



# **Being polite? Exploring the use of politeness theory and conversation analysis to assess pharmacy student performance within objective structured clinical examinations**

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## **Declaration**

I, Sarah Alsubaie, confirm that this is my own work and that the use of all material from other sources has been properly and fully acknowledged.

SARAH ALSUBAIE

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## Dedication

*I dedicate this thesis*

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## Dissemination of findings

### 1. Publications

Alsubaie, S., Grant, D. and Donyai, P., 2021. The utility of Conversation Analysis versus Roter's Interaction Analysis System for studying communication in pharmacy settings: a scoping review. *International Journal of Pharmacy Practice*, 30(1), pp.17-27

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### 2. List of presentations

Poster presentation at the Pharmacy Practice Research Virtual Showcase, School of Pharmacy, University of Reading on 8<sup>th</sup> June 2020, titled "*Utility of Politeness Theory in examining the interactions that take place within Objective Structured Clinical Examination (OSCEs)*".

Oral presentation at the Postgraduate Research Virtual Showcase, School of Pharmacy, University of Reading on April 2021, titled "*The Utility of Applied*

*Conversation Analysis or Roter's Interaction Analysis System in Pharmacy Settings: Scoping Review".*

Oral presentation at the Postgraduate Research Showcase, School of Pharmacy, University of Reading on March 2022, titled "*How do pharmacy students protect the 'face' of others? A micro-level analysis using applied linguistics*". I was awarded the prize for best final-year presentation.

Alsubaie, S., Grant, D. and Donyai, P. (2020). Improving Communication in Pharmacy Practice: Utility of Politeness Theory on OSCE Test Interaction. A poster presentation in *EACH: International Association for Communication in Healthcare Online Conference*.

Alsubaie, S., Grant, D. and Donyai, P. (2022). The use of politeness strategies by pharmacy students while obtaining information from patients during OSCES consultations. A poster presentation in *RPS Annual Conference 2022 - Inspiring Change: The Future of Pharmacy Conference*. London.

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## **List of Abbreviations**

ACPE	Accreditation Council for Pharmacy Education
CA	Conversation Analysis
CAT	Communication Accommodation Theory
FPP	First Pair Part
FTA	Face Threatening Act
GPhC	General Pharmaceutical Council
H	Hearer
NHS	National Health Service
OSCE	Objective Structured Clinical Examination
P	Power
Ph	Pharmacy student
PT	Politeness Theory
Pt	Patient (simulated)
RIAS	Roter Interaction Analysis System
S	Speaker
SPP	Second Pair Part
TCU	Turn Constructional Units

WHO

World Health Organization

## Abstract

**Background:** Communication issues among patient-health professionals persist, prompting the need for better communication training and assessment, such as through the use of Objective Structured Clinical Examinations (OSCEs). Politeness Theory (PT) considers how to deal with potentially sensitive situations, regarded as Face Threatening Acts (FTAs), which can embarrass patients (referred to as positive FTAs) or make people feel imposed on (referred to as negative FTAs). Failure to recognise and address FTAs may upset patients and reduce the effectiveness of the interaction. Studies that examine health professionals' communication with patients rarely address this topic.

**Aim:** To explore how pharmacy students use language to maintain (or not) patient face needs, using PT and Conversation Analysis (CA).

**Method:** A scoping review examined the usefulness of two established methods (Roter's method versus CA) in exploring real-time interactions within pharmacy practice. Then, nineteen OSCE video recordings of pharmacy students (2018-2019 and 2019-2020) interacting with simulated patients were examined. The videos were transcribed using ELAN software based on the Jeffersonian transcription system. The students' utterances were categorised using PT into a) Types of FTAs and b) Politeness strategies applied, if any. The sequence organization of CA was used to assess simulated patients' responses as preferred or dis-preferred responses. Chi-square was used to find out variables that might affect patient responses and pharmacy student feedback.

**Findings:** CA is a useful tool for investigating the finer details of communication, and Roter's method can provide a general description of communication. In consultations, speech acts can interfere with the patient's face needs (for example, receiving a diagnosis can feel embarrassing, or being given advice can feel imposing). Various type of politeness strategies were applied by students that ease a potential embarrassment to the patient (e.g. avoiding disagreement, expressing understanding), and maintain their autonomy (e.g. being indirect, using hedging or minimising the imposition). However, the pharmacy students studied mainly focussed on avoiding impositions, rather than preventing embarrassment to their patients. Patients' dis-preferred responses were more likely to occur when they were disclosing unhealthy behaviour, and paradoxically, these were less likely to receive positive feedback from students.

**Conclusion:** Programs for enhancing health professionals' communication skills do not generally focus on easing patients' embarrassment (i.e. maintaining patients' positive face needs). Developing teaching methods regarding this is crucial to preparing students for effective rapport-building. This thesis lays out several methods for further studying and improving the communication skills of pharmacy students and other health professional trainees.

# **1. Chapter 1: Improving Pharmacy Practice**

## **Communication**

### **1.1. Introduction**

Despite all the efforts made by healthcare professionals to improve communication within the medical field, there are still communication challenges faced by healthcare professionals, including pharmacists, when interacting with patients. Patients' dissatisfaction, disengagement or non-adherence can result from inadequate communication with them. Pharmacists play an essential role in managing these issues through establishing effective ways of communicating with them, such as providing proper counselling, active listening, sharing decision making and giving understandable information. Thus, education is focused on developing pharmacists' communication skills in order to improve patient adherence and achieve desired therapeutic outcomes. The importance of effective communication with patients is emphasized by most pharmacy schools during the initial stages of student education (Wallman, Vaudan and Sporrang, 2013). In this chapter, an overview of patient communication is presented, followed by a discussion of teaching method issues. Finally, the justification of this research is discussed.

### **1.2. Communication with patients within pharmacy settings**

Pharmacists' roles in the UK and in many other parts of the world extend beyond the traditional task of dispensing to encompass delivery of a wide range of healthcare

services, such as patient counselling, health check assessments, and giving influenza and COVID-19 vaccinations. Thus, acquiring high communication skills for pharmacists is a necessity required by the expansion of their role in healthcare systems (Jin *et al.*, 2018). The WHO (1997), in its report 'Preparing the Pharmacist of the Future: Curricular Development', concluded that pharmacists, being a conduit between physicians and patients, must have excellent communication skills as one of their essential seven characteristics. Communication skills involve all types of verbal, nonverbal, listening and written skills. These skills enable pharmacists to complete their task performances effectively, such as taking a patient history, delivering information to a patient in an accessible and understandable way, which results in making the patient feel more comfortable, and increasing their trust and confidence.

Undoubtedly, meaningful interactions between pharmacist and patient form the basis of achieving positive health outcomes. As a result of good communication, patients' understanding increases; for example, patients can be more aware of their medical condition, treatment options, and medication instructions, promoting medication adherence and reducing the risk of medication errors. Several studies have demonstrated that patients are more likely to adhere to their prescribed treatment plan when they have a clear understanding of their medication regimen, including dosage, frequency, and any potential side effects (Ha and Longnecker, 2010). In addition, as a result of good communication, patients are able to express all their concerns and misconceptions. This enables pharmacists to provide better



healthcare to the patient by correctly understanding the patient's problems and needs, hence customizing their healthcare plan based on their preferences (Coulter, 2012; Ha and Longnecker, 2010). Thus, when patients are able to openly communicate with pharmacists about their symptoms, concerns, and experiences, they are more likely to receive appropriate interventions. In fact, patients' understanding and acceptance of pharmacists' recommendations can be promoted by developing trusting relationships (Thamby and Subramani, 2014).

In addition, patients' behaviours are also affected by pharmacist attitudes and behaviours (Qudah, Thakur and Chewning, 2021). The level of engagement in conversation between patient and pharmacist can be influenced by pharmacist behaviour, either increasing it or preventing it. For example, it is important that pharmacists listen to patient concerns carefully. This is because, by not paying attention to patients' concerns, pharmacists may in fact obstruct patient engagement in any discussion that is being conducted (Stevenson *et al.*, 2004; Coulter, 2012).

From the patient's perspective, good communication leads to trust and a positive pharmacist-patient relationship. Patients tend to be more satisfied when they feel that they have been heard, understood, and involved in their healthcare decisions (Covvey *et al.*, 2019; Coulter, 2012). Numerous studies have demonstrated that an effective pharmacist-patient relationship has a positive impact on patient satisfaction, increasing patient education, and improving patient adherence to their medication, while decreasing medication-related problems, as well as reducing medication waste and its associated costs (Stevenson *et al.*, 2004; Maynard and

Heritage, 2005; Shah and Chewning, 2006; WHO, 2003; Chabot *et al.*, 2003; Ha and Longnecker, 2010).

Alternatively, poor communication has been shown to cause a number of negative consequences including lack of patient knowledge about their condition and medication (e.g. disease, dose regimen, and the intended therapeutic outcomes). Ineffective communication, for example, may lead to misunderstandings of medication instructions, increasing the rate of medication errors (Khan and Tidman, 2022). It is possible that patients may take incorrect doses, miss doses, or misunderstand critical warnings, resulting in treatment failures. In addition, confusion or uncertainty regarding medication instructions can lead to a reduction in medication compliance. Failure to take medications as prescribed may adversely affect a patient's treatment outcomes (Ha and Longnecker, 2010). A recent systematic review conducted by Ozavci *et al.* (2021) aimed to explore older patients' perspectives regarding medication communication across transitions of care (e.g. from hospital to community). This review demonstrated that poor communication would result in medication errors, particularly after older patients were discharged from the hospital to the community. Poor communication with the patient has an impact on more than just clinical outcomes. It has a direct impact on the patient's perception as well. Previous studies have found that poor communication can result in an increase in patient dissatisfaction. Patients may feel ignored because of inadequate explanations, a lack of empathy, or rushed interactions (Coulter, 2012;

Kwame and Petrucka, 2021). In the following paragraphs, A number of issues resulting from poor communication are highlighted.

### **1.2.1. Current communication issues between pharmacist- patient**

The healthcare system is experiencing a number of concerns related to ineffective interaction with patients and poor communication, such as medication waste, dominant pharmacy staff and nonadherence among patients (Noble, 2020; Chegini *et al.*, 2020; Stewart *et al.*, 2020). These concerns need to be addressed well to avoid adverse consequences on patient healthcare. Patient adherence to their medication, meaning the degree to which their medication-taking matches the agreed medication plan, is considered a global medical issue. The prevalence of non-adherence to medication is difficult to measure, however recent studies reported that the rate of patient adherence is between 22-65 % (Lin *et al.*, 2022; Seid, Abdela and Zeleke, 2019; Duarte-de-Araújo *et al.*, 2018). This newest adherence metric has not changed from previous studies, as seen from Osterberg and Blaschke (2005) report about medication adherence, which demonstrated that adherence rates among patients with long term conditions range from 43 to 78%, meaning that non-adherence to medication potentially occurs in 22% to 57% of cases. Nonadherence may be exacerbated when pharmacists and patients do not communicate well. Non-adherence to medication may lead to troubling consequences for the patient, including a deterioration of their condition and even death (Stevenson *et al.*, 2004; Osterberg and Blaschke, 2005).

In addition, poor communication is defined as one of main barriers to achieving patient-centred care (Pelzang, 2010; Santana *et al.*, 2019; Ng *et al.*, 2021). All recommendations and guidelines have been made to emphasize the importance of moving the healthcare system from traditional approaches (i.e. task-orientated care) toward more patient-centred care to increase patient engagement, empowerment, satisfaction, and then better health outcomes. McCormack and McCance (2006) defined patient-centred care as “*Person-centred processes focus on delivering care through a range of activities that operationalize person-centred nursing and include working with patients’ beliefs and values, engagement, having sympathetic presence, sharing decision-making and providing for physical needs*” (p.476). All these activities could not be applied without effective communication (Pelzang, 2010; Kwame and Petrucka, 2021). Thus, good communication with patients is a corn stone of patient-centred care. It is really challenging to measure the actual level of patient-centred care that has been embedded in healthcare (Santana *et al.*, 2019). This is because of the absence of a standard definition for patient-centred care, and how exactly it can be implemented (Santana *et al.*, 2019; Pelzang, 2010) The majority of quality indicator measurements that were identified, are guidelines, surveys or recommendations, rather than actual measurement (Santana *et al.*, 2019). However, later studies indicate there is a weakness in applying patient-centred care due to many barriers, in which poor communication is one of them (Ng *et al.*, 2021; Fix *et al.*, 2018; Pelzang, 2010; Stewart *et al.*, 2020; Santana *et al.*, 2019; Kwame and Petrucka, 2021).

In addition to the above concerns about inadequate interaction, patients also reported being dissatisfied when healthcare professionals use unsuitable verbal communication, showing disrespect, or ignoring the patients' questions (Kwame and Petrucka, 2021). In fact, being able to respect a patient's value and accept them, understand their needs and preferences requires special, skilled communication.

In light of this, numerous studies recommend updating educational programmes and teaching methods to equip pharmacy students with good communication skills. (Pelzang, 2010; Ng *et al.*, 2021). Therefore, investigating the communicational educational programmes is relevant to evaluate the current situation. In the next paragraphs, a brief discussion of the educational programmes for developing pharmacy students' communication skills will be provided..

### **1.3. Educational methods of communication skills**

Many educational and training guidelines of schools of pharmacy emphasize the importance of pharmacy students possessing the necessary communication skills to practice their profession effectively (ACPE, 2016; WHO, 1997; GPhC, 2021). While specific standards may vary between countries and organizations, such as Accreditation Council for Pharmacy Education (ACPE) in United States, General Pharmaceutical Council (GPhC) in United Kingdom, and World Health Organization (WHO), all these standards emphasize the important of communication skills to ensure that pharmacy students receive comprehensive training and education in effective communication with patients and other healthcare professionals (ACPE, 2016; GPhC, 2021; WHO, 1997). Wallman, Vaudan and Sporrang (2013) in their

review in “*Communication training in pharmacy education programs*”, reported that many pharmacy schools in different educational systems around the world focus on communication skills for pharmacists. For example, in the United Kingdom, the General Pharmaceutical Council (GPhC) standards for the initial education and training of pharmacists, state that pharmacy students must support the patient in choosing an option by listening and responding to their concerns and respecting their decisions (GPhC, 2021). This is similar to other developed countries, such as the US, and Australia (Marriott *et al.*, 2008; ACPE, 2006). All these training programmes recognise the importance of developing pharmacy trainees’ communication skills in order to assist them in performing their clinical duties, such as gathering and assessing patient information and providing appropriate advice, as well as providing safe and appropriate medication administration. Thus, many of the training programmes for preparing pharmacists are focussed on the pharmacist's acquisition of communication skills by providing these skills alongside pharmaceutical knowledge. In fact, the communication skills training of pharmacy students has been proven to significantly improve relevant competencies (Jin *et al.*, 2018; Lyons *et al.*, 2020). Therefore, the majority of pharmacy schools include a programme for improving pharmacy students’ communication skills through roleplay and practice, alongside the knowledge gained through traditional means of education, such as lectures.

Modern pharmacy teaching within academia includes developing and evaluating students’ communication skills (Lyons *et al.*, 2020). One of the established methods

used in many educational systems is the use of simulated patients that roleplay real life scenarios, such as the Objective Structured Clinical Examination (OSCE) (Kristina and Wijoyo, 2019).

### **1.3.1. Objective Structured Clinical Examination (OSCE)**

OSCEs are a widely used assessment method in various healthcare professions, including medicine, nursing, and others. It is a simulated patient method that has been widely implemented in many pharmacy schools to assess student competence. This method uses different interactive examination stations representing various clinical scenarios, providing students with real-life encounters, while assessing their clinical and communication skills (Kristina and Wijoyo, 2019; Lyons *et al.*, 2020; Langran, Alexander and Donyai, 2020). During an OSCE, students are typically required to move through a number of stations or scenarios, average 20 stations (Mitchell *et al.*, 2009). In healthcare education, OSCEs are commonly used to assess students' ability for clinical practice, and to assess professionals' competence. During OSCEs, students may be asked to perform their tasks as pharmacist such as taking a patient history, conducting a physical examination, making a diagnosis, formulating a treatment plan, demonstrating communication skills, or handling ethical concerns (Setyonugroho, Kennedy and Kropmans, 2015). Thus, it is possible to assess a wide range of pharmacy skills and competencies through OSCEs, including communication, patient counselling, medication history, physical assessment, therapeutic decision-making, and professionalism, which allows for a comprehensive assessment of the student. Using simulated patient methods in

pharmacy, OSCE stations prepare learners for real-world patient care scenarios (Kristina and Wijoyo, 2019). In fact, the use of simulated patient methods in pharmacy has demonstrated its practicality in transferring communicational theory to the practice setting and potentially increasing students' confidence in their skills. This method is also effective in managing communication anxiety through frequent exposure of participants to real life scenarios, allowing students to demonstrate their abilities in a controlled environment. (Mesquita *et al.*, 2010).

Additionally, OSCEs can be used to provide students with immediate feedback after each scenario or station (Mitchell *et al.*, 2009). In this manner, students can receive immediately information regarding their strengths and areas for improvement, which facilitates self-reflection. As a result of the feedback received, their professional development can be guided and their competency in patient care can be enhanced. OSCEs give the students opportunity to practice and refine their clinical skills in a safe and controlled environment during OSCEs (McWilliam and Botwinski, 2012).

In addition, OSCEs are not only used for assessing student performance but also as a reflection of the strengths and weakness of the educational system. In fact, many researches use simulated patient methods for assessing the educational system (Mesquita *et al.*, 2010). OSCE tools aid the identification of areas where students tend to perform weakly, so that curriculum needs can be identified and more effective teaching methods can be implemented. Additionally, students' performance can be compared over different schools or programmes via OSCEs. In this way, it is



possible to identify differences in educational systems, such as differences in teaching styles or curriculums. It is therefore possible for educators to make changes that will improve the quality of education. It is important to mention here that pharmacy schools may implement OSCE examinations differently, however, the OSCE's objectives and principles remain the same. This means there is a wide range of formats, content, and scoring criteria used in OSCEs, but all OSCEs aim to assess pharmacy student practical skills, knowledge, and competencies. This variation in OSCE examination application across countries may be attributed to factors such as educational standards, regulations, cultural variations, and teaching differences (Kristina and Wijoyo, 2019).

While OSCEs tool has several benefits, there are also some limitations to consider. Thus many studies call for further research to explore the use of OSCEs as an assessment tool within pharmacy practice (Lyons *et al.*, 2020; Kristina and Wijoyo, 2019). First of all, students may experience time stress as OSCE stations or tasks must be completed within a specified timeframe. Due to this time constraint, all relevant student's skills and knowledge may not be assessed thoroughly (Boursicot *et al.*, 2020). In addition, there is difficulty to ensure consistency across different examiners and exam sessions. This is because of low inter-rater reliability of scores when marking the communication skills component of OSCEs (Hodges *et al.*, 1996; Setyonugroho, Kennedy and Kropmans, 2015; Cömert *et al.*, 2016; Piumatti, Cerutti and Perron, 2021), which depends on evaluating the student's performance at a more subjective level. Furthermore, the OSCE format lacks flexibility, so some

aspects may not be included in the absence of an exact definition of effective communication. Mesquita *et al.* (2010) in a review of the use of simulated patient reported that there is a deficiency in identifying the accurate meaning of communication skills. This makes it difficult for examiners to pinpoint deficiencies in communication skills, especially those relating to the discussion of sensitive topics. These sensitive communicational components have been explored in one sociolinguistic theory, known as Politeness Theory (PT).

Interacting with patients requires highly qualified interpersonal skills, thus it might be beneficial to apply interpersonal theories within pharmacy settings in order to gain a better understanding of communication strengths and weaknesses. Many studies call for examination of patient interactions using one of the interpersonal theories to improve both research and practice (Shah and Chewing, 2006; Bylund, Peterson and Cameron, 2012). In this study, rather than randomly examining the OSCEs interaction, we examine the interaction with simulated patients through applying PT principles. The theoretical framework used in this study is outlined in methodology chapter (Chapter 3). The principle of PT is very relevant to interactions with patients and that is outlined through a description of PT in the following paragraphs.

#### **1.4. Politeness Theory**

Politeness Theory (PT) is one of the most fundamental sociolinguistic theories, and was established by Brown and Levinson (1987). It defines the framework of politeness strategies, used in any social interaction to save the hearer's (or the

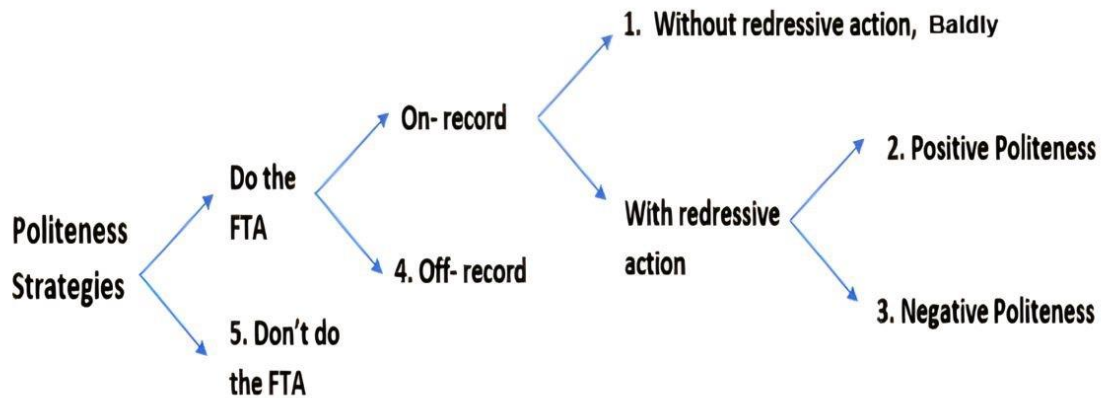
speaker's) 'face'. The application of PT provides insights into how pharmacy students use language to maintain social relationships during interactions with patients within pharmacy practice. In the subsequent few paragraphs, PT is further explained and the application of PT and other sociolinguistic theories in pharmacy practice is outlined.

#### **1.4.1. Explanation of Politeness Theory (PT)**

Brown and Levinson (1987) are widely known as being the first to propose the politeness strategies that are used universally within any social interaction. PT is based on two key concepts: 'face' and Face Threatening Acts (FTAs). Face is firstly defined by Goffman (1955) as "*the positive social value a person effectively claims for himself (sic.) by the line others assume he (sic.) has taken during a particular contact*" (p.217). PT suggests that everyone has a sense of their positive face and negative face. Each face has its desires. While 'negative face need' relates to wanting to be unimpeded by others (to maintain autonomy), 'positive face need' relates to wanting to be desirable to (liked by) , at least some, others. A FTA is any act that inherently interferes with someone's face, so that there are negative FTAs, which threaten the negative face needs, and positive FTAs, which threaten the positive face needs, as shown below in Table 1.

**Table 1 Different types of face threatening acts (FTAs) based on Brown and Levinson (1987).**

Negative face threatening acts (FTAs)	Positive face threatening acts (FTAs)
<ul style="list-style-type: none"><li>• Order and request</li><li>• Suggestion and advice</li><li>• Reminding</li><li>• Threats and warnings or expressions of strong negative emotion towards hearer</li><li>• Offers or promises</li><li>• Compliments</li></ul>	<ul style="list-style-type: none"><li>• Expression of disapproval, criticism, complaints</li><li>• Contradictions or disagreements or challenges</li><li>• Expression of violent emotion</li><li>• Irreverent mention of taboo topics or divisive topics (e.g. race, religion and politics)</li><li>• Bringing bad news about the hearer and good news about the speaker</li><li>• Blatant non-cooperativeness in activity</li></ul>



**Figure 1 Politeness strategies to redress FTA based on Brown and Levinson (1987).**

Brown and Levinson (1987) set up the framework of possible strategies of politeness based on these two concepts, Face and FTA. Their framework pointed out numerous ways people redress the face of others in any social interaction when doing a FTA. PT includes five types of strategies which are from more to less directness; bald on-record, positive politeness, negative politeness, and off-record. Not to do a FTA in the first place is considered as the fifth strategy of politeness (as shown in figure 1).

Bald on-record is the direct way of doing FTAs without any effort from the speaker (S) to mitigate the face needs of the hearer (H). PT indicates that there are two cases where the speaker is choosing to use a bald on-record strategy. The first case is when an FTA is more important than the hearer's face needs, such as in an urgent case and in a task-orientated instance. In the second case, the usage of bald on-

record strategy is considered as a face-redressing act to reduce threats, such as when the hearer expects the speaker to invite him in after a greeting. Figure 2 shows the bald on-record strategy which are obtained from the book by Brown and Levinson (1987) entitled 'Politeness Theory'. For a full version of bald on-record strategy with some examples, see Appendix A.

Positive politeness and negative politeness are used for doing an FTA while redressing the positive face needs and negative face needs, respectively. Positive politeness is broader than negative politeness since the positive politeness is used widely to express that the speaker respects the positive self-esteem of the hearer, while the negative politeness is mainly used to express that the speaker respects the hearer's freedom. The summary of proposed PT positive and negative politeness strategies is shown in Figure 2 of the framework, which was obtained from Brown and Levinson (1987). For a fuller version of these two strategies with examples, see Appendix A.

The fourth strategy of PT is called 'off record'. In the case of using this strategy, the speaker is using hints to complete the FTA in an indirect way. This strategy gives a chance for the hearer to interpret the hint, thus avoiding the potential effect of doing the FTA. Figure 2 summarizes the possible ways of using the off-record strategy, based on Brown and Levinson (1987). For a fuller version, see Appendix A.

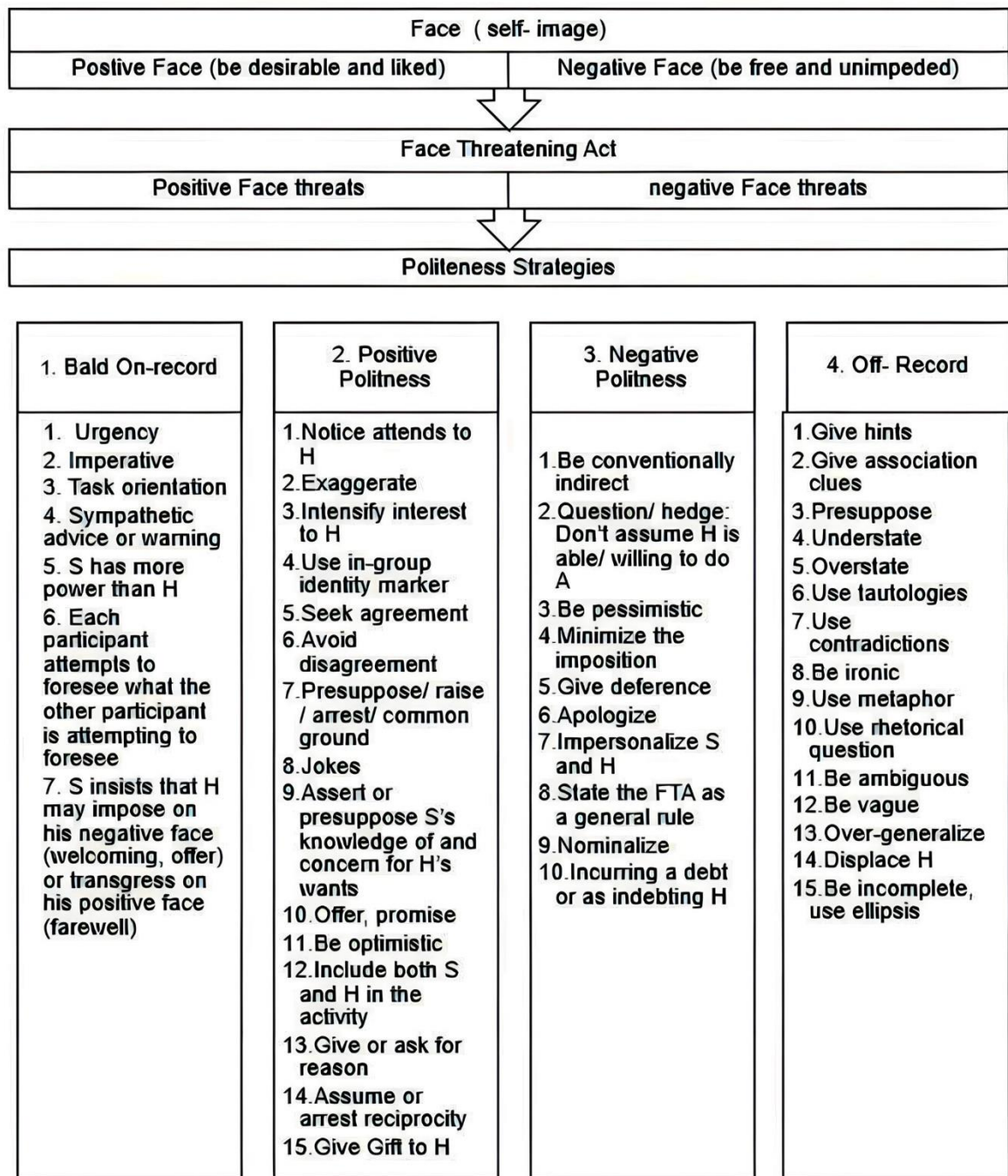


Figure 2 Framework of Politeness Theory (PT) based on Brown and Levinson (1987).

### **1.4.2. Factors influencing degree of politeness**

Brown and Levinson (1987) proposed three sociological variables that affect the choice of politeness strategies used, which are the social distance, relative power, and the absolute ranking of the threat of the FTA in each 'culture' (situation). As the weighting of FTA increases, the more politeness strategies are needed. The following equation was suggested by PT Brown and Levinson (1987):

$$W = D(S, H) + P(H > S) + R$$

Where W refers to the weightiness of the FTA, and D (S, H) refer to social distance between hearer and speaker. Therefore, as the social distance between participants increases, then more politeness strategies are used. P (H > S) refers to power of hearer over speaker, so that as the power of speaker increases, then fewer politeness strategies are used. R (rank of FTA) refers to how much (quality) the FTA interferes with positive and negative face needs. For example, asking one for money is more threatening than asking one to pass the salt.

### **1.4.3. Application of PT in medical field**

Many studies have examined conversational politeness within the medical field among patients and healthcare professionals, including physicians or nurses, by applying PT (Adams, 2013; Mileva, 2019; Spiers, 2000; Jones, 2003; Maynard and Heritage, 2005; Beach, 2013; Ayeloja and Alabi, 2018). These studies show that, similar to any other social interaction, politeness strategies are inherently applied



within medical interactions where healthcare professionals exert efforts to avoid patient embarrassment, which in turn results in maintaining the positive face needs, or imposition on them, which results in maintaining the negative face needs. The awareness of politeness concepts and the appropriate use of politeness strategies can help healthcare practitioners better perform tasks, such as giving advice and seeking information, by building rapport (Adams, 2013; Mileva, 2019; Spiers, 2000; Jones, 2003; Maynard and Heritage, 2005; Beach, 2013). Logically, then, the conversational politeness strategies used by healthcare professionals are essential for achieving patient satisfaction and, arguably, desired healthcare outcomes. (Yanti, 2018).

