information you give us. All audiotapes will be destroyed after 2 years. All participants will sign a confidentiality agreement to ensure that sensitive information disclosed will remain safe.

Duty of Care of Disclosure

If Information emerges during this study which causes concern about any participants or patients under their care we may have to break confidentiality and take appropriate action on it.

Complaints

If you have a complaint about how you were approached or how the focus groups were conducted then please contact Dr James Desborough (project supervisor) at the University of East Anglia on 01603 593413. He will be able to answer any concerns you may have.

Thank You

If you require more information please contact:

Lead Researcher: Ahmed Al-Nagar, Medicine Management Research Group, School of Pharmacy, University of East Anglia, Norwich, NR4 7TJ, Tel: 01603 591973, E-mail: a.al-nagar@uea.ac.uk

Appendix 1.5 – Basic Demographic Detail Survey

Participant Basic Demographic

Please tick the relevant boxes:

Age group	20 – 40	<input type="checkbox"/>
	41 – 50	<input type="checkbox"/>
	51 – 60	<input type="checkbox"/>
	61 – 70	<input type="checkbox"/>
	71 – 80	<input type="checkbox"/>
MUR accreditation	No	<input type="checkbox"/>
	Yes	<input type="checkbox"/>
	<i>If yes, average of MURs conducted in a year?</i>	_____
Gender	Male	<input type="checkbox"/>
	Female	<input type="checkbox"/>
Employer	Self employed	<input type="checkbox"/>
	Independent Pharmacy	<input type="checkbox"/>
	Small Multiple	<input type="checkbox"/>
	Large Multiple	<input type="checkbox"/>
Qualification	UK Qualified	<input type="checkbox"/>
	Non-UK Qualified	<input type="checkbox"/>
		<input type="checkbox"/>
Date of becoming a UK Registered pharmacist		_____
Nationality		_____

Appendix 1.6 – Preference Survey

Preference Survey



Time and Day

Please tick your preferred choices for the time, day and venue.

	<i>Please tick your preferences for the time and day for the focus group to be held</i>						
Time	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Before noon							
12pm-1:30pm							
Afternoon							
5pm-6:30pm							
6:30pm-8pm							
7pm-8:30pm							
7:30pm-9pm							
8pm-9:30pm							

Venue

- I am willing to attend a focus group if it was held in at the University East Anglia
- I am willing to attend a focus group only if the venue was nearer to my pharmacy.

Please suggest an alternative venue that is more suitable for you

Name:.....Preferred contact number:.....

Email Address:.....

Please return this form to the research team in the pre-paid envelope supplied. You do not need to put a stamp on the envelope

Appendix 1.7 – Withdrawal Postcard



Withdrawal Postcard

If you do not want wish to participate in this research, please return this postcard (no stamp needed) and you will not be contacted again. If you do not return this postcard back or the surveys we will contact you in 2 weeks time to check if your are still interested in participating.

(Please Tick)

I do not wish to take part in this research

Thank you for your time

Reference Number –

Appendix 1.8 – Consent Form

Communicating with patients, perceptions of community pharmacists

Focus Group Consent Form

If you wish to take part, please initial each box and complete the details at the bottom of the form.

1. I confirm that I have read and understand the participant information sheet dated 22/03/2011 for the above focus group and have had the opportunity to ask questions
2. I am willing to allow the discussion within the focus group to be audio-taped for the purposes of analysing the conversations that take place and possibly publish some of the discussions.
3. I understand that my participation is voluntary and that I am free to withdraw at any time.
4. I agree to take part in the focus group study and understand that my consent to participate can be withdrawn at any time.

Name of participant
Signature

Date

Name of person taking consent
Signature

Date

Address of participant: _____

Email Address _____

Telephone number: _____

When completed: 1 copy for participant; 1 for researcher team

Appendix 1.9 – Confidentiality Agreement

Confidentiality Agreement

I, _____ the undersigned, understand that during the course of my participation in the communicating with patients, perceptions of community pharmacists' focus group I may observe or hear confidential information.

Definition of Confidential Information. Confidential information shall include any information shared by participants in a focus group discussion that identifies a participant or a company.

Use of Confidential Information with respect to the Confidential Information the undersigned agrees to:

A. Maintain Confidential Information in full confidence and not reveal it to any other clients, firms, professional or other organizational groups with whom I am associated or to which I belong.

B. I will not make any disparaging remarks related to the Confidential Information.

C. I understand that I am not authorized to make public statements or press releases about this study.

D. I will respect the privacy of all the focus group participants by not repeating what I heard with any names attached.

I have read and understand this Confidentiality Agreement and Statement. By signing in the space below, I agree to its terms and conditions.

Print your name here:

Signature:

Date Signed:

When completed: 1 for participant; 1 for researcher team

Appendix 1.10 – Participant Validation

Proforma

Participant Validation Proforma

Thank you for agreeing to give feedback on themes that have been picked up in the focus group discussions. It appears that the main issues raised were:

A theme description

Quotes that seem to back this up are *1 or 2 illustrative quotes*

Do you feel this theme is important? Do you agree with this theme? Would you like to add more to this theme?

Each theme would have a separate title, set of illustrative quotes and dialogue box.

Please return this word document via email to a.al-nagar@uea.ac.uk .

Kind Regards,

Ahmed Al-Nagar

(This is an example of the proforma that will be sent out to participants that have agreed to take part in the validation via email as a word document. It will have all the themes and will allow participants to give feedback and an opportunity to elaborate on the themes)

Appendix 1.11 – Participant Validation Report

Communicating with patients, perceptions of community pharmacists: A focus group study

Participant Validation Proforma

Version 3, Date: 31/10/2011

Lead investigator: Ahmed Al-Nagar
Centre for Medicines Management Research
School of Pharmacy
University of East Anglia
Norwich Research Park
Norwich NR4 7TJ
Tel: 0044 (0) 1603 591973
a.al-nagar@uea.ac.uk

Introduction

You may remember, between June and August 2011 you participated in a focus group at UEA which discussed your views on communicating with patients. Four focus groups were conducted with 22 community pharmacists in total and we would like to thank you once again for your participation. All focus groups were audio recorded and transcribed verbatim. The transcripts have now been independently coded and then analysed by two researchers. This document contains a summary of all the themes generated in the four focus groups.

We are now asking participants to review this summary to confirm if this is an accurate representation of the discussions and ask if there is anything else you would like to add having read the summary. Some of themes might not have been discussed in your meeting but we believe it is important to see what was discussed overall and allow everyone to add their view if they wished.

The focus groups identified four key themes: feelings about consultations, the pharmacy environment, consultation techniques and relationships. Each theme will be described and will have sample quotes to demonstrate the theme or subtheme. All themes and subthemes are shown in the contents page.

At the end of each theme there will be a comments box which allows you to comment on the overall theme and any subtheme. If you would like to comment or add your view then please type it in the comments box, save the document and email it back to me on aal-nagar@uea.ac.uk. If you have anything to add then please send it back to me before the 14th of November 2011.

Thank you in advance for time and support.

Contents

Introduction	2
1. Feelings about consultations	4
1.1 Pharmacist enjoy speaking to patients	4
1.2 Pharmacists enjoy feedback from patients	4
2. The pharmacy environment	5
2.1 Pharmacy layout	5
2.1.1 Consultation room	5
2.1.2 Design of pharmacy floor	5
2.2 Staff	6
2.2.1 Accredited Checking Technicians (ACT)	6
2.3 Accessibility of Pharmacy	7
2.4 Lack of support for pharmacists	7
2.5 Role of the pharmacist	8
2.5.1 Patient perception of pharmacist role	8
2.6.2 Pharmacist perception of own role	8
2.6.3 Pharmacist responsibilities	8
2.6 Type of Pharmacy	9
2.6 Contract and new services	10
2.7 Time	11
3. Consultation approaches	13
3.1 Initiating consultation	13
3.2 Rapport Building	13
3.3 Ending Consultations	14
3.4 Other themes regarding consultation approaches	15
3.4.1 Consultation	15
3.4.2 Don't give too much information to patients	15
3.5 Consultation barriers in conversations	16
3.6 Consultation skills Training	17
4. Relationships	19
4.5 Pharmacist-Patient relationship	19
4.6 Doctor-Patient relationship	21
4.3 Pharmacist-Doctor relationship	21

1. Feelings about consultations

1.1 Pharmacist enjoy speaking to patients

Description

The Majority of the pharmacist enjoy speaking to patients and find it as an important aspect of their job. Pharmacists enjoy helping patients understand their medicines and solving their problems. Pharmacists also enjoy conducting MURs. Pharmacists feel they have the motivation and skill to help patients.

Quotations

F1.1.C1 - "I think it's the most enjoyable part of my job from the day I qualified that what I actually wanted to do as a community pharmacist was to have a one on one with patients"

F3.5.C4: "you have got the skills and the knowledge or that motivation to help them and of course"

1.2 Pharmacists enjoy feedback from patients

Description

Pharmacists enjoy the feedback from patients regarding advice they have given them on previous visits. They feel they can use it as a learning tool and gives them job satisfaction.

Quotations

F1.7.C7: "Having feedback as well is quite good because you have people coming back saying oh this and this was quite good for me and thank you for advice and the interaction"

F1.2.C13: "you get that feedback and it helps us as a learning tool as well"

F2.4.C4: "You know sometimes you get individual personal compliments from the patient and that makes me feel happy"

Having read this information is there any other comments you would like to add?

2. The pharmacy environment

2.1 Pharmacy layout

2.1.1 Consultation room

Description

Most pharmacists found the consultation room as a useful space to use when speaking to patients. Some stated that it provides a better place for confidential and personal conversations to take place where patients pay "attention" to them. Some pharmacists showed concern to the design of the room stating it can sometimes be "scary" for the patient due to small size of the room and also the lack of awareness from the public regarding the use of this room.

Quotations

F2.1.C89: "They usually pay attention when they are in the room"

F2.2.C43: "that's very handy I must admit, some people get very shy and say can I have a quick word in there"

F2.1.C99: "but they are a bit claustrophobic when the room is small, when you go in and close the door behind you, they say what's going on"

F4.1.C94: "It depends on what consultation room you have, sometimes my room just smells and it's just..... I wouldn't invite anyone, my professional image is gone"

F4.1.C85: "Yes that true, in confidential room you can get much more information from the patient, you can ask you questions more easily than over the counter...."

2.1.2 Design of pharmacy floor

Description

Some pharmacist felt that they needed a place to speak to patients without going inside the consultation room but at the same time it is confidential therefore suggesting the design of the pharmacy floor was not supportive to their role or didn't provide a suitable environment for them to speak to their patients.

Quotations

F2.3.C140: "I sometimes feel if we can do with a half way stage, there is the counter which is always busy with customers and somebody who wants to ask something but they don't want to go into the room they just want to ask you in a quiet corner and there isn't really a quiet corner for them to go in"

F3.2.C47: "I sometimes find confidentiality quite challenging talking to patients on the counter, you've got 3 , 4, other people sitting standing there that is particularly challenge to me, I don't like it..."

F3.3.C56: "there isn't really a separate confidential enough area for me where I am working to

2.2 Staff

Description

Pharmacists felt it was important to have the correct skill mix in the team. Many pharmacists also reported lack of staff and skill can restrain pharmacists from talking to patients because of other tasks they must take on to have a fully functional pharmacy. Pharmacies that have 2 pharmacists reported better consultations and enjoyed the interaction with the patient more.

Pharmacists also stated having good support staff gives you more confidence to speak to patients. An interesting point was also mentioned; pharmacists who treated pharmacy staff with respect can feed developing patient trust.

Quotations

F4.1.C96: "It's definitely more time, I would say and more staff to support us because when you're in the consulting room and there are prescriptions you know, to be completed and checked, it's always have this pressure and pressure and you know sometimes, most of the time I know I can't spend quality time with patients that's the problem lack of time and lack of staff. So that's the main thing to improve, how to do that, I just don't know"

F4.2.C97: "... one of the biggest is issues that we've always got and we do find in my pharmacy that on the day when we have double cover and a good counter assistant who is motivated to recruit our MURs then we can do wonderfully, quality MURs all day because there are two of us and we can take it in turns and free to go to do the consultations all day and those are the best days for consultations..."

F1.4.C3: "Actually in our branch we got one and half other pharmacists but I quite enjoy doing the MURs, so I tend to do most of the MURs because I enjoy that interaction with the patient"

F2.2.C26: "Slightly different slant, it depends how you treat you staff. If you treat them with respect, then they will feed through to the patients and customers and that will gradually build trust as well."

F1.6.C74: "whole team is required in order to acquire that interaction and I think you do need the support of the entire team"

F3.2.C67: "support definitely differs in different pharmacies, how much training they have the staff and you can trust leaving those people in charge of the counter and you can concentrate because you know some pharmacies you hardly even can hear what's going on outside because it's so far from you."

2.2.1 Accredited Checking Technicians (ACT)

Accredited checking technicians have been reported as being very useful by all pharmacists but it was also reported that some were underutilised. Pharmacists also specified that they free up time for them to speak to the patients and thought they were the way forward to free up time for them. Some pharmacists were concerned that there should be more incentives for technicians to become ACTs.

pharmacist and a half and I can spend a bit more time but in general its, you're thinking about the work you're going to check."

F1 .2.C83: "sometimes that perhaps shows when you speaking a lot quickly and they can't take in everything your saying and if you can spend that few more minutes with them we can get the point across"

F3.1.C42: "I think my biggest challenge is my time, I feel like I got so many people want a piece of my time and I am talking to patient and I got an addict waiting to have their supervised methadone and the phone is ringing and there is a customer wants to talk to me and there is so many things going on at once and I think sometimes the patient can feel a little bit intimidated by it all, oh I am wasting your time but making them feel that they are not wasting your time and that you do give at them everything they deserve out of your time at that time and yeah just my time is just spread over so many different things all at once. It's the same for all of us I am sure but yeah I think that is my biggest challenge"

F1 .4.C118: "I think it's how it's done, in my case they will knock on the door, it isn't to get out but if they wanted to check something then they will knock on the door and as soon as I hear the knock I would say to the patient I hope you don't mind, I just need to check something. It will only be a couple of minutes and if it's a smallish item in a tray the patient can't see, they will bring it to me and I'll check it and it will go out or ill just nip out, you know, and apologies. And I have to say for the however the number of years we have done this. Not a single patient complained about that and they are all quite happy"

F4.3.C37: "I obviously when you said targets there as well as well as time, I suppose when you're talking targets, you're talking things like MURs, and that's another thing that is probably on your mind if you're conducting an MUR, it's the time that it's taken you, whether it be 5 minutes or 25 minutes and how much work is building up behind you."

F4.3.C31: "I think you are always aware when you are talking to patients, your time constraints, there is a point during a consultation with somebody, your mind tends to, certainly mine does mine does to think about other things I got to do"

2.6 Type of Pharmacy

Description

Independent pharmacy owners reported they had a better control on the level of their staffing and how they run their pharmacy with no targets set. They felt this was an advantage for them. Pharmacists that are working in multiple pharmacies felt they were under pressure to provide the targets set by employers and felt stretched.

Quotations

F1 .1.C79: "Again being my own boss I get to choose my staff level so I have that luxury and I don't have problems people going sick. They just do not go sick from my team"

F1 .1.C67: "I don't have a big boss targeting my MURs so I have the opportunity to run my pharmacy the way I choose to do it which much more being out at the front"

F1 .5.C136: "so stretched that you are not effective really and I don't see this necessity in every pharmacy but I think certainly in some of the multiples its getting really difficult really."

F4.3.C107: "you just do your four hundred MURs, your bosses aren't really bothered about the quality of them"

F3.4.C57: "when I work for multiples I think there is much more pressure definitely"

F4.1.C106: "Well I would definitely, the thing is, you have to do MURs that's the pressure from companies, sometimes I've done an MUR and sometimes I feel oh I should have done better or maybe I should have asked this question or sometimes I just forget to ask some questions and you just not happy with yourself because you have done an MUR, ok you are going to claim money, your boss is going to be happy but actually if I had more time I would do this MUR much better so that's the thing that's the world we live in now because of the targets and the pressure, sometimes we do MURs they are not going to be that effective then when you have more time. I am sure everyone is going to agree with me because that's how it is."