#### **1.4.4. Application of PT in pharmacy settings**

To our knowledge, this is the second study that uses PT to investigate communication within pharmacy practice. The first was conducted by Lambert (1996), who investigated the factors affecting the degree of politeness in written letters from hospital pharmacists or community pharmacists to physicians. Lambert used content analysis to compare the degree of politeness in allergy reports and recommendations for alternative drug treatments. The social distance, power and demographic factors of the pharmacists involved, such as sex and age, were also examined in relation to the way in which recommendations and reports were written. Lambert stated that the degree of politeness was more noticeable in communications in which recommendations were made than in report-based communications, as recommendations are more face threatening than reports. In addition, the age and

practice setting did not affect the degree of politeness of reports, but they had an effect on recommendation letters. Sex had no impact on degree of politeness among both reports and recommendations. The differences in perception of power and social distance were not related to the degree of politeness.

#### **1.4.5. Application of other sociolinguistic theories in pharmacy practice**

Besides Brown and Levenson's politeness theory, other sociolinguistic theories related to the concept of 'face' have also been applied in pharmacy practice. For example, there are two recent studies (Murad, A. Spiers and Guirguis (2016) from Canada and Chevalier *et al.* (2017) from Australia) which explore pharmacist-patient interaction in terms of face needs and demands. These works also applied interpersonal relationships theory to pharmacist-patient interactions. Murad, A. Spiers and Guirguis (2016) examined the face needs and threats and the strategies used to deal with these aspects in pharmacist-patient interactions by applying face-work theory, which involves the communication strategies used to protect, maintain, and enhance face to satisfy face needs and to mitigate face threats, including basic face needs that underlie all social interaction; autonomy, competence or esteem, and fellowship. They used a descriptive study, which is a scientific method which involves observing and describing the behaviour of a subject without influencing it in any way, and principles of ethnology, which is the branch of anthropology that compares the characteristics of different peoples and the differences and relationships between them. They analysed 25 videos in community pharmacies. They found that the greatest face need was competence for both participants. The

solidarity communication strategy was widely used to support the face, and indirect questioning was commonly used to mitigate threats. Chevalier et al. (2017) measured the effectiveness of interaction by applying the Communication Accommodation Theory (CAT), which describes how individuals modify their communication style in order to enhance effective communication with others. Chevalier et al. (2017) examined the degree of pharmacist accommodation in response of patient conversational needs. They used discourse analysis to analyze 48 transcribed audio-recordings of patients and hospital pharmacists during medication counselling. They found that the majority of pharmacists were adapting to patient needs and applying the five CAT strategies, which are approximation<sup>1</sup>, interpretability<sup>2</sup>, discourse management<sup>3</sup>, emotional expression<sup>4</sup> and interpersonal control<sup>5</sup>. Chevalier et al. (2017) recommended the use of open-ended questions to engage the patient in the discussion.

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<sup>1</sup> Approximation strategies refer to "how individuals adjust their speech patterns such as the pitch, rate, volume, tone, use of dialect or accents to converge towards or diverge from their partner's speech"

<sup>2</sup> Interpretability strategies refer to conversation content, how the interactants modulate their language and word choice to ensure their words are understood.

<sup>3</sup> Discourse management strategies involve conversation processes to promote conversation between interactants through turn-taking, changing topics as needed, responding to non-verbal cues and using conversational repair such as face maintenance that allows patients to maintain a positive self-image and prevents interactions from becoming ineffective or negative.

<sup>4</sup> Accommodative emotional expression takes place when pharmacists provide appropriate levels of reassurance and empathy in response to patients' emotional needs.

<sup>5</sup> Interpersonal control strategies refer to promote equality between interactants, not constraining patients to passive patient roles.

#### **1.4.6. The relevance of PT in pharmacy practice**

Politeness theory is one of the interaction-centered theories that facilitate examining how pharmacists and patients constantly impact each other during their interactions. The framework of PT is very relevant to the interaction with patient. During patient consultation, patients may have positive face needs such as avoiding patient embarrassment, feeling respected, listened to, and understood by pharmacy staff. Inversely, patients may have negative face needs, such as wanting to be unimpeded, to maintain their privacy, dignity, and personal space during medical procedures or examinations. It is important for pharmacy staff to recognise and respect both the positive and negative face needs of their patients to promote effective communication, trust, and satisfaction in their relationship. However, patient consultation relies on giving advice, or recommendation which is considered based on PT to be one of the negative FTAs that may threaten patient face and affect the pharmacist-patient relationship. Counselling not only includes advice about the proper use of medication, but also goes far beyond that to include giving advice about lifestyle management, supporting patient health, and discussing all patient concerns. Patient consultation also may include discussion of personally sensitive topics, such as patient adherence, alcohol intake, and management of the patient's lifestyle. Being aware of the PT framework, including patient needs, pharmacist tasks that interfere with these needs, and how to handle them according to PT conversational strategies, may enable us to achieve effective communication with patients.

In the context of patient-centered care, understanding and addressing patients' positive and negative face needs is essential for better implementation of patient-centered care, as it provides care of the patient's emotional and psychological needs. Patient-centered care can be achieved by addressing their positive face needs (i.e. avoiding embarrassment). For example, patient centered care involves maintaining positive face needs by showing empathy and respect for the patient's values, beliefs, and preferences. It involves active listening, acknowledging the patient's concerns and providing support where necessary. Also, positive face needs are supported when healthcare professionals involve patients in decision-making and value their opinions. Similarly, patient-centered care is promoted by addressing the patient's negative face needs (i.e. avoiding imposition on them) by providing them with choices and allowing them to make decisions about their care. It involves respecting the patient's privacy and autonomy and not imposing unwanted recommendations. Thus, embedding patient-centered care requires consideration of patient face needs. This means prioritizing the patient's positive and negative face needs during treatment and ensuring they feel respected, heard, and valued.

### **1.5. Justification of performing this research**

Generally, pharmacy practice can be improved with the application of interpersonal relationship principles, including Brown and Levinson (1987) (Shah and Chewing, 2006). Pharmacists might benefit from using PT and its strategies of face-saving to improve interactions with patients. Additionally, assessing student performance can assist in assessing educational programmes. In this study, we therefore focused on

improving communication within pharmacy practice through the improvement of teaching programmes. This study uses the PT framework to evaluate pharmacy students' performances during an OSCE interaction. This will enable us to identify the areas of students' communication skills requiring improvement, and to produce a new teaching tool. Through this study, the different types of acts that threaten patients' face needs during patient consultation can be observed. In addition, the strategies used by students to address these acts in an effort to save the face of the patient can be identified. Furthermore, the results of this study may provide insight into what students' communication skills are strong and weak, and what approach is the best for embedding within communication skills courses. However, It is important to mention here that the implementation of PT, as described by Brown and Levinson (1987), has some challenges. For example, non-verbal communication is not included in PT, and the sequences of acts during interaction are not considered. To address these issues, Conversation analysis (CA) is used beside PT. CA is an useful method to explore and recognise the finer details of any real social actions, including interacting with patients (Drew, Chatwin and Collins, 2001; Have, 2007). By using CA, actions can be sequenced and analysed in depth, patterns in action can be recognised, and finer details of interactions can be identified, such as relative timing, sound characteristics, speed of delivery, intonation, and nonverbal behaviour, as will be explained in next Chapter 2. Thus, using Conversation analysis with PT can assist in analysing non-verbal communication and sequences of actions.

### **1.6. The purpose of this thesis**

The purpose of this thesis is to improve communication with patients in pharmacy practice by addressing patients' face needs to avoid patient embarrassment (i.e. addressing positive face needs) and to avoid imposition on them (i.e. addressing negative face needs).

### **1.7. Research question**

In a patient consultation, how does the pharmacy student meet the patient's needs during sensitive interactional components?

### **1.8. Research aim**

To explore how pharmacy student use language to build strong relationship with patients during OSCEs interactions using PT and CA.

### **1.9. .Research objectives**

To achieve the aim of this study, three main objectives were considered:

- 1) To conduct a scoping review to compare between the usefulness of the existing research tools that have been used to assess the dynamic interactions with patients within pharmacy practice (Roter method versus Conversation analysis). Based on the results of this study, we have been able to select the most appropriate methods to use in this research in order to achieve other objectives.

- 2) To identify and categorise the range of possible FTAs within a set of OSCEs, and the conversational strategies that pharmacy students use to meet patient face needs by using PT. Also, to highlight the effectiveness of strategies used to address them by judging patient responses using conversation analysis.
- 3) To identify the factors that affect patient responses (i.e. embarrass or give rise to feelings of imposition on patient) during OSCEs and to assess pharmacy students' ability to identify and mitigate these acts.

### **1.10. Structure of the thesis**

The thesis is divided into six chapters. It begins with this chapter, an introduction (Chapter 1), followed by a literature review (Chapter 2), a methodology chapter (Chapter 3), a chapter on qualitative findings (chapter 4), a chapter on quantitative findings (Chapter 5), and finally a discussion and conclusion (Chapter 6). Below, a brief outline of each chapter is provided:

After this chapter (Chapter 1), which highlights the ongoing communication issues within pharmacy settings and also provides an overview of the study aim and research objectives, Chapter 2 presents the literature review about the utility of two established methods used in examining the dynamics of patient interactions. The findings of this study aided us to choose the best available method to achieve the aim and objectives of this research.



## Chapter 1 Introduction

The methodology chapter (Chapter 3) that follows provides a full account of the methodological approach taken in this research. This chapter begins with a description of the theoretical framework that will be used in this research to examine the pharmacy students- simulated patient interaction. Then it describes methodology phases, which are sample collection, transcription, and data analysis. Chapter 3 also describes the ethical issues, payment and data protection and confidentiality in more detail.

Findings are presented in two chapters. The first of these (Chapter 4) highlights the qualitative results and findings of this study, including the type of sensitive situations during patient counselling, and conversational strategies used by pharmacy students to mitigate these actions. The next findings chapter (Chapter 5) presents the quantitative results and findings, including the factors affecting patient responses and pharmacy students' third responses.

The discussion and conclusion chapters (Chapter 6) focus on the interpretation of the findings and discuss the investigation in relation to the work of other scholars. It also summarizes the key research findings, including the limitations of the study and contribution to knowledge, and presents recommendations as well as suggestions for future research work. An illustration of the research process is presented in Figure 3.

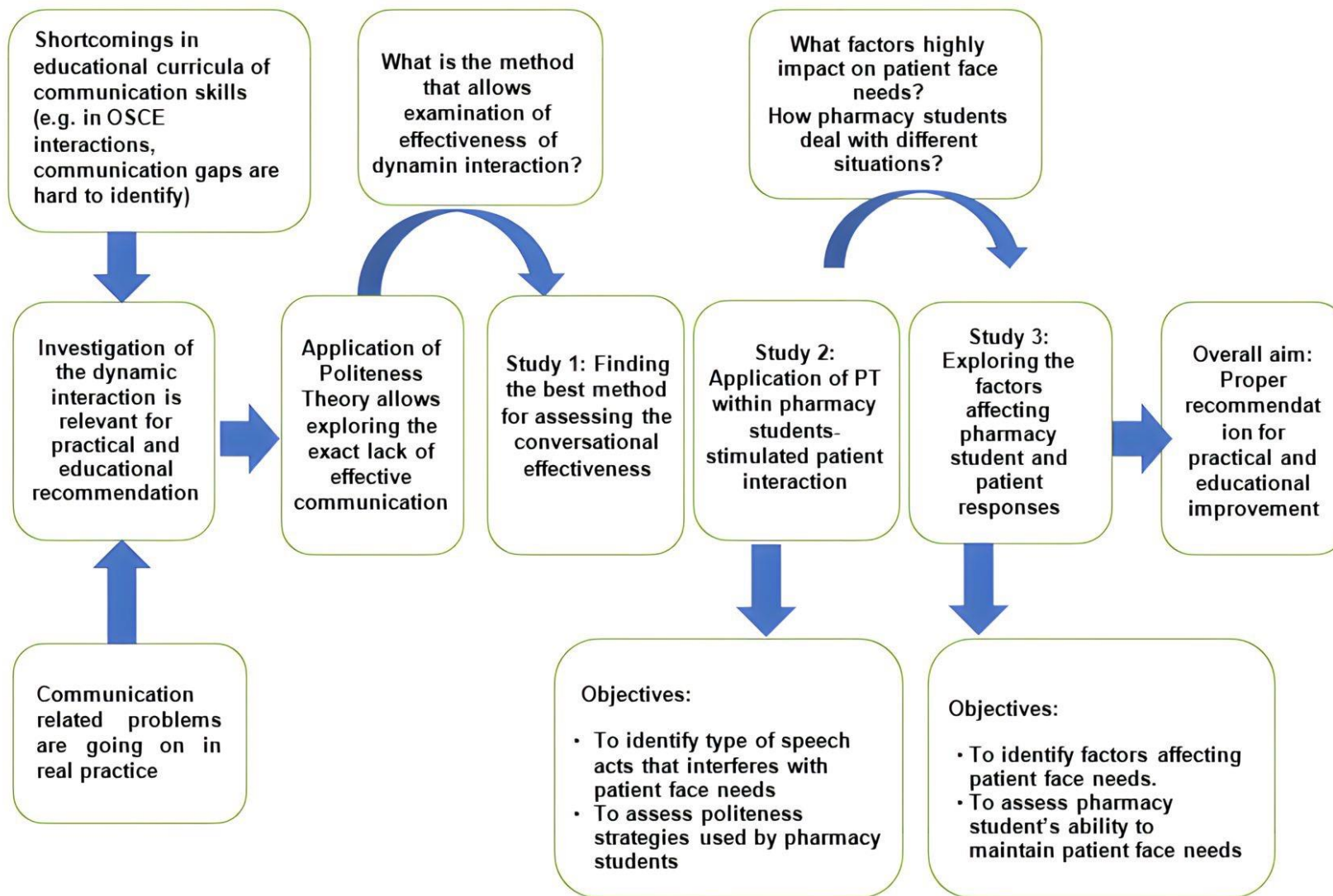


Figure 3 An illustration scheme of the study.

## **2. Chapter 2: The Utility of Conversation Analysis versus Roter's Interaction Analysis System**

### **2.1. Introduction**

Being a good communicator is crucial to the work of pharmacists and is recognised as such by the WHO (Thamby and Subramani, 2014). Communication relates to numerous types of acts, including verbal, nonverbal, listening, and written skills. A narrative review of barriers to patient-centred communication has already emphasized the importance of effective communication skills for building a robust relationship with the patient (Ilardo and Speciale, 2020). Going beyond this, numerous studies have also demonstrated that an effective pharmacist-patient relationship in turn has a positive impact on patient satisfaction, increasing patient education, and improving patient adherence and outcomes, while decreasing medication-related problems and reducing medication waste and its associated costs (Shah and Chewing, 2006; WHO, 2003; Stevenson *et al.*, 2004; Maynard and Heritage, 2005) (as discussed in Chapter 1 ). Due to the importance of successful communication between pharmacists and patients for achieving desired outcomes, communication within this field has been the focus of attention for many researchers.

In fact, communication between patients and healthcare professionals, or between healthcare professionals themselves, has been examined within the medical field since the beginning of the 1960s (Chamberlayne and Gross, 1961; Rosen, 1961).

Despite decades of research and the many recommendations that have been suggested to improve healthcare communication, however, there are still no clear answers as to how, exactly, pharmacists can best interact with patients to promote adherence to their advice in everyday practice. Medication-related problems, medication waste and patient non-adherence are ongoing problems in healthcare, which could arguably be addressed if, as the literature shows, better communication is the key to improving patient outcomes (Gysels, Richardson and Higginson, 2004). Investigating interactions between patients and pharmacists thus continues to be relevant, with the development of pharmacists' communication skills considered to be an ongoing objective for educators (as discussed in Chapter 1). One of the ways to address the gap is to examine dynamic patient-pharmacist interactions using established methods to unearth the detail of what actually works best *in situ*, and to devise relevant educational interventions accordingly.

Several methods have been used in previous research to examine communication *in situ* within the medical field (Shah and Chewning, 2006). Two established methods include the Roter Interaction Analysis System (RIAS)(Cavaco and Roter, 2010) and Conversation Analysis (CA) (Have, 2007). In addition to being used to examine the dynamic nature of medical interactions, these have also been used in pharmacy settings. Both methods are useful for examining two-way interactions *in situ* because of their ability to explore real-time conversations; for example, the impact of participants' responses on each other. Other analytical methods, such as discourse

analysis<sup>6</sup>, or thematic analysis<sup>7</sup>, while useful for interview research, are not helpful for analysing the dynamic nature of two-way interactions in the same way. This review therefore focussed on analysing the usefulness of the RIAS and CA methods for investigating real-time pharmacy interactions, to summarise what each method has to offer in order to help us and other researchers in selecting the right method for our own work. The review also summarised what findings these methods have unearthed in pharmacy. RIAS uses a quantitative coding system to describe the content of interactions by categorising verbal dialogue into different groups (Cavaco and Roter, 2010). CA, on the other hand, is a qualitative method that uses transcription and interpretation to deeply understand the detail of an interaction (Have, 2007). An outline of each method is provided below.

### **2.1.1. Roter methods (RIAS)**

The Roter Interaction Analysis System (RIAS) is a popular tool, developed from the social conversation theories of Debra L. Roter (Roter and Larson, 2002). Data analysis by RIAS mainly relies on dividing each interaction into the smallest unit of expression, known as an utterance, and categorising these into the RIAS scheme

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<sup>6</sup> Discourse analysis is the study of the ways in which language is used between people, both in written texts and spoken contexts.

<sup>7</sup> Thematic Content analysis is a form of qualitative analysis which involves recording or identifying passages of text or images that are linked by a common theme or idea.

(see Appendix B). This scheme was originally developed from coding the content of patient-physician interactions (Roter and Larson, 2002).

#### **2.1.1.1. Data analysis using RIAS**

The RIAS tool involves two main categories: the socioemotional category, which is more about building a relationship with the patient and includes 14 subcategories, such as the expression of concern, approval or disapproval, agreement, criticism, and empathy, and; the task-oriented category, which is related to the performance of the medical function and includes about 29 subcategories, such as asking for or giving information (Roter and Larson, 2002; Cavaco and Roter, 2010). The RIAS method can code the other party's utterances (e.g. the patient's utterances or their carer's) in different ways (Roter and Larson, 2002). For example, asking a question or giving information can be classified as being task-orientated content, while the expression of their (the patient's) concerns can be classified as socioemotional content. An updated version of RIAS includes a description of the conversation structure, such as speaker turns, which is defined as a continuous segment of uninterrupted utterances of a single speaker. This means the total number of speaking turns per interview can be interpreted as the rate of floor exchanges. An updated version of RIAS also includes dialogue interactivity, which is defined as the number of speaking turns per interview minute. For example, a 5 min interview with 30 turns will average 6 turns per minute. The updated version of RIAS also allows measure the turn density, which is characterized as the average number of

utterances within a turn by the speaker, and turn duration, which represents the length of time in seconds spanning the block of uninterrupted speech by the speaker (Roter *et al.*, 2008).

#### **2.1.1.2. Roter methods (RIAS) in the medical field**

Application of the RIAS method is limited to the medical field, and focusses only on health professional-patient interactions (Roter and Larson, 2002). RIAS studies have unearthed important findings relating to the type of verbal communication used during such interactions and have also proved useful for assessing the impact of training on health professionals' skills. For example, these studies can demonstrate improvements in terms of more patient-centred communication, important for encouraging patient adherence to medication (Beach *et al.*, 2015; Wissow *et al.*, 2011; Pires and Cavaco, 2014).

#### **2.1.2. Conversation analysis**

The Conversation Analysis (CA) method is also useful for examining and exploring human interaction in its natural setting (Drew, Chatwin and Collins, 2001; Kasper and Wagner, 2014). This method is relevant to social sciences research, and also a wide range of other fields such as linguistics, applied linguistics, communication, information, computer sciences, and anthropology, which is the scientific study of humans, human behaviour and societies in the past and present (Kasper and

Wagner, 2014). It focusses on identifying, in an interaction, what happened and how it happened (Drew, Chatwin and Collins, 2001; Have, 2007).

#### **2.1.2.1. Data analysis using CA**

According to CA principles, conversation is made up of many turns and each turn is identified as a Turn Constructional Unit (TCU). A TCU is the basic unit of social interaction. It can be a sentence, clause, phrase or single word. The main four ways of categorising or interpreting data through CA, described by Have (2007) as "*analytically distinguished but interlocking organizations*" (p. 125), are turn-taking organization, sequence organization, repair organization, and the organization of turn-design. Turn-taking organization is defined as "*organization of speaker changes*", how the next speaker is chosen. Sequence organization describes how turns at a conversation are arranged to produce specific actions. Repair refers to organized ways to deal with troubles in the interaction process, such as problems of mishearing or understanding. The concept of turn design refers to the various aspects associated with how participants construct, design, and formulate turns. Heritage (2013) states that turn-taking is the most important aspect of CA, as it has the ability to change the sequence of actions and activities. The analysis of interaction within institutions, such as schools and medical encounters, is known as institutional applied CA. Applied CA focusses on using the basics of CA theory and methods in analysing real-world interactions between people as they occur. Applied CA research usually starts with a specific question and aim because the researcher



is trying to solve a problem (Heritage and Robinson, 2011). However, CA is an effective, but time-consuming method to explore and recognise real social actions when two or more people interact.

#### **2.1.2.2. Conversation analysis in the medical field**

In the 1980s, researchers started using CA to examine medical practice, especially physician-patient interactions (Pilnick, 1999; Maynard and Heritage, 2005). This research on physician-patient interactions includes such work as that of Frankel (1984) and West (1984). The studies expanded with time to include interactions among patients and other healthcare staff, such as nursing staff, midwives, health visitors, pharmacists, and physiotherapists (Pilnick, 1999; Drew, Chatwin and Collins, 2001; Maynard and Heritage, 2005). In a review by Heritage and Maynard (2006), the role of CA research in the development of physician-patient communication through 30 years is examined. CA findings and recommendations are reported to have had a positive impact on the development of many aspects of physician-patient interactions; for instance, identification of the structure of component activities, and interaction sequences (Heritage and Maynard, 2006). In primary care, the overall structure of what happens during an encounter between the patient and physician has been identified to include the greeting, complaint, history taking, examination, diagnosis, treatment, and closing (Heritage and Maynard, 2006). Tsai, Lu and Frankel (2013) also demonstrate the positive effects of using conversational transcripts to encourage medical students to use open

questions in defining patient problems and concerns. The findings of CA studies are used to enhance medical education relating to patient-centred approaches. CA has identified, for example, the persistence of professional-led conversations despite expectations around patient-centred care, patient involvement, and patient empowerment. For example, in patient-physician encounters in primary care, physicians continue to structure the dialogue by managing and ordering their turns at conversation (Drew, Chatwin and Collins, 2001).

Although there are challenges to studying the dynamics of interactions between patients and healthcare professionals and measuring the quality of these interactions (Drew, Chatwin and Collins, 2001), research in this area is considered by some to be essential for improving healthcare interactions. The findings of CA can genuinely improve future communications in health. Using CA, the sources and solutions of communication issues might be identified and addressed in practice. In addition, it can be used to identify and analyse in depth the sequencing of actions, the pattern of these sequencing, repairing talk problems (Drew, Chatwin and Collins, 2001; Maynard and Heritage, 2005), and the finer details of interactions (Peräkylä, 1997; Drew, Chatwin and Collins, 2001), such as the relative timing of utterances, sound characteristic, speed of delivery and intonation, and non-verbal behaviour. By also applying CA in exploring patient interactions within the medical field, patient behaviours can become more understandable, thus new strategies can emerge to improve communication. For example, one CA study in medical practice was conducted by McCabe *et al.* (2002). They analysed patient engagement in medical consultations in a psychiatric setting. They conversationally analysed 32 encounters

for how physicians interact with their patients in the psychiatric setting. They found the physicians were seemingly unconcerned about patients' feelings regarding their psychotic symptoms and medication side effects. Therefore, greater consideration of patients' concerns would be a way of learning from this study to increase patient engagement and satisfaction.

## **2.2. Aim for conducting this review**

Because of the contrast between the RIAS and CA methods, however, the pros and cons of each method must be considered before choosing between the two. This review aims to explore the usefulness of these two distinct methods (CA, a qualitative method vsus RIAS, a quantitative method) within pharmacy practice to help other researchers in selecting appropriate method(s) for their own work.

## **2.3. Method**

A comprehensive search of the published literature was conducted to identify and evaluate all the published studies using either the RIAS or CA method in a pharmacy setting.

### **2.3.1. Information sources and searches**

The search was performed using seven databases: the Cochrane Library, PsycINFO, PubMed, ScienceDirect, Scopus, Summon, and Web of Science, during December 2019 to March 2020 (with a re-run of the search in January 2021). Search

terms included the method of data analysis (the phrase “Roter Interaction Analysis System”, “RIAS”, or “Conversation Analysis”) and terms related to pharmacy practice (pharm\*) to identify relevant articles. The search combinations included: “Roter Interaction Analysis System” AND (Pharm\*), OR “RIAS” AND (Pharm\*), OR “Conversation Analysis” AND (Pharm\*). The term (Pharm\*) was used to ensure all medical terminologies related to pharmacy practice were included, such as “pharmacist”, “pharmacies”, “pharmacy” or “pharmaceutical”. Additionally, the subsequent citations of included articles and their reference lists were both checked to identify other relevant studies that may have been missed via the databases searches. Searching journals for other relevant studies was not performed because of the use of the Summon database, which covers newspaper articles, standards, conference proceedings, government documents, trade publications and book reviews. The search was conducted by the researcher, Sarah and verified by the Professor Parastou Donyai . Details of search history for databases showing the queries constructed and the final yield are outlined in Appendix C. All the research results from each database were imported into Endnote software.

### **2.3.2. Inclusion and exclusion criteria**

The inclusion criteria were: primary research articles or reports (e.g. theses) using the RIAS or CA methods, studies that related to pharmacist-patient interactions, and English language publications. No publication date limits were set. Studies were excluded if the applied method of study was not RIAS or CA, or did not focus on

pharmacist-patient interactions or the pharmacy setting. Studies published in a language other than English were also excluded.

### **2.3.3. Study selection**

The details of the search and retrieval strategy are outlined in Figure 4 as a PRISMA flow chart. At first, duplicates were removed by applying the 'remove duplicate' function on the Endnote software. The initial screening then involved scanning the Titles, Abstract and Keywords of the articles which was performed by the researcher to find relevant papers and reports. In addition, the citation and reference lists of related records were screened for any missed work. Thesis papers were not excluded from this review. Both, the researcher and supervisor (Prof. Donyai), applied the inclusion and exclusion criteria to this pool of potentially eligible articles to finalize the list of included studies. The final list of included articles was kept by creating a separate folder in Endnote. These papers were then downloaded electronically and printed for the purpose of the analysis, which was completed by hand using the pen and paper method in Microsoft Word.

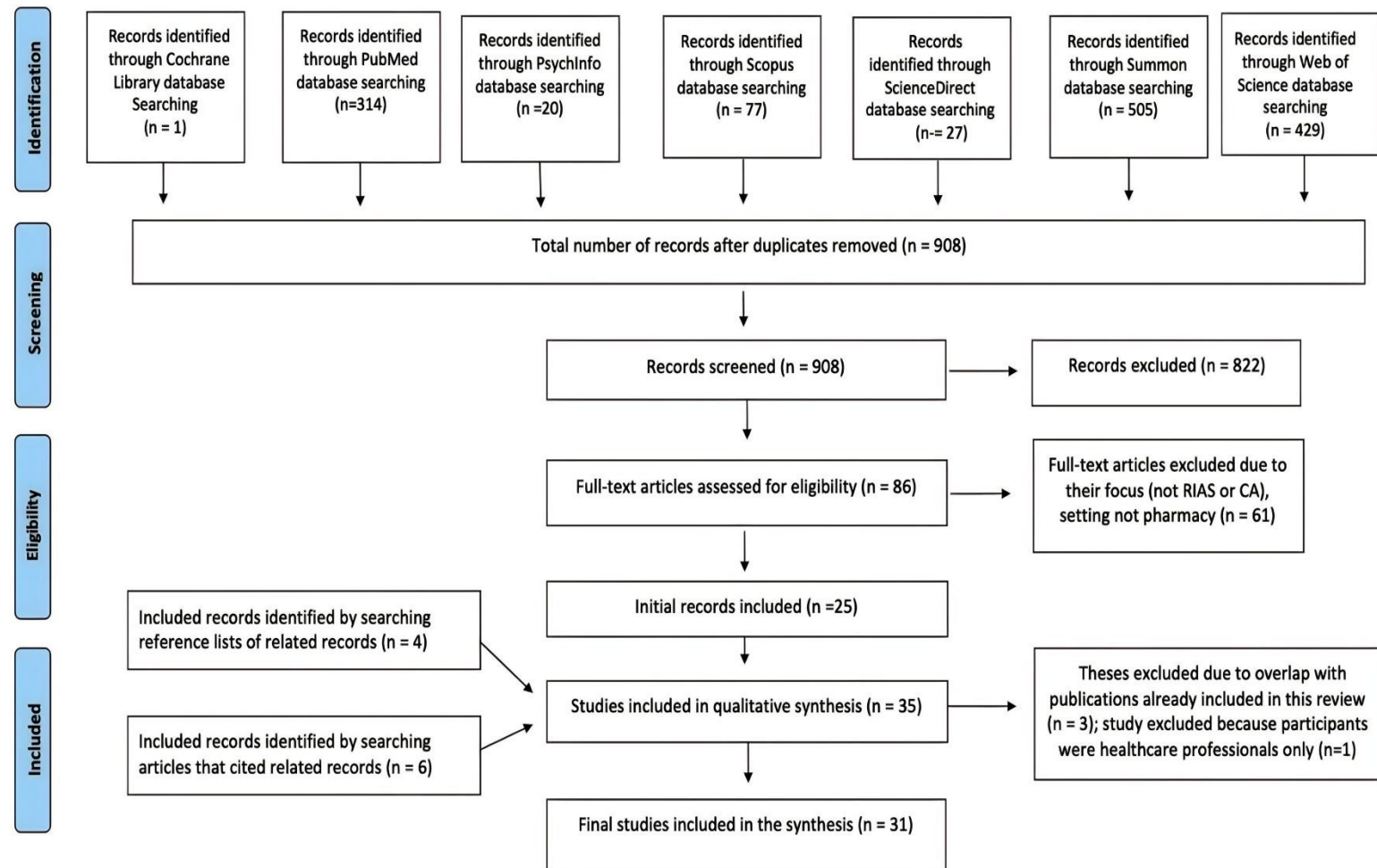


Figure 4 The literature search strategy and identification of publication used RIAS or CA included in this review

#### **2.3.4. Data Analysis**

I completed data analysis in consultation with Prof. Donyai who provided guidance and supervision. The analytical process started with the creation of a summary of the central characteristics of the included studies to structure the literature review. The approach taken in this review to synthesize data involved summarizing the content of included studies, including the aims, results, and future research suggestions. An overview of included studies, characteristics, key findings, and any similarities or differences between them is analysed and integrated. A key aim of included studies were reviewed was to assess the usefulness of the studies and to summarise their key findings. Data synthesis of this review focused on identifying themes, patterns, and relationships across the studies included. To complete this, the method and result section of each included study were analysed and coded. By first observing and labelling key concepts, it was then possible to identify the link between these codes to collect similar ideas under one theme. The codes were reviewed and analysed to identify similarities and differences between them. Therefore, the process of deriving the themes or constructs was an inductive approach using a similar process to thematic analysis, which was also completed by hand with pen and paper, and Microsoft Word was used to create and maintain all comparison tables.

#### **2.3.5. Reporting checklists of included studies**

All included studies were critically considered by using reporting checklists. These checklists were used to check how well the authors reported the criteria of their

studies and whether there were any missing details. The included studies used different types of methodology warranting the use of a range of checklist methods applicable to the study type. Although there are reporting checklists for mixed methods, these are not detailed enough to meet the criteria for the RIAS and CA methods. The Equator network was used to identify the most relevant checklist guidelines for each of the two methodologies. Since RIAS studies focus on exploring the relationship between protective factors (e.g. type and frequency of utterance, or interaction duration) and outcomes (e.g. communication features, patient engagement, or patient satisfaction), the STROBE: STrengthening the Reporting of OBservational studies in Epidemiology (STROBE) criteria were used for the reporting of the RIAS studies (Erik *et al.*, 2007) (see Table 2). On the other hand, as CA is a qualitative method, based on the Equator network's list, the standards for reporting qualitative research (SRQR) checklist was chosen for this type of study (see Table 3) (O'Brien *et al.*, 2014). Two of the studies that used RIAS were Randomised Controlled studies, therefore RCT-related checklist reporting (CONSORT) was used for these (Schulz, Altman and Moher, 2010) (Table 4). For illustrating compliance with the reporting guideline for qualitative systematic reviews, the reporting guideline: Enhancing transparency in reporting the synthesis of qualitative research (ENTREQ) has been used to illustrate the validity and reliability of this work (see Appendix D).



**Table 2 Checklist reporting assessment of the RIAS studies included in the review based on the STROBE statement.**

Study Author(s), Year	Title	Abstract	Background/rationale	Objectives	Study design	Setting	Participants	Variables	Data sources	Bias	Study size	Quantitative variables	Statistical methods	Participants	Descriptive data	Outcome data	Main results	Other analyses	Key results	Limitations	Interpretation	Generalizability	Funding
Sleath (1996)	N	P	Y	Y	N	Y	Y	Y	Y	Y	N	Y	P	Y	Y	Y	Y	Y	Y	Y	Y	Y	N
Cavaco and Roter (2010)	N	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Kubota <i>et al.</i> (2011)	N	Y	Y	Y	N	Y	Y	Y	Y	Y	N	Y	P	N	P	Y	Y	Y	Y	P	Y	Y	N
Al-Nagar (2014) (Thesis)	N	-	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Chong, Aslani and Chen (2014)	N	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N
Antunes, Gomes and Cavaco (2015)	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	P	N	Y	Y	Y	Y	Y	Y	Y	Y	N
Pelicano-Romano <i>et al.</i> (2015)	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Veiga <i>et al.</i> (2015)	Y	Y	Y	Y	Y	P	Y	Y	Y	N	Y	Y	P	Y	N	Y	Y	N	Y	P	Y	Y	N

Study Author(s), Year	Title	Abstract	Background/rationale	Objectives	Study design	Setting	Participants	Variables	Data sources	Bias	Study size	Quantitative variables	Statistical methods	Participants	Descriptive data	Outcome data	Main results	Other analyses	Key results	Limitations	Interpretation	Generalizability	Funding
Driesenaar <i>et al.</i> (2016)	N	Y	Y	Y	P	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Nakayama <i>et al.</i> (2016)	N	Y	Y	Y	N	P	N	Y	Y	Y	N	Y	N	Y	Y	Y	Y	Y	Y	P	Y	Y	N
Mulyono <i>et al.</i> (2019)	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	N

Y= Yes, it applies, N= No, it does not apply, P= Partially, it partially applies

**Table 3 Checklist reporting assessment of the CA studies included in the review based on the SRQR statement.**

Study Author(s), Year	S1 Title	S2 Abstract	S3 Introduction	S4 Purpose	S5 Qualitative approach & research paradigm	S6 Researcher characteristics	S7 Context	S8 Sampling strategy	S9 Ethical issues	S10 Data collection	S11 instruments & technologies	S12 Units of study	S13 Data processing	S14 Data analysis	S15 Techniques to enhance trustworthiness	S16 Synthesis & interpretation	S17 Links to empirical data	S18 Discussion	S19 Limitations	S20 Conflicts of interest	S21 Funding
Pilnick (1998)	P	Y	Y	Y	P	N	Y	N	N	P	Y	P	P	Y	Y	Y	Y	Y	N	N	Y
(Pilnick, 1999)	P	N	Y	Y	P	N	Y	Y	Y	P	N	P	P	Y	N	Y	Y	Y	N	N	N
Pilnick (2001)	P	N	Y	Y	P	N	Y	Y	Y	P	Y	P	P	Y	N	Y	Y	Y	N	N	N
Pilnick (2003)	P	N	Y	Y	P	N	Y	Y	N	P	N	P	P	Y	N	Y	Y	Y	N	N	Y
Dyck, Deschamps and Taylor (2005)	Y	Y	Y	Y	P	N	Y	Y	Y	P	Y	Y	Y	Y	N	Y	Y	Y	Y	N	Y
Nguyen (2006)	P	P	Y	Y	P	Y	Y	N	N	P	Y	P	N	P	Y	Y	Y	Y	N	N	N
Nguyen (2008)	P	P	Y	Y	P	Y	Y	Y	N	P	Y	P	Y	Y	Y	Y	Y	Y	N	N	N

Study Author(s), Year	S1 Title	S2 Abstract	S3 Introduction	S4 Purpose	S5 Qualitative approach & research paradigm	S6 Researcher characteristics	S7 Context	S8 Sampling strategy	S9 Ethical issues	S10 Data collection	S11 Instruments & technologies	S12 Units of study	S13 Data processing	S14 Data analysis	S15 Techniques to enhance trustworthiness	S16 Synthesis & interpretation	S17 Links to empirical data	S18 Discussion	S19 Limitations	S20 Conflicts of interest	S21 Funding
Watermeyer and Penn (2009a)	P	N	Y	Y	P	N	Y	Y	N	P	Y	P	Y	Y	Y	Y	Y	Y	Y	N	N
Watermeyer and Penn (2009b)	P	Y	Y	Y	P	N	Y	Y	Y	P	Y	P	P	Y	Y	Y	Y	Y	N	N	N
Watermeyer and Penn (2009c)	P	Y	Y	Y	P	N	Y	Y	Y	P	Y	P	P	Y	Y	Y	Y	Y	Y	N	N
Salter (2010)	P	Y	Y	Y	P	N	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	N	Y
Nguyen (2011)	P	P	Y	Y	P	Y	Y	N	Y	P	Y	P	Y	Y	N	Y	Y	Y	N	N	N
Watermeyer (2011a)	P	Y	Y	Y	P	N	Y	Y	Y	Y	Y	Y	P	Y	Y	Y	Y	Y	N	N	N

Study Author(s), Year	S1 Title	S2 Abstract	S3 Introduction	S4 Purpose	S5 Qualitative approach & research paradigm	S6 Researcher characteristics	S7 Context	S8 Sampling strategy	S9 Ethical issues	S10 Data collection	S11 Instruments & technologies	S12 Units of study	S13 Data processing	S14 Data analysis	S15 Techniques to enhance trustworthiness	S16 Synthesis & interpretation	S17 Links to empirical data	S18 Discussion	S19 Limitations	S20 Conflicts of interest	S21 Funding
Watermeyer (2011b)	P	P	Y	Y	P	N	Y	Y	Y	P	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N
Felix (2012)	P	Y	Y	Y	Y	Y	Y	Y	Y	P	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N
Nguyen (2013)	P	P	Y	Y	P	N	Y	N	Y	P	Y	P	Y	Y	N	Y	Y	Y	N	N	N
Rivas <i>et al.</i> (2017)	Y	Y	Y	Y	P	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Nguyen (2018)	P	P	Y	Y	P	N	Y	N	N	P	Y	P	N	N	N	Y	Y	Y	N	N	N

Y= Yes, it applies, N= No, it does not apply, P= Partially, it partially applies.

**Table 4 Checklist reporting assessment of two RIAS studies that were also randomised trials, based on the CONSORT statement.**

Study Author(s), Year	Funding	N	Y
	Protocol	N	N
	Registration	N	Y
	Interpretation	Y	Y
	Generalizability	Y	Y
	Limitations	Y	Y
	Harms	NA	NA
	Ancillary analyses	Y	Y
	Outcomes and estimation	NA	NA
	Outcomes and estimation	Y	Y
	Numbers analyses	Y	Y
	Baseline data	N	Y
	Recruitment	NA	NA
	Recruitment	Y	Y
	Participant flow	NA	NA
	Participant flow	Y	Y
	B Statistical method	Y	Y
	A Statistical method	Y	Y
	Blinding	NA	NA
	Blinding	Y	N
	Implementation	Y	N
	Allocation concealment	Y	Y
	B Randomization	NA	NA
	A Randomization	Y	N
	B Sample size	N	N
	A Sample size	N	N
	B Outcomes	NA	NA
	A Outcomes	Y	Y
	Interventions	Y	Y
	B Participants	Y	Y
	A Participants	Y	Y
	B Trial design	NA	NA
	A Trial design	Y	N
	objectives	Y	Y
	Background	Y	Y
	Structured summary	Y	Y
	Identification as a RCT title	N	N
Lieken <i>et al.</i> (2014)			
Hanya <i>et al.</i> (2017)			

Y= Yes, it applies, N= No, it does not apply P= Partially, it partially applies, NA= Not Applicable.

## 2.4. Results

A total of 908 studies were identified as potentially relevant, which were screened after duplicates were removed. By scanning the Titles, Abstract and Keywords of the articles, these papers, a total of 86 studies, were selected for full text assessment, of which 25 were included in this review. Ten additional studies were identified for inclusion by screening the citation and reference lists of related records. Thus, a total of 35 studies were identified for further consideration. This included a total of five theses. Three of these theses, however, were published in more than one manuscript already included in the review, so they were excluded to avoid duplication, namely that of Pilnick (1997); Nguyen (2003); Watermeyer (2008) . One more study was excluded because it focused on the interaction between patients and other healthcare professionals (e.g. dentist, physician, psychiatrist, and nurses) rather than pharmacists. So, a total of 31 studies met the criteria for inclusion in this review and were thus selected for analysis.

The summary of the main characteristic of included studies, which had used either the RIAS tool (n=14) or the CA method (n=17), is outlined in Table 5. A summary of the research topic (aim), main findings, and future recommendations is presented in the Table 6.

**Table 5 Summary of all studies included in the review in chronological order of publication year.**

No.	Author(s) , Year	Title	Country	Type and Size of Collected Data	Setting	Method used to analyse data
1.	Sleath (1996)	Pharmacist-patient relationships: authoritarian, participatory, or default?	New Mexico	196 of real interaction between pharmacist and patient were observed	8 Community pharmacies	Statistical analysis: Characteristic Interaction characteristic RIAS Method: Coder: three pharmacy students, which trained over one month.
2.	Pilnick (1998)	'Why didn't you say just that?' Dealing with issues of asymmetry, knowledge and competence in the pharmacist/client encounter	United Kingdom	43 audiotapes Naturally occurring interactions between the pharmacist and patient family	Pediatric oncology outpatient clinic	Ethnography <sup>8</sup> , CA Turn-by-turn
3.	(Pilnick, 1999)	PATIENT COUNSELING BY PHARMACISTS: Advice, Information, or Instruction?	United Kingdom	45 audio tapes Naturally occurring interactions between the pharmacist and patient family	Pediatric oncology outpatient clinic	CA Turn-by-turn
4.	Pilnick (2001)	The interactional organization of pharmacists Consultations in a hospital setting: A putative structure	United Kingdom	45 audiotapes Naturally occurring interactions between the pharmacist and patient family	Pediatric oncology outpatient clinic	CA Turn-by-turn

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<sup>8</sup> Ethnographic methods: an alternate sociology developed by Harold Garfinkel, studying the folk methods used to constitute social states of affairs.



No.	Author(s) , Year	Title	Country	Type and Size of Collected Data	Setting	Method used to analyse data
5.	Pilnick (2003)	“Patient counseling” by pharmacists: four approaches to the delivery of counseling sequences and their interactional reception	United Kingdom	45 audiotapes Naturally occurring interactions between the pharmacist and patient family	Pediatric oncology outpatient clinic	CA Turn-by-turn
6.	Dyck, Deschamps and Taylor (2005)	Pharmacists’ discussions about the side effects of medication A descriptive study	Canada	20 videotapes Naturally occurring interactions between the pharmacist and patient	Ten community pharmacies	CA Turn-by-turn
7.	Nguyen (2006)	Constructing 'expertness': A novice pharmacist's development of interactional competence in patient consultations	United States	18 videotapes Naturally occurring interactions between the pharmacist and patient	Community pharmacies	CA Turn-taking Action sequence Topic management Participation framework
8.	Nguyen (2008)	Sequence organization as a local and longitudinal achievement	United States	21 videotapes Naturally occurring interactions between the pharmacist and patient	Community pharmacies	CA Turn- taking Ordering of action Sequences of opening and giving advice Transition from one action to another
9.	Watermeyer and Penn (2009a)	Communicating dosage instructions across cultural and linguistic	South Africa	26 video recordings Naturally occurring interactions between the pharmacist and patient	Antiretroviral pharmacy of an HIV/Aids clinic at a public hospital	CA (turn by turn) and Discourse analysis

No.	Author(s) , Year	Title	Country	Type and Size of Collected Data	Setting	Method used to analyse data
		barriers: Pharmacist-patient interactions in a South African antiretroviral clinic				
10.	Watermeyer and Penn (2009b)	The organization of pharmacist–patient interactions in an HIV/Aids clinic	South Africa	26 video recordings Naturally occurring interactions between the pharmacist and patient	Antiretroviral pharmacy of an HIV/Aids clinic at a public hospital	CA and discourse analysis (DA)
11.	Watermeyer and Penn (2009c)	“Tell me so I know you understand”: Pharmacists’ verification of patients’ comprehension of antiretroviral dosage instructions in a cross-cultural context	South Africa	26 video recordings Naturally occurring interactions between the pharmacist and patient	Antiretroviral pharmacy of an HIV/Aids clinic at a public hospital	CA and thematic Content analysis Turn-by-turn Turn-taking Repair Topic management Nonverbal behaviour
12.	Cavaco and Roter (2010)	Exploring pharmacists’ communication with customers through screening services	Portugal	83 of real interaction between Pharmacist -patient were audiotaped	2 community pharmacies	RIAS: Speaker turn, Interactivity, turn density, and turn duration. Single coder during successive weeks
13.	Salter (2010)	Compliance and concordance during domiciliary medication review, involving the pharmacists and older people	United Kingdom	29 Tape recordings Naturally occurring interactions between the pharmacist and patient	In-patient hospital	Ethnography, DA, CA Turn-by-turn

No.	Author(s) , Year	Title	Country	Type and Size of Collected Data	Setting	Method used to analyse data
14.	Kubota <i>et al.</i> (2011)	Assessment of Pharmacy Students' Communication Competence Using the Roter Interaction Analysis System During Objective Structured Clinical Examinations	Japan	15 pharmacy student and three simulated patient interaction were videotaped	Examination test at Kyoto University	RIAS Linear Spearmans' Data coder: Two code raters
15.	Nguyen (2011)	Boundary and alignment in multiparty conflict talk	United States	one videotape Naturally occurring interactions between the pharmacist and patient	Community pharmacies	CA Sequential organization of conflict emerges and its resolution Management of alignment
16.	Watermeyer (2011a)	Now here come the pills that are going to save your life": pharmacists' discussions about antiretroviral drugs in a context of life and death	South Africa	26 videotaped Naturally occurring interactions between the pharmacist and patient	An antiretroviral pharmacy of HIV/Aids clinic at a public hospital	CA and DA Turn-by-turn
17.	Watermeyer (2011b)	"She will hear me": how a flexible interpreting style enables patients to manage the inclusion of interpreters in mediated pharmacy interactions	South Africa	26 videos recorded Naturally occurring interactions between the pharmacist and patient	An antiretroviral pharmacy of HIV/Aids clinic at a public hospital	CA Turn by turn turn taking, topic management, and repair of communication breakdown

No.	Author(s) , Year	Title	Country	Type and Size of Collected Data	Setting	Method used to analyse data
18.	Felix (2012) Thesis	" You understand this one?" "You're very clear on this one?" Pharmacist's use of rephrases to communicate across cultural and language barriers in a South African antiretroviral clinic	South Africa	18 videos recorded Naturally occurring interactions between the pharmacist and patient	An antiretroviral pharmacy of HIV/Aids clinic at a public hospital	CA (repair) repetition
19.	Nguyen (2013)	The prime questions in authentic patient's consultations: A call for additional research into current and new paradigms	United States.	16 videotaped Naturally occurring interactions between the pharmacist and patient	Community pharmacies	CA Delayed response Repairs Accounts sequence problems
20.	Al-Nagar (2014)	An exploration of consultation skills in community pharmacists	United Kingdom	30 of pharmacist and simulated patient interaction were audiotaped	4 community pharmacies	RIAS Statistical analysis : descriptive statistics Data coder: Two coders
21.	Chong, Aslani and Chen (2014)	Pharmacist–patient communication on use of antidepressants: A simulated patient study in community pharmacy	Australia	60 of pharmacist and simulated patient interaction were audiotaped	15 Community pharmacies	RIAS Statistical analysis: Demographic details of participants RIAS coded the utterance according to: task-focused

No.	Author(s) , Year	Title	Country	Type and Size of Collected Data	Setting	Method used to analyse data
						socio-emotional elements Data coder: Two coders
22.	Liekens <i>et al.</i> (2014)	Impact of training on pharmacists' counseling of patients starting antidepressant therapy	Belgium	40 of mystery shopper (Two pharmacy student) and pharmacist interaction were audiotaped	40 community pharmacies	RIAS Statistical Analysis Mann-Whitney U test Data coder: Two coders
23.	Antunes, Gomes and Cavaco (2015)	How pharmacist-patient communication determines pharmacy loyalty? Modeling relevant factors	Portugal	59 of phone calls between pharmacist and customer interaction during pharmaceutical care interview were audiotaped of phone call 17 pharmacists	10 Community pharmacies	RIAS Statistical analysis Data coder: single coders
24.	Pelicano-Romano <i>et al.</i> (2015)	Do community pharmacists actively engage elderly patients in the dialogue? Results from pharmaceutical care consultations	Lisbon	55 Phone called between pharmacist and elderly patient were audiotaped (six pharmacist)	5 elderly care centers	RIAS: content of interaction Statistical Analysis: patient characteristic Interaction characteristic Data coder: Two coders
25.	Veiga <i>et al.</i> (2015)	Quality supply of nonprescription medicines in Portuguese community pharmacy: An exploratory case study	Portugal	10 of pharmacy staff and 3 simulated patients were audiotaped (including 1 pharmacist, 1 technician, 3 counter assistants)	One community pharmacy	RIAS composite indexes: the Interpersonal Performance Index (IPI) Technical Performance Index (TPI) One coder (not mention)

No.	Author(s) , Year	Title	Country	Type and Size of Collected Data	Setting	Method used to analyse data
26.	Driesenar <i>et al.</i> (2016)	Communication during counseling sessions about Inhaled Corticosteroids (ICs) at the community pharmacy	Netherlands	169 of interaction between pharmacist or technician with patient used ICs were Videotaped	12 community pharmacies 12 pharmacists 12 technicians	RIAS Statistical Analysis Three coders
27.	Nakayama <i>et al.</i> (2016)	Analysis of pharmacist–patient communication using the Roter Method of Interaction Process Analysis System	Japan	57 pharmacist- simulated patient interaction was videotaped	Hospital and community pharmacies (not mention number)	RIAS Statistic Mann-Whitney tests (1) the pharmacist-patient talk ratio, (2) the patient centeredness ratio (3) the psychosocial to biomedical exchange ratio Two coders
28.	Hanya <i>et al.</i> (2017)	Effects of communication skill training (CST) based on SPIKES for insurance covered pharmacy pharmacists to interact with simulated cancer patients	Japan	20 of simulated cancer patient and pharmacist before and after the intervention were audiotaped	insurance-covered pharmacies within Aichi Prefecture	RIAS SPIKES, a six-step protocol for delivering bad news, 2 coders

No.	Author(s) , Year	Title	Country	Type and Size of Collected Data	Setting	Method used to analyse data
29.	Rivas <i>et al.</i> (2017)	Determining counselling communication strategies associated with successful quits in the National Health Service community pharmacy Stop Smoking programme in East London: a focused ethnography using recorded consultations	United Kingdom	158 interaction between pharmacist (advisor) and smoker were audiotaped 9 Adviser- 16 pairs of smoking quitter or non-quitter interaction	11 community pharmacies	RIAS Theme-oriented DA Two coders
30.	Nguyen (2018)	Interactional Practices across Settings: From Classroom Role-plays to Workplace Patient Consultations	United States	28 videotaped (5 videos used role-played patient in the classroom and 23 videos were naturally occurring interactions between the pharmacist and patient)	Community pharmacies and classroom	CA Overall structure Turn-by-turn Sequences Repair
31.	Mulyono <i>et al.</i> (2019)	Pharmacist-patient communication in Indonesia: The Roter Interaction Analysis System (RIAS) in a socio-hierarchical context	Indonesia	54 pharmacist patient interaction were audiotaped	Outpatient pharmacy	RIAS using Mann-Whitney tests Two coders

**Table 6 Summary of research topic (aim), main findings, and future recommendations of 31 studies included in the review in chronological order of publication year.**

NO.	Author(s), Year	Brief description of the study's aim	Interpretations(main findings)	Future implications suggested
1.	Sleath (1996)	<ul style="list-style-type: none"> <li>To assess features of pharmacist- patient interactions in community pharmacies</li> <li>To assess the extent of participation approach used in interaction (when it is used, what are contributed factors)</li> </ul>	<ul style="list-style-type: none"> <li>A participatory approach was applied significantly in 13% of all interactions, particularly with elderly patients and refill prescriptions.</li> </ul>	<ul style="list-style-type: none"> <li>Findings of this study aids to understand the nature of pharmacist-patient interaction.</li> <li>Further studies are needed to assess the effect of reeducating pharmacists about using a participatory approach.</li> </ul>
2.	Pilnick (1998)	<ul style="list-style-type: none"> <li>To examine how a pharmacist communicates with patients with a long-term condition (cancer) as people with expertise and knowledge</li> <li>To explore the difficulties pharmacists may face with patient experts and how to deal with them</li> </ul>	<ul style="list-style-type: none"> <li>Patient knowledge may reduce the interactional asymmetry that usually occurs during a professional meeting</li> <li>Patient knowledge may reduce the interactional dominance commonly exhibited by the pharmacist</li> </ul>	<ul style="list-style-type: none"> <li>The effect of patient expertise and knowledge on the advisory role of pharmacists needs to be identified.</li> </ul>
3.	(Pilnick, 1999)	<ul style="list-style-type: none"> <li>To analyze the difference between advice and information or instruction in terms of patient counseling by pharmacists.</li> </ul>	<ul style="list-style-type: none"> <li>Pharmacists are most likely to make all their consultations instructional.</li> <li>The distinction between forms of interaction can be more effective on patient future behaviour than the distinction between advice and information</li> </ul>	<ul style="list-style-type: none"> <li>Suggested to perform extended longitudinal studies to assess patient response to pharmacist communication style.</li> </ul>
4.	Pilnick (2001)	<ul style="list-style-type: none"> <li>To describe and explicate the structure or sequences of pharmacist- patient/ carer</li> </ul>	<ul style="list-style-type: none"> <li>The interaction sequence is assessed and then compared with others who are described by</li> </ul>	<ul style="list-style-type: none"> <li>Suggested that more works to identify communicative competencies are needed for good practice and to</li> </ul>



NO.	Author(s), Year	Brief description of the study's aim	Interpretations(main findings)	Future implications suggested
		encounters and compare with other early work in CA	Zimmerman's and Jefferson's troubling telling sequence template	facilitate the advisory role of pharmacist.
5.	Pilnick (2003)	<ul style="list-style-type: none"> <li>To examine the process of patient counseling with a particular focus on sequences and patients' or carers' responses</li> </ul>	<ul style="list-style-type: none"> <li>Four approaches to introducing patient counselling were recognised.</li> <li>Different patient responses to these approaches and the difficulties that may be created were identified.</li> </ul>	<ul style="list-style-type: none"> <li>These findings may be applied to develop better pharmacy practice and to avoid, in particular, patient resistance to pharmacist counselling</li> </ul>
6.	Dyck, Deschamps and Taylor (2005)	<ul style="list-style-type: none"> <li>To examine the strategies of providing information during counselling sessions for two medications, one for chronic use and the second for acute use.</li> </ul>	<ul style="list-style-type: none"> <li>Pharmacists focus on discussion about medication safety aspects rather than therapeutic benefits.</li> <li>Pharmacists did not rely on the leaflet for providing information, as they used verbal information.</li> </ul>	<ul style="list-style-type: none"> <li>More investigation about strategies to communicate information about the side effects of drugs in a manner that can be accurately interpreted by patients and can aid in reducing their resistance to pharmacist instructions</li> </ul>
7.	Nguyen (2006)	<ul style="list-style-type: none"> <li>To examine how new pharmacists use their professional knowledge of patient consultation in practice over a period of time.</li> </ul>	<ul style="list-style-type: none"> <li>Over time, a pharmacist acquires more experience and becomes more effective in applying this knowledge in patient encounters.</li> </ul>	<ul style="list-style-type: none"> <li>Contribution to expert-lay interaction research and competence development in the profession.</li> </ul>
8.	Nguyen (2008)	<ul style="list-style-type: none"> <li>To explore the development of pharmacists' communication skills over time by analyzing sequence organization as both a local and longitudinal interactional accomplishment</li> </ul>	<ul style="list-style-type: none"> <li>It was found that interactional competence changed and developed over time, particularly moving fluently from one action to another.</li> </ul>	<ul style="list-style-type: none"> <li>Implications of CA research findings on workplace socialization</li> </ul>
9.	Watermeyer and	<ul style="list-style-type: none"> <li>To describe strategies patients and pharmacists use to give information and how they</li> </ul>	<ul style="list-style-type: none"> <li>Pharmacists and patients seem able to communicate effectively despite barriers, such as difference in</li> </ul>	<ul style="list-style-type: none"> <li>Results of this study can be used to inform training, policy and future pharmacy practice in the context</li> </ul>

NO.	Author(s), Year	Brief description of the study's aim	Interpretations(main findings)	Future implications suggested
	Penn (2009a)	assess understanding in order to achieve interaction goals.	language and culture within the South African environment.	of HIV/Aids, both locally and worldwide.
10.	Watermeyer and Penn (2009b)	<ul style="list-style-type: none"> <li>To provide a template for cross-cultural pharmacy interactions in an HIV/Aids context</li> <li>To illustrate how the organizational structure of the pharmacist-patient interaction is mediated by site- and disease-specific factors</li> </ul>	<ul style="list-style-type: none"> <li>Interaction can be influenced by context and disease-related factors.</li> <li>A template of pharmacist-patient interaction is proposed in term of content and organization structure.</li> </ul>	<ul style="list-style-type: none"> <li>Informs training, policy and future pharmacy practice in the context of HIV/Aids</li> </ul>
11.	Watermeyer and Penn (2009c)	<ul style="list-style-type: none"> <li>To investigate different ways of confirming a patient's understanding</li> </ul>	<ul style="list-style-type: none"> <li>Assessing patient understanding can be achieved by many approaches. These include using specific questions, response solicitations and monitoring patients' verbal and non-verbal responses</li> </ul>	<ul style="list-style-type: none"> <li>Findings can be applied in communication skills course to improve practice</li> </ul>
12.	Cavaco and Roter (2010)	<ul style="list-style-type: none"> <li>To describe pharmacist–customer communication during screening test services, blood pressure and capillary cholesterol services</li> </ul>	<ul style="list-style-type: none"> <li>Pharmacists tend to control the conversation by using closed questioning.</li> </ul>	<ul style="list-style-type: none"> <li>RIAS scheme is useful for a simple communication analysis</li> <li>Educational programmes are needed to improve communication skills regarding how to increase patient engagement in the conversation</li> </ul>
13.	Salter (2010)	<ul style="list-style-type: none"> <li>To explore the pharmacist-older patient interaction during medication review encounters, as well as its effect on patient compliance</li> </ul>	<ul style="list-style-type: none"> <li>Several challenges may face pharmacists in terms of medication review, particularly with older patients</li> <li>The dominant compliance paradigm encourages pharmacist-led encounters with patients that fail to</li> </ul>	<ul style="list-style-type: none"> <li>Implications for both pharmacy practice and policy development</li> </ul>

NO.	Author(s), Year	Brief description of the study's aim	Interpretations(main findings)	Future implications suggested
			engage in the medication review process <ul style="list-style-type: none"> <li>• Little evidence of a two-way reciprocated discussion or concordance was evident</li> </ul>	
14.	Kubota <i>et al.</i> (2011)	<ul style="list-style-type: none"> <li>• To evaluate the significance of using RIAS in assessing communication skills</li> </ul>	<ul style="list-style-type: none"> <li>• Students' overall rating scores on the OSCE has a positive relation to the number of RIAS socio-emotional utterances category but not to task category.</li> </ul>	<ul style="list-style-type: none"> <li>• It is suggested that the RIAS method has a significant role in reviewing student communication skills, particularly socio-emotional skills.</li> </ul>
15.	Nguyen (2011)	<ul style="list-style-type: none"> <li>• To investigate multi-party conflict talk in a pharmacy setting</li> </ul>	<ul style="list-style-type: none"> <li>• Conflict talk initiation is incipient and gradual, and the participants continue to be oriented to the conflict, long after it is solved.</li> </ul>	<ul style="list-style-type: none"> <li>• Implications of the CA research findings on workplace socialization</li> </ul>
16.	Watermeyer (2011a)	<ul style="list-style-type: none"> <li>• To assess the way that pharmacists talk about antiretroviral medication in terms of life and death</li> </ul>	<ul style="list-style-type: none"> <li>• Explicit reference to death were infrequent. These references were often empathic.</li> <li>• Pharmacist communication is influenced by the disease and patient needs.</li> </ul>	<ul style="list-style-type: none"> <li>• Implication of the findings in a communication skills course dealing with an urgent disease</li> </ul>
17.	Watermeyer (2011b)	<ul style="list-style-type: none"> <li>• To assess and find the proper interpreting style model of translator to be included in pharmacist- patient interactions</li> </ul>	<ul style="list-style-type: none"> <li>• Different interpreting styles were assessed depending on different patient's communication needs and preferences</li> <li>• Flexible interpreting style is the more effective style as it supports a patient-centered approach to engage patient more in the interaction</li> </ul>	<ul style="list-style-type: none"> <li>• Applying flexible interpreting style in pharmacy practice</li> </ul>