Contract and new services

Description

Some pharmacist felt there should be a review on the pharmacy contract. Pharmacists also specified that the newer services needed more patient interaction and more time to do. Some pharmacist also thought the new approach of targeting MURs can help the patients. New services were also thought be associated with building trust with the patients. Pharmacists also felt that the New Medicines Service needs new skills since they don't usually counsel patients over the phone.

Quotations

F1.4.C137: "I think renegotiating of the contract and because I can't help thinking if we are all pharmacists we would probably talk in the same language. But if we went out down in the street about what is their perception, often I hear people say he really know or she know quite a bit they are so busy. We are perceived as really busy and somehow that got to change to a degree and at the moment what the economic forces aren't getting any better and I think that there got to be a stage where you become so stretched that you are not effective really and I don't see this necessity in every pharmacy but I think certainly in some of the multiples its getting really difficult really"

F3.2.C118: "I think it's a complex issue but yeah, I think the whole funding and the contract of pharmacy needs to be changed in the future"

F1 .3.C138: "what they want with this new medicines service? Isn't it? You know that another chunk of your time to be able to do that but I can't see the change in the contract"

.....Discussion.....

F1.5.138 (Pharmacist 5): "I think let be a bit more positive, I think the proposals for targeting groups with MURs is a very good idea, I am not so sure about a national level but certainly on a

local PCT if they are still around level then actually combining some of the work, the MUR work with what everybody else is doing locally. I think you can really end singing from the same hymn sheet. You could really drive standards of health care up so I think there is an opportunity there"

F1.8.139: "plus make a difference"

~~F1.5.139~~(Pharmacist 5): I think that is a possibility so more focus delivery of particular things and on the MUR agenda will mean the outcomes will drive forward.

A.A: "So that means you will have more time to speak to patients?"

F1.1.140 I think what Pharmacist 5 means, if it is targeted umm if locally we targeting a certain group and we are all doing the same umm then it will be very effective for that local group, yeah instead of trying to get as many MURs, having little conversations and this whole thing mixed up and nobody is really benefiting, ok the patient is benefiting a bit but not as a whole in the area.

F1.5.141: "yes exactly, you use the word targeting in two ways and I am not talking about targets as in commercial targets and driving them what I am saying. Say for example all the GPs and all the pharmacists and all the health promotional material for that particular month was based on a particular topic similar topic then I think we can actually really move to the GPs every conversation the GP has will involve about a particular thing. It touched down a bit on it when you did the medicines wastes and I thought, and (someone's name from PCT) came out on the radio and I thought that was pretty good and if you can galvanise everyone to focus on that one thing you can change the whole thing"

.....End of discussion.....

F2.4.C132: "I think by introducing more services I think we can build up this trust and we can improve the relationships."

F4.2.C101: "as the new services come in, I mean we touched on them chatting outside but as the new first medicine service comes in, we now have got to have 3 conversations with our customers, our patients, you know at 3 different times and we will then have to develop our telephone skills and everything because some of these are going to be over the telephone. It's going to be a different set of skills that we need when talking over the telephone because you don't get the body language, you don't get the sort of vibe feeling, you just got to say, hello this is me and I am phoning to follow up on your medicines, and then you got to somehow really get to open up to you in a very short time on the telephone so that will be a big new glorious challenge"

2.7 Time

Description

Pharmacists felt they had lack of time and not always enough time to counsel patients as they would like. Pharmacists don't usually prepare to see the patients and they don't have time to do so. Pharmacist felt if they had more time they can spend more time with the patients and that can enhance the relationship with the patients. Pharmacists also felt the constraints on

their time are only going to get worse. However, Pharmacists don't have the pressure of other consultations waiting like the doctor.

Quotations

F2.3.C133: "I think its spending more time with people as well is being given the time to do that"

F3.2.C46: "Getting an accurate history and an accurate what the patient agenda is, is another challenge sometimes because you do need that time"

F4.3.C98: "the more time you get to do consultations the better you are at them"

F4.3.C100: "To find how you are going to do things better under the time constraints that you have at the moment which probably will get worse and it won't get any better "

F1 .7.C132: "you got the time limit and you have ~~stick~~ with that and most of the time you would be faced with things that you haven't had time to prepare"

F3.5.C10: "pharmacists we don't have that pressure of another consultation another consultation, it's something that we take more relaxed"

F1.5.C15: "I also spend another element of my time trying to avoid talking to patients because you also got the day job to do"

Having read this information is there any other comments you would like to add?

3 Consultation approaches

3.1 Initiating consultation

Description

There were different approaches of how pharmacist initiated a consultation, some started the consultation outside the room explaining the purpose of the consultation for example why they want the patient to do an MUR and then go inside the consultation room. Some pharmacist also explained they use the initial response to gauge the intellect of patients and lead the consultation accordingly. Most pharmacists said they opened the conversation with an open question and then allowed the patient to speak. Some pharmacists introducing the MUR found it useful to give examples of how it benefited previous patients with positive examples.

Quotations

F3.2.C71: "I always start by telling patients what medication you are on and I let them lead the consultation"

F1.4.C30: "I tend to just ask my first question always because I am getting them on the PMR is you know like umm are you having any side effects from any of the medication just an open question and then they can start talking and hopefully by that time I have set up and ready to go with the first drug"

F3.2.C72 "if the patient is knowledgeable and tells you I take digoxin for my heart failure, I take warfarin for my AF and that , you just know who you are dealing with and if you if the patient doesn't know what's going on then you know what to do."

F3.3.C73: "I always ask them if they have heard of the service before, are they aware of it and I tell them the various names there might be for it, medicines check-up, medicine use review, medicines MOT even or whatever other chains or independents call them and if they are familiar with it and know what's about that how I always start off with every medicine use review that I have done just to find out to make sure they are happy for what they are about to come inside for"

F1.4.C113: "do you have any problems with the medication and side effects and then I go through each drug"

F2.1.C98: "sometimes you use example of pervious MURs like I said one of the patients I saw, customer I saw was using steroids on her face continuously and I tell them that's the sort of thing we spot that's the sort of thing you shouldn't be doing and other one which used to take her nitrate long acting because she thought it wasn't working for no reasons."

3.2 Rapport Building

Description

Pharmacists had different approaches in building rapport with patients. Some negotiated with patients about how to take their medicines while others used the MUR form as a platform to ask the patient. The type of question they asked the patient reflected the amount of information the patient replied with, for example asking an open questions will give you more information. Pharmacists felt they should make patients feel comfortable and making the MUR

not too official by joking and small talk. Some pharmacists felt it's important to use patient language. Pharmacists try to pitch the language according to the level of the patient's understanding but they first investigate the patient's intellect. Pharmacists felt they should not treat patients as if they know everything about their medicines. Some pharmacist also said it was challenging to build a full picture of why the patient is on a specific medicines because they didn't have the notes of the patient.

Quotations

F1.5.C29: "it's more technique isn't it really and fairly open style so that you do get that information fairly open style so that you do get that information" (this was quote is from a discussion about the best way to get patients to speak)

F2.3.C102: "so I think that's how you get them to talk when you ask them a lot of open questions and then you try hone in on what it is you actually need to know about"

F3.3.C79: "that's why it's important to ask open questions because some patients don't include things like vitamins and minerals and supplements and things like that unless you mention it to them they will not dreamt of telling you about the fact they are taking all those"

F1.8.C115: "I think we should make them feel comfortable so they can talk to you, try to not make it too official, have a joke sit down just start you know small things"

F1.8.C133: "I think we should speak patient language and be very, don't use big words try to say as simple as possible for the understanding"

F2.1.C106: "you make them, you make it interesting, you make them laugh, you explain how the drug works on the kidney, open blood vessel"

F2.2.C119: "yes I try to get the screen so the patient can see it. Those at the doctor surgery they sit there with the screen in front of you talking to the screen. (Pharmacist 3: No I angle it so we both see it) and we both look at it and that's a great way of moving on because you got a list of drugs and you can go down to the next one and then moves it on and then you end up finishing on time with a good results."

F1.3.C28: "so you need to ask a few questions and just be aware of what comes back as to where to pitch your questions really"

3.3 Ending Consultations

Description

Pharmacists reported different approaches they ended a conversation with the patient or an MUR. There wasn't a standardised way as they felt each patient was different. Some pharmacists used a member of staff to end consultations with patients who are taking too long by fake phone calls and staff knocking on the door. Majority of pharmacists reported that the consultation with the patient usually ended naturally by summarising and writing action plan and provided a way back to speak to the pharmacist if they had any question.

Quotations

F3.4.C70: "they do the opposite way for me as well if I am stuck in a consultation room long they call from mobile to the pharmacy phone"

F1.8.C116: "usually if I am there more than ten minutes one of the girls will come and say Pharmacist B can you please, you know, if it's ok then I say its fine but you know when they come in I just shake they know its fine. The girls they know when to come in"

F2.3.C110: "you summarise everything you have talked about"

F2.1.C113: "I personally would summarise different points"

F2.5.C131: "closing thing is leave the door open, any problem or anything you know where to come back you know where to find me, you know the simple things like that"

F4.2.C65: "I press the print button, laugh, and I say I will go get your paper work now. It's quite easy, I mean we have made an action plan, we've written things down and I say do you have any other questions good then I'll just print it then I go and get it."

F4.1.C68: "I think it depends on the patient and the situation, normally my girls at the pharmacy know that I am too long at the consultation room, they just pretend there is a fake phone call, or someone is waiting for me at the pharmacy."

3.4 Other themes regarding consultation approaches

3.4.1 Consultation

Description

There was not a standardised approach pharmacists used when speaking to patients. For example some pharmacists used the MUR form as way to design the consultation while others just went inside the room and spoke to the patients.

Quotations

F1.5.C33: "well it's your own technique that you develop over a period of time"

F2.3.C63: "You know and you're kind of so homing on what you go to tell them about this drug that you might forget to listen to their concerns and ideas"

3.4.2 Don't give too much information to patients

Description

Some pharmacist felt that they shouldn't give too much information to the patients and using references to reassure patients who were in doubt. Some pharmacists also felt it was important to not repeat information to the patient and hear the expectations of the patients before starting a consultation.

Quotations

F1.8.C134: "if you give more than 3 information to patient they forget the first one and if you give 4 they forget the second one. So you have to be careful, you know, how many things you tell them. I usually go through the most important things with them they really need to know and ask them if they want to know more because otherwise it's just a waste of their time and your time because you can't really give them too many information, they forget. That's my experience."

F2.5.C72: "I think sometimes we repeat information as well unfortunately pharmacists, the stuff we are telling them is on the label, Metronidazole, do take with alcohol, if he reads the label, it will tell him the same thing."

F2.5.C51: "at the same time as pharmacist if they had it three times there is no need to ask or give this information, so when the dispenser is dispensing, what happens in some places they say new item, they highlighted it very clear, that helps really"

F2.2.C58: "I usually pull out a BNF or something like that and say look, give him guidance."

F2.3.C61: "I think it's about hearing their ideas and their expectations as well, listening to that and seeing what they want out of the consultation so sometimes it's about you know I am trying to think of an example, but it's about what do they want to hear, it's all very well if they ask you to take with food or not and so on but sometimes if you try to get out of them what they want to hear and what they want to get from you"

F4.2.C26: "That is quite interesting because I worked in an another branch last week and I actually did what I normally do when I go out in my own shop and I was saying are these your regular medicines, are you happy with them, do you need a chance to talk to me, and they look at me as if I was coming from..."

F4.3.C55: "you are probably best give them the positives of you know what they can gain from taking this regularly and why they are taking it and hope they go away with a bit more information perhaps a bit more of an idea of why they should take that properly rather than as they are doing"

3.5 Consultation barriers in conversations

Description

Language can be a barrier in the consultations between patients and pharmacists. Some pharmacist felt that patients don't listen to the pharmacist. Some pharmacist find working with elderly can be challenging with because it's difficult to extract information and provide information they can understand.

Quotations

F1.7.C90: "I find the language as well for me it's quite it can be a bit of a challenge because sometimes they don't understand the accent or understand what you're saying"

F2.4.C45: "The regular challenge that I face is they don't listen, really. You say something and they come they walk through that door with a picture in their mind say their name especially if it's their surname not the first name and get that medication and then go home, that's it, that's the thing they have in their mind."

F2.1.C47: "I think sometimes, my biggest challenge is to talk to very old people because you really don't know what they can understand and what they can't and that's why I stopped doing MURs with them"

F1 .1.C144: "Some elderly patients cannot read or write"

F4.2.C29: "you know I have heard my Norfolk patients say, don't understand that foreign pharmacist..."

3.6 Consultation skills Training

Description

Some pharmacist felt having consultation skills training helps in leading a consultation in different situations. The overall participants have not received any formal consultation skills training. The training provided in the online MUR training does not cover the consultation skills training. Some pharmacist felt that consultation skills training should be provided to newly qualified pharmacists and not experienced pharmacists. However, some pharmacists seek more consultation skills training but as a general message more consultation training was not welcomed by the overall participants.

Quotations

F1 .6.C120: "I am an independent prescriber so in that training you learn consultation skills for different types of consultation skills and then you develop the one that you feel comfortable for you and can apply in different situations but I find that quite interesting you know how, you sort of analyse how a GP leads their consultation"

.....Discussion.....

F1.6.C120 (42:00): most pharmacist do study communication skills as well

F1.4.C121 "I think most of us have had some you know knowledge or training on making open questions closed questions, I think most...."

F1 .3.C122: "Not particularly formal training."

F1.4.C123: "yes, not formal"

F1.3.124a: "it certainly was not covered in our degree course."

F1.4.124b "oh no no, definitely not"

..... End of Discussion.....

F1.4.C124: "on some of the workshops we've attended, you know some CPPE workshops you do get little a bit information on questioning techniques but not a whole formal session"

F2.4.C123: "when I learnt, I mean when I was training for this MUR, it was only an online test so it is about MURs rather than technique."

F2.4.C125: "perhaps the newly qualified pharmacists might find it useful because I still remember like when I was qualifying I was a bit anxious, what to do, how to talk about, how

do I open up, how do I close so perhaps newly qualified pharmacist if they could have this training before accreditation."

F3.6.C94: "I didn't have any consultation skills training what's so ever, therefore I don't do any MURs"

F3.2.C99: "maybe you can develop or recommend some kind of PCT related, get some actors and do some consultation skills training for pharmacists in the area, it will be useful"

F4.2.C75: "oh yes in my university days, perhaps I didn't see a patient for the whole 3 years I went to university. I went to university for 3 years."

F4.2.C79: "I don't think I need any more training as such because I've developed my own way of doing it and it works, people like it I think. It's quite interesting, it might be interesting to have an MUR from two different people on the same person and them to say which one they prefer, I don't know that might be quite interesting a bit of interesting research."

Having read this information is there any other comments you would like to add?

4 Relationships

4.5 Pharmacist-Patient relationship

Description

Pharmacists felt building a good relationship with the patient as an important aspect when communicating with patients. It was also mentioned that it should be a professional relationship and not too personal. Some pharmacist also felt that patients don't disclose all the information because they don't see the reason why the pharmacists need all this information. It was also reported having a regular pharmacist is an advantage to building a good patient relationship.

Some pharmacist also stated keeping cool and professional with hostile patient can win their confidence over time. Some pharmacists also felt they acted like gatekeepers for GPs at times. Patients see the pharmacist more than the doctors therefore have better relationships. Some pharmacist found it challenging to convince patients that they are working for their interest.

Pharmacists build trust from the patient by being honest with patients and trust was an important part in having a good relationship with the patient. Some pharmacists think the title makes patients trust them while others felt trust can be built by providing excellent customer services. Confidentiality is important in building trust with patients. Some patients perceive pharmacists to know more than doctors.