NO.	Author(s), Year	Brief description of the study's aim	Interpretations(main findings)	Future implications suggested
18.	Felix (2012)	<ul style="list-style-type: none"> <li>To identify types of repetition by pharmacists and the function of them</li> </ul>	<ul style="list-style-type: none"> <li>There are two types of rephrasals used by pharmacists within pharmacist- patient interactions:               <ul style="list-style-type: none"> <li>Contingent rephrasals, which are used to solve interactional trouble ( e.g. recovering a mistake or solving problems in understanding)</li> <li>Contextual rephrasals, which are used to make the multilingual and multicultural contexts relevant.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Further investigation is needed to identify other repetition categories and other strategies used by pharmacists to effectively communicate across language or cultural barriers.</li> </ul>
19.	Nguyen (2013)	<ul style="list-style-type: none"> <li>To assess the role of the prime question and the way it is used by pharmacists to ask the prime question and what is the main role (performance) of these questions?</li> </ul>	<ul style="list-style-type: none"> <li>Open-ended prime questions may lead to some problems in communication</li> <li>Strategies to ask questions were suggested.</li> </ul>	<ul style="list-style-type: none"> <li>In a communication skills course to avoid the recommended prime question</li> <li>A new paradigm was suggested</li> </ul>
20.	Al-Nagar (2014)	<ul style="list-style-type: none"> <li>To explore the validity of using RIAS in a community pharmacy setting in the United Kingdom.</li> </ul>	<ul style="list-style-type: none"> <li>The majority of pharmacist-patient interaction utterances were easily categorised according to RIAS framework.</li> <li>RIAS proved its usefulness in identifying training needs and creating criteria for pharmacist communication.</li> </ul>	<ul style="list-style-type: none"> <li>The relationship between patient care outcomes (controlling blood pressure) and pharmacist communication behaviours needs to be assessed in the future.</li> </ul>
21.	Chong, Aslani and Chen (2014)	<ul style="list-style-type: none"> <li>To investigate the patient-centered approach within interactions between community pharmacists and patients who use antidepressant medication</li> </ul>	<ul style="list-style-type: none"> <li>Patient-centered approach is not achieved yet during consultation about antidepressant medication.</li> </ul>	<ul style="list-style-type: none"> <li>RIAS is a useful tool for developing communication training programmes and assessing development in communication skills.</li> <li>There is a need for communication training programmes to</li> </ul>

NO.	Author(s), Year	Brief description of the study's aim	Interpretations(main findings)	Future implications suggested
				educate pharmacists about how to achieve a patient-centered approach.
22.	Liekens <i>et al.</i> (2014)	<ul style="list-style-type: none"> <li>To examine the effect of a one-day training programme on pharmacists counselling a patient about a new antidepressant medication</li> </ul>	<ul style="list-style-type: none"> <li>Intervention pharmacists' group, who received training related to communication with patients taking antidepressants, takes more time in the counselling session addressing patient's lifestyle and psychosocial concerns</li> <li>Pharmacist training in depression care has positively affected the quality of patient care.</li> </ul>	<ul style="list-style-type: none"> <li>Training programmes for pharmacists in the delivery of mental health services are necessary to improve the quality of pharmaceutical care.</li> <li>RIAS is an applicable and sensitive method for the description and evaluation of communication skills.</li> </ul>
23.	Antunes, Gomes and Cavaco (2015)	<ul style="list-style-type: none"> <li>To assess the impact of technical and/or humanistic-based communication on patient loyalty (to return for a next consultation with a pharmacist)</li> </ul>	<ul style="list-style-type: none"> <li>Social-based skills seem to be more influential on patient loyalty than educational approach, and medication-related skills.</li> </ul>	<ul style="list-style-type: none"> <li>The findings of this study are significant for justifying the unexpectedly low achievement of pharmaceutical care services</li> <li>Pharmacists' psychosocial and clinical communication skills need to be improved by training.</li> </ul>
24.	Pelicanó-Romano <i>et al.</i> (2015)	<ul style="list-style-type: none"> <li>To explore the communication between pharmacists and elderly patients during pharmaceutical care consultations</li> </ul>	<ul style="list-style-type: none"> <li>Patients are not engaging in the dialogue (3.6% related to patient involvement) and asking fewer questions.</li> </ul>	<ul style="list-style-type: none"> <li>A communication skills programme is needed to prepare pharmacists with more communication skills which may facilitate patients' participation and engagement in the consultation.</li> </ul>
25.	Veiga <i>et al.</i> (2015)	<ul style="list-style-type: none"> <li>To assess the features of pharmacy staff communication during counselling about non-prescription medication.</li> </ul>	<ul style="list-style-type: none"> <li>The pharmacy staff asked more closed questions than open questions.</li> <li>Pharmacy staff are more likely to give advice than give information.</li> </ul>	<ul style="list-style-type: none"> <li>The quality of supplying non-prescription medication may be improved by considering clients' perspectives, internal processes,</li> </ul>

NO.	Author(s), Year	Brief description of the study's aim	Interpretations(main findings)	Future implications suggested
			<ul style="list-style-type: none"> <li>Overall, the mean of the Technical Performance Index (TPI) score was satisfactory (50%) and the mean of the Interpersonal Performance Index (IPI) score was excellent (78%).</li> </ul>	innovation and learning and a financial perspective.
26.	Driesen <i>et al.</i> (2016)	<ul style="list-style-type: none"> <li>To investigate the communication features of pharmacists and pharmacy technicians during counselling sessions about ICs with patients with asthma and/or chronic obstructive pulmonary disease</li> </ul>	<ul style="list-style-type: none"> <li>It is noticeable that pharmacists' communication style is different than technicians' style.</li> <li>Pharmacists showed more affective behaviour and broadly considered medical and therapeutic topics.</li> </ul>	<ul style="list-style-type: none"> <li>Educational courses for pharmacists and pharmacy technicians are needed. Adherence to ICS, lifestyle, and psychosocial topics need to be considered more with patient counselling.</li> </ul>
27.	Nakayama <i>et al.</i> (2016)	<ul style="list-style-type: none"> <li>To recognise the pharmacist- patient communication features and issues in Japan.</li> </ul>	<ul style="list-style-type: none"> <li>Pharmacists are more likely to ask closed-ended questions on information-gathering activities</li> <li>Pharmacists' communication style is affected by patients' disease.</li> </ul>	<ul style="list-style-type: none"> <li>Pharmacist communication needs to be focused on patient-centered care.</li> </ul>
28.	Hanya <i>et al.</i> (2017)	<ul style="list-style-type: none"> <li>To evaluate the improvement of pharmacist communication skills needed to deal with cancer patients after a communication skills workshop (Medical Communication with Cancer Patients).</li> </ul>	<ul style="list-style-type: none"> <li>Pharmacists' communication style was improved after the communication training programme in terms of patient satisfaction, showing empathy and building a relationship.</li> </ul>	<ul style="list-style-type: none"> <li>Communication skills training may be effective to improve pharmacists' conversation styles</li> </ul>

NO.	Author(s), Year	Brief description of the study's aim	Interpretations(main findings)	Future implications suggested
29.	Rivas <i>et al.</i> (2017)	<ul style="list-style-type: none"> <li>To identify the communication strategies used in stop smoking programmes</li> </ul>	<ul style="list-style-type: none"> <li>The smoking cessation plan with more smoker-centered approach was more likely to succeed.</li> </ul>	<ul style="list-style-type: none"> <li>The findings of this study can be applied in smoking cessation programmes in practice.</li> </ul>
30.	Nguyen (2018)	<ul style="list-style-type: none"> <li>To explore the difference between using learned interaction practice in two different settings (the classroom and workplace)</li> </ul>	<ul style="list-style-type: none"> <li>Interactional organization practices have changed from classroom role-play to a real workplace over time, in terms of the overall structure, the organization of the opening sequences, the organization of the entries into advice sequences, and the ordering of advice sequences</li> </ul>	<ul style="list-style-type: none"> <li>Communication skills course for novice pharmacists is required.</li> </ul>
31.	Mulyon <i>et al.</i> (2019)	<ul style="list-style-type: none"> <li>To evaluate pharmacist-patient interaction in an outpatient clinical setting</li> </ul>	<ul style="list-style-type: none"> <li>The result showed that the conversations were mainly led by pharmacists.</li> <li>Pharmacists don't have the skills to build relationship with patients</li> </ul>	<ul style="list-style-type: none"> <li>Further training is needed to improve pharmacists' communication skills.</li> </ul>

None of the included studies that had met the criteria were excluded after undergoing the reporting checklist assessment. All CA studies met the conditions for CA methodology, including recording data either by using audio or videotape, transcribing the data as a whole or in part, submitting evidence of transcripts, and using CA principles to analyse the data. However, three studies out of 17 did not mention the type of recording, i.e. whether it was audio or video (Salter, 2010; Pilnick, 1999; Pilnick, 2003). In addition, sampling strategies and level of participation were not mentioned in most of the CA studies. Failure to mention when data collection occurred (e.g. time of year, month) was noticeable in all CA studies except two, which stated the year in which data were collected (Watermeyer, 2011a; Salter, 2010). In terms of RIAS, in three studies out of 14, a single coder had coded the data, which may affect the reliability of the studies (Antunes, Gomes and Cavaco, 2015; Veiga *et al.*, 2015; Cavaco and Romano, 2010). One study using the RIAS tool did not record the interaction between pharmacist and patient and relied on the researcher observing the interaction (Sleath, 1996), hence the reliability of this study may be reduced. Sampling strategies were not considered in four RIAS studies (Sleath, 1996; Kubota *et al.*, 2011; Antunes, Gomes and Cavaco, 2015; Veiga *et al.*, 2015). Data collection time was mentioned in most RIAS studies (Antunes, Gomes and Cavaco, 2015; Pelicano-Romano *et al.*, 2015; Al-Nagar, 2014; Chong, Aslani and Chen, 2014; Cavaco and Romano, 2010; Mulyono *et al.*, 2019; Rivas *et al.*, 2017; Driesenaar *et al.*, 2016).

The similarities and differences between the two methods were identified in terms of their topic of focus, methodology, main findings, and future recommendations. A



comparison between RIAS and CA studies is thus outlined in Table 7. Finally, the usefulness of applying the two methods within pharmacy practice was summarized and categorised into five main themes: the description of the nature of communication, evaluation of pharmacist communication skills, the impact of communication style on various variables, sequence of actions, and type of communication. Table 8 represents a summary of the usefulness of RIAS versus CA in pharmacy practice. Further details about these five themes are outlined in the subsequent sections.

**Table 7 Comparison points between RIAS and CA methods.**

Comparison points		RIAS studies	CA studies
Focus topic		<ul style="list-style-type: none"> <li>• General brief description of characteristic of interaction</li> <li>• Evaluate the impact of training courses on communication skills</li> <li>• Evaluate relationship between specific variables and outcomes (e.g. patient satisfaction, patient loyalty)</li> </ul>	Different subjects have various objectives, deeply analyse the interaction (e.g. how to assess patient understanding, how to deal with conflict, how pharmacists talk about death with AIDS patients, and what is structure template of interaction)
Methodology	Data analysis	Quantitative analysis	Qualitative analysis (WHAT happens and HOW it happened)
	Setting	Only for medical field. Limited to interaction between health provider and patient.	Widely used for medical field and other fields (e.g. educational and business). Not limited to patient interaction, but also includes interaction between healthcare professionals themselves
	DATA Transcription	Not necessary.	Should be transcribed as part or whole. Usually Jeffersonian system is used
	Study Design	Mainly used with statistical tests (e.g. linear regression	Used alone or accompanied by another method (e.g. discourse analysis, thematic

Comparison points		RIAS studies	CA studies
		the Pearson correlate, Mann-Whitney U test, Wilcoxon rank test and t-test )	content analysis or ethnography)
	Study Sample	Large sample Range (10-196) Average about 75 interactions recruited Cannot reanalyse the data	Small sample Range (1 to 45) Average about 32 interactions. Same data are reused for different purposes
	type of data	Could be audio or video tape. Mainly Audiotape (n= 9/14). (note: Sleath (1996) only observation without recording the interactions With or without transcription )	Could be audio or video tape. Mainly videotape (n=12/17), All of them transcribed the data. Data can be reused and analyses in different ways within more than one research.
	simulated patient	Recruited in (n=6) of RIAS studies (Hanya <i>et al.</i> , 2017; Veiga <i>et al.</i> , 2015; Kubota <i>et al.</i> , 2011; Chong, Aslani and Chen, 2014; Liekens <i>et al.</i> , 2014; Nakayama <i>et al.</i> , 2016).	Only recruited in one of CA studies (Nguyen, 2018) needed to be simulated patients to examine the learned interaction practice at classroom and workplace.
Findings and future work		Mostly general recommendations and suggestions to improve educational programmes. (e.g. adherence topic needs to be considered)	The recommendation is specific and detailed (e.g. several strategies suggested to confirm the patient understood, and using jargon with patients with long-term conditions has a positive effect on pharmacist-patient relationship)
Others features		Easy to understand and apply with non-specialist	Need to learn the principles of CA and how to apply them

**Table 8 A summary of usefulness of RIAS and CA in pharmacy practice.**

Main Themes	RIAS	CA
Description of the nature of communication	Allows simple description of main characteristics of interaction.	Allows for deep analysis the finer details of interaction.
Evaluation of pharmacist communication skills	Allows for evaluation of the impact of training courses on communication skills before and after training course (speedy and efficient)	Allows the comparison of communication skills between different groups (e.g. between new pharmacist vs experienced pharmacist)
The impact of communication style on specific variables	Allows the evaluation of the relationship between specific variables and outcomes without being too time-consuming	Allows the evaluation of the relationship between specific variables and outcomes, but is consuming time and requires much effort
Sequence of turns	Does not consider sequence of turns.  Instead, the utterance of one speaker is analysed separately from other participants	Considers sequence of turns meaning the true dynamics can be investigated.  e.g. Sequences of responses
Type of communication	Mainly allows for investigation of verbal communication	Allows the investigation of both verbal and non-verbal communication

### 2.4.1. The description of the nature of communication

Both methods succeeded in exploring the characteristic of pharmacist-patient communication. Studies using the RIAS method proved that the RIAS tool is useful for simply describing the pharmacist-patient communication. Most of the RIAS studies (n=10) quantified communication between the pharmacist and patient or their carer (third party) in terms of the dominance of interview and type of utterance (Sleath, 1996; Cavaco and Romano, 2010; Chong, Aslani and Chen, 2014; Pelicano-Romano *et al.*, 2015; Veiga *et al.*, 2015; Nakayama *et al.*, 2016; Rivas *et al.*, 2017; Mulyono *et al.*, 2019; Al-Nagar, 2014). RIAS studies concluded that a patient-centred approach is not prevalent (Sleath, 1996; Cavaco and Romano, 2010; Chong, Aslani and Chen, 2014; Nakayama *et al.*, 2016; Pelicano-Romano *et al.*, 2015; Veiga *et al.*, 2015; Mulyono *et al.*, 2019; Driesenaar *et al.*, 2016). Similarly, the CA studies succeeded in characterising the interactions. However, CA methods were able to deeply analyse the interactions to answer specific research questions. Five out of the 16 studies aimed to explore advice activities (Pilnick, 1998; Pilnick, 1999; Pilnick, 2003; Dyck, Deschamps and Taylor, 2005; Nguyen, 2008). The Pilnick (1998) study demonstrated that the health professional dominance commonly observed in lay-physician encounters is not exhibited as much in pharmacist consultations. This is especially the case where pharmacists have known the patient for a long time, and where patients have a high level of knowledge about their condition. Furthermore, CA studies have observed that patient knowledge and experience about their medication result in a more flexible consultation. Salter (2010) carried out an in-depth analysis of the interaction between a pharmacist and an older patient in a medication

review consultation. He concluded that pharmacists could face several challenges during medication reviews, particularly with older patients, finding little evidence of two-way communication during these encounters, in which the pharmacist mainly led the conversation.

#### **2.4.2. Evaluation of communication skills and development over time**

Assessment of pharmacists' skills in communication with patients has also been addressed by researchers using the RIAS and CA methods. RIAS has been used to examine the development of communication skills before and after a training session in two studies (Liekens *et al.*, 2014; Hanya *et al.*, 2017). These two studies demonstrated the positive effect of these courses on improving communication skills. One study out of the 14 using RIAS evaluated pharmacy student skills during objective structured clinical examination (OSCE) performance (Kubota *et al.*, 2011). Similarly, the CA method allows pharmacy practice to be examined for improvements over time. Three CA studies assessed the impact of repetition of the action (e.g. counselling) over time on the pharmacist's communication skills (Nguyen, 2006; Nguyen, 2008; Nguyen, 2018). These studies demonstrated that the pharmacist's interactional competence changed and developed over time as a result of repeating the action (i.e. practice over time).

#### **2.4.3. The impact of communication style on specific variables**

The influence of communication style has been one of the major interests in RIAS and CA communication research. RIAS studies used statistical analytical tests to examine the relationship between the type of utterances made by pharmacists (e.g. emotional talk) or patients (e.g. negative talk), the frequency of utterance categories

which reflect communication style, various variables (e.g. age, race, and gender) and outcomes (e.g. patient satisfaction). For example, Sleath (1996) examined the effect of participants' (patient and pharmacist) demographic characteristics on their communication style. They suggested that a participatory style is used more with an elderly patient than with younger patients and is more frequent with repeated prescriptions. Another RIAS study examined the relationship between pharmacists' communication style and the prospect of the patient returning to the same pharmacy to obtain their medication (Antunes, Gomes and Cavaco, 2015). Correspondingly, the effect of communication style on patient adherence was investigated in five CA studies (Pilnick, 1999; Watermeyer and Penn, 2009a; Watermeyer and Penn, 2009c; Salter, 2010; Watermeyer, 2011a). These studies concluded that improving communication between the pharmacist and patient had a great effect on reducing patient resistance to the medical plan and led to a shift towards more patient-centred care.

#### **2.4.4. Sequence of action**

The sequence of interactional activity within pharmacy has only been examined by CA methodology. Three templates of pharmacist-patient encounters have been proposed by applying CA tools (Nguyen, 2008; Pilnick, 2001; Watermeyer and Penn, 2009b). In addition, these templates have been compared with early work on CA, such as Zimmerman's and Jefferson's templates (Zimmerman, 1992; Jefferson, 2004). Watermeyer and Penn (2009b) described the content and structure of the first and subsequent encounters between an HIV/AIDs pharmacist and the patient. An

example of the first suggested template by Pilnick (2001) proposed the structure of patient-pharmacist interaction as follows:

*“Opening/Identification/Recognition/Acknowledgement*

*Greeting*

*Approach to advice giving*

*Arrival at advice giving*

*Acceptance/Rejection of Intention*

*(Rearrival)*

*Delivery of advice/information*

*Response to advice/information*

*Close implicature (Questions/Reclose implicature)*

*Exit”.*

CA studies have also succeeded in assessing the second party's (e.g. patient's) response to one action. Several strategies used by pharmacists to verify the patient's understanding of their counselling were identified including specific questions, using response solicitations and monitoring patients' verbal and non-verbal responses (Watermeyer and Penn, 2009a; Watermeyer and Penn, 2009c; Watermeyer, 2011b; Felix, 2012; Nguyen, 2013). None of the RIAS studies have examined the patient response to pharmacist action or proposed a structural template of pharmacist-patient interaction. The RIAS analytical system permits researchers to examine patient utterances in a similar but independent way to pharmacist utterances.

### **2.4.5. Type of communication**

One of the major differences between RIAS and CA protocols is related to the type of communication used in data analysis. Analysis of data by the RIAS tools is mainly focused on verbal actions, although some of the non-verbal actions were coded in two studies, by the coder using a rating scale from one to six immediately after the interview (Hanya *et al.*, 2017; Liekens *et al.*, 2014). Verbal transcription of tape was not applied to all RIAS studies included; 7 studies out of 14 used transcribed data (Al-Nagar, 2014; Liekens *et al.*, 2014; Hanya *et al.*, 2017; Mulyono *et al.*, 2019; Antunes, Gomes and Cavaco, 2015; Sleath, 1996; Driesenaar *et al.*, 2016). Some studies (n= 5) did not transcribe the data to hard copy. However, the data analysis by CA studies coded verbal and non-verbal communication. All verbal data of CA studies were transcribed according to the Gail Jefferson transcription system as a whole or part (Jefferson, 2004); non-verbal actions were written between brackets in the transcribed sheets. All CA studies had some examples of transcribed data. Figure 5 shows an example of CA transcribed sheets (Watermeyer and Penn, 2009c).



			<i>moves pill boxes</i>	<i>clasps hands, leans forward slightly, smiles</i>
			<b>v</b>	<b>v</b>
			-----	-----
Greeting →	2	Ph A:	Ok C*****, hi, how are you doing?	
	3	Pt:	I am doing all right.	
			""	
			^	
			<i>looks down at desk</i>	
			<b>v</b>	
			-----	
	4	Ph A:	You're feeling fine?= Yes.	
	5	Pt:	=Ja.	
			Yes.	
			...	
			^	
			<i>looks up at Ph A</i>	

**Figure 5 Example of a CA transcribed sheet that captured verbal and non-verbal action.**

Because of the numerous important differences in the usefulness of RIAS and CA methods, a flowchart showing the relative utility of RIAS and CA was created and is presented in Figure 6. The type of participant, the intention of the study, sample size, time, consideration of action sequences, the type of communication being assessed, and consideration of the finer details, are all factors considered in the flowchart.

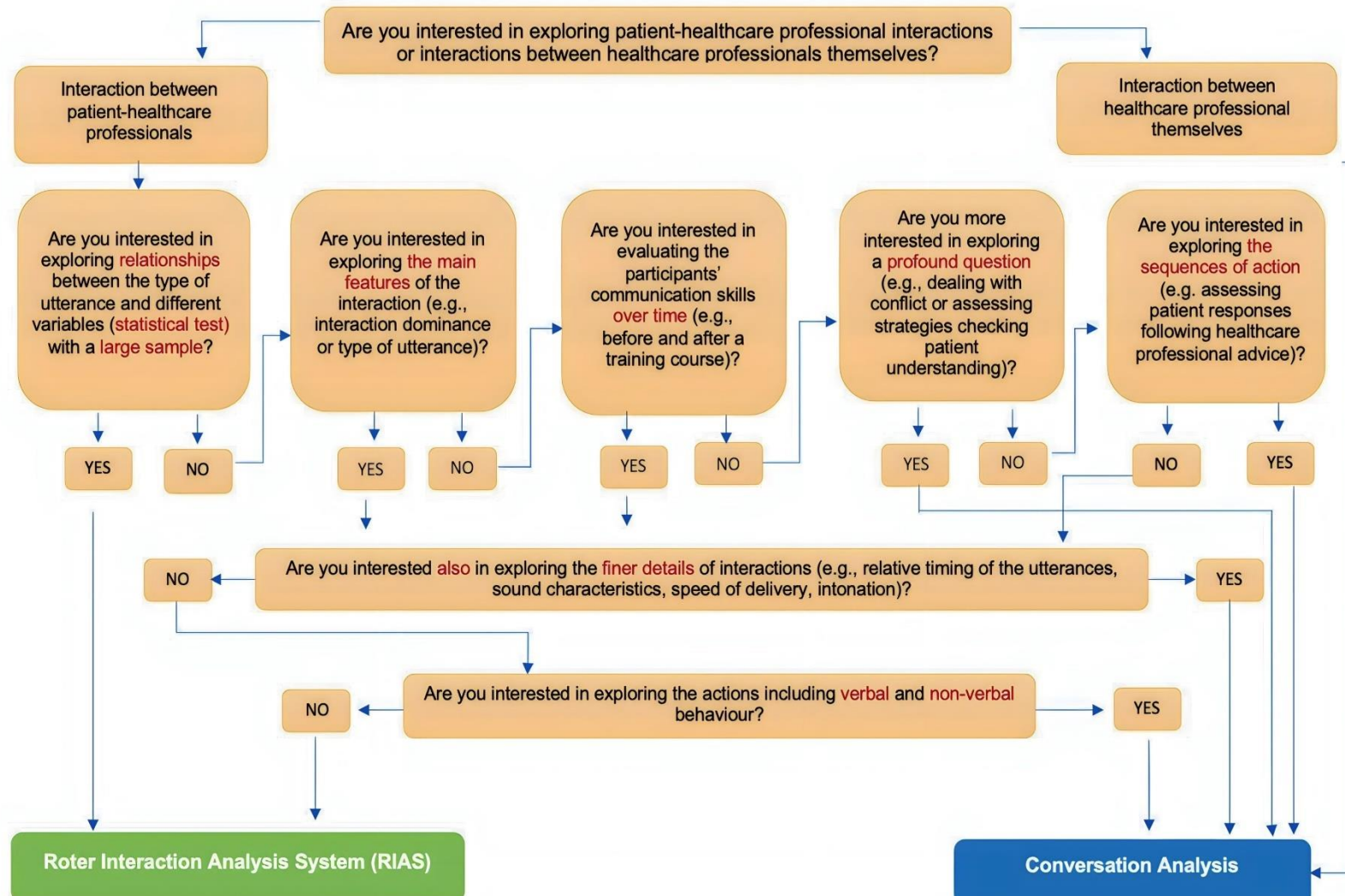


Figure 6 The flowchart of the utility of RIAS Versus CA.

## **2.5. Discussion**

This is the first comprehensive literature review to examine the relative value of applying RIAS and CA methods in studying pharmacist-patient interactions. The differences between RIAS and CA in terms of their analytical elements means these tools are relevant for different purposes in pharmacy settings. The RIAS method has proved to be effective in briefly describing pharmacist-patient interactions and it can be used to measure the effect of training courses (e.g. assessing the difference in communication skills before and after the training course) without being too time consuming, whereas CA is more suitable than RIAS for intensely exploring pharmacist-patient interactions in detail. This study had several strengths. First this review is the first comparison between RIAS and CA methods in pharmacy practice, hence a range of RIAS and CA studies have been brought into one reference that is easier for other researchers to use to guide their own work. Also, the findings from the included studies have not only been reviewed and summarized but have also been pooled to capture how we might improve communication in pharmacy. Based on these findings, a flowchart of the utility of the RIAS versus the CA method was developed and can be used to facilitate the proper application of these methods in future communication research within pharmacy and the wider medical field (Figure 6). Another strength is that this study has met all but one of the ENTREQ criteria (Tong *et al.*, 2012), which is recognised by the Equator network to identify the validity and reliability of systematic reviews. Another strength of this study is that all the selected studies went through an appraisal process based on an assessment criterion appropriate to each method. This step is essential to reasonably weight all

included studies and exclude those that have a heavy bias or weak results. However, one limitation of this study is that the included studies were carried out across different nations that might have differences in societal norms around communication e.g. between different cultures and societal contexts. The impact of this on communication needs to be considered in future research.

The RIAS analysis system has many advantages. The RIAS method saves time because it is simpler to learn and apply, thus making it easier to collect and analyse data by novice researchers (e.g. doctoral students) than if they were to use the CA method, which usually requires extensive training (Roter and Larson, 2002). It is also easier to apply the method because RIAS does not require data to be transcribed as hard copy, as the data can be directly coded from the recording device. This feature makes it easy for researchers to use the method to assess the impact of training courses on a pharmacist's interactional style, for example, in a relatively short time (Roter and Larson, 2002). In contrast, the CA method is time-consuming as it requires the whole data, or parts of it, to be transcribed in detail. Data within all the CA studies identified (n=17) were transcribed into conversational transcripts as hard copy. Although the transcription process takes longer, these hard copies are easier than tape recordings to re-access and working from hard copies also facilitates both analysis and observation (Pilnick, Hindmarsh and Gill, 2009; Tsai, Lu and Frankel, 2013). For example, the CA data of Pilnick (1997), Nguyen (2003), and Watermeyer (2008) theses were reanalysed with diverse CA techniques to answer more than one research questions and have been published in more than one paper.

In addition to being easier to learn and less time consuming to apply, another advantage of the RIAS analysis system as a quantitative approach is that it allows researchers to study larger sets of data and apply inferential statistics to examine cause-effect. The RIAS studies included in this review analysed a larger sample of data (ranging from 10-196 interactions, with an average of about 75 interactions) whereas the CA qualitative studies had a smaller sample (ranging from 1-45 interactions, with an average of about 32 interactions). This is consistent with the general convention of qualitative studies using a smaller sample size than quantitative studies (DeCoster and Lichtenstein, 2007). Thus, the RIAS tool allows researchers to assess the relationship between specific variables (e.g. the type of utterance or communication style) and outcomes (e.g. patient satisfaction, or patient loyalty). For example, one study used the RIAS method to examine the relationship between the frequency of open versus closed questions and patient engagement (Cavaco and Romano, 2010). This study demonstrated that patient engagement can be achieved by asking more open-ended questions. This is a similar observation to Pires and Cavaco (2014), who found that the RIAS makes it easier to establish a connection between the professional's verbal content and the patient's health outcomes, such as patient satisfaction or adherence to the medication plan (Pires and Cavaco, 2014).

Despite these advantages, the RIAS scheme used in patient-pharmacist interactional studies included in this review had some limitations. The purpose of applying the RIAS scheme is to explore the main features of an interaction, such as interaction dominance or type of utterance. These features are limited to what is

already included in the existing RIAS template, which includes the general characteristics of any medical interaction with patients regardless of the different agenda of each interaction type (patient-physician, or patient–nurse versus patient-pharmacist) and the different settings. Indeed, the RIAS research studies included in this review used the pre-existing templates developed from patient-physician interactional studies to meet their aims but did not create templates specific to patient-pharmacist interactions. This is even though the RIAS template has some flexibility for adding sub-categories within the basic scheme to fit any conversation (Roter and Larson, 2002). This means that the exclusive features of patient-pharmacist interaction were not assessed because the researchers mainly adapted templates from patient-physician interactions.

Furthermore, the RIAS system of investigation which relies on dividing the interaction into small utterances and completing the predefined template, limits the analysis of the interaction to a specific focus and misses a number of other essential details, such as the relative timing of the utterances, sound characteristics, speed of delivery, intonation, and non-verbal behaviour (Sandvik *et al.*, 2002). Accordingly, most RIAS study findings included in this review, while stating that a communication skills programme needs to be set up to improve pharmacist communication skills, did not explain what this should cover and how it could be achieved. This is a downside of the RIAS analysis system which does not consider the finer details of interactions, or the sequences of actions. In fact, the shifting of social speaking between participants is not considered to be a part of the RIAS system of analysis at all, whereas, arguably, a good understanding of any interaction requires the sequence

of the actions to be studied. To explain: while the RIAS system allows researchers to code for the other party's (e.g. patient's or carer's) responses, in addition to those of the health professional being studied, this is done separately (Roter and Larson, 2002). Thus, the actions and utterances of one participant (the pharmacist) are analysed independently from the actions of the other participant (the patient), which fails to capture the sequence of actions and the connection with the participant's responses. This results in an incomplete view as to what is happening during the interaction. In contrast, studying the sequential actions (which CA enables) provides an opportunity to assess the second party's responses (patient responses), and hence identify what is preferred and what is dis-preferred within the pharmacist-patient interaction (i.e. to be able to judge the effectiveness of the interaction with fine granularity and provide recommendations for change). Additionally, the RIAS analysis system mainly analyses and codes verbal communication, and any analysis of nonverbal communication is limited to the tone of voice. This again hinders assessment of non-verbal responses (e.g. nods, shakes of the head), which are also important for revealing responses that are not necessarily said or disclosed in words. In comparison, the application of CA methods in pharmacy practice is effective in providing in-depth analysis of interactional details. This is to be expected because the principles of CA allow exploration of all turns within an interaction and analysis of them in a dependent manner. CA helps to inform the researcher about what has happened (the action) and how it has happened (Have, 2007). For example, Nguyen (2011) used CA techniques to understand how conflict emerges and how it is resolved during an interaction. CA processes also facilitates the researcher to

identify and analyse, in-depth, the sequencing of actions, the pattern of this sequencing, and repairing talk problems (Peräkylä, 1997; Maynard and Heritage, 2005). Taking in the sequence of actions has enabled researchers to propose templates of pharmacist-patient interactions (Pilnick, 2001; Nguyen, 2008; Watermeyer and Penn, 2009b). In addition, CA analysis facilitates the assessment of patient responses within the interaction. For example, Watermeyer (2011a) used the CA method to assess how patient adherence may be affected by the way the pharmacist talks about death with an AIDS patient.

Another advantage of CA is its ability to consider all the finer details of an interaction in the analysis, such as silences, speed of speech, intonation, and voice tone, which results in fully understanding the pharmacist and patient behaviours. In addition, CA analysis is interested in examining non-verbal communication as well as verbal communication. Therefore, audio recorders were only used in early CA studies (before 2003), and all recent CA studies (after 2003) use a video recorder. Because of these advantages of CA analysis, it has been possible for these studies to suggest new strategies to improve communication and build good pharmacist-patient rapport. For example, Watermeyer and Penn (2009c) applied CA to identify how pharmacists can assess a patient's understanding and the implications of these strategies in pharmacy practice.

Although both methods (RIAS and CA) are effective for investigating the interactions within pharmacy practice separately, there are potential advantages to combining these methods to enrich investigations of communication within the medical field. For communication to be improved, it is important to identify what is happening (e.g.



conflict or misunderstanding or miscommunication), how it has happened (e.g. how conflict emerged, or reasons for miscommunication), and how it is resolved (e.g. participants' responses to each other). This is exactly the type of information that can be yielded through CA studies, enabling researchers to propose new strategies, approaches, and educational training sessions for improving communication through inductive theory building. By combining RIAS methods, the application of these new strategies and any training for better communication can then be assessed statistically using the RIAS system. Here, the RIAS system would then enable researchers to examine specific actions during communication to test a new suggested hypothesis, or to assess the type and frequency of any variable that related to that interaction, e.g. the frequency of open-ended versus closed questions.

## **2.6. Conclusion**

Both methods, RIAS and CA, proved to be effective in investigating communication within pharmacy practice, but for different purposes. The RIAS method is a more suitable method for use in studies interested in briefly describing pharmacist-patient interactions or measuring the effect of training courses in a relatively short period of time, whereas CA is more suitable for use in studies interested in exploring the finer detail of pharmacist-patient interactions. All included studies in this review have demonstrated that patient-centred care has not yet been fully achieved within the pharmacy setting. Therefore, a continued examination of communication within pharmacy is required for improving pharmacists' communication skills and striving for better patient outcomes. The suggested flowchart of the utility of RIAS versus CA

method can be used to aid other researchers in suitably selecting between these two methods in future communication research. Sequentially applying both methods in future research has considerable potential for improving communication within pharmacy practice and within the wider medical field.

## **2.7. Chapter summary**

Issues from practice, such as nonadherence and patient dissatisfaction, informs us that effective patient communication is not achieved yet in real practice (as outlined in chapter 1). Thus, further investigations are rational for improving communication within this area. Interaction with patient could be examined using qualitative analysis (such as CA) or quantitative analysis (RIAS). The review in this chapter 2 set out the rationale for usefulness of applying these two distinguished tools (i.e. RIAS versus CA) in exploring the dynamic interaction with patients in pharmacy settings. It explained and justified the use of CA method to investigate the details of interaction and RIAS method to provide an overall description of the interaction. The finding of included studies in this review also stated that there are few studies carried out for examining pharmacist-patient interactions. Studies to date demonstrate that patient-centred care is not yet fully achieved within the pharmacy setting. Thus, further investigations are needed to identify how appropriate interaction takes place within pharmacy practice. In addition, there is a new impetus to improve healthcare professionals-patient relationships by applying sociolinguistic theories, such as PT, as explained in chapter 1. Thus, in our study, the investigation of interaction with

patients was conducted using both qualitative method (CA) to investigate the dynamic interaction with patients in more detail (that will be highlighted in chapter 4), followed by a quantitative method to examine the hypothesis that suggested from observations ( that will be outlined in chapter 5). The next chapter (chapter 3) will explain and justify the methodology that was used in this thesis, including how the data were collected and analysed.

## Chapter 3: Methodology

As a first step, we discussed the theoretical frameworks used in this study to illustrate the methods and techniques used to support our data analysis. The following section of this work will describe the actual research methods employed to collect data for this study (quantitative and quantitative), including the design of the study, the selection and recruitment of participants and the analysis of the data, to give some perspective on the study. Moreover, the trustworthiness of the study is demonstrated in this chapter. The final section of this chapter explains in great detail how ethical approval was obtained, which is a very important step in the process.

### 3.1. Introduction

This study uses a mixed-methods approach with qualitative and quantitative analysis tools to examine the dynamic interaction with patients. First, the qualitative method (i.e. conversation analysis) was applied to explore and capture the finer details of our data. This is a critical step in this study, as it helps identify issues regarding the interaction and the proposition of a set of hypotheses based on the observations made. Subsequently, this study used a quantitative tool (statistical analysis), which helped examine the suggested hypotheses. As outlined in the scoping review in Chapter 2, the combination of two methods facilitates the integration process, enabling the strengths of each method to be incorporated into the overall process.

In the following paragraphs, the theoretical framework employed in this study will be clarified in detail.

### **3.2. Theoretical frameworks relating to exploring dynamic communication with patients**

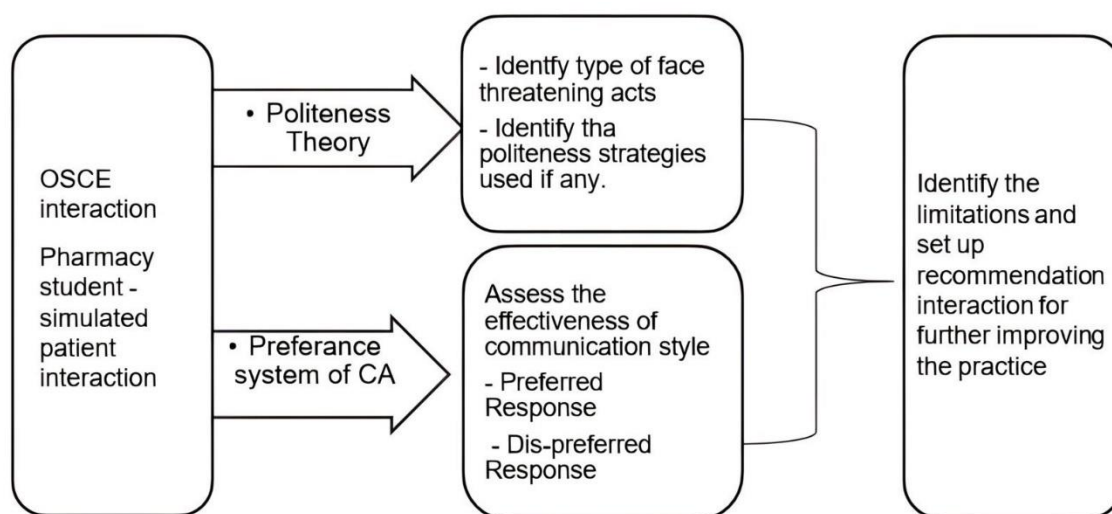
Brown and Levinson (1987) recognised that “...*nearly all the structural predispositions that have been studied under the rubric of preference, and many aspects of pre-sequenced, seem to be motivated by face considerations*” (p. 40). It can be concluded, therefore, that many of the responses we make during any interaction, including those made by patients during a consultation, are influenced by threats to face needs. These ideas gave the impetus to our decision to use both CA principles and the PT framework for examining dynamic interactions with patients. The CA preference system identified by Pomerantz (1984) was applied to judge patient responses and to analyse the sequences of acts during pharmacy student–patient (actor) interaction. The Brown and Levinson (1987) PT framework was used to identify different types of speech acts that highly threaten interactors’ face needs and to recognise the conversational strategies that were used by pharmacy students to mitigate the impact of these actions on patients’ face needs. The theoretical framework used for this study was based on analyses of pharmacy students’ utterances using the PT framework to identify all FTAs raised up and politeness strategies used to address these acts, as well as analysing patient responses using CA principles sequentially and simultaneously.

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Notably, the standalone application of PT that Brown and Levinson (1987) for OSCE scenarios was judged insufficient for the current study for the following reasons. First, non-verbal communication is not included within PT, which means the analysis cannot consider non-verbal communication. Second, the sequence of action relating to an FTA is not considered within the PT framework. One of the objectives of this study is to assess students' ability to recognise and address threats to patients' faces. This necessitates using an additional method to facilitate analyses of patients' (assessors') responses to students' handling of FTAs. An examination of these responses is important for gauging the effectiveness of the politeness strategies used by the students. Thus, a combination of CA principles and PT was employed to meet all the study's objectives. CA is effective for exploring the finer detail of interactions within pharmacy practice and can be applied to the analysis of both non-verbal communication and the sequences of acts within pharmacy practice (Alsubaie, Grant and Donyai, 2021). This method uses transcription and interpretation to deeply understand any interaction by identifying what happened and how (Drew, Chatwin and Collins, 2001; Have, 2007). Additional details about CA are outlined in Chapter 2. In addition, Brown and Levinson (1987) did not include all face-threatening acts, such as the refusal of a request, which threatens the positive and negative face of the refuser, and the positive face of the requester (Johnson, Roloff and Riffie, 2004), necessitating other additions for the current study. The flow chart in Figure 7 below illustrates the use of the combined methods in this study. Rather than using one method, combining the PT framework and CA principles helps identify sensitive situations during patients' consultations and the effectiveness of

## Chapters 3: Methodology

conversational strategies used by assessing how pharmacy students performed these actions. This PT framework is outlined in Chapter 1. In the following paragraph, the CA preference system is explained in detail.



**Figure 7 Illustrates the combined methods used in this study.**

### 3.3. CA preference system

CA used Pomerantz (1984) foundational paper on conversational assessment, '*[a]greeing and disagreeing with assessments: some features of preferred/dis-preferred turn shapes*'. This system is widely used in CA research and was used to assess patient responses, as follows. Pomerantz (1984) itemised the first part of an utterance by a first speaker as the First Part Pair (FPP) and the second part of an utterance by a second speaker as the Second Part Pair (SPP). An adjacency pair

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comprises two utterances by two speakers, one (SPP) after the other (FPP). According to CA principles, any duration between the FPP and SPP of more than 0.4 seconds is considered a gap between two turns (Have, 2007). For example, a preferred response is inherently marked as being a quick response between two turns (less than 0.4 s), agreeing with the previous speaker, and even upgrading their assessment of a situation. However, if there is a delay in the reply (more than 0.4 s between two turns) or other relevant markers such as a distinct disagreement, this is considered a dis-preferred response (as shown in Table 9). In certain cases, hesitation might be considered a marker of reluctance (that is, weak agreement), which might also be considered a dis-preferred marker, particularly if it is associated with a delayed response process (Bilmes, 1988).

**Table 9 Categorisation of preferred and dispreferred response regarding the second pair part (SPP), based on Pomerantz (1984).**

Preferred Response	Dis-Preferred Response
Minimises gap between turns (slight overlap)	Delayed response (maximises the gap) No response
Upgrades evaluation (strong agreement)	Contrastive evaluation or conjunction (but)
Presents the same evaluation (weak agreement)	Displays reluctance or discomfort ('Uh', 'well') or hesitations
Downgrades evaluation (weak agreement)	Long hesitation ('mmm')

To be clear, the below example, Extract 1, represents a quickly approved response between two turns which, based on Pomerantz (1984) assessment, is considered a



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preferred response. An example of a dis-preferred response is represented by Extract 1, where there is a delayed reply, and in Extract 2 and 3, where the patient hesitates to respond. Please note that the symbol (=) indicates a quick response, and the time between two turns is reported in parts of seconds and represented between two brackets as (0.0 s), according to Jefferson (2004) transcription system, which is explained in detail later in this chapter. In our study, CA was used to examine the effectiveness of the politeness strategies (i.e. to specifically consider the success in meeting the patient's face needs). Simulated patients' automatic dis-preferred responses were expressed because of the patient's sense of embarrassment (i.e. positive FTAs) or feeling imposed on via constraints on their freedom (i.e. negative FTAs).

#### *Extract 1 Student C (Preferred Response)*

PH    don't drink a lot in one day=

Pt    =[Okey]

#### *Extract 2 Student A (Dis-Preferred Response, delayed response)*

PH    = XXX XXX nice to meet you, (.) umm So are you aware of mmm what blood pressure test is? (0.75)

PT    mmm, well, I have one but five years ( )

PH    =okay, Yes,

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### Extract 3 Student B (Dis-Preferred Response, hesitation with delayed response)

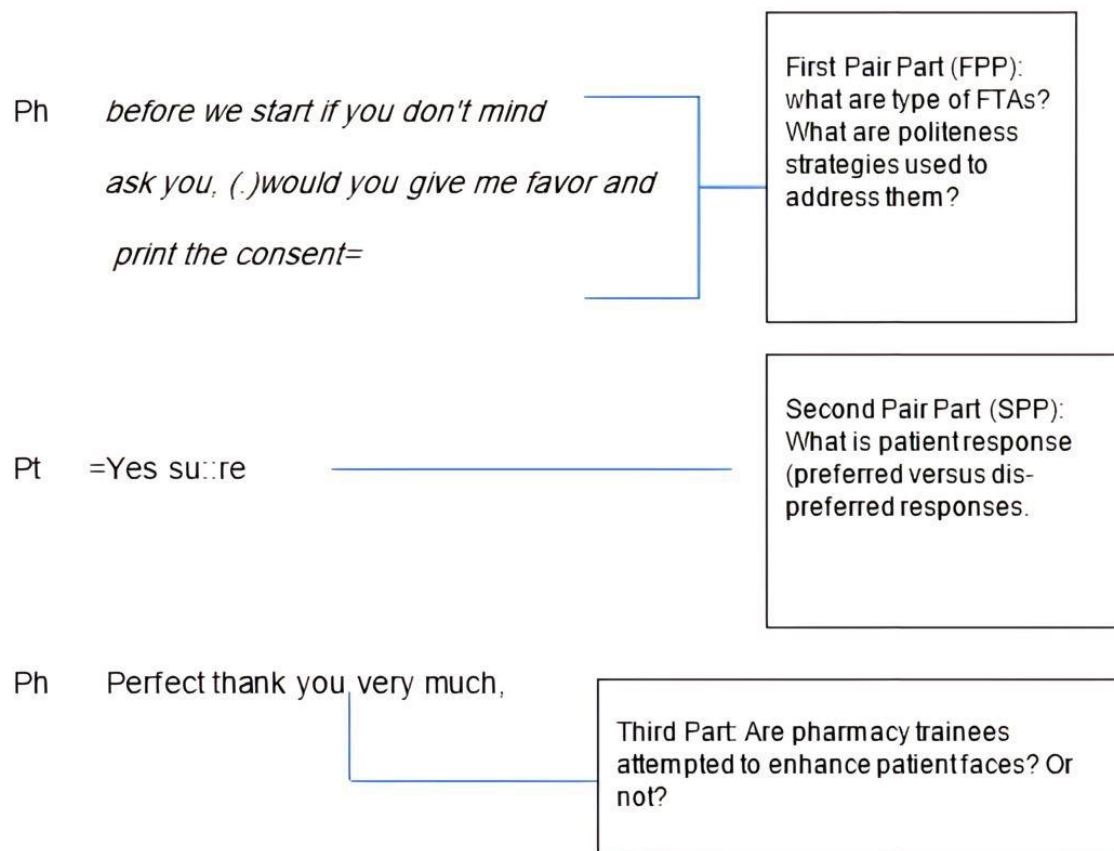
*PH what did you have yesterday?*

*Pt mmm, (0.8) breakfast I had fruit smoothie, (0.39) and then I had a ( Tuna) sandwich for lunch, then I had salmon and veg for dinner*

*PH it is very [good], vegetable salmon fish, it is [very very good]*

### **3.4. Illustration of practically combined PT and CA**

The data analysis started with the coding of all the pharmacy students' utterances into different types of speech acts (i.e. FTAs) based on the PT framework, as shown in Table 1. Once FTAs were identified, the patient's face needs were examined regarding the sequences of acts. These were the (FPP), which included the type of FTAs and politeness strategies used to perform the act optimally, and then the SPP, which included patient responses (i.e. preferred or dis-preferred responses) and, finally, the Third Part, which included students' feedback to the patient (i.e. politeness strategies used to enhance patients' face needs; (Have, 2007). Figure 8 below presents the analysis.



**Figure 8: An example of the analysis process of data using combinations of the PT framework and CA principles**

### 3.5. Research phases

The method used in this study is divided into three phases.

#### 3.5.1. Phase I: Sample data collection

All pharmacy students who had already taken part in OSCEs in 2017–2018 and 2018–2019 were invited by Prof Parastou Donyai to participate in the study by email (Appendix E) OSCEs. The email that was sent included an informational letter (Appendix F) and a consent form (Appendix G). Those willing to participate were

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asked to sign and send their consent by email to Prof Donyai after reading the information sheet. This provided access to their video-recorded OSCE exams, which had been kept for teaching quality assurance (QA) purposes. These videos had already been recorded as part of the assessment process and were stored in the university's archive. Nineteen video recordings were included of pharmacy–student/assessor interactions (i.e. role playing pharmacist–patient interactions) during final-year OSCEs at our pharmacy department. Four students from 2017–2018 and six students from the 2018–2019 cohort agreed to participate in this study. The demographic features of the subjects are represented in Table 10. The study maintained the confidentiality of each individual using a letter from A to J. There were four male and six female students, six British South Asian, one British Caribbean, one White British and two international students, one from Africa and one from Southeast Asia. There were typically 100–120 students per year. Our sample of students was small and self-selected. However, to the best of our knowledge, it was as representative as possible of the overall student body within the study design. I am mindful of the fact that a qualitative study does not seek representativeness but searches for depth in data for a small sample to explore phenomena in detail. Our study examined a much larger volume of data than is normally conventional for conversation analysis studies.

**Table 10 The de-identified coding for participants.**

Participants	Gender	Ethnicity
A	British South Asian	Male
B	British South Asian	Male
C	British South Asian	Male
D	British Caribbean	Female
E	Africa	Female
F	British South Asian	Male
G	British White	Female
H	British South Asian	Female
I	British South Asian	Female
J	Southeast Asia	Female

This study included only two OSCE stations that involved communication with simulated patients, namely the Healthy Living Assessments (HLA) station and the Responding to Symptoms station (RTS). This was because these two stations were the only ones that required communication with patients (actors). Other scenarios for OSCEs were not considered, as they did not involve communication with a patient; for example, it might involve communicating with a simulated physician instead. Within HLA and RTS stations, students assume the role of a pharmacist and are put in charge of soliciting sensitive information and recommending

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behavioural change or other advice, both of which involve negotiating FTAs. These interactions encompassed a range of scenarios (e.g. high blood pressure, high cholesterol or high blood sugar) and involved a mix of staff and actors who had been provided with detailed information about the role they played via a script. However, the staff/actors playing the part of patients had not been trained on how exactly to perform their role, other than to give straight answers to questions or disclose information as requested according to the script. Accordingly, their automatic responses could still be seen within the confines of the broader script. One interaction was lost to follow-up, meaning 19 rather than 20 videos were available for use. According to previous CA research, 19 video recordings were suitable for this type of analysis.

Potential interviewees were offered a £5 Amazon voucher if they agreed to participate in the study. The researchers made the decision to offer this amount, as it was considered reasonable to make a payment of £5 in Amazon vouchers to thank people for sharing their videos for our study. This minimal sum is not considered coercive, and this amount was agreed upon by the Ethics Review Committee. No money or other payment was offered to staff who played a role as a patient, as this task was conducted as a normal part of their job.

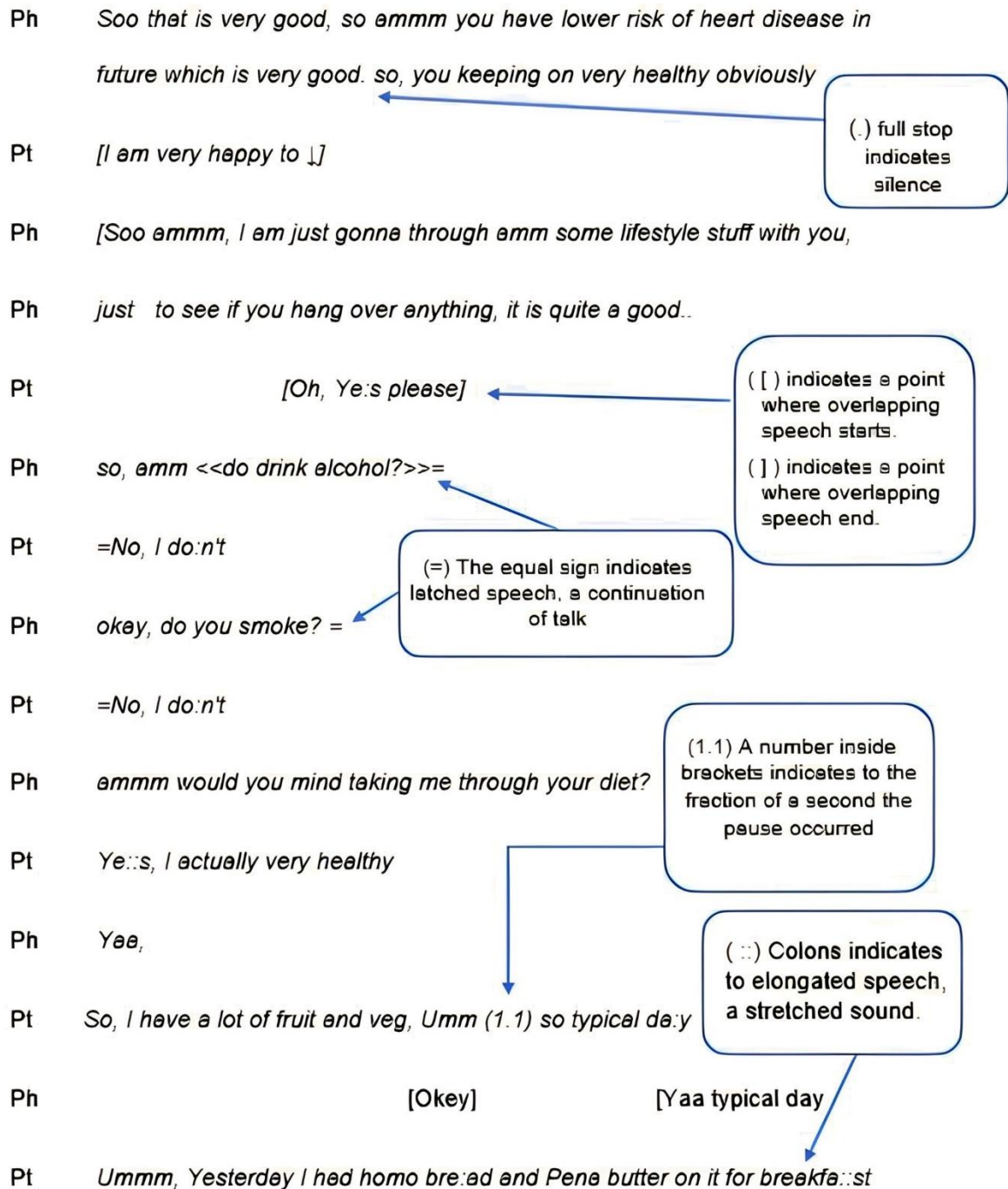
#### **3.5.2. Phase II: Transcription**

The videos analysed were transcribed using ELAN software (ELAN, 2022). Data were transcribed by the researcher based on Jefferson's transcription system

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(Jefferson, 2004), which is widely used in CA studies (see Appendix H). Jefferson's transcription system records a high level of detail in interactions, including silences, overlapping speech, voice volume and speed rate of speech, so reading a transcript marked up this way provides the reader with an accurate impression of the event. For example, a silence is marked with a full stop '(.)', or the duration of silence is marked using numbers to show the fraction of a second in which the pause occurred '(0.8)', as shown below. All transcriptions were made using Microsoft Word. The excerpt below for Student C (Figure 9) includes an explanation of Jefferson (2004) symbols. For a full version, see Appendix H.

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**Figure 9** An example of our transcribed interaction (student C) using Jeffersonians system.



### **3.5.3. Phase III: Data analysis**

Applying PT and CA methods together facilitated the assessment of all FTAs that were raised during patient consultation, the strategies that pharmacy students used to mitigate them and their effectiveness (as mentioned earlier). The analysis involved coding the utterances of each pharmacy student according to PT. CA was then applied to test whether a conversational strategy used by the pharmacy student (i.e. when they tried to save the patient's face) was effective. These are described in more detail below. The research student completed data analysis in consultation with the supervisor, Prof Donyai, who provided guidance and supervision. Double checking the coding of the data was conducted with the second coder pharmacist, Hannah Piekarz, and the supervisor.

#### **3.5.3.1. Phase III a: Data analysis according to PT**

The PT framework (Brown and Levinson, 1987) was used to identify the FTAs (Figure 2). The researcher coded the FTAs according to three types: negative FTAs, positive FTAs and acts that threatened the needs for both negative and positive faces. Requests, advice giving, ordering, suggestions, offering and promises were coded as negative FTAs because they might impose on the hearer's autonomy. Bringing bad news (e.g. a diagnosis) and expressing disapproval were coded as positive FTAs because they potentially endanger the hearer's sense of self-worth and may cause embarrassment to the patient. Requesting personal information (e.g. sexual activity, alcohol consumption or smoking status) were coded as negative and positive FTAs because they threaten patient autonomy and self-esteem

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simultaneously. Additionally, the utterances of pharmacy students were coded according to four politeness strategies, where used, to mitigate the FTAs: bald on-record, positive politeness, negative politeness and off-record, based on the framework derived from Brown and Levinson (1987), naming the sub-category where relevant (Figure 2).

#### **3.5.3.2. Phase III b: Data analysis of patient responses using CA**

Patient responses to these situations were coded according to CA conventions as being preferred or dis-preferred. Within OSCE scenarios, the responses are usually scripted so the patient (actor/assessor) is instructed to give a very specific answer (usually agreeing with the pharmacy students' request). However, the preferred and dis-preferred analytic framework was used so the automatic reaction of the patient (assessor) could be elicited to the politeness strategy used by the pharmacy student (something that is less controllable). Thus, patient responses were analysed based on work by Pomerantz (1984). CA was used to examine the sequence of utterances, as explained above.

#### **3.5.3.3. Phase III c: Quantification of the data**

Statistical methods are often combined with CA analysis to provide a more generalised conclusion (Peräkylä, 2011; White, 2019). To complete the appropriate statistical tests, all results were quantified based on the observational analysis. These categories and their variables were identified using the PT framework and the CA preference system. Pharmacist students' utterances were categorised according

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to the PT Framework (Figure 2). FTA types were classified into three categories: positive, negative, and positive and negative. In addition, there was a category for politeness strategies used for maintaining or enhancing patient needs, such as bald on record (do not use any politeness strategies), positive politeness strategies (to enhance self-esteem), negative politeness strategies (to respect others' freedom) and off record (by using hints) (Figure 2). Alternatively, all patient (actor) responses were coded using the CA preference system. As discussed previously, CA facilitates the process of judging the patient's response based on Pomerantz's (1984) definition of *preferred versus dis-preferred responses*. Thus, the third category was determined by the type of response from the patient, which included the preferred response and the dispreferred response. All data analysis sheets were made using Microsoft Word (see Appendix I for an example). The data were quantified and transferred to an Excel spreadsheet (Appendix J) for further analysis. Next, all statistical tests were conducted using SPSS (Version 27).

### **3.6. Trustworthiness of the study**

For all research studies, whether quantitative or qualitative, it is essential to demonstrate a high level of validity and trustworthiness. Many aspects of the validity and reliability of the method of conversation analysis have been clarified by Seedhouse (2005) and Peräkylä (2011). These two references were consulted in this dissertation section, along with Lincoln and Guba (1985), to evaluate my research's reliability and validity. Lincoln and Guba (1985) outlined the following

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factors for evaluating trustworthiness in qualitative studies: credibility, dependability, confirmability, transferability and reflexivity.

### 3.6.1. Credibility

*Credibility* in qualitative research refers to the establishment of confidence that the results are true, credible and believable. Credibility can be viewed as a type of internal validity in terms of quantitative research (Seedhouse, 2005). Lincoln and Guba (1985) recommended many strategies to evaluate a study's credibility. One of the criteria for credibility is prolonged engagement and persistent observation. In this study, I have been working with the data since I began my Ph.D. programme in May 2019. I transcribed the data myself, so I am aware of all the details in the transcription. Because of taking a great many recorded workshops on how to practise transcribing recordings using Jefferson's system, I have become more skilled at transcription. Moreover, I undertook an advanced-level conversation analysis course at the University of York to ensure that I had the required knowledge and research skills to perform CA analysis.