Quotations

F4.2.C21: "yeah you do try and keep it professional, you can't get too personal and if you allow them to think of you as being too much of their friend rather than your then their sort of professional advisor on something"

F1.3.C35: "They never tell you everything"

F1 .1.C93: "I don't think they deliberately want to hold information but they don't see it as relevant to what you're talking about, it's not that they don't want to tell you but it's just they don't think there is any reason to tell you"

F1 .1.C41: "..... if you actually had a conversation with the patient one week and you actually follow it up with a question or a comment the following week when they next come in to want to talk to a pharmacist they are much more relaxed and you will find the process is easier (Pharmacist 4 says: yea...) so that is good when you actually got a community pharmacy where you have the same person there perhaps on regular day of the week so that they know they can see the same person and you're not starting right in the beginning each time and we have an opportunity on progressing your relationship in different fields and they will come back more and more to ask a different enquires be it medication be it health, be it for a child, mother"

F1 .1.C42: "got a community pharmacy where you have the same person there perhaps on regular day of the week so that they know they can see the same person and you're not starting right in the beginning each time"

F1 .6.C94: "Sometimes they experience as patients as having a fear that you will make some intervention that will have a bad effect on their medicines"

F2.4.C11: "patients they tend you know but apart from discussing about their medication they do sometimes discuss about their personal life so that gives me an idea that everybody has their own story"

F2.1.C38: "They often say you know more than a doc" (Pharmacist was explaining that some patients trust the pharmacist)

F2.2.C36: "long as you remain cool calm and professional, over time they realise that you are there to be trusted and win their confidence and I find that confidence is much stronger than somebody else who is easily"

F3.5.C11: "probably we put this extra thing that they feel and you can click ~~sometimes they~~ can tell you things they don't tell to the doctor or to any people"

F3.2.C17: "gate for referring people to GPs, I often get people, you tell them, ~~they~~ look to you to tell them they need to go see a doctor"

F3.5.C22: "they just tell you things that they said that they have never told that to the doctor and you are like it doesn't make me your friend but I understand that probably you are releasing more information, so people need to be listened and the pharmacist is an ideal person to listen"

F3.1.C27: "...if you're the same pharmacist in the same store all the time, you can see the patient 2 to 3 times a week whilst they see their doctor every time they got a problem but I think they trust us a lot more because they do see us on a regular basis..."

F3.3.C51: "I think the biggest challenge I think is trying to get across patient that you are always working in their interest"

F2.1.C13: "They trust our judgment you see, it doesn't have to be about drugs you see"

F2.1.C21: "Honesty, it's like with anybody really. if you are not honest with your partner, your children, your family, you wouldn't rip off your own family why would you rip of your customers and then lose their trust because you are there for the long term"

F2.5.C22: "I think our title of being a pharmacist on itself points to trusts without working hard for it just being a pharmacist I think or being a doctor or being sort of.. There is that trust in that name or that position"

F2.4.C24: "I think another way of building trust could be by providing excellent customer service that is suitable tailored for individual patient."

F2.4.C31: "in my opinion we need to build the trust and it does not come just like that"

F2.4.C42: "I think sometimes you can earn trust from the patients by maintaining confidentiality and not talking everything you can over the counter"

F4.3.C23: "from the patient's point of view, they see someone they recognise on a regular basis surely that, I know personally if I was going to a place to where I was asking advice, if it was the same person each time assuming you were getting good advice, if it was the same person each time I think that would be easier."

4.6 Doctor-Patient relationship

Description

Some pharmacists felt that doctors did not spend enough time counselling patients. Pharmacists also reported that some patients had a tendency to order medicines even when they didn't take them or need them to limit any suspicion of poor compliance.

Quotations

F2.1.C55: "Again sometimes they don't listen, he said the doctor told me and I trust him, that's what he told me. So sometimes the trust they have in their doctor is higher than in the pharmacist"

F2.4.C75: "I think sometimes doctors don't spend enough time with the patients, while initiating a new drug for example. Yesterday I was doing an MUR with a patient and the patient hasn't been taking Alendronic Acid for the past 6 months..."

F1.7.C57: "and what I also realised that sometimes you get someone come in and say my doctor said this and that or I need about it or what do you think about it. They are just trying to find out if you are contraindica you got contraindicating information and therefore in that case it quite hard to know how to respond to them person I find. So yes...."

F3.5.C26: "They tell you the doctor hasn't got time, they tell you the doctor hasn't got time for them, the doctor says that."

F4.2.C59: "We are trying to eliminate the stash in the cupboard but it still happens and I have had people say to me I don't want to upset the doctor for not having my medicines"

F4.3.C60: "They will order them purely for not to arouse suspicion."

4.3 Pharmacist-Doctor relationship

Description

Pharmacist felt it was important to confirm information with the GP as sometimes patient may have misunderstood the instructions of the GP. Some pharmacists also reported that it was difficult to confirm changes with doctors especially if the medicine was initiated at hospital. Some pharmacist felt it would be useful if they had access to patient notes to learn about why the patient was taking the specific medicines.

Quotations

F1.4.C62: "Sometimes we have had to ring the doctor did he actually say that because I am thinking this is probably not the case , ring the surgery and the doctor says no I didn't actually say that"

"I tried to explain and she said you think I am stupid, I know what doctor told me, my god now call the hospital, the doctor from the hospital changed it to 4 but her own doctor gave her 2 so I was talking to these 2 doctors"

F2.1.C82: "the only thing I don't like about MURs is you don't know what the doctor is treating the patient for, you only guess from the drugs they prescribing and really you can't challenge"

it, you can't challenge its being prescribed for the purpose of not. We just check can you swallow, is it irritating your stomach?

Having read this information is there any other comments you would like to add?

Appendix 2 – Consultation skills questionnaire study

**Appendix 2.1 – Approval letter from
Ethics Committee**



Mr Ahmed Al-Nagar
Medicines Management Research Group
School of Pharmacy
University of East Anglia
Norwich Research Park
Norwich
NR4 7TJ

Research & Enterprise Services
West Office (Science Building)
University of East Anglia
Norwich Research Park
Norwich, NR4 7TJ

Telephone: +44 (0) 1603 591574
Fax: 01603 591550
Email: fmh.ethics@uea.ac.uk

Web: www.uea.ac.uk/researchandenterprises

9th February 2012

Dear Mr Al-Nagar

Project title: Consultation skills training of community pharmacists: A scoping exercise
Reference: 2011/12 - 18

The resubmission of your above proposal has been considered by the FMH Ethics Committee at their meeting on 26th January 2012 and we can confirm that your proposal has been approved.

Please could you ensure that any further amendments to either the protocol or documents submitted are notified to us in advance and also that any adverse events which occur during your project are reported to the Committee. Please could you also arrange to send us a report once your project is completed.

The Committee would like to wish you good luck with your project

Yours sincerely

A handwritten signature in blue ink that reads 'Yvonne Kirkham'. The signature is written in a cursive style.

Yvonne Kirkham
Project Officer

Appendix 2.2 – Initial Email

E-mail Title: Research investigating consultation skills training of community pharmacists

Dear Pharmacist,

We are writing to invite you to complete a questionnaire which aims to determine the consultation skills training community pharmacists have received on their undergraduate degree, pre-registration program and during the post registration period. Over the past four decades the role and responsibility of the pharmacist has evolved from focusing on medication dispensing and compounding to include the provision of patient information, education, and clinical care services. There is little or no published research to determine the extent of consultation skills training that community pharmacists have received at the different stages of their career. We hope that you can help us build a picture of the training that was provided at the different stages of a pharmacist's career, and how valuable those sessions were. This questionnaire is part of a PhD project aimed at developing consultation skills of community pharmacists. The Centre for Pharmacy Postgraduate Education (CPPE) has reviewed and kindly agreed to send this questionnaire to some of its members by a randomised selection. The results will also be used by CPPE to help in future planning of educational events and training. The questionnaire is designed to be completed by pharmacists who currently practice in community and should take between 5-10 minutes to complete. All identifiable data will remain confidential and be removed prior to analysis.

Please click on the link below to complete the questionnaire:

<http://www.surveymonkey.com/s/consultationskillscommunitypharmacists>

All participants who complete the questionnaire will be eligible to enter a prize draw for one of three £100 Marks and Spencer's vouchers. Details will be needed in order to choose the winners; any contact details entered will be deleted once the winners have been randomly selected.

In 2 weeks time you will receive a reminder email, if you do not want to receive the reminder email or have any other questions or concerns contact me via email a.al-nagar@uea.ac.uk.

Thank you for taking the time to help us with this research.

Yours Faithfully,

Ahmed Al-Nagar

Supervisor: Dr. James Desborough j.desborough@uea.ac.uk

Medicines Management Research Group

School of Pharmacy

University of East Anglia

Norwich Research Park

Norwich NR4 7TJ

Appendix 2.3 – Reminder Email

Title: Research investigating consultation skills training of community pharmacists

Dear Pharmacist,

Two weeks ago we invited you to complete a questionnaire regarding consultation skills training of community pharmacists. If you have already completed this questionnaire please ignore the remainder of this e-mail.

We are writing to invite you to complete a questionnaire which aims to determine the consultation skills training community pharmacists have received on their undergraduate degree, pre-registration program and during the post registration period. Over the past four decades the role and responsibility of the pharmacist has evolved from focusing on medication dispensing and compounding to include the provision of patient information, education, and clinical care services. . There is little or no published research to determine the extent of consultation skills training that community pharmacists have received at the different stages of their career. We hope that you can help us build a picture of the training that was provided at the different stages of a pharmacist's career, and how valuable those sessions were. This questionnaire is part of a PhD project aimed at developing consultation skills of community pharmacists. The Centre for Pharmacy Postgraduate Education (CPPE) has reviewed and kindly agreed to send this questionnaire to some of its members by a randomised selection. The results will also be used by CPPE to help in future planning of educational events and training. The questionnaire is designed to be completed by pharmacists who currently practice in community and should take

between 5-10 minutes to complete. All identifiable data will remain confidential and be removed prior to analysis.

Please click on the link below to complete the questionnaire:

<http://www.surveymonkey.com/s/consultationskillscommunitypharmacists>

All participants who complete the questionnaire will be eligible to enter a prize draw for one of three £100 Marks and Spencer's vouchers. Details will be needed in order to choose the winners; any contact details entered will be deleted once the winners have been randomly selected.

If you have any questions, please contact me at:

a.al-nagar@uea.ac.uk

Thank you for taking the time to help us with this research.

Yours Faithfully,

Ahmed Al-Nagar

Supervisor: Dr. James Desborough j.desborough@uea.ac.uk

Medicines Management Research Group

School of Pharmacy

University of East Anglia

Norwich Research Park

Norwich NR4 7TJ

**Appendix 2.4 – Questionnaire and
questions logic**

Introduction

This is a questionnaire designed for community pharmacists. It is a joint project between University of East Anglia (UEA) and Centre for Pharmacy Postgraduate Education (CPPE). The aim is to determine the consultation skills training community pharmacists have received on their undergraduate degree, pre-registration program and during the post registration period. Over the past four decades the role and responsibility of the pharmacist has evolved from focusing on medication dispensing and compounding to include the provision of patient information, education, and clinical care services. There is little or no published research to determine the extent of consultation skills training that community pharmacists have received at the different stages of their career. We hope that you can help us build a picture of the training that was provided at the different stages of a pharmacist's career, and how valuable those sessions were.

All answers will remain confidential and all participants who complete the questionnaire will be eligible to enter a prize draw for £100 Marks and Spencer's vouchers.

(This questionnaire is designed to take about 5-10 minutes)

Section 1: Some Information About You

1. Gender

- Male
 Female

2. How old are you (years)?

- Under 25
 26-35
 36-45
 46-55
 56-65
 Over 65

*3. Do you currently work in community pharmacy?

- Yes
 No

Question Logic for question 3:

If yes is chosen then will go to question 4, if no then will go to question 45

Section 1: Some Information About You

*4. How many years have you been qualified?

Years

*5. Which region of the UK do you work in?

Please choose below

Region

***6. Which of the following type of community pharmacy do you work in?**

(Please tick all that apply)

- Self Employed (Locum)
- Independent Pharmacy
- Small Multiple (2 to 19 pharmacies)
- Large Multiple (20 and more pharmacies)

***7. Do you currently work in any other sector(s) in pharmacy?**

- Yes
- No

Question Logic for question 7:

If yes will go to question 8, if no will go to question 10

Section 1: Some Information About You

***8. How much of your working time do you spend as a**
(Please insert a number as an estimated percentage of your average working week)

***9. Please indicate which other sector(s) you work in?**

(Please tick all that apply)

- Hospital pharmacist
- Primary care pharmacist
- Industrial pharmacist
- Regulatory pharmacist
- Academic pharmacist
- Royal Army Medical Corps
- Veterinary Pharmacist
- Other (please specify)

Section 1: Some Information About You

***10. Are you accredited to provide Medicine Use Reviews (MURs)?**

- Yes
- No

***11. In your last standard week at work, how many patient consultations (one to one discussions in the consultation room e.g. MUR, NMS, Emergency contraception) did you conduct?**

***12. Which university did you obtain your undergraduate pharmacy degree from?**

- Aston University
- Bath University
- Cardiff University
- De Montfort University
- London School of Pharmacy
- Keele University
- Kingston University
- King's College London
- Medway School of Pharmacy (Kent)
- Queen's University (Belfast)
- Robert Gordon University (Aberdeen)
- University of Bradford
- University of Brighton
- University of Central Lancashire
- University of East Anglia
- University of Hertfordshire (Hatfield)
- University of Manchester
- University of Nottingham
- University of Portsmouth
- University of Reading
- University of Strathclyde (Glasgow)
- University of Sunderland
- University of Wolverhampton
- Abroad

Question Logic for question 12:

If any UK University is chosen then will go to question 13, if abroad is chosen then will go to question 15

Section 1: Some Information About You

***13. What undergraduate pharmacy degree do you hold?**

- MPharm
- BPharm
- BSc (Pharmacy)

Other (please specify)

14. Do you hold any additional qualifications?

- PhD
- Pharmacy Postgraduate Diploma
- Pharmacy Postgraduate Certificate
- MSc
- BSc
- BA
- Other (please specify)

Question Logic for question 14:

The next question then is 18, even if none of the choices is ticked

Section 1: Some Information About You

***15. From which country did you receive your undergraduate pharmacy degree?**

***16. Did you need to complete the Overseas Pharmacist Applied Programme (OSPAP)?**

- Yes
- No

17. Do you hold any additional qualifications?

- PhD
- Pharmacy Postgraduate Diploma
- Pharmacy Postgraduate Certificate
- MSc
- BSc
- BA
- Other (please specify)

Section 2: Communication Skills in Pharmacy Undergraduate Degree

***18. Do you remember learning about communication skills during your pharmacy undergraduate degree?**

- Yes
- No

Question Logic for question 18:

If yes is chosen then will go to question 19, if no then will got to

Section 2: Communication Skills in Pharmacy Undergraduate Degree

***19. Do you remember receiving knowledge based teaching about communication skills (e.g. lectures)?**

- Yes
- No

Question Logic for question 19:

If yes is chosen then will go to question 20, if no then will got to question 21

Section 2: Communication Skills in Pharmacy Undergraduate Degree

***20. What information was covered in knowledge based teaching (e.g. lectures) ?
(Please tick all that apply)**

- I don't remember
- Basic communication skills (e.g. use of open and closed questions)
- Patient counselling (e.g. when a new medicine is dispensed)
- Responding to symptoms
- Drug History Taking
- Taking a patient-centred approach
- Addressing challenges within the consultation
- Models of counselling techniques (e.g. Cambridge-Calgary model)
- Dealing with difficult discussions
- Advanced communication skills (e.g. Motivational interviewing)
- Other (please specify)

Section 2: Communication Skills in Pharmacy Undergraduate Degree

***21. Did you have a chance to practice your consultation skills (e.g. workshop/seminar)?**

- Yes
- No

Question Logic for question 21:

If yes is chosen then will go to question 22, if no then will go to question 23

Section 2: Communication Skills in Pharmacy Undergraduate Degree

***22. In what format(s) did you practice your consultation skills?**

(Please tick all that apply)

- I don't remember
- Written task (e.g. describe how you can consult a patient?)
- Role play with peers
- Role play with patient actors
- E-learning (e.g. patient simulators)
- Watching media (e.g. short videos)
- Other (please specify)

Section 2: Communication Skills in Pharmacy Undergraduate Degree

***23. Were you assessed on your consultation skills?**

- Yes
- No

Question Logic for question 23:

If yes is chosen then will go to question 23, if no then will go to question 25

Section 2: Communication Skills in Pharmacy Undergraduate Degree

***24. How was this assessment structured?**

(Please tick all that apply)

- I don't remember
- Objective Structured Clinical Examination (OSCE)
- Coursework/Written Exam
- Peer Marking
- Staff Feedback
- Collection of evidence in portfolio
- Assessed role play
- Other (please specify)

Section 2: Communication Skills in Pharmacy Undergraduate Degree

***25. How well do you feel the pharmacy undergraduate degree prepared you to conduct patient consultations as a pharmacist?**

(1=Not prepared, 5= Fully prepared)

 1 2 3 4 5

Section 3: Consultation Skills in Pre-registration Placement

***26. Do you remember receiving any consultation skills training while completing your pre-registration placement?**

 Yes No

Question Logic for question 26:

If yes is chosen then will go to question 27, if no then will got to question 31

Section 3: Consultation Skills in Pre-

***27. What methods were used to develop your consultation skills in your pre-registration placement ?**

(Please tick all that apply)

I don't remember

Lectures

Workshops

Practised with real patients (observed by tutor)

Role play with patient actors

Peer role plays

E-learning

Video recording

Watched media (e.g. short videos)

Other (please specify)

***28. What information was covered in your pre-registration year?**

(Please tick all that apply)

- I don't remember
- Basic communication skills (e.g. use of open and closed questions)
- Patient counselling (e.g. when a new medicine is dispensed)
- Responding to symptoms
- Drug History Taking
- Taking a patient-centred approach
- Addressing challenges within the consultation
- Models of counselling techniques (e.g. Cambridge-Calgary model)
- Dealing with difficult discussions
- Advanced communication skills (e.g. Motivational Interviewing)
- Other (please specify)

***29. Do you remember being assessed in consultation skills?**

- Yes
- No

Question Logic for question 29:

If yes is chosen then will go to question 30, if no then will go to question 31

Section 3: Consultation Skills in Pre-registration

***30. How was this assessment structured?**

- I don't remember
- Objective Structured Clinical Examination (OSCE)
- Coursework/Written Exam
- Peer Marking
- Staff Feedback
- Collection of evidence in portfolio
- Assessed role play
- Other (please specify)

Section 3: Consultation Skills in Pre-registration Placement

***31. How well do you feel the pre-reg year prepared you to conduct patient consultations as a pharmacist?**

(1=Not prepared, 5= Fully prepared)

 1 2 3 4 5

Section 4: Consultation Skills Since You Qualified as a Pharmacist

***32. Have you attended any formal consultation skills training since registration as a pharmacist?**

 Yes No

Question Logic for question 32:

If yes is chosen then will go to question 33, if no then will go to question 38

Section 4: Consultation Skills Since You Qualified as a Pharmacist

33. Was any of this training received as an element of another learning topic (e.g. clinical training)?

 Yes No

***34. How was the training structured?**

(Please tick all that apply)

 I don't remember Defined reading Lectures E-learning Workshops/Seminars Practical Experience Distance learning Other, please state

***37. How well do you feel the training courses you participated in after you qualified prepared you to conduct patient consultations?**

(1=Not prepared, 5= Fully prepared)

 1 2 3 4 5

Section 5: Your Views on Developing Consultation Skills

***38. How important do you rate consultation skills in your role as a pharmacist?**

(1=Not important, 5= Very important)

 1 2 3 4 5

***39. How confident do you feel about your current consultation skills?**

(1=Not confident, 5= Fully confident)

 1 2 3 4 5

***40. Would you like to receive more training in consultation skills?**

 Yes No

Question Logic for question 40:

If yes is chosen then will go to question 41, if no

Section 6: Further Consultation Skills Training

***41. If you would like more training in consultation skills, what content would you like included?**

(Please tick all that apply)

- Basic communication skills (e.g. use of open and closed questions)
- Patient counselling (e.g. when a new medicine is dispensed)
- Responding to symptoms
- Drug History Taking
- Taking a patient-centred approach
- Addressing challenges within the consultation (e.g. how to end a consultation)
- Models of counselling techniques (e.g. Cambridge-Calgary model)
- Dealing with difficult discussions (e.g. discussions of an intimate nature)
- Advanced communication skills (e.g. Motivational interviewing)
- Other (please specify)

***42. If you would like more consultation skills training what style(s) would you prefer?**

(Tick all that apply)

- Written format
- E-lecture format
- E-learning programme
- Webinar
- Face to face
- Lectures (Tutor led)
- Workshop (Tutor led)
- Workshop (Peer led)
- Role play (e.g. practical scenarios)
- Use of 'real' patients
- Use of actors as patients
- Use of video recordings for feedback
- Other (please specify)

***43. How much do you agree with each of the following statements?**

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
I would like more information about consultation skills theory in the form of reading	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would like more practice in a workshop setting	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would like to be observed speaking to patients and given feedback	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would like my skills to be formally observed and assessed	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

44. If you have any additional comments you would like to add in relation to this research, please add them below:

Question Logic for question 44:

After this question the survey will be directed to question 46

Thank you for completing this questionnaire. Since this research is focusing on pharmacists who are currently working in community pharmacy, we do not require any further information.

Thank you for your time.

45. If you would like to be entered into a prize draw to win a £100 M&S voucher please provide the following information

Name:

Address 1:

Address 2:

City/Town:

ZIP/Postal Code:

Email Address:

Question Logic for question 45:

After this question the

Thank you for your time and for filling in this survey.

Appendix 2.5 – Models that are not Valid

Methods of assessing consultation skills in Undergraduate

A backward elimination ordinal logistic model was used to investigate whether the assessment type in undergraduate level had an impact on the preparedness of participants to hold consultations with patients. The model included all the options available to participants. Table below shows the outcome of the investigation.

Assessment Type	Odds Ratio	Std. Err.	P	[95% Conf. Interval]	
Collection of evidence in portfolio	2.555	1.231	0.052	0.994	6.569
Staff Feedback	1.680	0.532	0.101	0.903	3.126
Objective Structured Clinical Examination (OSCE)	1.541	0.493	0.177	0.823	2.885
I don't remember	2.548	1.530	0.119	0.785	8.269

Note: Pseudo $R^2 = 0.2479$, Approximate LRT of proportionality of odds across response categories, 0.0239

Summary of ordered logistic regression model to identify if the type of CS assessment undertaken at undergraduate influence reported preparedness to hold consultations with patients.

The approximate LRT of proportionality is significant therefore any results from this model should be used with caution. None of the variables had a statistically significant P value. The results can only suggest that participants who had OSCEs, staff feedback and collection of evidence in a portfolio may have helped to feel more prepared to hold consultation with patients.

Methods of practicing consultation skills and preparedness to hold consultation at pre-registration level

Training structure	Odds Ratio	Std. Err.	P	[95% Conf. Interval]	
Practised with real patients (observed)	2.662	0.735	0.000*	1.550	4.572
Lectures	2.393	0.834	0.012*	1.209	4.737
Video recording	2.305	0.994	0.053	0.990	5.366
Workshops	2.035	0.547	0.008*	1.202	3.448
Peer role plays	1.413	0.376	0.194	0.839	2.379

Note: Pseudo R²= 0.0765, Approximate LRT of proportionality of odds across response categories, p= 0. 0.0091, *P value = <0.05

Summary of ordered logistic regression model if the way CS training was structured at preregistration influence reported preparedness to hold consultations with patients

The approximate LRT of proportionality is significant therefore any results from this model should be used with caution. Participants who practiced with real patients had the highest odds ratio for feeling reading to hold consultations.

Structure of CS training at post-registration level

A backward elimination ordinal logistic model was used to investigate whether the training structure at post-registration level had an impact on the preparedness of participants to hold consultations with patients. The model included all the options available to participants. Table below shows the outcome of the investigation.

Training structure	Odds Ratio	Std. Err.	P	[95% Conf. Interval]	
E-learning	3.525	1.392	0.001*	1.626	7.643
Defined reading	2.546	0.841	0.005*	1.333	4.863
Practical experience	1.672	0.405	0.034*	1.040	2.689
Lectures	1.624	0.448	0.079	0.946	2.788
I don't remember	0.378	0.196	0.060	0.137	1.044

Note: Pseudo $R^2 = 0.0644$, Approximate LRT of proportionality of odds across response categories, $p = 0.0020$, *P value = < 0.05

Summary of ordered logistic regression model to identify if the way post-registration CS training was structured to influence reported preparedness to hold consultations with patients.

The approximate LRT of proportionality is significant therefore any results from this model should be used with caution. Defined reading, e-learning and practical experience are the only variables that had significant p value and showed to have a positive effect on the preparedness of participants to hold consultations with patients.

Providers of consultation skills training

A backward eliminating ordinal logistic model was used to investigate whether the provider of consultation skills at post-registration level had an impact on the preparedness of participants to hold consultations with patients. The model included all the options available to participants. Table below shows the outcome of the investigation.

Providers	Odds Ratio	Std. Err.	P	[95% Conf. Interval]	
University	5.439	1.768	0.000*	2.876	10.286
Employer	1.823	0.417	0.009*	1.164	2.854
Self-training	1.745	0.443	0.028*	1.060	2.870
Other	3.731	1.086	0.000*	2.108	6.601
I don't remember	0.454	0.258	0.164	0.149	1.381

Note: Pseudo $R^2= 0.0819$, Approximate LRT of proportionality of odds across response categories, $p= 0.0129$, *P value = <0.05

Summary of ordered logistic regression model to identify if the providers of CS training have an influence on reported preparedness to hold consultations with patients.

The approximate LRT of proportionality is significant therefore any results from this model should be used with caution. Participants who received the training at university had the highest odds ratio for being prepared to conduct patient consultations.

Factors that influence importance of consultation skills

Participants rated the importance of consultation skills for a pharmacist with a median (IQR) rating of 5 (5, 5) on a scale where 1 was not important and 5 was very important.

A backward elimination ordinal logistic regression model was used to investigate participant perception in the importance of consultation skills as the dependent variable with following independent variables:

1. Gender
2. Years in registration
3. Type of pharmacy
4. MUR accreditation
5. Any post graduate education
6. CST at undergraduate level
7. CST at pre-registration level
8. CST at post-registering level
9. Request for more CST
10. Reported confidence in CS

Table below includes the variables that had an overall significant influence on the reported importance of consultation skills.

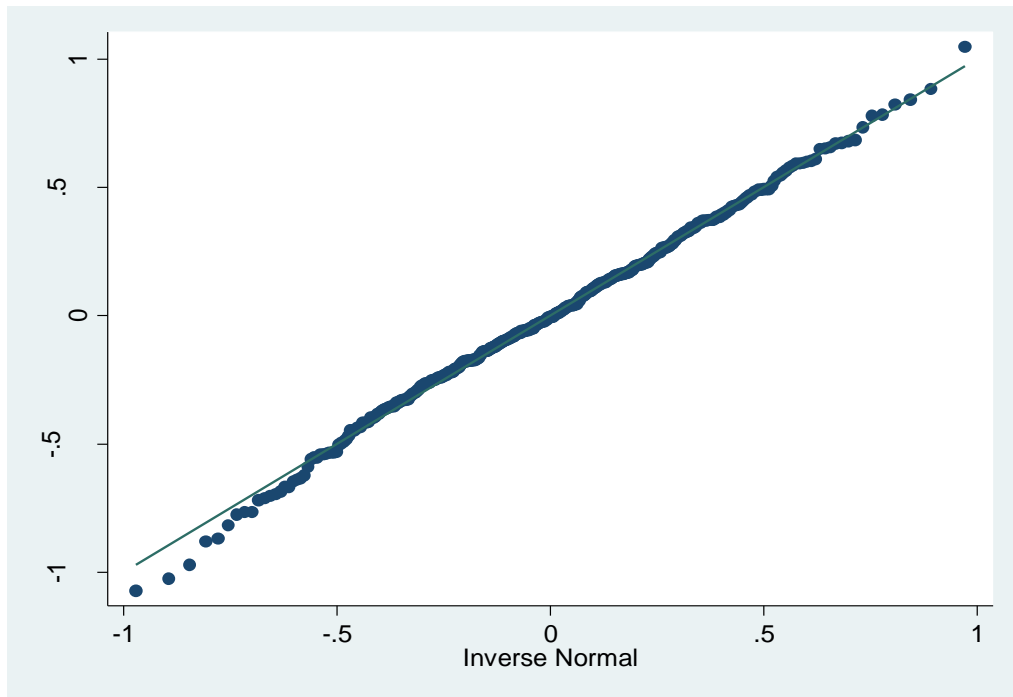
Independent Variables	Odds Ratio	Std. Err.	P	[95% Conf. Interval]	
Reported Confidence 1-2 in CS**	1				
Reported Confidence 4 in CS**	3.630	1.938	0.016*	1.275	10.335
Reported Confidence 5 in CS**	15.989	10.207	0.000*	4.575	55.877
More CST*** Requested	1.938	0.532	0.016*	1.132	3.320
Type of Pharmacy- Large Multiple	1.434	0.339	0.128	0.902	2.279
Reported Confidence 3 in CS**	1.255	0.698	0.683	0.422	3.734
Sex – Male	0.636	0.156	0.065	0.393	1.029

Note: Pseudo R²= 0.0838, Approximate LRT of proportionality of odds across response categories, p= 0.0323, *P value = <0.05, CS**=Consultation Skills, CST***=consultation skills training.

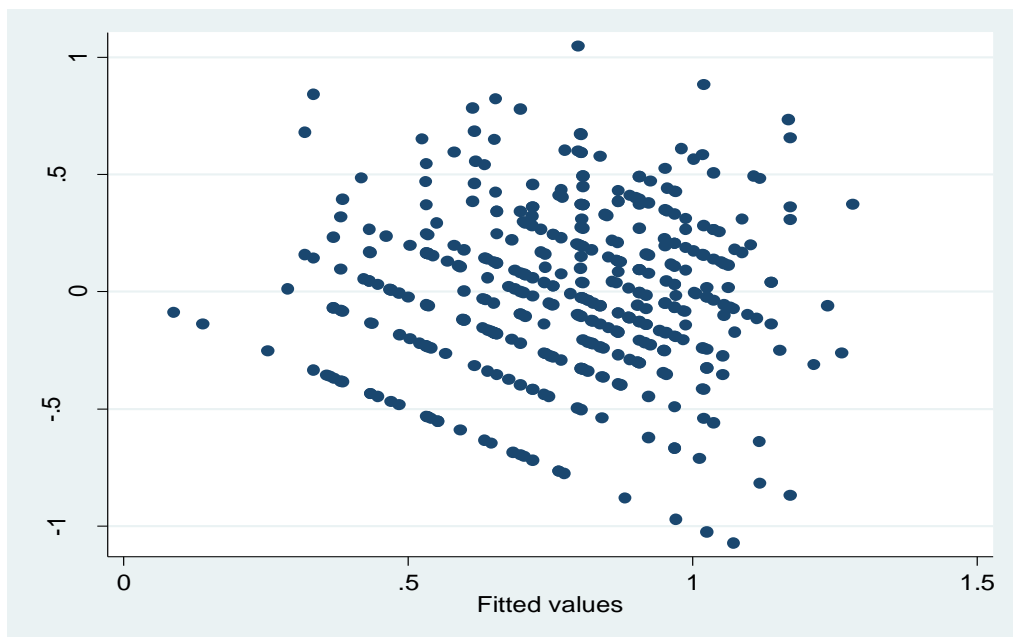
Summary of logistical regression model to identify factors that influence the reported importance of consultation skills

Participants who were confident in their consultation skills also rated the skills as important. Those who seek more consultation skills training felt consultation skills more important. The only variable that had a negative relationship with importance was being a male participant; female participants felt consultation skills almost twice as important then male participants. The approximate LRT of proportionality is significant therefore any results from this model should be used with caution.