- Credibility can also be determined through peer debriefing, which involves presenting one's findings to others with related experience to examine one's biases, assumptions, logic and methods (Lincoln and Guba, 1985). By using CA, I can provide all the data recorded in videos detailing all social activities, making them repeatable and replicable (Seedhouse, 2005). Prof Donyai, my supervisor, contributed to all phases of this research, including planning, data collection,

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research design, data transcription and data analysis (coding and interpretation). I met with Prof Donyai every week to discuss my findings and ideas. Due to the COVID-19 pandemic, these meetings shifted from face-to-face to online. In addition, the data were coded by a second coder to determine the percentage of agreement. This study started with a scoping review to identify the proper methods (RIAS versus CA) for the research aims, as discussed in Chapter 2. The methodology used in Chapter 3 was described in more detail, including data collection, data analysis and a framework adapted from PT and CA principles step-by-step so anyone reading this thesis can understand how the results were generated. Additionally, primary or raw data are available. A triangulation investigation involves the use of several methods, data sources and analysts to gain a deeper understanding of a phenomenon (Lincoln and Guba, 1985). I achieved triangulation by triangulating the methodology using two analytic techniques (qualitative and quantitative; (Seedhouse, 2005).

- Data triangulation using a variety of sources. Due to the detailed and in-depth nature of CA data (recorded videos and then transcriptions), this type of triangulation was not generally conducted. Other types of data sources, such as interviews, questionnaires and observations, cannot provide the same level of detail. Therefore, other sources of data are required to increase the validity and reliability of the study (Seedhouse, 2005).
- My supervisor, my second coder and I conducted the investigator triangulation.
- Theoretical triangulation was achieved using the principles of PT and CA to generate hypotheses and code sheets based on the theory.

### **3.6.2. Dependability**

Dependability is determined by the degree to which the results of this qualitative enquiry can be replicated within the same cohort of participants, coders and environment. Three steps were taken in this study to achieve dependability:

1. A detailed description of the study methods is presented in the methodology section.
2. A step-by-step replication of the data was carried out by measuring the coding accuracy and the inter-coders' reliability of the research team.
3. The audit trail was achieved by keeping the primary data (transcription to the reader) and providing my interpretation of the concepts and categories. With the audit trail, readers can verify that the findings are logical and consistent.

### **3.6.3. Confirmability**

Confirmability reflects the level of confidence that the results will be confirmed or agreed upon by other researchers. Confirmability could be achieved through the use of several triangulation techniques (methodological, investigator and theoretical), as mentioned above, and through obtaining an audit trail, if possible.

### **3.6.4. Transferability**

The transferability of the results is determined by their generalisability or adaptability. It is difficult to establish the transferability of qualitative studies. This can be determined through a method called "*thick description*" (Lincoln and Guba, 1985).

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As part of the thick description, I described data collection, student recruitment and student characteristics in detail to clarify the phenomena of this study. The data analysis sheet (Appendix I) and the categorisation spreadsheet (Appendix J) are presented to the reader. In addition, the context of the research is outlined, enabling anyone to assess whether the findings can be applied to other situations and contexts. Furthermore, CA studies may contribute to a generalisable description of the interactional structure of the setting. This is characterised by rational patterns of action according to social objectives (Seedhouse, 2005). An example of this would be a physician–patient conversation that is similar to others in different contexts.

#### **3.6.5. Researcher characteristics and reflexivity**

As a researcher, reflexivity involves considering how one's own beliefs, judgments and practices may have influenced the research process. This aspect is important for any research, particularly qualitative research. It is generally accepted that reflexivity enhances the validity and reliability of research results. In addition, reflexivity helps identify any bias that might create an ethical issue (Guillemin and Gillam, 2004). I am a Kuwaiti pharmacist and international doctoral student, and I conducted the analyses. I earned a BSc degree in pharmacy from Kuwait University, Faculty of Pharmacy, in Kuwait in 2010. I gained professional experience during my job as an outpatient pharmacist, being responsible for dispensing medication and counselling patients about the proper use of medication. This job allowed me to gain experience with communicating with patients in practice, and this gave me the chance to learn how to deal with different patient groups (e.g. young versus elderly),

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with different conditions (e.g. acute versus chronic conditions). The nature of my professional career influenced my knowledge and experience on the ongoing issues related to patient consultation, particularly non-adherence. According to my experience, multitudinous patients missed the refill appointment for their medication, as their medication had not run out, or others refused to take some medications, such as antihyperlipidemic drugs. This indicated that they were not taking their medication regularly.

I completed my MSc in Advanced Clinical Pharmacy from the School of Pharmacy, University of Hertfordshire, UK, in 2016. While completing my MSc degree, part of the programme was to work in a placement for two months (April–May 2017) under the supervision of an expert pharmacist in Luton and Dunstable Hospital. I prepared medication in the outpatient department and as a ward pharmacist. I had the opportunity to communicate with patients when they were admitted to the hospital to take their history and when they were discharged to dispense medication for them and counsel them. This opportunity helped me improve my communication skills to deal with patients from diverse backgrounds and cultures. During my placement, I obtained the opportunity to be involved in UK society and culture as an international student.

During my Ph.D. research in pharmacy practice, I conducted this study as the primary investigator. Once my supervisor, Prof Donyai, offered me the project, I accepted it without hesitation. All researchers whom I consulted believed it to be an area with unanswered questions worthy of detailed investigation. My curiosity about



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communication issues led me to accept my Ph.D. topic, despite having no specific interest in or experience with conversation analysis or politeness theory before starting the project. In my opinion, that lack of experience might eliminate biases that could otherwise have arisen in my research, because I had no preconceived ideas or expectations about conversation analysis or politeness theory before starting. I undertook specific training during the first year of my PhD, including how to analyse data using CA at the University of York.

Cultural backgrounds play a significant role in my understanding of politeness strategies. This is because various cultures have distinct norms, beliefs and expectations regarding communication and social interaction. Thus, culture can greatly affect the way people in general and patients express and interpret their positive and negative face needs. For example, what is acceptable in one culture may not be acceptable in another. However, I did not experience any difficulties or concerns when I became involved in the investigation of interactions within UK society and culture as an international student for the following reasons. First, the UK has evolved into a multi-cultural society consisting of people with a variety of backgrounds. Indeed, Brown and Levinson's (1987) PT was proposed as universally applicable and has been applied in many cultures, such as Indonesia, Japan, Persia and South Africa (Fukada and Asato, 2004; Brandt, 2021; Kazerooni and Shams, 2015; Susanti and Rohmadi, 2018). Second, the short experience I gained from my placement at an NHS Trust helped me understand the UK's culture. Due to my living in the UK during the completion of my master's studies (2016–2017), I was able to

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increase my exposure to British culture, which helped me acquire a greater degree of confidence regarding the natural exchange of information. However, it is possible that, due to my own cultural and personal impacts, I may have an inherently/automatically biased view of the data and findings. Consequently, I considered this possibility and took steps to minimise it by following the established framework as best I could and by working with a second coder who speaks English as a native language (more information provided below).

I would like to report here that this research was affected by some restrictions due to the COVID-19 pandemic. Besides OSCEs' interaction (pharmacy student-simulated patient interaction), I aimed to investigate a real-life interaction between pharmacy staff and patients as part of my research. The University Ethics Committee granted me permission to work on this project. Once I received their approval, I contacted many community pharmacy managers around Reading who provide health check assessments to invite them to participate in the study. I also received approval from a community pharmacy in Swindon and Wiltshire. At that time, however, these services were suspended due to COVID-19 for about one year. Unfortunately, I could not complete that element of my project. I was excited to have the opportunity to research actual interactions, which would have enabled me to compare how experience (from pharmacy students to expert practitioners) affects search results. Obtaining ethical approval was a very difficult process, taking approximately 11 months. Even though this element of the project was incomplete, the process of writing the protocol and obtaining ethical approval for this element

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undoubtedly enhanced my skills as a researcher. In particular, it was crucial to ensure that the patient's privacy was protected at all times, and I learnt to think this through in my paperwork, even though the project examining real-life interactions did not actually take place.

### **3.6.6. Inter-rater reliability measurement**

To increase the trustworthiness of the findings, inter-rater reliability was measured by another coder. I independently performed all the coding of the data in consultation and discussion with Prof Donyai. Additionally, 20% of data were randomly (every sequence of 5) selected and independently coded by a second coder, a PhD student and pharmacist Hannah Piekarz, and these were compared. To measure the inter-rater reliability between the two coders, we used Cohen's kappa. The coding process involved examining and agreeing on the type of FTAs, any politeness strategies used by pharmacy students to maintain patients' face needs while performing FTAs or to respond to patients' answers and the type of patient responses. Thus, the Kappa value for each theme was measured separately. Both coders then discussed all disagreements about the data to achieve final agreement. All the data were then adjusted according to both coders' agreement. Excel software was used to keep and perform the statistical analysis. The results are shown in Table 11.

**Table 11 Inter-rater reliability of themes' analysis.**

Category	Kappa Value	Level of Agreement
Type of face-threatening acts	0.85	Storage agreement
Type of politeness strategies used	0.75	Good agreement
Patient response	0.81	Storage agreement

### **3.7. Ethical issues**

An existing ethics approval was granted for an ongoing study. However, amendments were requested for this study, and approval was granted. The primary data for this research were obtained from the University of Reading Archive. The OSCE interaction videos had already been recorded as part of the assessment process and were stored in the university archive for teaching QA purposes. Consequently, the study received internal ethical approval from the Head of the School of Pharmacy on behalf of the University of Reading's Research Ethics Committee (see Appendix K). Prof Donyai emailed the head of the pharmacy school asking for permission to conduct the current study. The approval response was received via email (Appendix L). The study was reviewed according to the university's ethics approval procedures, after which it was approved (study no. 14/19).

### **3.7.1. Data protection and confidentiality**

To ensure ethical practice, students were provided with the information sheet in Appendix F, which clarified in detail all these points:

- Taking part in this research was voluntary and they had the right to withdraw at any time without giving any reason. They had the right to end their participation in the project up to two weeks after consenting.
- Confidentiality and privacy in this study was ensured for all participants, and the information gathered was only used for research purposes. The data (recorded videos and transcriptions) were de-identified. (i.e. did not contain names or other details that might identify the participant). Instead, non-identifiable codes were used, and other identifiable information was altered. Each student was represented by a letter from A to J to maintain their anonymity within the current study.
- All subjects were provided with a consent form (Appendix G) and an information sheet (Appendix F), which included a detailed description of the nature of the study, why the research was being conducted, why they had been chosen to participate and the nature of the questions that would be asked. They were informed that the researcher would answer any questions before the consent forms were formally signed.
- Individuals were asked for their permission to access the recordings of their OSCE videos and to make transcripts of these videos to identify features of communication. A signed consent form was obtained from all participants.

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- The recordings were accessible only by the researcher and her supervisor. Afterwards, these records were transcribed into Microsoft Word documents, without containing any names or information that might identify the participants. At the conclusion of the study, the digital recordings will be deleted.
- The data that included identifying information (consent form) were kept safely and separately from other data (videos, transcription) and were accessible to the chief investigator only. This was processed securely in line with the guidance provided by the Data Protection Principles set out in the General Data Protection Regulations 2016 (GDPR) Act and the Data Protection Act 2018.
- All video recordings were pseudonymised using technology such as X-ray filters (to blur participants' faces) on the recordings to protect participants' privacy.
- All research data were appropriately anonymised so they cannot be traced to the individual and held securely and in the strictest of confidence.
- Research data were saved with password protection and given restricted access in adherence to the University's Bring Your Own Device (BOYD) policy on the researcher's, Sarah's, university's One Drive (cloud) and the University's network drive where those requiring access (supervisor and researcher) could access it.
- All documents transferred from the researcher to the supervisors were sent and transferred via the One Drive.
- De-identified (pseudo-anonymised) transcript data were preserved for future scientific research at the University of Reading.

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- The researcher ensured that all personal details about participants (e.g. their name, email) were removed from the transcription sheet to ensure that information or data collected about individuals could not be traced back to them by other parties.
- The video recordings will also be kept and stored on University network drives for security and availability reasons until the end of this study and then deleted at the end of the study (June 2023).

### **3.8. Chapter summary**

The purpose of this chapter is to provide a more detailed description of the methodology used to examine dynamic interactions with patients. Next in this paper is the qualitative analysis of the data, in which the PT framework developed by Brown and Levinson (1987) is used to identify the types of FTAs and politeness strategies used in this study, along with CA analysis to assess the effectiveness of these strategies. Continuing from the qualitative analysis, Chapter 5 presents the results of the statistical analysis of the hypotheses derived from the observational analysis.

## **4. Chapter 4: An Applied Linguistics Study of How Students Prevent Embarrassments and Impositions During Interactive Examinations (OSCEs)**

### **4.1 Introduction**

Although interactions within OSCEs may appear relatively straightforward, there are many micro-elements that potentially threaten both the negative and positive face of patients. PT has been shown to be relevant to the consultations with patients. As explained in Chapter 1, PT is a fundamental sociolinguistic theory established by Brown and Levinson (1987) to examine politeness within any social interaction. PT is based on two key concepts: 'face' and 'face threatening acts' (FTAs). Each face, positive and negative, has its own desires and needs. Negative face needs represent the wish to maintain autonomy, whereas positive face needs represent the desire to be liked by others. Thus, FTA refers to any act that interferes inherently with someone's face, whether a negative or positive FTA (please refer to Chapter 1 for full details of the PT framework).

Pharmacists are involved in many different types of FTAs as part of their roles. For example, providing patients with appropriate recommendations (suggestion or advice) or taking a patient's history (asking patients about their family history, medical history, or disease history) could affect negative face needs (i.e. patient freedom and autonomy), because the patient might not want to accept the advice or



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disclose the information. Similarly, providing patients with a diagnosis (giving bad news about, e.g. high blood sugar) or expressing disapproval for any inappropriate behaviour (e.g. excessive alcohol consumption) could affect positive face needs (i.e. patient wanting to be liked) because these carry an inherent judgement about the patient, albeit in relation to their health. Thus, consultation with patients could benefit from the PT framework.

It is essential to explore how pharmacy staff perform these acts. As explained earlier in Chapter 1, the PT framework suggests five broad types of strategies: bald on-record, positive politeness, negative politeness, off-record, or avoiding FTAs altogether. By using bald on-record strategy, the pharmacist is able to manage a FTA directly without having to address the patient's face needs, especially if the act is more important than the face needs. Using the pharmacy context, it would be appropriate to say, "*Keep this medicine out of the reach of children*". Using positive politeness means showing respect for the patient's positive self-esteem. An example of this in the pharmacy context would be thanking the patient or showing empathy and understanding to enhance the patient's self-esteem. By contrast, negative politeness indicates that the speaker respects the patient's freedom, such as when obtaining patient agreement or consent. As a fourth strategy of PT, off record, involves using hints to complete the FTA in an indirect way. Using this strategy avoids the potential effects of performing an FTA more directly (e.g. commenting that there is a smoking cessation programme indicates giving advice about stopping smoking, without asking specifically to do so).

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Dealing with potentially sensitive situations that arise during patient consultations, such as discussing alcohol consumption or sexual activity) is an important aspect for building good rapport and trust with patients. These kinds of speech acts may cause patient embarrassment (i.e. affecting positive face needs), and/or may cause a feeling of imposition on the patient (i.e. affecting negative face needs). Thus, failing to recognise and handle such circumstances has the potential to upset patients and, in turn, decrease the effectiveness of an interaction in achieving a positive outcome. Alternatively, negotiating with sensitive interactional components has the potential to increase compatibility and rapport. However, this topic has rarely been examined within studies examining dynamic interactions between patients and pharmacists (Alsubaie, Grant and Donyai, 2021). This study sought to consider sensitive interactional components within OSCE interactions and the issues surrounding this concept.

For the current study, applying PT to OSCE scenarios on its own would not be sufficient to achieve the objective of the study, since it would not be possible to assess the effectiveness of students' interactional strategies (previously explained in Chapter 3). The reason is that nonverbal communication and the sequence of actions relating to FTAs are not considered within PT, which means that patient responses are unchecked. Therefore, this study uses conversation analysis (CA) together with PT. CA examines the structure, organisation, and dynamics of natural interactions in any settings, including interaction with patient (Drew, Chatwin and Collins, 2001). CA offers the benefits of exploring the finer details of interactions

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within pharmacy practice including nonverbal communication, such as head nodding and silents (Alsubaie, Grant and Donyai, 2021; Have, 2007). Additionally, the sequence of acts within an interaction can be examined using CA, as the methodology can evaluate the effectiveness of students' conversational strategies (Have, 2007). PT and CA are applied together in a novel way in this study, allowing responses to politeness strategies to be considered.

Our current work was driven by numerous qualitative observations made during the marking of OSCEs, which highlighted differences among pharmacy students in how they handled FTAs, and which were difficult to tease out. These OSCE interactions were therefore used as a baseline for the linguistic analysis of the students' ability to recognise and deal with sensitive interactional components within the current study. Thus, the objectives of the study were to: (a) identify the types of FTAs that arise during OSCE interactions; (b) identify strategies used by pharmacy students to mitigate these acts, if any; and (c) point out any unexpected incidents when patient face is unintentionally highly threatened, as judged by patients' responses.

### **4.2. Methods**

This study's methods are fully described in Chapter 3, but a brief summary is provided below.

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### **4.2.1. Phase I: Data collection**

A total of 19 OSCE video recordings of 10 pharmacy students (participants) interacting with mock patients were included in this study. Our examination included two stations that involve a number of potentially sensitive interactional elements, namely the 'healthy living assessments' (HLA) (Langran, Alexander and Donyai, 2020) station and the 'responding to symptoms' (RTS) station. The HLA station mimics a set of workshops in which students are guided to conduct diagnostic tests on volunteer participants to assess their cardiovascular risk and to provide them with relevant lifestyle advice. Within the OSCE, students assume the role of a pharmacist and are put in charge of soliciting sensitive information and giving behaviour-change advice, both of which involve negotiating FTAs (Langran, Alexander and Donyai, 2020). A similar situation normally arises at the RTS station, where students again need to interact with patients and deliver their recommendations as a result.

### **4.2.2. Phase II: Transcription**

The videos analysed were transcribed using ELAN software (ELAN, 2022). The data were transcribed using the Jeffersonian transcription system (Jefferson, 2004). All transcriptions were made using Microsoft Word.

### **4.2.3. Phase III: Data analysis**

A detailed description of the data analysis process can be found in Chapter 3. The theoretical framework of this study incorporates both the PT framework and CA

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principles. Indeed, it was essential to apply a combination of methods in achieve the study's objectives. In what follows, the details of the main points of how the data were analysed are represeanted.

### **4.2.1.1. Phase III: Data analysis according to PT**

Using a framework derived from Brown and Levinson (1987), three distinct types of FTAs were coded for each pharmacy student's utterances: negative FTAs, positive FTAs, and acts that threatened both negative and positive face needs. Further, the utterances of the pharmacy students were calssified into four politeness strategies: bald on-record, positive politeness, negative politeness, and off-record.

### **4.2.1.2. Phase III: Data analysis of patient responses using CA**

CA tools enabled the assessment of the effectiveness of the strategies applied by the pharmacy students to mitigate FTAs. Patient responses to these situations were coded according to CA conventions preferred, or dis-preferred.

### **4.2.4. Reporting checklist of the research paper**

This part of the study was formatted as a manuscript and used a standard reporting checklist to verify that all significant reporting criteria were met. The Equator network was used to identify the most relevant checklist for this work. Since CA is a qualitative method, based on the Equator network's list, the standards for reporting qualitative

research (SRQR) checklist (O'Brien *et al.*, 2014) was chosen for the reporting of this study (see Appendix M). All of the 21 criteria achieved.

### **4.3. Results**

There was a total of 182 minutes of data for the 19 interactions, which lasted an average of 9 minutes and 30 seconds. By observing all included videos ( $n = 19$ ), we identified a total of 848 FTAs encountered by the pharmacy students (average  $\approx 45$  FTA/interaction), with different degrees of potential threat impact. The pharmacy students naturally applied various types of politeness strategies to perform their interactions with minimal threat to patient face. The analytical theming in this study focused on classifying(I) the types of FTAs that occurred during all interactions, (II) the politeness strategies used by the pharmacy students to manage these FTAs, and (III) any unexpected incidents when patient face was unintentionally highly threatened, as judged by their response (i.e. dis-preferred responses).

#### **4.3.1. Types of FTAs occurring during OSCE interactives**

A summary of the types of FTAs observed in HLA and RTS counselling stations is presented in Table 12. A total of 739 acts were identified that, according to PT, had the potential to interfere with patient (assessor) autonomy and impede their freedom (i.e. negative FTAs). These were classified as requesting patient permission (e.g. before discussing a topic or performing a test), requesting information from patients (e.g. asking about their lifestyle), offering something (e.g. help or a physical object), making a recommendation (e.g. recommending a medicine), giving instructions (e.g.

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how to use a medicine), and seeking agreement (e.g. about the healthcare plan discussed). Further details and specific examples of dialogue illustrating negative FTAs are presented in Table 13.

Positive FTAs were also identified during patient HLA and RTS assessments, as acts that had the potential to interfere with patient (assessor) desire to be liked/accepted and potentially cause embarrassment, but these were observably less prevalent (positive FTAs,  $n = 37$ ). These were classified as expressions of disapproval (e.g. about the patient's lack of physical activity), or bringing bad news about the patient's condition (e.g. informing the patient that he/she has a high blood cholesterol or high blood pressure). Further details and examples of these positive FTAs are presented in Table 14.

In addition, a number of cases ( $n = 72$ ) were identified in which threat to face encompassed both face needs, thus potentially interfering with negative and positive face needs at the same time. These were relevant when asking patients personal questions (e.g. what is your diet) or discussing sensitive topics (e.g. regarding sexual activity or alcohol consumption). Further details and examples are presented in Table 15.

**Table 12 A summary of various Type of FTAs involved in HLA and RTS counselling.**

Type of FTAs	Type of Negative FTAs	How its affected face needs	Explanation
Negative FTAs (acts that potentially impede patient autonomy)	Requesting patient permission	Asking patient for their permission may result in the patient either accepting or not accepting the request.	Before undertaking procedure (obtaining patient consent)
			Before performing each of the actions of procedure
			Before discussion of a topic
			Before asking a question
	Requesting information	Asking the patient, a question may result in the patient either answering or not answering the question.	Clarification of what the patient has called in for
			Information about medical history
			Information about demographic data (age, gender, or occupation)
			Information about patient's lifestyle
			Information about presenting symptoms
	Offering something	Making an offer may result in the patient either accepting or rejecting the offer.	Offering a physical subject (e.g. tissue or pen)
			Offering help at the beginning of conversation
			Offering available treatment option (e.g. cream or tablets)
			Offering help at the end of conversation
	Making recommendation	This includes giving advice or a suggestion. These acts involve telling the patient what to do, which may conflict with their general desire for freedom.	Recommendation about healthy lifestyle (e.g. decreasing alcohol consumption)
			Recommendation about medication (e.g. antihistamine product, or hydrocortisone cream)
			Recommendation about non-medication management (e.g. wear gloves, or open shoes)
			Referring to GP
	Giving instructions	This act involves instructing the patient to do something. It puts the patient under pressure to perform or not perform the act.	Instructing to carry out an action or procedure (in case of HLA)
			Instructing about correct use of medication (in case of RTS)



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Type of FTAs	Type of Negative FTAs	How its affected face needs	Explanation
	Seeking agreement	This act demands either an acceptance or a refusal of the suggested plan or treatment. It usually occurs after discussion of the healthcare plan or provision of medication.	Agreement about healthcare plan and recommendations given
			Agreement with medication provided
Positive FTAs (affecting patient's feeling to be desirable)	Expression of dis-approval	These acts involve criticism of patient lifestyle choices. So, they directly threaten the patient's desire to be liked and approved, which is related to positive face needs.	Criticism of patient lifestyle (e.g. unhealthy diet, physically inactive, or smoking)
	Bring bad news about patient		Telling patient about negative test result (e.g. high cholesterol, high blood sugar)
FTAs threatening both positive and negative faces	Request for personal information	Asking personal questions may affect both face needs at the same time because: <ul style="list-style-type: none"><li>- The patient has to either answer or not answer the question.</li><li>- The patient's self-esteem may be affected, especially if their answer is not appropriate according to social norms</li></ul>	Asking the patient question about their behaviour
			Assessing patient knowledge
	Discussion of sensitive topics (sex life, or alcohol consumption)		Unrelated Personal question (e.g. do you have any children)?

**Table 13 Examples of negative Face Threatening Acts (FTAs).**

Type of FTAs	Explanation	Examples (Key: highlighted text is coded to negative FTAs, in the first column).	The negative FTAS	Excerpt reference number
Request for patient permission	Before undertaking procedure (obtaining patient consent)	<p>Ph: [Okay, so if you could just fill out this form here, just tick where it says blood glucose measured, if you're happy with everything I said, just tick yes, and then print your name, and sign it and date it.</p> <p>Pt: Great. ((Pt receives the consent form)) I'll make sure I tick the r-right box.</p> <p>Ph: [Yep] (( Pt signs the form and returned back to Ph))</p> <p>Pt: That's go:od. Okay, that one.</p>	The student asked patient to sign consent form, may result in the patient either accepting or not.	Student F, HLA, No. 8
		<p>Ph: Okay, umm, so let's start just, umm, taking a couple of details and, umm, getting you to sign the for:m.</p> <p>Pt: =Okay.</p> <p>Ph: Umm, s::o(.) This will just take a few moments, if that's alright with you?</p> <p>Pt: =mmmm</p>		Student H, HLA, No. 2
Request for patient permission	Before performing each of the actions of a procedure	<p>Ph: I'm just going to... It's okay if I'm holding your hand?</p> <p>Pt: ↑Yeah.</p> <p>Ph: Okay,</p>	The student request patient's permission to start procedure, may result in the patient either agreeing or not.	Student I, HLA, No. 20
		<p>Ph: So if you don't mind, I'm just going to show you, is that okay to start? =</p> <p>Pt: =Ya of course=</p> <p>Ph: Okay. So while that gets ready (.) can I just... Do you have a preference for which hand you want me to...</p> <p>Pt: [This hand will be fine.</p> <p>Ph: Do you have preference to any finger or should I...</p> <p>Pt: =No.</p> <p>Ph: Okay,</p>		Student A, HLA, No.14 Student G, HLA, No.11

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Type of FTAs	Explanation	Examples (Key: highlighted text is coded to negative FTAs, in the first column).	The negative FTAS	Excerpt reference number
	Before discussion of a topic	Ph: Okay, So, <b>do you mind (.) if I tell you a little bit about it?</b> Pt: Yes, plea::se. Ph: So, um, healthy living assessment is a series of tests that we do to assess your current health status. And blood glucose levels involves, uh, using this machine	The student asked patient permission to start a topic, may result in the patient either agreeing or not.	Student J, HLA, No.4
		Ph: <b>Do you mind if &gt;&gt; we just have a quick consultation or just a quick chat just to make sure I make the appropriate recommendation&lt;&lt;?</b> Pt: Yeah. Ph: <b>Is that okay with you?</b> Pt: =Yeah, that's fine.		Student E RTS NO.2
		Ph: Umm, before I start, umm, <b>is it okay if I just tell you a bit about the actual procedure itself?</b> Pt: Ye::s. Ph: What it involves... Pt: [mmmm.		Student I, HLA, No.2
		Ph: Umm, what <b>I'd also like to recommend is, um, did you want to discuss some lifestyle factors that you can maybe...</b> Pt: Yeah, you can.		Student I RTS NO.57
		Ph: so no:w > <b>if I can ask you &lt; a few</b> a few questions about your lifestyle, Pt: Mmmm ((Pt nodding her head))	The student asked patient permission to obtain information, may result in the patient either agreeing or not.	Student B, HLA, No. 19
	Before asking question a	Ph: Umm, so that's where I... Here <b>I would like to ask you a few questions about your, umm, lifestyle.</b> Pt: =Okay. Ph: Umm, <b>so you said you don't smoke?</b> Pt: ↑Yeah.		Student H, HLA, No. 16
		Ph: So umm before we start, <b>I just ask you a fe:w questions about yourself.</b> How old are you? Pt: =33. Ph: 30? ((Ph keep taking note))		Student D, HLA, No. 7

# Chapter 4: qualitative analysis

Type of FTAs	Explanation	Examples (Key: highlighted text is coded to negative FTAs, in the first column).	The negative FTAS	Excerpt reference number
		Pt: 33↑		
1. Request for information	Clarification of what the patient has called in for	<p>Ph: Hello, my name is ( ), and I'm the pharmacist here today, <b>how can I help you?</b></p> <p>Pt: (.) Umm, I'm interested in &gt;&gt;your healthy living assessments&lt;&lt;</p> <p>Ph: [Oka:y</p> <p>Pt: And I would like to get my blood pressure checked.</p> <p>Ph: <b>Your blood pressure?</b></p> <p>Pt: Yeah.</p> <p>Ph: Okay</p>	Asking the patient, a question may result in the patient either answering or not answering the question.	Student H, HLA, No. 1
	Information about medical history	<p>Ph Okay. That's fine (1.89) Just give me one moment... <b>Do you have any medical condition?</b></p> <p>Pt =No.</p> <p>Ph <b>Are you taking any medications at the moment?</b></p> <p>Pt =No.</p> <p>Ph <b>This could be over the counter, vitamins, herbals, nutrition supplements. Anything something like that?</b></p> <p>Pt =No.</p> <p>Ph Okay that's fine.</p>		Student A, RTS, No 18-20
		<p>Ph: <b>So are you pregnant or breastfeeding at the moment?</b></p> <p>Pt: No.</p> <p>Ph: (.)Okay.</p>		Student G, RTS, No. 20
		<p>Ph So, <b>Do you have any food allergies?</b></p> <p>Pt (1.23)No food allergies.</p> <p>Ph <b>How about drug allergies?= =I'm allergic to Aspirin.</b></p> <p>Ph You are allergic to Aspirin. Okay, that's fine., <b>And what is the severity of it?</b></p> <p>Pt I just get a terrible indigestion.</p> <p>Ph a terrible indigestion. That's fine.</p>		Student A, RTS, No. 7-9

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Type of FTAs	Explanation	Examples (Key: highlighted text is coded to negative FTAs, in the first column).	The negative FTAS	Excerpt reference number
	Information about demographic data (age)	Ph: And ( .) Umm, <b>can I just ask your, umm, age please?</b> Pt: I'm 33. Ph: ↓33. ((wrote note))	Asking the patient, a question may result in the patient either answering or not answering the question.	Student H, HLA, No. 4
	Information about demographic data (gender)	Ph okay, <b>would you describe your</b> self as ( )= Pt =Yes, I would standard Ph ammm you are fema, [Yaa Pt [Yaaa]		Student C, HLA, No. 21
	Information about demographic data (occupation)	Ph =okay, and <b>if you don't mind me to ask you, amm what is your day job?</b> Pt I am a postman so work out [three hours a day] Ph [postman ] so you're required [three hours a day], then Pt .Ya, ((nodding))		Student A, HLA, No.31
	Information about patient's lifestyle	Ph .hhh, so <b>what should Da- diet like? it is healthy?</b> Pt Yaa, I think Yes, it is health as I can, keep it Ph <b>what did you have yesterday?</b> Pt mmm, (.) breakfast I had fruit smoothly, (0.39) and then I had a china sandwich for lunch, then I had salmon and veg for dinner		Student B , HLA, No. 20
		Ph aaa, <b>soo mm do you do any exercises as well?</b> (0.88) Pt no not really Ph that's fine,(.)		Student A, HLA, No.32
		Ph that's fine,(.) mmmm <b>how about mmm do you smoke?</b> Pt =no no Ph and <b>how is alcohol intake</b> Pt =no Ph .okay that's fine		Student A, HLA, No. 32-33