Appendix 2.6 – QQ Plot and Scatter Plot



QQ Plot of Summary of linear regression model to identify factors that influence the reported number of consultations a pharmacist conducts in a standard week



Scatter Plot of Summary of linear regression model to identify factors that influence the reported number of consultations a pharmacist conducts in a standard week

Appendix 3 – Feasibility Study of Pharmacy Consultations

Appendix 3.1 – Ethical Approval

NRES Committee East of England - Cambridge East

The Old Chapel
Royal Standard Place
Nottingham
NG1 6FS

Telephone: 0115 8839425

Facsimile: 0115 8839294

29 April 2013

Mr Ahmed Al-Nagar

PhD Student

University of East Anglia

School of Pharmacy

Norwich Research Park

NR4 7TJ

Dear Mr Al-Nagar,

Study title: **A feasibility study investigating community pharmacy consultations**

REC reference: **13/EE/0082**

IRAS project ID: **123186**

Thank you for your letter. I can confirm the REC has received the documents listed below and that these comply with the approval conditions detailed in our letter dated 19 April 2013

Documents received

The documents received were as follows:

<i>Document</i>	<i>Version</i>	<i>Date</i>
Covering Letter		
Letter of invitation to participant	3	20 April 2013
Other: Patient reminder letter	2	20 April 2013
Other: Letter to patient decline patients	2	20 April 2013

Other: Letter to patients	3	20 April 2013
Other: MUR appointment letter		20 April 2013
Other: Letter to decline pharmacists	3	20 April 2013
Participant Consent Form: Pharmacist	4	20 April 2013
Participant Consent Form: Patient	4	20 April 2013
Participant Information Sheet: Pharmacist	3	20 April 2013
Participant Information Sheet: Patient	3	20 April 2013

Approved documents

The final list of approved documentation for the study is therefore as follows:

<i>Document</i>	<i>Version</i>	<i>Date</i>
Covering Letter		
Evidence of insurance or indemnity	Zurich Municipal	15 May 2012
Investigator CV	Ahmed Al-Nagar	07 February 2013
Investigator CV	Jane Skinner	14 December 2012
Investigator CV	James Desborough	
Letter from Sponsor	UEA	11 February 2013
Letter of invitation to pharmacist – Appendix 1	3	20 April 2013
Other: Pharmacist demographics – Appendix 2	1	09 February 2013
Other: No Opinion - refer for full review letter from South Birmingham REC		21 February 2013
Other: Withdrawal postcard: Appendix 5	1	09 February 2013
Other: MUR leaflet – Appendix 7		
Other: Reply Form: Appendix 11	2	08 April 2013
Other: Pharmacist Evaluation of Patient Consultation: Appendix 14	1	09 February 2013

Other: Patient reminder letter – Appendix 16	2	20 April 2013
Other: Letter to patient decline patients – Appendix 13	2	20 April 2013
Other: Letter to patients – appendix 10	3	20 April 2013
Other: MUR confirmation appointment letter – Appendix 9		20 April 2013
Other: Letter to decline pharmacists – appendix 6	3	20 April 2013
Participant Consent Form: Pharmacist – Appendix 3	4	20 April 2013
Participant Consent Form: Patient – appendix 12	4	20 April 2013
Participant Information Sheet: Pharmacist – Appendix 1	3	20 April 2013
Participant Information Sheet: Patient – Appendix 8	3	20 April 2013
Protocol	9	04 April 2013
Questionnaire: Pharmacist's Questionnaire – Appendix 14	1	09 February 2013
Questionnaire: Patient's Questionnaire – Appendix 15	1	09 February 2013
REC application	123186/41281 1/1/738	11 February 2013
Response to Request for Further Information		

You should ensure that the sponsor has a copy of the final documentation for the study. It is the sponsor's responsibility to ensure that the documentation is made available to R&D offices at all participating sites.



Health Research Authority
NRES Committee East of England - Cambridge East

The Old Chapel
Royal Standard Place
Nottingham
NG1 6FS

Telephone: 0115 8839425
Facsimile: 0115 8839294

19 April 2013

Mr Ahmed Al-Nagar
PhD Student
University of East Anglia
School of Pharmacy
Norwich Research Park
NR4 7TJ

Dear Mr Al-Nagar

Study title: A feasibility study investigating community pharmacy consultations
REC reference: 13/EE/0082
IRAS project ID: 123186

Thank you for your letter of 9 April 2013, responding to the Committee's request for further information on the above research and submitting revised documentation.

The further information has been considered on behalf of the Committee by the Chair.

We plan to publish your research summary wording for the above study on the NRES website, together with your contact details, unless you expressly withhold permission to do so. Publication will be no earlier than three months from the date of this favourable opinion letter. Should you wish to provide a substitute contact point, require further information, or wish to withhold permission to publish, please contact the Co-ordinator Miss Jessica Parfremont, NRESCommittee.EastofEngland-CambridgeCentral@nhs.net.

Confirmation of ethical opinion

On behalf of the Committee, I am pleased to confirm a favourable ethical opinion for the above research on the basis described in the application form, protocol and supporting documentation as revised, subject to the conditions specified below.

Ethical review of research sites

NHS sites

The favourable opinion applies to all NHS sites taking part in the study, subject to management

+

+

permission being obtained from the NHS/HSC R&D office prior to the start of the study (see "Conditions of the favourable opinion" below).

Non-NHS sites

Conditions of the favourable opinion

The favourable opinion is subject to the following conditions being met prior to the start of the study.

1. The invitation letter should explicitly state that the study is towards a PhD qualification.
2. The Pharmacist Participant Information Sheet should state that the Cambridge East REC has reviewed the study.
3. The Patient Participant Information Sheet should state that the Cambridge East REC has reviewed the study.
4. The word 'traveling' in the Patient Invitation Letter should be corrected to 'travelling'.
5. The Project mobile number should be given in both Participant Information Sheets.

You should notify the REC in writing once all conditions have been met (except for site approvals from host organisations) and provide copies of any revised documentation with updated version numbers. The REC will acknowledge receipt and provide a final list of the approved documentation for the study, which can be made available to host organisations to facilitate their permission for the study. Failure to provide the final versions to the REC may cause delay in obtaining permissions.

Management permission or approval must be obtained from each host organisation prior to the start of the study at the site concerned.

Management permission ("R&D approval") should be sought from all NHS organisations involved in the study in accordance with NHS research governance arrangements.

Guidance on applying for NHS permission for research is available in the Integrated Research Application System or at <http://www.rdforum.nhs.uk>.

Where a NHS organisation's role in the study is limited to identifying and referring potential participants to research sites ("participant identification centre"), guidance should be sought from the R&D office on the information it requires to give permission for this activity.

For non-NHS sites, site management permission should be obtained in accordance with the procedures of the relevant host organisation.

Sponsors are not required to notify the Committee of approvals from host organisations

It is the responsibility of the sponsor to ensure that all the conditions are complied with before the start of the study or its initiation at a particular site (as applicable).

Approved documents

The final list of documents reviewed and approved by the Committee is as follows:

Document	Version	Date
Evidence of insurance or indemnity	Zurich Municipal	15 May 2012
Investigator CV	Ahmed Al-Nagar	07 February 2013
Investigator CV	Jane Skinner	14 December 2012
Investigator CV	James Desborough	
Letter from Sponsor	UEA	11 February 2013
Letter of invitation to participant	Appendix 1 V2	04 April 2013
Other: Medicines use review		
Other: MUR appointment letter	1	09 February 2013
Other: Letter to patient to decline patient	1	09 February 2013
Other: Patient reminder letter	1	09 February 2013
Other: No Opinion - refer for full review letter from South Birmingham REC		21 February 2013
Other: Pharmacist Basic Demographic Details: Appendix 3	1	09 February 2013
Other: Pharmacist Information Leaflet: Appendix 2	2	04 April 2013
Other: Withdrawal postcard: Appendix 5	1	09 February 2013
Other: Letter to Decline Pharmacist: Appendix 6	2	08 April 2013
Other: Appendix 7: MUR leaflet		
Other: MUR Appointment Leaflet: Appendix 9	1	09 February 2013
Other: Letter to Patients: Appendix 10	2	04 April 2013
Other: Reply Form: Appendix 11	2	08 April 2013
Other: Letter to patient decline patients: Appendix 13	1	09 February 2013
Other: Pharmacist Evaluation of Patient Consultation: Appendix 14	1	09 February 2013
Participant Consent Form: Pharmacist Consent Form: Appendix 4	3	08 April 2013
Participant Consent Form: Appendix 14	3	08 April 2013
Participant Information Sheet: Pharmacist information leaflet	1	09 February 2013
Participant Information Sheet: Patient Consent	2	25 February 2013
Participant Information Sheet: Appendix 8	2	04 April 2013
Protocol	9	04 April 2013
Questionnaire: Pharmacist's Questionnaire	1	09 February 2013

Questionnaire: Patient's Questionnaire	1	09 February 2013
REC application	123186/412811/1/738	11 February 2013
Response to Request for Further Information		

Statement of compliance

The Committee is constituted in accordance with the Governance Arrangements for Research Ethics Committees and complies fully with the Standard Operating Procedures for Research Ethics Committees in the UK.

After ethical review

Reporting requirements

The attached document "*After ethical review – guidance for researchers*" gives detailed guidance on reporting requirements for studies with a favourable opinion, including:

- Notifying substantial amendments
- Adding new sites and investigators
- Notification of serious breaches of the protocol
- Progress and safety reports
- Notifying the end of the study

The NRES website also provides guidance on these topics, which is updated in the light of changes in reporting requirements or procedures.

Feedback

You are invited to give your view of the service that you have received from the National Research Ethics Service and the application procedure. If you wish to make your views known please use the feedback form available on the website.

Further information is available at National Research Ethics Service website > After Review

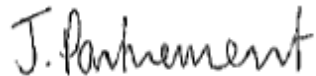
13/EE/0082

Please quote this number on all correspondence

We are pleased to welcome researchers and R & D staff at our NRES committee members' training days – see details at <http://www.hra.nhs.uk/hra-training/>

With the Committee's best wishes for the success of this project.

Yours sincerely



pp
Dr Daryl Rees
Chair

Email: NRESCommittee.EastofEngland-CambridgeEast@nhs.net

Enclosures: "After ethical review – guidance for researchers"

Copy to: Sponsor - Oliver Dean, University of East Anglia

Appendix 3.2 – R&D Approval

Mr Ahmed Al-Nagar
School of Pharmacy
Norwich Research Park
Norwich
NR4 7TJ

Wembley Centre for Health & Care
116 Chaplin Road
Wembley
Middlesex
HA0 4UZ

Tel: 020 8795 6730/5

Date: 24th May 2013

Email: ricky.banarsee@brentpct.nhs.uk

Dear Ahmed

Project Title: A feasibility study investigating community pharmacy consultations
REC 13/WM/0084
Portfolio No CSP/IRAS 123186

The West London Primary Care Consortium (WLPC) is the lead Research Governance (RG) office for the North West London CCGs and GP practices/pharmacists/dentists.

NHS RG assurance for the above research has been given on the basis described in the application form and supporting documentation approved by an NHS Research Ethics Committee (REC) subject to the conditions listed below and overleaf. Assurance is given on the understanding that the study is conducted in accordance with the Research Governance Framework and NHS Trust policies and procedures. Assurance is only granted for the activities for which a favourable opinion has been given by the REC.

Four Community Pharmacists will be involved with the recruitment of participants linked to MUR consultations. Those Pharmacists have been ccd to this assurance letter. This assurance covers our Community Pharmacists in Hammersmith & Fulham.

Please note that the ultimate decision as to whether to take part in a study lies with the Community Pharmacists. The study team must have obtained written agreement from each site confirming their decision to take part in this study.

Please find attached guidance on the Independent Practitioner/Practice research governance responsibilities which sets out the responsibilities of the primary care site.

If you require any further information or advice, do not hesitate to contact Sylvia Westrup our Research Governance & Management Manager (s.westrup@imperial.ac.uk)

With kind regards



Ricky Banarsee
Director WLPC/Applied Research Unit
Sent via email
Chief Investigator: ahmed.alnajar@gmail.com; a.al-nagar@uea.ac.uk
Study Coordinator: Oliver.dean@uea.ac.uk
Student Supervisors: jane.skinner@uea.ac.uk ; j.desborough@uea.ac.uk

Private and Confidential

Mr Ahmed Al-Nagar
School of Pharmacy
Norwich Research Park
Norwich
NR4 7TJ

Wembley Centre for Health & Care
116 Chaplin Road
Wembley
Middlesex
HA0 4UZ

Tel: 020 8630 1000

Email: ricky.banarsee@brent-harrowpcts.nhs.uk

Date: 29 May 2013

Dear Ahmed

Letter of access for research: A feasibility study to investigate community pharmacy consultations

As an existing NHS employee you do not require an additional honorary research contract with this NHS organisation. We are satisfied that the research activities that you will undertake in this NHS organisation are commensurate with the activities you undertaken for your employer. Your employer is fully responsible for ensuring such checks as are necessary have been carried out. Your employer has confirmed in writing to this NHS organisation that the necessary pre-engagement checks are in place in accordance with the role you plan to carry out in this organisation. This letter confirms your right of access to conduct research throughout Community Pharmacists in Hammersmith & Fulham for the purpose and on the terms and conditions set out below. This right of access commences on 29 May 2013 and ends on 1 May 2014 unless terminated earlier in accordance with the clauses below.

You have a right of access to conduct such research as confirmed in writing in the letter of assurance for research from this NHS organisation. Please note that you cannot start the research until the Principal Investigator for the research project has received a letter from us giving permission to conduct the project.

You are considered to be a legal visitor to the above NHS organisation(s) premises. You are not entitled to any form of payment or access to other benefits provided by this organisation to employees and this letter does not give rise to any other relationship between you and this NHS organisation, in particular that of an employee.

While undertaking research through the above NHS organisation(s), you will remain accountable to your university and employer but you are required to follow the reasonable instructions of your nominated manager Ricky Banarsee, Director of WLPC/Applied Research Unit in this NHS organisation or those given on her/his behalf in relation to the terms of this right of access.

Where any third party claim is made, whether or not legal proceedings are issued, arising out of in connection with your right of access, you are required to co-operate fully with any investigation by this NHS organisation in connection with any such claim and to give all such assistance as may reasonably be required regarding the conduct of any legal proceedings.

You must act in accordance with policies and procedures of the above NHS organisation(s), which are available to you upon request, and the Research Governance Framework.

You are required to co-operate with the above NHS organisation(s) in discharging its duties under the Health and Safety at Work etc Act 1974 and other health and safety legislation and to take reasonable care

for the health and safety of yourself and others while on the above NHS organisation(s) premises. Although you are not a contract holder, you must observe the same standards of care and propriety in dealing with patients, staff, visitors, equipment and premises as is expected of a contract holder and you must act appropriately, responsibly and professionally at all times.

If you have a physical or mental health condition or disability which may affect your research role and which might require special adjustments to your role, if you have not already done so, you must notify your employer and the Trust (020 7594 2714) prior to commencing your research role at the Trust.

You are required to ensure that all information regarding patients or staff remains secure and *strictly confidential* at all times. You must ensure that you understand and comply with the requirements of the NHS Confidentiality Code of Practice (<http://www.dh.gov.uk/assetRoot/04/06/92/54/04069254.pdf>) and the Data Protection Act 1998. Furthermore you should be aware that under the Act, unauthorised disclosure of information is an offence and such disclosures may lead to prosecution.

The above NHS organisation(s) will not indemnify you against any liability incurred as a result of any breach of confidentiality or breach of the Data Protection Act 1998. Any breach of the Data Protection Act 1998 may result in legal action against you and/or your substantive employer or University.

You should ensure that, where you are issued with an identity or security card, a bleep number, email or library account, keys or protective clothing, these are returned upon termination of this arrangement. Please also ensure that while on the premises you wear your ID badge at all times, or are able to prove your identity if challenged. Please note that this NHS organisation accepts no responsibility for damage to or loss of property.

We may terminate your right to attend at any time either by giving seven days' written notice to you or immediately without any notice if you are in breach of any of the terms or conditions described in this letter or if you commit any act that we reasonably consider to amount to serious misconduct or to be disruptive and/or prejudicial to the interests and/or business of this NHS organisation or if you are convicted of any criminal offence. You must not undertake regulated activity if you are barred from such work. If you are barred from working with adults or children this letter of access is immediately terminated. Your employer will immediately withdraw you from undertaking this or any other regulated activity and you MUST stop undertaking any regulated activity immediately.

Your substantive employer and/or University is responsible for your conduct during this research project and may in the circumstances described above instigate disciplinary action against you.

If your circumstances change in relation to your health, criminal record, professional registration or suitability to work with adults or children, or any other aspect that may impact on your suitability to conduct research, or your role in research changes, you must inform the NHS organisation that employs you through its normal procedures. You must also inform your nominated manager in this NHS organisation.

Yours sincerely,



Ricky Banarsee
Director WLPC/Applied Research Unit

**Appendix 3.3 – Pharmacist invitation
letter**

Pharmacy
Address
Date

Ahmed Al-Nagar
School of Pharmacy
University of East Anglia
Norwich NR4 7TJ
a.al-nagar@uea.ac.uk
Mobile : 07442 640678

Dear Pharmacist

Re: A feasibility study to investigate community pharmacy consultations

We would like to invite you to participate in a research project that will contribute to the development of training for community pharmacists in consultation skills. The project will test the feasibility of using a novel approach to analysing the consultation in order to help identify how different consultation behaviours may impact on patient and pharmacist satisfaction with a consultation. The study is towards a PhD qualification.

What does it involve?

The study has been designed to have a minimal impact on the workload of pharmacists. Consenting patients will be invited to an MUR consultation. The consultation will be audio recorded and after each MUR consultation, the pharmacist and the patient complete a short questionnaire. We are looking to recruit between 5 and 10 patients per pharmacy.

The pharmacy team will receive an Amazon £50 voucher (or a preferred voucher of choice) as compensation for the time involved in setting up this study. The pharmacy will also be reimbursed for any time involved in patient recruitment (maximum fund of £100 per pharmacy). Participating pharmacists will be reimbursed £5 for each completed questionnaire following an MUR consultation. All payments will be made at the end of the study.

If interested in participating

Please contact Ahmed Al-Nagar using the contact details above to express interest in participating or to ask any questions that you may have.

In one week's time, all pharmacies that have not yet contacted the research team will receive a phone call to discuss interest in participating and where required explain the study in more detail. Once interest is expressed, the researcher will arrange a visit to your pharmacy to provide full information and where necessary arrange approval from employers. If we have more than 4 pharmacists interested, then only 4 pharmacists will be chosen randomly and if by chance you have not been chosen, you will be notified by a letter.

Yours sincerely,

Ahmed Al-Nagar *MRPharmS*

**Appendix 3.4 – Gateway Consent from
Alliance Boots**

Ahmed Al-Nagar (PHA)

From: Tracey Thornley <tracey.thornley@boots.co.uk>
Sent: 10 September 2012 13:31
To: Ahmed Al-Nagar (PHA)
Cc: Jamal Butt; Beneeta Shah; Ireland, Mark
Subject: FW: MUR research project (to help support contract negotiations)

Follow Up Flag: Follow up
Flag Status: Flagged

Hi Ahmed

I have spoken to Jamal Butt who is the Head of Pharmacy for the London locality. Jamal understands the importance of the evidence you are trying to collect, so as such, is happy for the stores to support with recruitment. He is going to ask Beneeta within his team (copied in on this email) to work with you in identifying and recruiting the right stores. We just need to be mindful that it is minimal workload impact on the pharmacy teams.

What do you need as a next step from us to help feed into your ethics submission?

Kind Regards
Tracey

Dr Tracey Thornley PhD MRPhamS
Senior Manager (Contract Framework and Outcomes)
Boots UK, Nottingham
Special Lecturer in Pharmacy Practice
University of Nottingham

From: Ahmed Al-Nagar (PHA) [<mailto:A.Al-Nagar@uea.ac.uk>]
Sent: 15 August 2012 10:01
To: Tracey Thornley
Subject: MUR project

Hi Tracey,

We are seeking to get help on the purposed project below. The project is exploring pharmacist consultation skills as well as assessing impact of the MUR on patients. What we seek from the pharmacy team is in the 5 steps below:

1. Pharmacy team identifies eligible MUR patient and gets consent to speak to researcher
2. Patient recruited by researcher and consented (If patient accepts then we go to step 3)
3. Regular pharmacist conducts a recorded MUR with patient. According to patient, they can either have a normal MUR (NOT be included in the study) or recorded MUR (which can be included in the study). All equipment will be installed and ready with a push of a button once the MUR is started.

**Appendix 3.5 – Participant Information
Sheet for Pharmacists**

A feasibility study to investigate community pharmacy consultations

Pharmacist Information Sheet

I would like to invite you to take part in a research study. Before you decide to participate you need to understand why the research is being done and what it would involve for you. Please take time to read the following information carefully. Talk to others about the study if you wish. Ask us if there is anything that is not clear or if you would like more information.

What is the purpose of the study?

There has been an increase in the patient services provided by community pharmacy in which the pharmacist must conduct a one to one consultation with a patient. Pharmacists can give valuable advice to patients on their medications. However, there is limited research into pharmacists' consultations with patients despite being widely acknowledged that communication skills for pharmacists are very important. Research has shown from other disciplines that the use of good communication skills can improve patient health outcomes. Therefore we are conducting this study to examine the way pharmacists conduct one-to-one consultations to discuss their patient's prescribed medicines (medicine use reviews). This is an exploratory study to inform further research and help us design future studies.

Why have I been invited?

A generic letter has been sent to all the pharmacies in Fulham and Hammersmith inviting them to participate in the study. You have been chosen because you practice as a pharmacist in community

pharmacy in the borough of Fulham and Hammersmith. The researcher by now has visited the pharmacy to explain the study and provided a study pack.

Do I have to take part?

No. It is up to you to decide whether or not to take part. If you wish to take part, you will be given this information sheet to keep and be asked to sign a consent form. You are still free to withdraw at any time and without giving a reason. A decision to withdraw at any time, or a decision not to take part, will not affect you in anyway. If you do not wish to take part then please return the withdrawal postcard and you will not be contacted again. We may ask if you consent to information already collected still being used. If we have more than 4 pharmacists interested, then only 4 pharmacists will be chosen randomly and if by chance you have not been chosen, you will be notified by a letter.

What will happen to me if I take part?

The study has been designed to have a minimal impact on the workload of pharmacists.

If you decide to participate, the pharmacist will be expected to:

- Complete a short demographic questionnaire and return to researcher
- Liaise with researcher on when its best to arrange a training session for appropriate pharmacy staff, training should not take more than 1 hour. The training will provide you all the information about the study design and processes. The training will particularly focus on taking patient consent. Potential appointment slots for MURs will be discussed at the training.

Once the project is live then the pharmacist is expected to:

- Audio record MUR consultations with the equipment provided
- Complete a questionnaire after completing each MUR

Training will provide the team with information about the recruitment strategy and how to gain consent from patients prior to the MUR. The study is pursuing two recruitment strategies which will be allocated randomly. One strategy will have the researcher present at the pharmacy for two weeks to aid with the recruitment of patients into the study while the other strategy will include identifying and writing to approximately 100 MUR eligible patients. For patients who show interest after the study recruited enough patients, they can still request to arrange an MUR but it will not be part of this study.

Expenses and payments:

The pharmacy team will receive an Amazon £50 voucher (or a preferred voucher of choice) as compensation for their time to setup the project and be present for the training. The pharmacy will also be reimbursed for any extra staffing needed to accommodate the recruitment strategy of the study (maximum fund of £100 per pharmacy). Participating pharmacist will be reimbursed £5 for each completed questionnaire following an MUR consultation. All payments will be made at the end of the study.

What are the possible disadvantages and risks of taking part?

It is not anticipated that there will be any risks associated with the study.

What are the possible benefits of taking part?

Participants may request a summary of the results which will provide average scores from questionnaire and a breakdown of the consultations (e.g. number of open, closed questions, pharmacist talk time vs. patient talk time) this will be presented next to the average scores for all participants

Will my taking part in the study be kept confidential?

Yes. All the information about your participation in this study will be kept confidential.

What happens to the information?

The information obtained will remain confidential and stored within a locked filing cabinet. The data are held in accordance with the Data Protection Act, which means that we keep it safely and cannot reveal it to other people, without your permission. The results of this study will be used for analysis in the researcher's PhD thesis and for publication of papers in appropriate relevant scientific journals. A summary of the results will be available to research participants upon request. You will **NOT** be identified in any report/publication. All the data will be stored securely 5 years after the study has ended. All data will then be destroyed. Any data stored electronically will be fully password protected.

Who has reviewed the study?

All research in the NHS is looked at by independent group of people, called a Research Ethics Committee, to protect your interests. This study has been reviewed and given favourable opinion by Cambridge East Research Ethics Committee.

Who is organising and funding the research?

The research is being carried out by Ahmed Al-Nagar from The University of East Anglia. This project is funded by a PhD support grant from the Harold and Marjorie Moss Charitable Trust Foundation.

Duty of care of disclosure

If Information emerges during this study which causes concern about any participants or patients under their care we may have to break confidentially and take appropriate action on it.

What if I have a complaint?

If you have a concern or complaint about the way you have been approached or treated during this study, please feel free to contact my research supervisor Dr James Desborough (contact details below). Alternatively, if you want to talk with someone independent about the research, you can contact NW London Research Governance Unit on 020 7594 3383.

Where can I get further information about the study?

If you have any questions about this study, please contact Ahmed Al-Nagar on the following contact details:

School of Pharmacy, University of East Anglia, Norwich, NR4 7TJ	Mob/text: 07442 640678 Email: a.al-nagar@uea.ac.uk
-----------------------------------------------------------------	-------------------------------------------------------------------------------------------------

You can contact the primary supervisory, Dr James Desborough, on the following contact details:

School of Pharmacy, University of East Anglia, Norwich, NR4 7TJ	Phone: 01603 593413 Email: j.desborough@uea.ac.uk
-----------------------------------------------------------------	--------------------------------------------------------------------------------------------------

Thank you for reading this information sheet.

**Appendix 3.6 – Pharmacist Basic
Demographics Form**

**A feasibility study to investigate community pharmacy
consultations**

**Pharmacist Basic Demographic
Reference:**

Pharmacist Name:	_____	
How many years have you been registered as a pharmacist?	_____	
Do you currently work at least 30 hours a week as a community pharmacist?	No	<input type="checkbox"/>
	Yes	<input type="checkbox"/>
Are you MUR accredited?	No	<input type="checkbox"/>
	Yes	<input type="checkbox"/>
	<i>If yes, average of MURs conducted in a year?</i>	_____
How many MURs did your pharmacy complete in the year of 2011-2012	Less than 100	<input type="checkbox"/>
	More than 100	<input type="checkbox"/>

Appendix 3.7 – Pharmacist Consent Form

A feasibility study to investigate community pharmacy consultations

Researcher: Ahmed Al-Nagar
REF:

CONSENT FORM

**Please
initial each
box**

1. I confirm that I have read and understand the PHARMACIST INFORMATION LEAFLET (Version 3, dated 20TH April 2013) about the above study and have been given a copy to keep. I have had the opportunity to ask questions and understand why the research is being done.
2. I understand that my participation in this study is voluntary and that I am free to withdraw at any time, without giving any reason and without my legal rights being affected.
3. I agree for the relevant consultations (MURs) with patients to be recorded on an audio device
4. I permit the researchers to use direct quotes from the consultations so long as they do not reveal information which could be used to identify me
5. I understand that data collected during the study may be looked at by individuals from regulatory authorities, university staff, and from the NHS Trust where it is relevant to my taking part in this research. I give permission for these individuals to have access to my records

I agree to take part in the above study

Full name (BLOCK CAPITALS) Date Signature

Name of person taking consent Date Signature
1 for pharmacist; 1 for researcher

**Appendix 3.8 – Pharmacist Withdrawal
card**

**“A feasibility study to investigate community
pharmacy consultations”**

Withdrawal Postcard

If you do not want wish to participate in this research, please return this postcard (no stamp needed) and you will not be contacted again. If you do not return this postcard back or the basic demographic questionnaire/consent form, we will contact you in 2 weeks' time to check if you are still interested in participating.

(Please Tick)

I do not wish to take part in this research

Thank you for your time

Reference Number –

Appendix 3.9 – NHS MUR leaflet

Medicines use review: Understand your medicines



Meet with your pharmacist to talk about:

- The medicines you are taking
- What they do
- How well they work for you
- How to get the most out of them



What this guide is for

You may have been invited by your pharmacist to a meeting to talk about your medicines. This is called a **“medicines use review”**.

If you have questions about your medicines, you can also ask for a medicines use review meeting yourself.

This guide will give you the information you need and help you get the best from your review meeting.

What’s in this guide?

What a medicines use review is	3
How you may be offered a review	4
Is a medicines use review for you?	5
What you can expect in the review meeting	6
How you might prepare	10
What will happen in the meeting?	12
What happens afterwards?	13
Questions you could ask	14

What a medicines use review is

A **medicines use review** is an appointment with a pharmacist to focus on how you are getting on with your medicines. It usually takes place in your local pharmacy (chemist). It is an NHS service – you don't need to pay for it.

The meeting is to:

- **Help you to find out more about the medicines you are taking.**
- **Pick up any problems you are having with your medicines.**
- **Improve the effectiveness of your medicines.** There may be easier ways to take them, or you may find you need fewer medicines than before.
- **Get better value for the NHS** – making sure that your medicines are right for you prevents unnecessary waste.

The pharmacist you meet with will have questions to ask you, and may suggest changes to your medicines. You may have concerns or questions that you want to ask. You can ask anything at all about your medicines.

Remember you can ask your pharmacist questions at any time, but a review will give you both more time to concentrate on you and your medicines.

How you may be offered a review

Your pharmacist might invite you for a review – either in person or in a letter through the post

You can ask for a review at your local pharmacy where you get your prescription medicines. You must have been getting your prescriptions there for three months or more.

Not every local pharmacy will be offering this service and those that do will only be able to provide a certain number of reviews.

In your area there may have been a local decision to make certain diseases or groups of people a priority. That may mean you may not get a review immediately.



"I wanted to know how my tablets worked, and how long I might need to stay on them. I felt comfortable asking the pharmacist, knowing they are properly trained."

Is a medicines use review for you?

You can ask for a medicines use review if:

- You are regularly taking more than one prescription medicine.
- You are taking medicines for a long term illness (like asthma, arthritis, diabetes or epilepsy).

Your pharmacist will be happy to arrange a review meeting, and may even suggest it. Your doctor or nurse might also suggest that a review would be helpful.

Even if you're not in either of these groups, you can ask your pharmacist for advice at any time.

If there is an urgent problem with medicines, don't wait for a medicines use review.

If you, or somebody else, notice one of the things on this list, don't delay.

- ***If you have taken too much of any medicine***
- ***If you have an allergic reaction to a new medicine (such as wheezing, rash, swelling or fainting)***
- ***If you notice a serious side effect or any unusual symptoms***
- ***If you notice your health getting worse.***

In any of these cases, talk to a doctor or pharmacist straight away.

For all your healthcare needs

[NHS Direct →](#)

[NHS Walk-in Centre →](#)

[GP's Surgery →](#)

[A&E/999 →](#)

5

What you can expect in the review meeting

All the pharmacists who offer this particular service will have been assessed to make sure they have the right knowledge and skills.

The meeting is confidential

- **There will be a private area within the pharmacy**, where you can sit down together and can't be overheard by customers or staff.
- **Your details, and your discussion, will be kept private.** You can talk openly and your questions or worries will be listened to. Only you and your GP will normally receive a record of the meeting.

The pharmacist will listen and help

- **They will be ready to hear your concerns and your questions.** You can be open with them and say whatever you want in these meetings.
- **Your pharmacist will only know about the medicines you have received from that pharmacy.** They will not have a record of prescriptions you've picked up from another pharmacy, medicines prescribed by a hospital, medicines bought without a prescription, or herbal medicines. They will not have your medical history or details about your illness. So it's important to tell them as much as you can.