# Chapter 4: qualitative analysis

Type of FTAs	Explanation	Examples (Key: highlighted text is coded to negative FTAs, in the first column).	The negative FTAS	Excerpt reference number
		<p>Ph: <i>Um, and could you describe any other symptoms. Was it painful?</i></p> <p>Pt: <i>=No, it's just really itchy.</i></p> <p>Ph: <i>Itchy. Okay.</i></p>	Asking the patient, a question may result in the patient either answering or not answering the question.	Student H, RTS, No.8
	Information about presenting symptoms	<p>Ph: <i>Umm, and can I just check, is the rash for yourself?</i></p> <p>Pt: <i>Yes.</i></p> <p>Ph: <i>Yeah (.), Okay. And &lt;&lt; where is the rash&gt;&gt;?</i></p> <p>Pt: <i>So I've got this red, dry, itchy rash on my hands. (( Ph kept taking notes during the discussion))</i></p> <p>Ph: <i>Okay. And is it on both hands?</i></p> <p>Pt: <i>Yes .</i></p> <p>Ph: <i>↓ Both hands. And do you have... What sort of symptoms are you having with it? So you said it's red and itchy.</i></p> <p>Pt: <i>(0.6) Yeah, so, so it's just mainly red, itchy, and dry.</i></p> <p>Ph: <i>↓ Dry, okay. Is it weeping at all? Is there anything... Any liquid coming out of it?</i></p> <p>Pt: <i>No.</i></p> <p>Ph: <i>No. Umm, is it painful?</i></p> <p>Pt: <i>(0.75) Uh, it's just uncomfortable.</i></p> <p>Ph: <i>↓ Uncomfortable. Okay. Umm, have you had it befo::re?</i></p> <p>Pt: <i>No. So I used to have eczema as a child. Umm, but this went away when I was about six or seven years old.</i></p> <p>Ph: <i>↓ Okay.</i></p> <p>Pt: <i>And my skin is normally fine.</i></p> <p>Ph: <i>↓ Mmmm.</i></p> <p>Pt: <i>But it's just a bit dry, but I've never had anything quite like this before.</i></p> <p>Ph: <i>Okay, how long have you had it?</i></p> <p>Pt: <i>Uh, just for a few days.</i></p> <p>Ph: <i>↓ Few days, okay</i></p>		Student E, RTS, No.4-11

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Type of FTAs	Explanation	Examples (Key: highlighted text is coded to negative FTAs, in the first column).	The negative FTAS	Excerpt reference number
Offer	Offering a physical object	Ph: <i>There is a tissue.</i> Pt: <i>=I've got a tissue.</i> Ph: <i>Oh, you've got a tissue. Okay, that is brilliant. And then that should give me a reading, which is (4.5). Brilliant. Okay,</i>	Making an offer may result in the patient either accepting or rejecting the offer.	Student F, HLA, No. 13
		Ph: <i>So would you like a plaster or(.) ↓ Anything?</i> Pt: <i>(.)No. Just tissue will be fine.</i>		Student G, HLA, No. 15
	Offering help at the beginning of conversation	Ph <i>Umm, and Umm if you have any questions or anything, feel free to ask them. Is that alright?</i> Pt <i>=Yes ↑</i>		Student C, RTS, No. 4
	Offering available treatment option	Ph <i>That's fine. So, what I can offer you is, I've got a tablet or a suspension. What do you prefer?</i> Pt <i>(0.8) umm I just (want)... what makes my diarrhoea go really quickly.</i> Ph <i>Okay. That's fine.</i>		Student A, RTS, No. 32
	Offering help at the end of conversation	Ph <i>Ok. Umm, if you do have any questions or concerns, feel free to contact me so you can come back to the pharmacy whenever if you have any questions. thank you</i> Pt <i>[okey thank you</i>		Student C, RTS, No. 46

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Type of FTAs	Explanation	Examples (Key: highlighted text is coded to negative FTAs, in the first column).	The negative FTAS	Excerpt reference number
Recommendation	Recommendation about lifestyle (alcohol consumption)	<p>Ph: So, ideally, that's something that we should be reducing, your alcohol intake.</p> <p>Pt: Is it really that bad for my health?</p> <p>Ph: Uh, yes, it is. So it does put you at risk of, umm, like I liver said disease(.) Liver disease(.)</p> <p>Pt: Okay.</p> <p>Ph: Liver cirrhosis(.)</p> <p>Pt: Okay.</p> <p>Ph: And other ↓comorbidities(.)</p> <p>Pt: Okay.</p> <p>Ph: Which are not very nice at all.</p> <p>Pt: Yeah, I don't want that(.)</p>	This includes giving advice or a suggestion. These acts involve telling the patient what to do, which may conflict with their general desire for freedom.	Student D, HLA, No. 27
	Recommendation about lifestyle (exercise)	<p>Ph = Yaa</p> <p>Ph so if you aaa increase your walking then, aaa like half an hour a day, could be really good for you, just to take that ammm take total exercises up to two handers fifty minutes per a week because you do only one hour which is really good</p> <p>Pt okay</p> <p>Ph: So umm(.) Umm(.) &lt;&lt; We do suggest that you exercise at least 150 minutes every week&gt;&gt;</p> <p>Pt: Mmmm ((patient nodded his head))</p> <p>Ph: So that could be like 30 minutes for five days, so you could just walk to your work or walk to shops or anything or just like walk after dinner just to get(.)</p> <p>Pt: Mmm ((patient nodded his head))</p> <p>Ph: A little bit of an exercise in.</p> <p>Pt: Mmmm</p>		Student C, HLA, No. 39
	Recommendation	<p>Ph Okay. That's fine. so I think umm best thing to take would be lmodium 2mg, it's two capsules,</p> <p>Pt Okey</p>		Student G, HLA, No. 29
				Student A, RTS, No. 33



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Type of FTAs	Explanation	Examples (Key: highlighted text is coded to negative FTAs, in the first column).	The negative FTAS	Excerpt reference number
	about medication	Ph and the best way to take them is basically to take 2 capsules to start the treatment and then 1 capsule after each new bowel movement. Pt Okay.	This includes giving advice or a suggestion. These acts involve telling the patient what to do, which may conflict with their general desire for freedom.	
		Ph: Umm, based on what you told me, because you've, umm... because you've used Diprobace and it's helping a bit, but it's not actually getting rid of this... Pt: Mmmm. Ph: Umm, I would recommend you, umm, hydrocortisone cream. Pt: Okay. Ph: And, uh, this is a mild corticosteroid. Pt: Mmmm.		
	Recommendation about non-medication help	Ph You can wear open sandals, umm just trying to keep them dry as constant, Pt Okay, Ph keep them dry. Pt sure		Student I, RTS, No. 33
		Ph: So you could put on gloves and see if that helps as well. It might reduce your need, umm, for this as well. Pt: =Okay Ph: Umm, and you could put on two if that helps. Pt: Mmmm Ph: Or you could see if you could do something else that doesn't require the use of the hair dye. Pt: Mmmm Ph: Or see if they could switch to a different one that isn't umm, as irritating. Pt: All right		Student B, RTS, No. 43
	Referring to GP	Ph: so it is important that you do make an appointment with your GP, just so they can give you a fasting blood cholesterol test. Is that okay?		Student E, RTS, No. 36
				Student I, HLA, No. 28

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Type of FTAs	Explanation	Examples (Key: highlighted text is coded to negative FTAs, in the first column).	The negative FTAS	Excerpt reference number
		<p>Pt Yeah. When should I see them?</p> <p>Ph okey. <b>is that all right? do you have any questions?</b></p> <p>Pt Uh (1.5) No. So I need to go to the GP?</p>		<p>Student C RTS, no 31</p>
Instructions	Instruct patient to conduct a procedure	<p>Ph: So, if you just <b>press onto there.</b></p> <p>Pt: Mmmm</p>	This act involves instructing the patient to do something. It puts the patient under pressure to perform or not perform the act.	Student G, HLA, No. 16
		<p>Ph: so, <b>can I ask you to remove your coat, please.</b></p> <p>Pt: =Of course, yeah</p>		Student H, HLA, No. 10
		<p>Ph So, .hhh what I will do is, ummm, <b>I put the cuff around your ar::m</b></p> <p>Pt [Yaa]</p> <p>Ph about 1 to 2 cm above umm the crease of your elbo::w</p> <p>Ph .hhh and then <b>I make sure your are rela:x, recomm</b> ((Ph explain by his hand)) <b>and once done this, I press start one and you feel tighten up ↑</b></p>		Student A, HLA, No. 12-13
		<p>Ph so ammm, first of <b>all I just need to get to remove your socks,=</b></p> <p>Pt =°okay</p>		Student C, HLA, No. 17
		<p>Ph [if you don't <b>mind roll up your sleeve?</b></p> <p>Pt . ( Please don't )so just °( )° (( reply no))</p> <p>Ph . [That is Okay, that fine</p>		Student A, HLA, No. 20
		<p>Ph okay, <b>if you like stand up we can begin</b></p> <p>Pt [Mmm] (( Pt stand up))</p> <p>Ph so we can do your, your BMI(.) body mass Index</p> <p>Pt [mmm]</p> <p>Ph so we can do: your, Amm weight fi::rst</p> <p>Pt [ Mmm]</p> <p>Ph <b>if you just remove your shoes ple::ase?= =Yes</b></p> <p>Pt =Yes</p> <p>Ph Thank you ( ) done (5.42)(( Ph switch on the scale))</p>		Student B, HLA, No. 9

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Type of FTAs	Explanation	Examples (Key: highlighted text is coded to negative FTAs, in the first column).	The negative FTAS	Excerpt reference number
		<p>Ph if you can stand to the center of the (0.5) plate</p> <p>Pt ((Pt stand in the middle))</p> <p>Ph thank you so much</p> <p>Ph sorry (pharmacist is reading the weight)</p> <p>Ph that's in kilograms ((Pharmacist is recording the patient weight))</p> <p>Ph if you could just step off for me</p> <p>Pt °okay°</p> <p>Ph thank you</p>		
	Instruct about the correct use of medication	<p>Ph So is Basically, umm you swallow the correct number of capsules as above, and drink of water and only for (one) use only</p> <p>Pt mmmm</p> <p>Ph and it is essentially, it is not for long-term treatment.</p> <p>Ph So umm ( 2.2 ) Don't take more than 6 capsules in a 24 hours period,</p> <p>Pt Ok</p>		Student A, RTS, No. 43
		<p>Ph: So you wash your hands before applying this cream. Gently rub a thin layer of cream until it's disappeared and wash your hands again after using the cream unless you're using it to treat your hands, which you are, so you needn't wash your hand, the hand that you're using, umm, the hand that you are applying the cream to.</p>		Student I, RTS, No. 46
Request for agreement	Agreement about healthcare plan and recommendations given	<p>Ph ummm,(.) so what I want do, is I want work with you together and I don't make the decision for you so (would) be like a (.) joint things, so ummm how do you think you could um maybe change your diet? like diet like (di) almost set goals at the end of ( this,,, ),</p> <p>Ph so umm (.) we can maybe lower your blood pressure pressure because I think one of &gt; the contributing factors can be your diet &lt; umm I can see that you have quite a</p>	This act demands either an acceptance or a refusal of the suggested plan or treatment. It usually occurs	Student A, HLA, No. 35

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Type of FTAs	Explanation	Examples (Key: highlighted text is coded to negative FTAs, in the first column).	The negative FTAS	Excerpt reference number
		<i>lot of chocolate throughout the day and like I think the food that you eat is quite sa:lty, so for example curries</i>	after discussion of the healthcare plan or provision of medication.	
		Ph: <i>so do you have anything in your mind you can do yourself</i> Pt: <i>Well, I am thinking if you say thirty minutes a day,</i> Ph: <i>[Yaa]</i> Pt: <i>then perhaps I can go for walk in lunch time</i>		Student C, HLA, No. 43
		Ph: <i>And you've agreed that you're gonna try and increase your exercise (.) by going for a walk every day at work and climb stairs.</i> Pt: <i>=Yeah.</i> Ph: <i>And try to get up to 150 minutes a week, ((Pt nodded))</i> Ph: <i>yeah?</i> Pt: <i>Yeah.</i>		Student I, HLA, No. 49
		Ph: <i>Okay. Um, if(.) So if you have to set a health goal next time, what would you?</i> Pt: <i>(0.74) Well, probably to increase my exercises. Yes</i> Ph: <i>↑Yeah</i> Pt: <i>Yeah</i> Ph: <i>Okay</i>		Student J, HLA, No. 29
		Ph: <i>Umm, Are you(.) Do you think that's something that you might be considering?</i> Pt: <i>=Sounds like a really good idea, yeah. It sounds like it'd be healthier to drink less, yeah.</i>		Student D, HLA, No. 34
		Ph: <i>Is that something you think you could incorporate into your diet? Or switch?</i> Pt: <i>(1.16) Yeah, I could consider that, yeah.</i> Ph: <i>Yeah.</i>		Student G, HLA, No. 24
	Agreement to	Ph: <i>Are you happy with what I recommended you? ((means corticosteroid cream))</i> Pt: <i>=Yeah.↑</i>		Student I, RTS, No. 36

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Type of FTAs	Explanation	Examples (Key: highlighted text is coded to negative FTAs, in the first column).	The negative FTAS	Excerpt reference number
	medication provided	<i>Ph:</i> <i>Yeah,</i>		

**Table 14 Examples of positive Face Threatening Acts (FTAs).**

Type of FTAs	Explanation	Examples (Key: highlighted text is coded to positive FTAs, in the first column).	Positive FTAs	Excerpt reference number
Expression of Dis-approval	Criticism of patient lifestyle (e.g. unhealthy diet, physically inactive, or smoking)	<p>Ph: Umm, so, as you said that you normally &lt;&lt;start with a bacon sandwich, umm, you have pizza for lunch&gt;&gt;, <b>so quite high in fat and high in saturated fat.</b></p> <p>Pt: [↓ Okay</p>	These acts involve criticism of patient lifestyle choices. So, they directly threaten the patient's desire to be liked and approved, which is related to positive face needs.	Student H, HLA, No 23
		<p>Ph So the thing that we should amm talk about right now, I think is your di:et</p> <p>Ph &gt;<b>I think that might one of the main reasons why your blood pressure might be hi:gh&lt;=</b></p> <p>Pt =Ya</p> <p>Ph so umm (.) we can maybe lower <b>your blood pressure pressure because I think one of &gt; the contributing factors can be your diet &lt; umm I can see that you have quite a lot of chocolate throughout the day and like I think the food that you eat is quite sa:lt, so for example curries</b></p>		Student A, HLA, No 34
Bringing bad news	Telling patient test result	<p>Ph: Umm, however, your <b>alcohol::l, it seems to be quite high.</b></p> <p>Pt: Mmm.</p> <p>Ph: So. It is recommended that you drink, uh, 14 units of alcohol per week...</p> <p>Pt: [Okay.</p> <p>Ph: Uh, as a maximum...</p> <p>Pt: [Okay.</p> <p>Ph: If you are going to drink. Umm, however if you... You said you go out with your friends, and you have 5-6 pints and some shots. So that is <b>considered (.) ↓binge ↓drinking.</b></p> <p>Pt: =Okay.</p>		Student D, HLA, No 26
		<p>Ph: Okay, umm, so what that means is <b>your blood cholesterol is actually high.</b> Umm, so a normal reading is... What we aim for is, umm, anything below 5 millimoles per liter, so 10.8 is, umm, considerably higher...</p>		Student I, HLA, No 27

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Type of FTAs	Explanation	Examples (Key: highlighted text is coded to positive FTAs, in the first column).	Positive FTAs	Excerpt reference number
		Pt: Okay. (Pt nodded his head)		
		Ph Okay <sup>↑</sup> , so the reading we've got is um < hundred fifty one over ninety fou:r>		Student A, HLA , No 27
		Ph amm <b>IS slightly on the high side,</b>		Student E, HLA, No 15
		Ph amm usually we end for one forty over ninety Soo,		
		Ph: Yup. Um, so for your result, so your total cholesterol, <<so is it on the sheet here? Is 10.8.>>		
		Ph: So that's very well there. So basically what the normal range is would be, um, is that we would want it to be over, for the total to be over five. Um, so since it is above that		
	Telling patient about condition they may have	Pt: [mmm]		Student E, HLA, No 33
		Ph: Um, <b>it is high</b>		
		Ph: Okay. Umm, so I do have to(.) So <b>because your reading was high,</b> so it(.) Usually we want it at five and it was at 10.8, umm		Student G, RTS, No 15
		Ph: Okay. <b>So this does look like contact dermati::tis because as you said you've started a new job and you've come into contact with a new hair dye and that's probably irritated your skin to cause, like, the dryness and irrit::ation</b>		Student E, RTS, No 18
		Ph: Umm, because you said it's coincided with the hair dye, I think it's because of that, so I think it's, umm, <b>dermatitis of your hand. Umm, (.) like contact dermatitis, because there is a cause. Umm, do you have a preferred formulation for something that you'd like?</b>		
		Pt: ↓No, it's just something that will get rid of the redness.		
		Ph: ↓Something to get rid of the redness.		
		Pt: Yeah.		

**Table 15 Examples of negative and positive Face Threatening Acts (FTAs).**

Type of FTAs	Explanation	Examples (Key: highlighted text is coded to negative and positive FTAs, in the first column).		Excerpt reference number
Request for personal information	Asking the patient questions about their health behaviour	<p>Ph: Umm, and what about your diet? How would you describe it?</p> <p>Pt: (1.89) Umm, if I was to run through a typical day, I mean, I get up fairly early, I'm a postman.</p> <p>Ph: [You're a postman.</p> <p>Pt: Umm, so, I'll have a bacon sandwich, uh, mug of tea with a couple sugars in it.</p> <p>Ph: [Okay.</p> <p>Pt: &lt;&lt;Uh, lunch, maybe I will just go to the canteen in work, grab a slice of pizza. Uh, in the evening, uh, probably, &gt;&gt; (.) I don't cook a lot because it's just me on my own...</p> <p>Ph: [Yeah.</p> <p>Pt: So maybe I'll just have a microwave...</p> <p>Ph: [Okay.</p> <p>Pt: Grab some food from the freezer, maybe chicken curry, lasagne ((Ph smile chuckle))</p> <p>Pt: umm, but I also maybe snack during the day. There's always biscuits and cakes in the office...</p> <p>Ph: Yeah.</p>	<p>Asking personal questions may affect both face needs at the same time because:</p> <ul style="list-style-type: none"> <li>• The patient has to either answer or not answer the question.</li> <li>• The patient's self-esteem may be affected, especially if their answer is not appropriate according to social norms.</li> </ul>	Student H, HLA, No 19
		<p>Ph ummm, so first of all, mmm what your diet like?</p> <p>(1.1)</p> <p>Pt ummm ↓ (0.62)</p> <p>Pt &lt;°so breakfast is biscuits°, (0.7)onl:y ↓&gt;</p> <p>Ph [Yab] (0.58)</p> <p>Pt and aaa mid-morning ↓, (.) chocolate bar or something=</p> <p>Ph =Okay</p> <p>Pt sausage sandwich for lunch=</p>		Student A, HLA, No 30
		<p>Ph and do your exercise very good?</p> <p>Pt Ammm, bit of time issue, I am a driver for local coun::cil, so I am behind the steering whe:el all ti:me</p> <p>Pt but I do go to (Pilates) class once a week</p>		Student C, HLA, No 31



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		Ph what is that? Pt A pl::aties, exercise class, once a week Ph okay, (0.11) Ph okay, once a week, okay, Pt		
		Ph: And what's your exercise like? Pt: (0.8) I don't do much exercise at all, because I work like at my desk, I work for a local council. Ph: Okay		Student C, HLA, No 31
	Checking patient knowledge	Ph umm So are you aware of mmm what blood pressure test is? (0.75) Pt mmm, well, I have one but five years ( ) Ph =okay,		Student A, HLA, No 3
		Ph: Um, so have you have that done before? Do you know what it's about? Pt: (0.60) No. Ph: No.		Student E, HLA, No 2
	Unrelated Personal question	Ph so if you if yo:u walk maybe with your frie::nds o:r and do you have children? Pt No Ph No, okay		Student C , HLA , No 41
		Ph: Um, but yeah. I think that's, um, everything. You said it's for yourself. So it says not to use for children. I don't know if you have any children. Pt: ↓↓No. Ph: Okay. Um, because it says not to use it on them as well. Um and that's all I have to say on that one.		Student H, RTA, No 35

#### **4.3.2. Strategies pharmacy students used to save patient face**

The pharmacy students intrinsically used a variety of politeness strategies during HLA and RTS interactions, as shown in Table 16. Among 556 FTAs, 65.41% were performed using at least one politeness strategy, compared with 294 FTAs, 34.59% that were performed directly. Pharmacy students used the 'bald on-record' strategy to perform FTAs directly without any effort to minimise threat to patient face, mainly in the case of task orientated acts, such as instructing the patient to do something (e.g. such saying 'remove their socks or use their medication in a particular way), when offering them help (e.g. to come back if needed) or when asking them a question to help their own task (e.g. assessing patient lifestyle within the HLA), Even when they directly performed task-orientated acts during OSCE interactions (i.e. using 'bald on-record strategy), the patients' permission was mostly obtained in advance of the actual situation. For example, prior to the participants directly instructing the patient to do a test without any redress of FTAs, such as when stating *"Feet flat down, your hand relaxed on the table"* or *"Remove your socks"*, the patient's approval was obtained by explaining the procedure and receiving a signed consent form from them. Similarly, in most cases, the participants obtained patient permission prior to discussing personal topics; for example, they asked *"Is it okay to ask a few questions about your lifestyle?"* This means that the bald on-record strategy followed the setting up of some mutual understanding beforehand. Further details and excerpt examples of the use of bald on-record strategies are presented in Table 17.

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Additionally, the participants applied many positive politeness strategies to show respect for the patient, even if there was no potential threat to patient face. For example, the participants widely gave encouraging feedback to patients during the conversation, such as “*Perfect*” or “*That is great*”, which was coded using PT as ‘Notices and attends to the hearer’, and ‘Exaggeration’, two strategies that stress the participants’ approval and interest in the patients’ answers. The pharmacy students also widely used other positive politeness strategies, such as ‘seek opportunity for agreement’, ‘give or ask reasons’, ‘avoid disagreement’, ‘include both parties in same activity’, and ‘providing offer’ to maintain patients’ positive face needs. The ‘give Gift’ positive strategy was also broadly used by the pharmacy students for different purposes. More details and explanations about the use of positive politeness are presented in Table 16. Further excerpt examples of positive politeness strategies are presented in Table 18.

Furthermore, the pharmacy students extensively applied negative politeness strategies to confirm patient autonomy, as will be explained below. For example, to obtain permission, the participants frequently applied various negative politeness strategies to avoid directly imposing on the patient during these interactions; thus, the patient had the chance to not perform the negative FTAs. For example, using hedging (e.g. “If you don’t mind”), being pessimistic (e.g. “You don’t wish to...”), and minimising the imposition of FTAs (by using ‘just’, ‘a little bit’ or ‘a few’) were the strategies that the participants most relied on to protect patient autonomy. The strategy of ‘being pessimistic’ was used mainly to obtain patient permission or agreement, particularly in cases of patients’ weak agreement or reluctance (e.g.

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expressing a minimal response, such as saying “*Ummm*”). The pharmacy students also used other types of negative politeness strategies such as ‘give deference’, ‘state FTA as a general rule’ and ‘apologize’. Table 19 presents all negative politeness strategies applied by the pharmacy students and their examples in detail. In many cases, the pharmacy students extensively applied a combination of positive and negative politeness strategies simultaneously to mitigate FTA and meet patients’ face needs.

The ‘off-record’ strategy involved indirectly performing FTAs. This strategy was very rarely applied ( $n = 2$ ) and, when it was used, it was to offer a physical object, such as tissues or pen. Further details and excerpt examples of off-record strategies are presented in Table 20.

**Table 16 A summary of politeness strategies used during HLA and RTS interactions.**

Type of politeness strategy	Subcategorise the Politeness Strategies	Examples	Explanation for reasons of application
Bald on record (the most direct way)	Task oriented act	<i>'remove your socks'</i>	To instruct patient to carry out an action or procedure
		<i>'basically, take Umm two capsules to start the treatment'</i>	To instruct patient to use medication
		<i>'feel free to contact me'</i> <i>'come back and see me or see your doctor'</i>	To offer any kind of help
		<i>'What is your normal diet?'</i>	To ask various types of question
Positive Politeness Strategy-	Notices and attends to the hearer	<i>'All things you're doing are great. Um, maybe it might be best to you to increase the exercise a bit more'</i>	To pre-give recommendation
		<i>'Healthy man'</i>	To provide a compliment about patient
		<i>'You have the power to kind of....'</i>	To encourage the patient to change to a healthier lifestyle
		<i>you have lower risk of heart disease 'in future which is very good, so you keeping on very healthy obviously'</i>	To approve patient test results or behaviour
	Exaggeration	by using <i>'Exactly, absolutely that's right'</i>	Expression of agreement with the patient
		by using <i>'Okay. Excellent, Perfect'</i>	Expression of admiration for good behaviour (non-smoking, normal range of alcohol intake, or healthy diet)
	Seek opportunity for agreement	by using <i>'Umm'</i> , and keeping eye contact	Indicating effective listening by repeating the speaker's word
		<i>'Okay, that's fine'</i>	Expressing agreement with the patient
	Give or ask for reason	<i>'Umm, I'm just putting on gloves just because, umm, I will be using your blood'</i>	To explain the instructions given by pharmacy student
		<i>'I would recommend a hydrocortisone cream because.....'</i>	To explain the recommendation of provided medication

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Type of politeness strategy	Subcategorise the Politeness Strategies	Examples	Explanation for reasons of application
	Avoid disagreement	<i>'we can maybe lower your blood pressure because I think one of the contributing factors can be your diet'</i>	To explain recommendation given by pharmacy student
		Using hedging: <i>you're actually drinking a bit too much?</i> <i>I'm a bit concerned about your alcohol</i>	Expressing disapproval about inappropriate lifestyle behaviour
		<i>'your reading is considered a bit low'</i>	Bring bad news about patient condition
	Include both in the same activity	By using: <i>'Let us start'</i> <i>'We'</i> <i>'Before we begin or start'</i>	To ensure the patient's cooperation with the procedure
			To stress cooperation in the healthcare plan
			To assume cooperation with the recommendation
	Offer	<i>'How can I help you?'</i>	In opening conversation, pharmacy student stresses that he will help patient to obtain what they want
		<i>'Please feel free anytime to come back'</i> <i>'Also always come back to the pharmacy'</i>	In closing the conversation, pharmacy student stresses that he will help patient anytime
	Give gift	<i>'Hi there, I am a( ) I am the pharmacist, how are you doing?'</i>	By introducing themselves properly to the patient
		<i>'Nice to meet you',</i> <i>'I am glad to meet you'</i> <i>'Umm wish you a nice day'</i>	By gently welcoming
		<i>'do you have any questions to me?'</i> <i>'Is that something you expected? or were you hoping to, fearing the worst?'</i>	By considering patient questions, needs and expectations
		<i>great thank you,</i> <i>thank you for your time</i>	By expressing thanks to patient
		<i>↓ Sorry.</i>	By expressing sympathy

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Type of politeness strategy	Subcategorise the Politeness Strategies	Examples	Explanation for reasons of application
		<i>That looks like it hurt so I'll make sure I'll be quick.</i>	
		<i>'I see, I see', 'fair enough'</i> = ↑ <i>Exactly, it's.</i>	By understanding patient situation
		<i>I think everything will be fine within the week there is nothing to worry about, it's just to make sure there is nothing more serious I'm confident to say it's nothing serious. we will explore it so don't worry too much</i>	By reassuring the patient
		<i>'Are you happy with everything I've said?'</i>	By paying attention to patient satisfaction
		<i>'would you like to go into the consultation room?'</i>	By offering privacy
		Keep eye contacts with patient Being good listener to the patient (e.g. head nodding, or by using word 'mmm', 'yeah', or 'okay')	By showing their interest in listening to the patient
Negative Politeness Strategy	Hedging / Question	<i>'could you'</i> <i>'would you like'</i> <i>'if you don't mind'</i> <i>'If you could'</i>	To request agreement
			To request information
			To provide recommendation
			To instruct to carry out the action or procedure
	Be pessimistic	<i>Is that's okay?</i> <i>Is that alright?</i> <i>It's okay if I ....?</i>	To obtain patient agreement before performing HLA test
			To obtain patient agreement before asking personal questions
			To obtain patient agreement before discussing any sensitive topic

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Type of politeness strategy	Subcategorise the Politeness Strategies	Examples	Explanation for reasons of application
	Minimize the imposition	<i>Just Tiny A bit of</i>	To lessen the impact of action
	Give deference	<i>if you're happy to do that</i>	To ask patient about their preference
		<i>'please', 'sorry'</i>	To show humility to the patient
	State FTA as a general rule	<i>'So, the actual test itself involves me umm using a needle called a lancet'</i>	To explain the procedure
		<i>'It's recommended to have about.....'</i>	To inform the patient about the general recommendation
		<i>'the result we normally aim for is five or below'</i>	To inform the patient about normal/target result
	Apologize	<i>Pardon Sorry I didn't hear you</i>	To ask patient to repeat what they said
		<i>Sorry, do you smoke cigarettes?</i>	To ask the patient for sensitive information
		<i>Sorry bear with me</i>	To ask the patient for more time
		<i>Sorry about this confusion</i>	To fix incorrect information provided to patient
Off record	Indirect way to provide offer	<i>'So, here's a pen' 'There is a tissue'</i>	To provide offer of an object, such as a pen or tissue



**Table 17 Examples of application of the ‘Bald-on-record’ politeness strategy.**

Type of politeness strategy	Type of FTAs	Examples (Key: highlighted text is coded to Bald on record, in the left-hand column).	Excerpt reference number
Bald on record (mainly used for task orientated)	To instruct patient to conduct procedure	Ph . <b>make sure you keep your feet on midline on (      )</b> Pt <b>in the middle (      )</b> Ph No, that (      ) line Pt <b>[okay, I see I get it, Yaa</b>	Student C HLA, No 20
		Ph <b>Soo Ya, So shoulders rela:ax, amm headi- heading against the back of the, straight your head,(totally)relax</b> Pt <b>(( Pt followed the Ph instructions))</b>	Student B HLA, No 13
	To instruct patient to use medication	Ph <b>So is Basically, umm you swallow the correct number of capsules as above, and drink of water and only for (one )use only</b> Pt <b>mmmm</b> Ph <b>and it is essentially, it is not for long-term treatment.</b> Ph <b>Don't take more than 6 capsules in a 24 hours period,</b> Pt <b>Ok</b>	Student A RTS. No 43, 44
		Ph <b>So, just to summarize, umm you basically take Umm two capsules to start the treatment and one capsule after each bowel movement,</b> Pt <b>Mm</b> Ph <b>and you take up to a max of 6 a day so you don't exceed the dosage,</b> Pt <b>Sure</b>	Student A RTS. No 43, 53
	To offer any kind of help	Ph <b>Let me know</b> how it goes and hopefully we can get this sort out for you. Pt <b>Okay,</b> Ph: <b>Um, if it doesn't work, if it doesn't reduce your itching, come back and see me or see your doctor.</b>	Student B RTS. No 73 Student G RTS, No 34
		Ph: <b>Um, so have you have that done before? Do you know what it's about?</b> Pt: <b>(0.56) No.</b>	Student E HLA, 2