You will be given an Action Plan

- The pharmacist will fill in a form to say the meeting took place and to record what was agreed during the meeting.
- The form is called the **Medicines Use Review Action Plan** and you will receive a copy at the end of the meeting.
- A copy will also go to your GP to be put into your medical notes.
- You can ask for a copy to be sent to another health professional involved in your care – for example, your district nurse – or to your carer. You may think it will be useful for them to know about your review.



"I haven't been for a yearly check-up for ages, not since I had the extra inhaler. Perhaps I should go for a review."

How you might prepare

- **Make a note of all the medicines you take by filling in the chart** on pages 8-9. If you have concerns about particular medicines or have any medicines which you no longer use, bring them along.
- **Think about your questions, concerns and suggestions**, see pages 14-15, and write them down.
- **Make sure you know when, where and who you are meeting.**



When medicines cause problems

Taking medicines is often trouble-free, but there can be problems:

- *It can be difficult to take medicines – for example, if they're hard to swallow*
- *Some people end up taking lots of tablets at different times*
- *When someone is taking lots of medicines it can be difficult to know what each one is for*
- *There are medicines which don't mix with other medicines or some foods*
- *Some people get side effects from one or more of their medicines*
- *Some people have questions or worries and don't know who to talk to*

Raise these or any other concerns at a medicines use review, when you meet to focus on your medicines.



Reporting a side effect or reaction to a medicine

If you think a medicine has caused an unwanted side effect (an adverse drug reaction), you can report the problem to the Medicines and Healthcare products Regulatory Agency (MHRA) on a Yellow Card. The MHRA is the medicines safety watchdog and is part of the Department of Health.

Medicines are designed to prevent or treat illnesses, or relieve symptoms. Any effective medicine can cause side effects. Side effects may not be discovered until many people have used the medicine over a period of time. Side effects can occasionally appear when a person has stopped taking a medicine. For these reasons, the safety of medicines is monitored.

Reports of suspected side effects are collected through the Yellow Card Scheme on all types of medicines, including prescription medicines, medicines you can buy without a prescription, and herbal and other complementary remedies.

Even if you are not sure whether a medicine, or combination of medicines has caused a side effect, please complete a Yellow Card.

- *Yellow Card forms are available from pharmacies and other outlets across the NHS. Forms are also available directly from the Yellow Card hotline on freephone 0800 100 3352, or*
- *Yellow Card reports can be completed on the web at www.yellowcard.gov.uk.*

Yellowcard[®]

For all your healthcare needs

NHS Direct →

NHS Walk-in Centre →

GP's Surgery →

A&E/999 →

11

What will happen in the meeting?

- **You will confirm the medicines you are taking.** The pharmacist will probably start by going through all the medicines you take (including medicines you have bought and herbal medicines), finding out how you take your medicines, and if you have enough information about them.
- **The pharmacist will check how well you are getting on with your medicines,** for example, can you swallow your medicines easily, or are you using your inhaler properly so that you get the most benefit from it.
- **Together, you will discuss how you think your medicines are working.** Not all your medicines may be necessary, or the dose might need to be adjusted by your doctor. A different medicine might make things easier.
- **Together, you will talk through any questions or concerns.** If you have any side effects, the pharmacist may be able to suggest something that will help or another medicine which might not cause the same problems.

You can feel free to ask any question about your medicines. There's a list of suggested questions to help you on page 14 of this booklet.

What happens afterwards?

- Everything may be okay with your medicines and nothing else will need to happen.
- **You will be given an Action Plan** which will include a note of any changes you have agreed in the way you take your medicines. This will be filled in by the pharmacist who did the review with you.
- **A copy of the Action Plan will go to your doctor** and be kept with your medical notes.
- **The pharmacist may recommend a change to your prescription.** You will have a note of this in the Action Plan. Both you and the person who prescribes your medicines (usually your doctor) will need to agree on any changes to your prescription, so you may be asked to make an appointment with them to discuss these. No changes will be made against your will.



“The Action Plan was a great help. Having it with me made me feel much more comfortable when I went back to talk to my doctor.”

For all your healthcare needs

GP's Surgery →

A&E/999 →

13

Questions you could ask

These are just suggestions. We've left some space for you to write your own questions on the back page. Or you may want to write on a separate sheet, which you can use for writing down the answers as well.

- What does this medicine do?
- Why is it important that I take this medicine?
- Are there any other treatment options?
- When and how should I take it?
- How long should I take it for?
- What other medicines, drinks, foods or activities should I be aware of when I am taking this medicine?
- What should I do if I don't feel well while taking it?
- How do I know it's helping?
- How can I be sure it's safe for me to take it?

- What are the possible risks and side effects?
- What should I do if I get one of these effects?
- Could another medicine do a better job, with less risk?
- What if I stopped taking it, or took a lower dose?
- Will the medicine build up in my body?
- Do I really need to take all these medicines?
- Is there anything that can help to remind me to take my medicines?
- Can I have containers that are easier to open?
- Could you provide the patient information leaflet for my medicine(s) in larger print?
- Where can I go for more information?



"I just thought that the doctor decided when... now I feel more confident, and I can go and ask for a review myself."

For all your healthcare needs

[NHS Direct →](#)

[NHS Walk-in Centre →](#)

[GP's Surgery →](#)

[A&E/999 →](#)

15

Your questions and concerns

We've left some space for you to write your own questions below.

-
-
-
-
-
-
-
-

Photographs on pages 1, 4, & 15 courtesy of National Pharmacy Association
Z70570 1P 1000k Nov 05 (COM)

For all your healthcare needs

[Pharmacist →](#) [NHS Direct →](#) [NHS Walk-in Centre →](#) [GP's Surgery →](#) [A&E/999 →](#)

**Appendix 3.10 – Participant Information
Sheet for Patients**

Exploring community pharmacist communication with patients

Patient Information Sheet

We would like to invite you to take part in a research study. Before you decide you need to understand why the research is being done and what it would involve for you. Please take time to read the following information carefully. Talk to others about the study if you wish. Ask us if there is anything that is not clear or if you would like more information.

What is the purpose of the study?

There has been an increase in the patient services provided by pharmacists where the pharmacist must conduct a one to one consultation with a patient. Pharmacists can give valuable advice to patients on their medications. However, there is limited research into pharmacists' consultations with patients despite being widely acknowledged that communication skills for pharmacists are very important. Research from other disciplines has shown that the use of good communication skills can improve patient health outcomes. Therefore we are conducting this study to examine the way pharmacists conduct one-to-one consultations to discuss their patient's prescribed medicines

(medicine use reviews). This is an exploratory study to inform further research and help us design future studies.

Why have I been invited?

You have been invited to take part because you are eligible to receive a review of your medicines, known as a Medicine Use Review (MUR), with your community pharmacist.

Do I have to take part?

No. It is up to you to decide whether or not to take part. If you do, you will be given this information sheet to keep and be asked to sign a consent form. Participation is entirely voluntarily. If you do agree to take part you are still free to withdraw at any time and without giving a reason. A decision to withdraw at any time, or a decision not to take part, will not affect you in any way including the standard of care you receive. We may ask if you consent to information already collected still being used, whether you agree to this is entirely up to you. The first 30 patients that show interest will be included in this study; if we receive interest from more than 30 patients then you are still entitled to have the MUR but it will not be part of this study.

What will happen to me if I take part?

Patients are being invited as they come to the pharmacy or by a postal letter.

If you are being invited by post then once the researcher has received your reply, you will receive a phone call to

confirm interest and find a convenient time and day to have the MUR with your local pharmacist. A confirmation letter for an appointment will be sent to your address. A day before the appointment, you will receive a reminder call about the appointment.

If you are just visiting the pharmacy and you were asked to take part in this research then you are free to have more time to decide to take part. If you agree we will phone you within 24 hours at a time suitable for you to confirm whether or not you wish to take part. If you are interested you will get a letter confirming your appointment and a reminder phone call the day before your appointment.

With your consent, the MUR consultation will be audio recorded and this will allow the researcher to look at the communication behaviours of the pharmacist in the consultation in more detail. After the MUR is finished, you will be given a short/brief questionnaire to complete. You may complete this questionnaire straight after the MUR, but if you need more time then you are free to take it home and post it back. If the questionnaire is not returned after two weeks then we will send you a reminder letter and if we don't receive a reply after a further two weeks then we will assume no response and you will not be contacted again.

Expenses and payments

It is not expected that you will incur any additional costs due to this study however £5 will be given to help with the costs of traveling and attending the MUR appointment.

What do I have to do?

The only requirement of you is to attend the appointment for your MUR and complete the questionnaire after the consultation. If you wish to have the MUR and do not want to be included in the study then just tell the pharmacist or pharmacy team and they will be happy to arrange that.

What are the possible disadvantages and risks of taking part?

It is not anticipated that there will be any risks associated with the study.

What are the possible benefits of taking part?

You might find the MUR service beneficial however we cannot promise the study will help you but the information we get might help to improve pharmacists' communication with patients in the future.

What happens when the study ends?

The study will not affect your continued treatment in anyway.

Will my taking part in the study be kept confidential?

Yes. All the information about your participation in this study will be kept confidential.

What happens to the information?

The information obtained will remain confidential and stored within a locked filing cabinet. The data are held in accordance with the Data Protection Act, which means that we keep it safely and cannot reveal it to other people, without your permission. The results of this study will be used for analysis in the researcher's PhD thesis and for publication of papers in appropriate relevant scientific journals. You will not be identified in any report/publication unless you have consented to release such information. All the data will be stored securely 5 years after the study has ended. All data will then be destroyed. Any data stored electronically will be fully password protected.

Who has reviewed the study?

All research in the NHS is looked at by independent group of people, called a Research Ethics Committee, to protect your interests. This study has been reviewed and given favourable opinion by Cambridge East Research Ethics Committee.

Who is organising and funding the research?

The research is being carried out by Ahmed Al-Nagar from The University of East Anglia. This project is funded by a PhD support grant from the Harold and Marjorie Moss Charitable Trust Foundation.

What if I have a complaint?

If you have a concern or complaint about the way you have been approached or treated during this study, please feel free to contact my research supervisor Dr James Desborough (contact details below). Alternatively, if you want to talk with someone independent about the research, you can contact your local Patient Advice and Liaison Service (PALS) who will advise you on what to do, email: pals@inwl.nhs.uk or phone 0800 389 9092.

Where can I get further information about the study?

If you have any questions about this study, please contact Ahmed Al-Nagar on the following contact details:

School of Pharmacy, University of East Anglia, Norwich, NR4 7TJ	Mob/text: 07442 640678 Email: a.al-nagar@uea.ac.uk
-----------------------------------------------------------------------	-------------------------------------------------------------------------------------------------

You can contact the primary supervisory, Dr James Desborough, on the following contact details:

School of Pharmacy, University of East Anglia, Norwich, NR4 7TJ	Phone: 01603 593413 Email: j.desborough@uea.ac.uk
-----------------------------------------------------------------------	---------------------------------------------------------------------------------------------------------

Thank you for reading this information sheet.

**Appendix 3.11 – Patient appointment
letter**



Ahmed Al-Nagar
School of Pharmacy
University of East Anglia
Norwich NR4 7TJ
a.al-nagar@uea.ac.uk

Date

Re: Exploring the communication of community pharmacists with patients

Thank you for agreeing to take part in this research study. Further to our phone conversation regarding the arrangements for your medicine use review (MUR) appointment. Please find the details below:

Date	Time	Venue
[TBA]	[TBA]	[TBA]

You will be asked to sign a consent form just before the MUR starts. Each participant will be given £5 to help with the costs of traveling to the pharmacy.

Please contact Ahmed Al-Nagar at 07442 640678 or email a.al-nagar@uea.ac.uk if you have any concerns or questions or want to withdraw from the study. We will phone you a day before the MUR appointment as a reminder.

Yours sincerely,

Ahmed Al-Nagar MRPharmS

Appendix 3.12 – Patient invitation letter

Patient's Address

Reference code:

Date

Dear

Re: Exploring the communication of community pharmacists with patients

The pharmacy has identified you as a potential participant in a research study. University of East Anglia is organising the study. Currently the university researcher does not have any information relating to prospective participants. The researcher (Ahmed Al-Nagar) is a qualified pharmacist as well as a PhD student. The study is towards a PhD qualification.

What does it involve?

You will only need to attend a medicine use review appointment with your pharmacist and complete a questionnaire after it finishes. A medicines use review (MUR) is an appointment with a pharmacist to focus on how you are getting on with your medicines. It is an NHS service – you don't need to pay for it. After each MUR consultation, the pharmacist and the patient complete a questionnaire.

You will be given **£5** to help with the costs of traveling and attending the MUR appointment. Please find enclosed more information about

the project and a leaflet explaining what an MUR is and what it involves.

If interested in participating

Please read the enclosed documentation and if you're happy to participate, please return the reply form enclosed in the prepaid envelope enclosed. The researcher will then contact you via phone to find a suitable time to book an MUR appointment. The first 30 patients that show interest will be included in this study; if we receive interest from more than 30 patients then you are still entitled to have the MUR but it will not be part of this study.

Yours sincerely,

Pharmacy Team

Appendix 3.13 – Reply form for patients



Exploring the communication of community pharmacists with patients

Reply Form

Study code:

I am happy for you to contact me about this study:

Name:

Address:

Telephone number:

Once the researcher has received this form, you will be contacted you via phone to confirm interest and answer any questions that you may have. If you were still happy to participate in this study, the researcher will send you an appointment confirmation letter for the MUR.

Appendix 3.14 – Patient consent form



University of East Anglia

Tel: 07442 640678

Email: a.al-nagar@uea.ac.uk

Exploring community pharmacists communication with patients

Researcher: Ahmed Al-Nagar, PhD Researcher

CONSENT FORM

**Please
initial each
box**

1. I confirm that I have read and understand the PATIENT INFORMATION LEAFLET (Version 3, dated 20TH April 2013) about the above study and have been given a copy to keep. I have had the opportunity to ask questions and understand why the research is being done.
2. I understand that my participation in this study is voluntary and that I am free to withdraw at any time, without giving any reason and without my legal rights being affected.
3. I agree for my medicine use review with the pharmacist to be recorded on an audio device
4. I permit the researchers to use direct quotes from the consultations so long as they do not reveal information which could be used to identify me
5. I understand that relevant sections of my medical notes and data collected during the study may be looked at by individuals from regulatory authorities, university staff, and from the NHS Trust where it is relevant to my taking part in this research. I give permission for these individuals to have access to my records

I agree to take part in the above study

Full name (BLOCK CAPITALS) Date Signature

Name of person taking consent Date Signature

1 for patient; 1 for researcher

**Appendix 3.15 – Pharmacist’s
Questionnaire**

Pharmacy:

Study Code:

Pharmacist's Questionnaire

This questionnaire is designed to find out how you felt about the consultation you just had with the patient.

Thinking about your consultation with the patient, please show how much you agree or disagree with each statement by ticking the appropriate box.

During this consultation I feel I:

		Strongly disagree	Disagree	Uncertain	Agree	Strongly Agree
1	Greeted the patient in a way that made them feel comfortable	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	Discussed the patient's reason(s) for the service	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3	Encouraged the patient to express his or her thoughts concerning his or her medicines	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4	Listened carefully to what the patient had to say	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5	Understood what the patient had to say	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6	Discussed treatment options with the patient	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7	Gave the patient as much information as he or she wanted	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8	Checked with the patient to see if the treatment plan(s) was acceptable	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9	Explained medications, if any, including possible side-effects	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10	Encouraged the patient to ask questions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11	Responded to the patient's questions and concerns	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

		Strongly disagree	Disagree	Uncertain	Agree	Strongly Agree
12	Discussed next steps including any follow-up plans	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13	Involved the patient in decisions as much as he or she wanted	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14	Checked to be sure the patient understood everything	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15	Showed care and concern about the patient as a person	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16	Spent the right amount of time with the patient	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17	Overall, I was satisfied with this consultation today	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18	Any other comment?					

Questions adopted from: Campbell C, Lockyer J, Laidlaw T, MacLeod H. Assessment of a matched-pair instrument to examine doctor- patient communication skills in practising doctors. Medical education. 2007;41(2):123-9.

Thank you for completing this questionnaire

Appendix 3.16 – Patient’s questionnaire

Pharmacy:

Study Code:

Patient's Questionnaire

This questionnaire is designed to find out how you felt about the consultation you just had with the pharmacist. There are 3 sections in total.

- Section one asks for brief details about you
- Section two asks you about your opinion of the pharmacist
- Section three assesses how you felt about the consultation

For each question, tick the box that you think best describes your own feelings.

Section 1: Details about you

- 1 What is your gender? Male Female
- 2 Which category below includes your age?
- | | |
|--------------------------------|--------------------------------------|
| <input type="checkbox"/> 18-21 | <input type="checkbox"/> 21-29 |
| <input type="checkbox"/> 30-39 | <input type="checkbox"/> 40-49 |
| <input type="checkbox"/> 50-59 | <input type="checkbox"/> 60 or older |

Section 2: Your opinion of the pharmacist

- 3 Did you see your usual or regular pharmacist today? No Yes

Thinking about the pharmacist you have just seen, please answer the following questions as honestly as possible by ticking the box that best fits with your opinion.

- | | Disagree | Neither agree nor Disagree | Slightly agree | Mostly agree | Totally agree |
|--------------------------------------------------------|--------------------------|----------------------------|--------------------------|--------------------------|--------------------------|
| 4 I know this pharmacist very well | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 5 This pharmacist knows me as a person | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 6 This pharmacist really knows how I feel about things | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

7	I know what to expect with this pharmacist	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		Disagree	Neither agree nor disagree	Slightly agree	Mostly agree	Totally agree
8	This pharmacist really cares for me	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9	This pharmacist takes me seriously	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10	This pharmacist accepts me the way I am	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11	I feel totally relaxed with this pharmacist	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Questions adopted from: Ridd, M. J., G. Lewis, et al. (2011). "Patient-Doctor Depth-of-Relationship Scale: Development and Validation." *The Annals of Family Medicine* 9(6): 538-545.

Section 3: Evaluation of Visit

Thinking about the consultation you had with your pharmacist, please show how much you agree or disagree with each statement by ticking the appropriate box.

During the consultation the Pharmacist:

		Strongly disagree	Disagree	Uncertain	Agree	Strongly Agree
12	Greeted me in a way that made me feel comfortable	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13	Discussed the reason(s) for the service	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14	Encouraged me to express my thoughts concerning my medicines	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15	Listened carefully to what I had to say	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16	Understood what I had to say	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

© UEA School of Pharmacy
Patient Evaluation of Pharmacist Consultation: Version 1, 09/02/2013

Page 3 of 4

		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		Strongly disagree	Disagree	Uncertain	Agree	Strongly Agree
17	Discussed treatment options with me	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18	Gave me as much information as I wanted	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19	Checked to see if the treatment plan(s) was acceptable to me	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20	Explained my medications, including possible side-effects	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
21	Encouraged me to ask questions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
22	Responded to my questions and concerns	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
23	Discussed next steps including any follow-up plans	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
24	Involved me in the in the decisions as much as I wanted	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
25	Checked to be sure I understood everything	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
26	Showed care and concern about me as a person	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
27	Spent the right amount of time with me	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
28	Overall, I was satisfied with my visit to the pharmacist today	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Questions adopted from: Campbell C, Lockyer J, Laidlaw T, MacLeod H. Assessment of a matched-pair instrument to examine doctor-patient communication skills in practising doctors. *Medical education*. 2007;41(2):123-9.

29 Any other comment?

© UEA School of Pharmacy
Patient Evaluation of Pharmacist Consultation: Version 1, 09/02/2013

Page 4 of 4

**Appendix 3.17 – Permissions to use
questionnaires**

Ahmed Al-Nagar (PHA)

From: Ian Bowmer <ibowmer@mcc.ca>
Sent: 21 February 2014 12:43
To: Campbell, Craig; Lockyer, Jocelyn; Ahmed Al-Nagar (PHA)
Subject: Re: Assessment of a matched-pair instrument

MCC is also happy to see the instrument used in this way. We would be very interested in the results. Could you please share them with us when available.

Thank you
Ian Bowmer
Medical Council of Canada

Sent from my BlackBerry 10 smartphone on the Rogers network.

From: Campbell, Craig
Sent: Friday, February 21, 2014 7:19 AM
To: Lockyer, Jocelyn; 'Ahmed Al-Nagar (PHA)'
Cc: Ian Bowmer
Subject: RE: Assessment of a matched-pair instrument

I have no objections to the use of the instrument to assess interactions between a patient and pharmacist and would be equally interested in the results!

Craig Campbell MD FRCPC

Director, Continuing Professional Development, Office of Specialty Education
Directeur, Développement professionnel continu, Bureau de l'éducation spécialisée

Royal College of Physicians and Surgeons of Canada | Collège royal des médecins et chirurgiens du Canada

Tel/Tél 613-730 - 8177 ext/poste 196 | **Toll Free/Sans frais** 1-800-461-9598 ext/poste 196

royalcollege.ca | collegeroyal.ca

From: Jocelyn Lockyer [mailto:lockyer@ucalgary.ca]
Sent: Thursday, February 20, 2014 1:48 PM
To: 'Ahmed Al-Nagar (PHA)'
Cc: Campbell, Craig; Bowmer, M. Ian
Subject: RE: Assessment of a matched-pair instrument

Hi Ahmed

While my name was associated with the article...the Medical Council of Canada actually funded and owns the instrument along with the Royal College of Physicians and Surgeons of Canada. With this note, I will let them know. We would all love to hear about the study and what you learned.

Jocelyn Lockyer PhD
Senior Associate Dean—Education
Phone 403 220 4248

From: Ahmed Al-Nagar (PHA) [mailto:A.Al-Nagar@uea.ac.uk]
Sent: Thursday, February 20, 2014 11:03 AM
To: Jocelyn Lockyer
Subject: Re: Assessment of a matched-pair instrument

Dear Dr Lockyer,

I hope this email finds you in great health. I am writing to you regarding the Assessment of a matched-pair instrument which you have published in 2007 at the Medical Education Journal. I adopted the instrument so it can be used in pharmacy consultations by changing the word "doctor" and into "pharmacist" and removing any questions that were not relevant to pharmacy consultations. It is the first time that I adopt questionnaires as I have never done so in my previous PhD projects, it would have been a better idea to ask for your permission before actually using it. At all the stages of my project, your work was referenced and clearly stated that the questionnaire was adopted from the authors. I wanted to get a retrospective approval for using the instrument in my PhD project and just to reassure you that your work has been referenced and will always be referenced in any possible future publication.

Kind regards,

Ahmed Al-Nagar

=====
Ahmed Al-Nagar
Medicines Management Research Group
University of East Anglia
Norwich Research Park
Norfolk
NR4 7TJ
+44 (0)7837756821
a.al-nagar@uea.ac.uk

=====
Top UK School of Pharmacy –Guardian League Table for 2013
Ranked 6th in the UK in the 2008 Research Assessment Exercise
No.1 for Student Experience (Times Higher Student Experience Survey 2013)
UK Top 25 (Guardian 2013), World Top 100 (Leiden Ranking 2013)
UK Top 10 for research citations (Times Higher Education 2013)
=====

This email may contain privileged and/or confidential information, and the Medical Council of Canada does not waive any related rights. Any distribution, use, copying or disclosure of this email or the information it contains by other than the intended recipient is strictly prohibited. If you received this email in error please delete it immediately from your system and notify the sender promptly by email that you have done so. The integrity and security of this message cannot be guaranteed on the Internet. If you prefer not to receive MCC communications by e-mail, please send us an e-mail with only "unsubscribe" in the subject line to unsubscribe@mcc.ca. Any questions about our privacy practices should be made in writing and directed to the Privacy Committee at 2283 St. Laurent Blvd., Ottawa ON K1G 5A2.

Le présent courriel peut contenir de l'information privilégiée ou confidentielle. Le Conseil médical du Canada ne renonce pas aux droits qui s'y rapportent. Toute diffusion, utilisation ou copie de ce courriel ou des renseignements qu'il contient par une personne autre que le ou les destinataires désignés est interdite. Si vous recevez ce courriel par erreur, veuillez le supprimer immédiatement et envoyer sans délai à l'expéditeur un message électronique pour l'aviser que vous avez éliminé de votre ordinateur toute copie du courriel reçu. L'intégrité et la sécurité de ce message ne peuvent pas être garanties sur l'Internet. Si vous ne voulez pas que le CMC communique avec vous par courriel, vous pouvez nous faire parvenir un courriel à l'adresse suivante unsubscribe@mcc.ca et inscrire dans la ligne d'objet « désabonnement ». Si vous avez des questions ou des préoccupations concernant notre politique sur la protection des renseignements personnels, n'hésitez pas à en faire part par écrit au comité de protection des renseignements personnels, au 2283, boul. St-Laurent, Ottawa (Ontario) K1G 5A2.

Ahmed Al-Nagar (PHA)

From: M Ridd <M.Ridd@bristol.ac.uk>
Sent: 25 February 2014 13:12
To: Ahmed Al-Nagar (PHA)
Subject: Re: Patient-Doctor Depth-of-Relationship Scale

Dear Ahmed

Thanks for getting in touch. Delighted this work has found another home.

Please let me know/send me copies of any publications resulting from this work.

Regards

Matthew.

On 20 February 2014 17:56, Ahmed Al-Nagar (PHA) <A.Al-Nagar@uea.ac.uk> wrote:

Dear Dr Ridd,

I hope this email finds you in great health. I am writing to you regarding the Patient-Doctor Depth-of-Relationship Scale which you have published November/December 2011 at the ANNALS OF FAMILY MEDICINE. I adopted the scale so it can be used in pharmacy consultations by changing the word "doctor" and into "pharmacist". It is the first time that I adopt questionnaires as I have never done so in my previous PhD projects, it would have been a better idea to ask for your permission before actually using it. At all the stages of my project, your work was referenced and clearly stated that the questionnaire was adopted from the authors. I wanted to get a retrospective approval for using the tool in my PhD project and just to reassure you that your work has been referenced and will always be referenced in any possible future publication.

Kind regards,

Ahmed Al-Nagar

Ahmed Al-Nagar

Medicines Management Research Group

University of East Anglia

Appendix 3.18– Patient reminder letter

Ahmed Al-Nagar
School of Pharmacy
University of East Anglia
Norwich NR4 7TJ
Mobile: 07442 640678
a.al-nagar@uea.ac.uk

Patient's

Address

Date

Dear

Re: Exploring community pharmacists communication with patients

Approximately two weeks ago you took part in a research study and took a questionnaire away with you to complete. Currently, we have not received your completed questionnaire. We appreciate you may be very busy so I have enclosed another copy of the questionnaire and a stamped addressed envelope for your convenience. If you have already returned the completed questionnaire, thank you for your time and please disregard this letter.

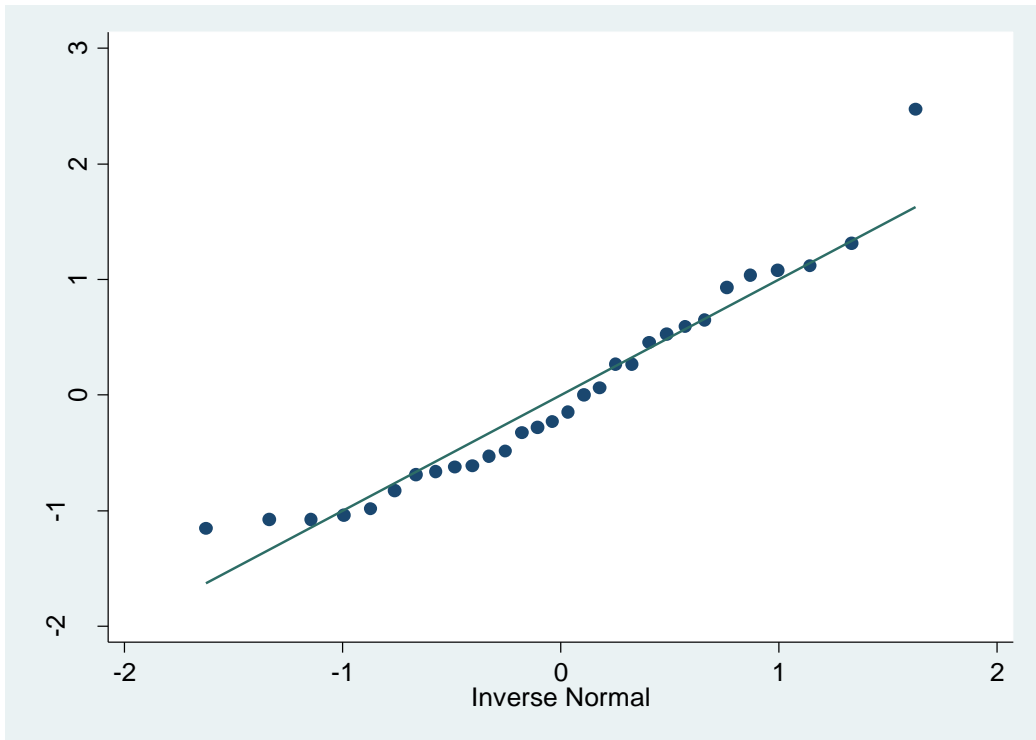
The questionnaire only requires tick box responses for each numbered question and is designed to take no more than 10 minutes to complete.

If you have any questions, do not hesitate to contact me on 07442 640678. I would finally like to thank you for your time and support with this study.

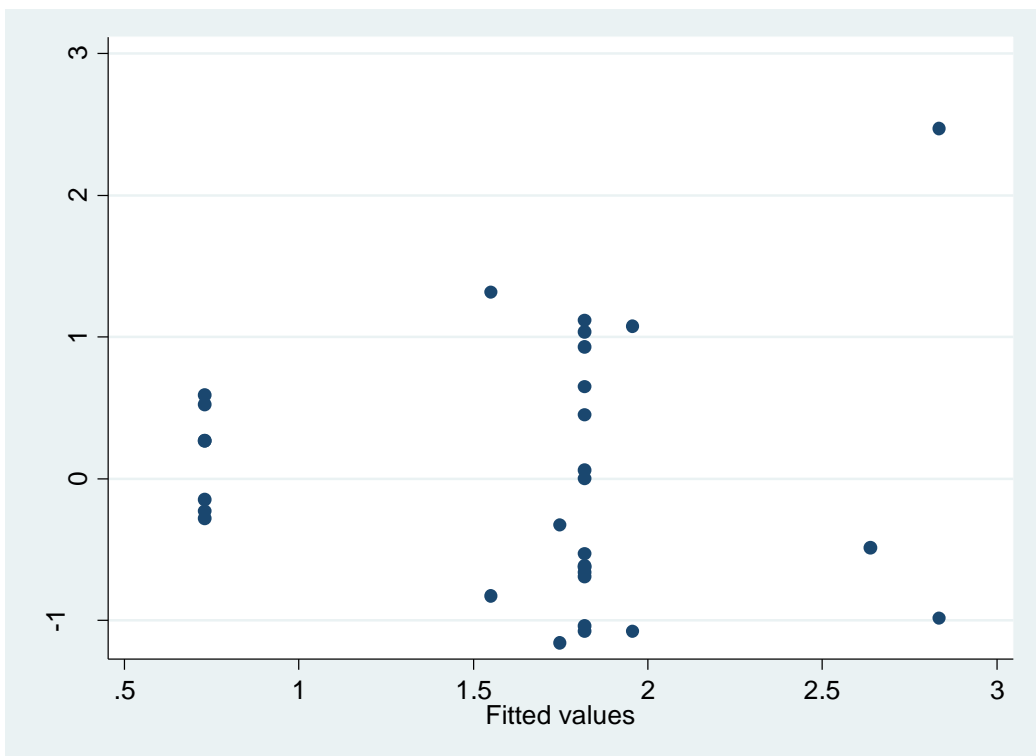
Many thanks,

Ahmed Al-Nagar MRPharmS

Appendix 3.19 – QQ Plot and Scatter Plot



QQ Plot of Summary of linear regression model to identify factors that influence Patient Centeredness Score



Scatter Plot of Summary of linear regression model to identify factors that influence Patient Centeredness Score