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	types of question	<p>Ph: So <b>have you been sat down and relaxed for about 5 minutes?</b></p> <p>Pt: =Yes, I've been here for about 10 minutes, and I've been relaxed.</p> <p>Ph: Okay, umm, and <b>when was the last time you had any caffeine?</b></p> <p>Pt: = haven't had any today.</p> <p>Ph: You haven't. <b>And do you smoke at all?</b></p> <p>Pt: =No ((nodding head))</p>	Student H HLA, No 7,8,9
		<p>Ph So, <b>Do you have any food allergies?</b></p> <p>Pt (1.23)No food allergies.</p> <p>Ph <b>How about drug allergies?</b>=</p> <p>Pt =I'm allergic to Aspirin.</p> <p>Ph You are allergic to Aspirin. Okay, that's fine. <b>And what is the severity of it?</b></p> <p>Pt I just get a terrible indigestion.</p> <p>Ph a terrible indigestion. That's fine. ummm ( 3.3) okey , <b>have you tried anything for your diarrhoea?</b></p> <p>Pt So, I took a Dioralyte sachet this morning. umm I just wanted this to work really quickly.</p> <p>Ph [okey] That's fine, And, <b>how long have you the symptoms for?</b></p> <p>Pt So, It started yesterday.</p> <p>Ph It started yesterday, And, <b>has it gotten better or worse?</b></p> <p>Pt (0.8) umm haven't noticed any changes.</p> <p>Ph =so you didn't notice any change, so when you took the... so <b>what did you took ?</b></p> <p>Pt =Dioralyte</p> <p>Ph When you took that, how.. <b>didn't help at all?=-</b></p> <p>Pt =No. It's still there.</p> <p>Ph That's fine, <b>Have you had diarrhea before?</b></p>	Student A RTS, No 7- 15

**Table 18 Examples of application of positive politeness.**

Type of politeness strategy	Sub-category	Examples (Key: highlighted text is coded to positive politeness strategy, in the left-hand column).	Excerpt reference number
Notices and attends to hearer	To provide an introduction pre-giving recommendation	Ph so so based on what you to:ld m:e Ph >> ammm you don't drink alcohol, you don't smoke, your diet seems really good<<, which reflex with the, .hhh aaa your fats body composition the result Pt [Ummm] ((nodding)) Ph so it just exercises that you need to improve on, Pt [Ummm]	Student C, HLA No 34
		Ph: Okay, so that's great. So just run through(.) Your blood pressure is i::n normal range. Umm, you don't drink, you don't smoke, and you get enough exercise, and they're all really good health behaviours to have. Umm, we just want ( change) your diet, improve your diet. Pt: (( Pt noded his head))	Student H, HLA No 34
	to provide a compliment about patient	Ph: No. And do you have any, umm (.) Are you taking any medicines or anything prescribed over the counter, herbal or nutritional supplements? Pt: Nothing at the moment. Ph: Nothing at the moment. Healthy man, ↑ that's good. ((Ph. smile)) Ph: mmmm ((Pt smile))	Student I HLA, No 12
		Ph: I'm just gonna prick it. Pt: Yep. Ph: Okay. Excellent, you've got a nice pool of blood there. Pt ( smile)	Student I HLA, No 22
	To support patient decision	Ph: Liver cirrhosis(.) Pt: Okay. Ph: And other ↓comorbidities(.) Pt: Okay. Ph: Which are not very nice at all. Pt: Yeah, I don't want that(.) Ph: So You(.) You have the power to kind of(.)	Student D HLA, No 28

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Type of politeness strategy	Sub-category	Examples (Key: highlighted text is coded to positive politeness strategy, in the left-hand column).	Excerpt reference number
		<p>Ph: Okay.</p> <p>Ph: Reduce that risk.</p> <p>Pt: Okay, fair enough.</p>	
	To approve patient test results or behaviour	<p>Ph okay, so (basically to) body to body fat perce:ntage is come back is Thir:ty-one percentage</p> <p>Ph okay, ammm and mmmm that is very good actually, because is healthy level,</p> <p>Pt [Aww, excellent]</p> <p>Ph [so that means your weight and relation to you height, your fat relation to your weight and height is actually really good,</p> <p>Ph Soo that is very good, so ammm you have lower risk of heart disease in future which is very good, so you keeping on very healthy obviously</p> <p>Pt [I am very happy to ↓]</p>	Student C HLA , No 26
		<p>Ph: Okay. So your blood glucose reading is... So your glucose reading is 5 milligrams per liter. ↓I'll just write down here (( Ph wrote note)).</p> <p>Ph: Okay, so the normal range for blood glucose that we'd expect to be healthy is between 4 and 9 milligrams per liter.</p> <p>Pt: Okay, okay.</p> <p>Ph: Umm, your's has come out as 5 milligrams per liter.</p> <p>Pt: Mmm.</p> <p>Ph: So that's good ↑.</p> <p>Pt: [Great]</p> <p>Ph: Umm, to me, that's a good sign.</p> <p>Pt: =Great.</p>	Student D HLA, No 18
		<p>Ph So your result is 22. so that means that your are healthy Weight↑, YOU HAVE HEALTH BODY MAS INDEX↑↑, THAT is very very (good sign)</p> <p>Pt [Mmmmm]</p>	Student B HLA, No 18
Exaggeration	Expression agreement to patient	<p>Ph: So you can have one alcoholic drink, and then maybe, a soft drink, or water...</p> <p>Pt: Sounds like a really good idea.</p>	Student D HLA, No 30

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Type of politeness strategy	Sub-category	Examples (Key: highlighted text is coded to positive politeness strategy, in the left-hand column).	Excerpt reference number
		<p>Ph: <i>When you're out with your friends, yeah?</i>  Pt: <i>Yeah, I'll probably feel much better on Sunday as well.</i>  Ph: <i>Yeah. Yeah, exactly. Umm..</i></p>	
		<p>Ph: <i>which is something we can(.) We've worked together to discuss. So what can we agree on, like, going forward from this that you will try to work on?</i>  Pt: <i>Well, I can go for a walk during lunch time or the evening. (2.3) Then I can use stairs, instead of lift, in my office.</i>  Ph: <i>Yeah, that sounds really good.</i>  Pt: <i>Yeah.</i></p>	Student I HLA, No 43
		<p>Ph <i>So, I am measuring the body composition, if I just get you to print your name and sign it</i>  Ph <i>just showing that you read provided (manifestations you have to contained)</i>  Pt <i>°okay °</i>  <i>(22.11) ((Pt signed the consent))</i>  Ph <i>okay, great thank you</i>  Pt <i>thank you</i></p>	Student C HLA, No 8
		<p>Ph: <i>Hi I'm (xxxx) I'm the pharmacist. How can I help?</i>  Pt: <i>Hi I'm really interested in your healthy living assessment.</i>  Ph: <i>[Yep. That's no problem]</i>  Pt: <i>[And I really wanted to have a umm, a blood glucose check please.</i>  Ph: <i>=&gt;&gt;Yep, that's absolutely uh no problem.</i></p>	Student F HLA, No 1
		<p>Ph: <i>So do you have any in mind about changing diets or anything in particular you wanted to</i>  Pt: <i>= (.hhh) ↑Well, I guess, it would be easy to swap out the biscuits and snacks during the day for a piece of fruit.</i>  Ph: <i>[Yeah]</i> <i>[Yeah]</i>  Pt: <i>Umm, maybe grab something a bit healthier from the canteen rather than pizza(.) Umm, I think in the evening maybe(.) Well, I did see a</i></p>	Student H HLA, No 31

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Type of politeness strategy	Sub-category	Examples (Key: highlighted text is coded to positive politeness strategy, in the left-hand column).	Excerpt reference number
		<p>poster in the local community center that maybe enroll on some cooking courses(.)</p> <p>Ph: <i>[↑ Yeah.</i></p> <p>Pt: <i>Maybe I can start to cook [for myself.</i></p> <p>Ph: <i>[That's a great way to start.</i></p>	
		<p>Ph: <i>Could I just get you to fill in the consent form?</i></p> <p>Pt: <i>=Yeah, sure</i></p> <p>Ph: <i>Thank you. Any particular reason you've come in to get your blood cholesterol checked today?</i></p> <p>Pt: <i>No, I just want to get checked myself</i></p> <p>Ph: <i>[ No. Yeah, it's always good to be safe, right?</i></p> <p>Pt: <i>Yeah.</i></p>	Student I HLA, No 8
	Expression admirable for good behaviour (non-smoking, normal range of alcohol intake, or healthy diet)	<p>Student I no 53 HLA</p> <p>Ph: <i>You don't smoke, okay. And what's your diet like?</i></p> <p>Pt: <i>(1.2) I eat a healthy diet, in the morning I will have cereal with milk.</i></p> <p>Ph: <i>[mmmm.</i></p> <p>Pt: <i>And then for lunch I normally have a cheese and pickle sandwich.</i></p> <p>Ph: <i>[mmmm.</i></p> <p>Pt: <i>And then for dinner I normally have pasta with vegetables and tomato sauce.</i></p> <p>Ph: <i>=Okay.</i></p> <p>Pt: <i>And I snack on fruit during the day.</i></p> <p>Ph: <i>Oh, that's really good.</i></p>	Student I HLA, No 31
		<p>Ph <i>.what did you have yesterday?</i></p> <p>Pt <i>. mmm, (.) breakfast I had fruit smoothly, (0.39) and then I had a china sandwich for lunch, then I had salmon and veg for dinner</i></p> <p>PH <i>it is very [good], vegetable salmon fish, it is [very very good</i></p> <p>Pt <i>[Yes], [ Yes, Yes]</i></p>	Student B HLA, No 21

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Type of politeness strategy	Sub-category	Examples (Key: highlighted text is coded to positive politeness strategy, in the left-hand column).	Excerpt reference number
		<p>Ph: <i>Um, do you(.) How, how about exercising? Do you, do you like to exercise?</i></p> <p>Pt: <i>Um, Well, I got a dog and I walk him to the end of the road everyday about 10 minutes.</i></p> <p>Ph: <i>Everyday?</i></p> <p>Pt: <i>Everyday.</i></p> <p>Ph: <i>Okay. That's good</i></p>	Student J HLA, No 15
Seek for agreement	Show that I am listening	<p>Ph: <i>Okay. Would you mind just, umm, sanitizing your hands with some alcohol gel if that's okay?</i></p> <p>Pt: <i>I just washed my hands.</i></p> <p>Ph: <i>You just washed your hands, okay, that is fine.</i> ↓(Okay, so I'm just going start by putting the test strip into the machine)</p>	Student I HLA, No 15
		<p>Ph: <i>I'll I'll just get my gloves on (wearing gloves). And have you eaten anything uh within the the past hour?</i></p> <p>Pt: <i>(1.2) Yeah. About half an hour ago, I had my afternoon snack. I just had an apple</i></p> <p>Ph: <i>You had an apple, Okay,</i></p>	Student I HLA, No 12
		<p>Ph <i>[if you don't mind roll up your sleeve?</i></p> <p>Pt <i>( Please don't )so just °( )° (( replay no))</i></p> <p>Ph <i>[That is Okay, that fine</i></p>	Student A HLA, No 20
	Expression their agreement	<p>Ph: <i>What would you say your normal diet consists of?</i></p> <p>Pt: <i>(0.51) I think I eat a normal diet. So morning, I will have like cereal with milk(.)</i></p> <p>Ph: <i>Mmmm</i> ((ph nodded his head))</p> <p>Pt: <i>And then for lunch I will have cheese and pickle sandwich.</i></p> <p>Ph: <i>Mmmm</i> ((ph nodded his head))</p> <p>Pt: <i>And then for dinner, I will have pasta and vegetables and tomato sauce.</i></p> <p>Ph: <i>Oh, okey</i></p> <p>Pt: <i>And I take a fruit during the day.</i></p> <p>Ph: <i>Okay. Okay</i></p>	Student G HLA , No 22

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Type of politeness strategy	Sub-category	Examples (Key: highlighted text is coded to positive politeness strategy, in the left-hand column).	Excerpt reference number
		<p>Ph: Hi, I am XXX and am pharmacist. How can I help?</p> <p>Pt: Aaa ↑ (that's) blood pressure check ple::ase</p> <p>Ph: =Okay that's fine.</p>	Student A HLA, No 1
Give or ask for reason	To explain the recommendation of provided medication	<p>Ph: Umm, based on what you told me, because you've, umm... because you've used Diprobace and it's helping a bit, but it's not actually getting rid of this...</p> <p>Pt: Mmmm.</p> <p>Ph: Umm, I would recommend you, umm, hydrocortisone cream</p> <p>Pt: Okay.</p> <p>Ph: And, uh, this is a mild corticosteroid.</p> <p>Pt: Mmmm.</p>	Student I, RTS, No.33
	To explain the instructions given by pharmacy student	<p>Ph: ↓ Okay. I put the test strip into the machine. ↓ Okay, I'm just going to put some gloves on. Umm, I'm just putting on gloves just because, umm, I will be using your blood.</p> <p>Pt: ↓ That's fine.</p> <p>Ph: Okay. Okay, right, so</p>	Student I HLA, No 16
	To explain recommendation given by pharmacy student	<p>Ph: So, ideally, that's something that we should be reducing, your alcohol intake.</p> <p>Pt: Is it really that bad for my health?</p> <p>Ph: Uh, yes, it is. So it does put you at risk of, umm, like I said liver disease... Liver disease...</p> <p>Pt: Okay.</p> <p>Ph: Liver cirrhosis...</p> <p>Pt: Okay.</p> <p>Ph: And other ↓ comorbidities...</p> <p>Pt: Okay.</p> <p>Ph: Which are not very nice at all.</p> <p>Pt: Yeah, I don't want that...</p> <p>Ph: So You... You have the power to kind of...</p> <p>Ph: Okay.</p> <p>Ph: Reduce that risk.</p> <p>Pt: Okay, fair enough</p>	student D HLA, no. 27



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Type of politeness strategy	Sub-category	Examples (Key: highlighted text is coded to positive politeness strategy, in the left-hand column).	Excerpt reference number
Avoid disagreement	Bring bad news about patient condition	<p><i>Student F HLA, no. 28</i></p> <p><i>Ph: Cutting down your alcohol, uh, how would you feel if I told you that from what I've learned you're actually drinking a bit too much?</i></p> <p><i>Pt: Umm, (.87) aaa I mean is alcohol that bad for my health?</i></p>	Student F HLA, No 27-28
	Expression disapproval about inappropriate lifestyle behaviour	<p><i>Ph: So, (.) I'm a bit concerned £about your alcohol£ but we'll go through everything else. at moment and then we can go back to that</i></p> <p><i>Pt: [ Okay ↓ [okay.</i></p>	Student D HLA, no. 21
Include both in the same activity	To ensure the cooperation to do the procedure	<p><i>Ph: Okay, umm, so let's start just, umm, taking a couple of details and, umm, getting you to sign the for:m.</i></p> <p><i>Pt: =Okay.</i></p> <p><i>Ph: Umm, s::o(.) This will just take a few moments, if that's alright with you?</i></p> <p><i>Pt: =mmmm</i></p>	Student H HLA, No 2
		<p><i>Ph: Umm, and sign and print your name as well, plea::se</i></p> <p><i>Pt: (( signed the consent form))</i></p> <p><i>Ph: mmmmm, thank you. So let's get started</i></p>	Student H HLA, No 6
		<p><i>Ph: Just to prick the side of your finger. Either your index or your middle finger.</i></p> <p><i>Pt: Yep.</i></p> <p><i>Ph: And then what I will do is, hopefully, we will get a pool of blood on your finger.</i></p> <p><i>Pt: mmmm.</i></p> <p><i>Ph: And I'll just use something called a pipette, just to, umm, extract a drop of blood by squeezing the teat of the pipette.</i></p> <p><i>Pt: mmmm.</i></p> <p><i>Ph: And I'll pop this into, umm, the CardioChek Meter, and this should hopefully give us a reading of your blood cholesterol.</i></p>	Student I HLA, No 5

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Type of politeness strategy	Sub-category	Examples (Key: highlighted text is coded to positive politeness strategy, in the left-hand column).	Excerpt reference number
		Ph Okay so before <b>we</b> start, Is well ask you few questions?	Student A HLA, No 7
		Ph and then I will explain your result for you, will have short discussion about your lifesty:le, Pt [Ummmm](( noding his head up down)) Ph <b>we can</b> set some go::als (.) together (.) to improve your health if need b:e Pt [Ummm]	Student B HLA, No 4
		Ph okay, if you like stand up <b>we</b> can began Pt [Mmm] (( Pt stand up)) Ph so <b>we</b> can do your, your BMI(.) body mass Index Pt [mmm] Ph so <b>we</b> can do: your, Amm weight fi::rst Pt [ Mmm]	Student B HLA, No 9
		Ph: Hello, my name is ( ) I'm the pharmacist. How can I help please↓? Pt: Hi, I'm really interested in your healthy living assessments. umm, I really want to have a blood glucose test. Ph: <b>Okay, umm we can do that today.</b> That's fi:ne.	Student D HLA, No 1
	To stress cooperation in healthcare plan	Ph: Okay. So your blood glucose reading is(.) So your glucose reading is 5 milligrams per liter. ↓I'll just write down here (( Ph wrote note)). Ph: Okay, so the normal range for blood glucose that <b>we'd expect to be healthy is between 4 and 9 milligrams per liter.</b> Pt: Okay, okay. Ph: Umm, your's has come out as 5 milligrams per liter.	Student D HLA, No 18
		Ph: which is something <b>we can(.) We've worked together to discuss. So what can we agree on, like, going forward from this that you will try to work on?</b> Pt: Well, I can go for a walk during lunch time or the evening. (2.3) Then I can use stairs, instead of lift, in my office.	Student I HLA, No 43

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Type of politeness strategy	Sub-category	Examples (Key: highlighted text is coded to positive politeness strategy, in the left-hand column).	Excerpt reference number
		Ph: umm, what I like to do with my patients is I like to work with them to achieve their health goals, Ph: obviously, you know you just told me you haven't actually thought about. Pt: ↓ Mmm. Ph: Cutting down your alcohol,	Student F HLA, No 27
	To assume cooperative for recommendation	Ph: Um, so it is good with your diet to get, um, like a varied amount of fruits and vegetables and(.) Pt: Mmmm Ph: We can all do with more fruits and vegetables if we try. Pt: Yeah.	Student E HLA, No 22
		Ph: Okay, so that's great. So just run through(.) Your blood pressure is i::n normal range. Umm, you don't drink, you don't smoke, and you get enough exercise, and they're all really good health behaviours to have. Umm, we just want ( change) your diet, improve your diet. Pt: (( Pt nodded his head))	Student H HLA, No 34
		Ph: Umm, so where we can improve diet is to make sure you have five portions of fruit and veg every day.	Student H HLA, No 21
Offer	In Opening conversation pharmacy student stress that he will help patient to obtain what they want	Ph: Hi, Good Morning. My name is ( ), I'm the Pharmacist. How can I help? Pt: H:i, I'm interested in your healthy living assessment and I'm wondering whether you can measure my cholesterol to decrease? Ph: Yes, of co::urse.	Student G HLA, No 34
		Ph: Hello. My name is ( ) and I'm your pharmacist today. How can I help you? Pt: Umm, hi, umm, do you have a treatment for a rash, plea::se? Ph: A rash, Umm... Pt: Yes.	Student I, RTS, No. 1

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Type of politeness strategy	Sub-category	Examples (Key: highlighted text is coded to positive politeness strategy, in the left-hand column).	Excerpt reference number
		Ph: <i>Okay. That's, umm, fine. Hopefully, we do have a treatment for the rash.</i>	
	In Closing conversation pharmacy student stress that he will help patient anytime	Ph: <i>Okay, so if you do have any questions, feel free to come back to the pharmacy. My name is ( ). I'll be more than happy to answer any questions for you.</i> Pt: <i>Mmmm.</i>	Student I HLA, No 50
		Ph <i>Hi there, I am a XXXX I am the pharmacist, nice to meet you, how are you doing?</i> Pt <i>I am fine, thank you</i> Ph <i>Good, O:key, so amm so you are coming today for body composition assess,</i> Pt <i>[Ye::s</i> Ph <i>[is that right]? =</i> Pt <i>= Right, Ye</i>	Student C HLA, No 1
Give gift	By Introducing themselves properly to the patient	Ph <i>before we start, ummm can I just take your name? =</i> Pt =Ya XXX XXX = Ph <i>= XXX XXX nice to meet you,</i>	Student A HLA , No 2
	By gently welcoming	Ph: <i>And is there a particular reason why you've come in for the blood glucose?</i> Pt: <i>= I just saw the sign and I thought it looked interesting</i> Ph: <i>[Okay</i> Pt: <i>to just check my blood glucose.</i> Ph: <i>Okay, that's fine</i>	Student D HLA, No 10
	By considering patient needs and expectation	Ph: <i>Is that something you expected? Or were you hoping to, fearing the worst?</i> Pt: <i>It just interested</i> Ph: <i>Okay then, that's absolutely fine. So what I'm going to do is I'm just gonna note that down. ((Ph wrote note))</i>	Student F HLA no. 16

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Type of politeness strategy	Sub-category	Examples (Key: highlighted text is coded to positive politeness strategy, in the left-hand column).	Excerpt reference number
	Thanking patient	<p>Ph: Umm, do you have any questions to me?</p> <p>Pt: No, it's all very clear. Thank you.</p> <p>Ph: Okay. Umm, yeah, <b>so thank you, umm, for coming in today. I think...</b></p> <p>Pt: Thanks. It's been very helpful, thank you...</p>	Student D HLA , NO 33
	Sympathy	<p>Ph: Okay, so I'll use this lancet umm to prick your finger</p> <p>Pt: [ Yeah</p> <p>Ph: <b>It will feel like a sharp scratch.</b></p> <p>Pt: Okay. No problem.</p> <p>(( Ph picked Pt finger))</p> <p>Pt: ↓ Thank you.</p> <p>Ph: <b>↓ Sorry.</b></p> <p>Pt: That's okay. It's fine.</p>	Student D Hla, no 16
		<p>Pt and I had to take an extra day off because I had no control of ( my bowel at the moment),</p> <p>Ph [Okey]</p> <p>Pt and so I just want you basically the best way to stop it//.</p> <p>Ph <b>I am so so sorry to hear that, I'll try my best to find the best possible option for you and hopefully I can help you.</b></p>	Student A RTS, No 5
	By Understanding patient situation	<p>Ph <b>ummm Before we start, I just want to ask, what do you want to get out of this umm ( like what is usual)?</b></p> <p>Pt So, I've got an urgent meeting at wo::rk,</p> <p>Ph [Okey]</p> <p>Pt and I had to take an extra day off because I had no control of ( my bowel at the moment),</p> <p>Ph [Okey]</p> <p>Pt and so I just want you basically the best way to stop it//.</p> <p>Ph <b>I am so so sorry to hear that, I'll try my best to find the best possible option for you and hopefully I can help you.</b></p>	Student A, RTS, No. 5
		<p>Ph: Umm, have you ever considered cutting down on your alcohol?</p> <p>Pt: Uh (2.61) aaaa Not especially, I mean, apart from those, uh, Saturday nights when I do tend to drink probably a bit more than I</p>	Student F HLA, No 27

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Type of politeness strategy	Sub-category	Examples (Key: highlighted text is coded to positive politeness strategy, in the left-hand column).	Excerpt reference number
		<p><i>should maybe five, six pints of beer and uh, probably a shot of uh (1.2)</i></p> <p><i>Pt: Every type of shot of tequila, every beer maybe I was always playing drinking games at the football club.</i></p> <p><i>Ph: I see, I see.</i></p> <p><i>Pt: Umm, so I guess yeah. I mean, it's good at the time, I don't feel great on a Sunday.</i></p> <p><i>Ph: [mmmm]</i></p> <p><i>Pt: But, you know, it's only a couple of times a month.</i></p> <p><i>Ph: Okay. Yeah,</i></p>	
		<p><i>Ph: So walking at lunchtime and then we said that if you were parking somewhere you could(.) Umm(.)</i></p> <p><i>Pt: (1.29) Yeah, in the morning I might be late to work, so I can't do that.</i></p> <p><i>Ph: Oh okay fair. Sure, that's fine.</i></p>	Student E HLA, no 27
	By Reassuring the patient	<p><i>Ph: When you. For when you've eaten so, uh I'm gonna speak to you a bit more about your diet.</i></p> <p><i>Pt: [mmm.]</i></p> <p><i>Ph: Because that is a little bit lower than I expect considering you ate so recently.</i></p> <p><i>Pt: ↓ Okay</i></p> <p><i>Ph: Although the spike might come in an hour, so it's nothing to cause a great deal of alarm. And we'll explore that further more. Uh, it's not extremely low. Like I said if it was under four it would be a bit of a issue.</i></p> <p><i>Ph: (.) Umm, so I'm not. we will explore it so don't worry too much. Umm, can I speak to you quickly about umm, the other aspects because obviously blood glucose is in the area directly related to health</i></p>	Student F HLA, No 18
		<p><i>Ph: And if it wasn't on the face, I would be less worried. But just because it's on the face, you'll wanna make sure it's nothing serious. But because of the vaccinations and everything, I'm just trying to not ( ) distressing you.</i></p>	Student F, RTS, no.50

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Type of politeness strategy	Sub-category	Examples (Key: highlighted text is coded to positive politeness strategy, in the left-hand column).	Excerpt reference number
		<p>Pt: Okay.</p> <p>Ph: Everything will be okay. So yep, like I said, umm...</p> <p>Pt: Fine. Lovely.</p>	
	By paying attention to patient concerns	<p>Ph: Umm, and then what it actually involves is(.) Are you scared of blood or anything?</p> <p>Pt: N::o.</p> <p>Ph: You're not scared of blood, okay. Because this does involve me just, umm, using a lancet(.)</p> <p>Pt: Okay.</p>	Student I HLA, NO 4
	By offering privacy	<p>Ph: While you're doing that, I'm just going let you know that this is completely voluntary and you are, uh, you have the right to withdraw whenever you'd like. And all the information that we(.) Uh, any, any data we have today(.) We see today is completely confidential.</p> <p>((Pt completed the consent form and rose her head to see the Ph while she was speaking))</p> <p>Ph: Is that okay?</p> <p>Pt: That's fine ((keeping completed the consent form))</p> <p>Ph: ↓ Okay.</p> <p>Ph: ((945) ↓ Thank you (( Pt returned back the consent form))</p> <p>Ph: Umm, you okay to talk here or would you want to talk somewhere in private o</p> <p>Pt: [This is fine.</p> <p>Ph: =This is fine, Okay,</p>	Student J HL, No 7
			Student F, RTS, no.1

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**Table 19 Examples of application the negative politeness.**

Type of politeness strategy	Subcategory	Examples (Key: highlighted text is coded to negative politeness strategy, in the left-hand column)	Excerpt reference number
Hedge / Question	To request agreement	Ph: <i>Is that something you still <b>would like to go ahead with?</b></i> Pt: =Yes ((patient nodded his head)) Ph: <i>Yeah, of course.</i>	Student G HLA, No 3
	To request information	Ph: <i>Brilliant. Okay, so <b>could I just ask you</b> before I read to you the conclusions. (.) Uh. <b>When was the last time you ate or had, had anything to eat?</b></i> Pt: = Oh, I had my lunch a half an hour ago. Ph: <i>Half an hour ago. Yep, that's absolutely fine.</i>	Student F HLA, No 14
	To provide a recommendation	Ph: <i>Um, and <b>I was wondering maybe you could,</b> instead of 10 minutes of walking your dog, <b>maybe you can do a little bit longer?</b></i> Pt: <i>Ye:s.</i>	student J HLA, No 23
	To instruct patient to conduct the procedure	Ph: <i>[Okay, so <b>if you could just fill out this form</b> here, just tick where it says blood glucose measured, <b>if you're happy with everything</b> I said, just tick yes, and then print your name, and sign it and date it.</i> Pt: <i>Great. ((Pt received the consent form)) I'll make sure I tick the r-right box.</i> Ph; <i>So, I'm just gonna set-up the mach:ine. If I could just get you to wash <b>your hands while I do that, is that ok::ay?</b></i> Pt: <i>=I just washed. Do you like..</i> Ph: <i>Okay, perfect. ↓ (So I'm just going to put on some gloves)</i>	Student F HLA, No 8 Student G HLA, No 10
Be pessimistic	To obtain patient agreement	Ph: <i>Okay, umm, so let's start just, umm, taking a couple of details and, umm, getting you to sign the for:m.</i> Pt: =Okay. Ph: <i>Umm, s::o(.) This will just take a few moments, if <b>that's alright with you?</b></i> Pt: =mmmm	Student H HLA, No 2
		Ph: <i>=&gt;&gt;Yep, that's absolutely uh no problem. Umm, what I'm going to do first, (.) just to get the paperwork out of the way, uh what we do with our patients to make sure they give consent, just so they are happy with everything that's gonna happen.&lt;&lt;</i> Pt: <i>[Yep]</i>	Student F HLA, No 2



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		<p>Ph: So before you sign that I will just explain the procedure so you're not signing anything before you know what's happening.</p> <p>Pt: ↓great</p>	
		<p>Ph: While you're doing that, I'm just going let you know that this is completely voluntary and you are, uh, you have the right to withdraw whenever you'd like. And all the information that we... Uh, any, any data we have today... We see today is completely confidential.</p> <p>((Pt completed the consent form and rose her head to see the Ph while she was speaking))</p> <p>Ph: Is that okay?</p> <p>Pt: That's fine ((keeping completed the consent form))</p>	Student J HLA, No 7
Minimize the imposition (mainly by using 'just')	To Lessen the impact of action	<p>Ph: Just to prick the side of your finger. Either your index or your middle finger.</p> <p>Pt: Yep.</p> <p>Ph: And then what I will do is, hopefully, we will get a pool of blood on your finger.</p> <p>Pt: mmmm.</p> <p>Ph: And I'll just use something called a pipette, just to, umm, extract a drop of blood by squeezing the teat of the pipette.</p> <p>Pt: mmmm.</p> <p>Ph: And I'll pop this into, umm, the CardioChek Meter, and this should hopefully give us a reading of your blood cholesterol.</p>	Student I HLA, No 5
		<p>Ph: Okay, umm, so let's start just, umm, taking a couple of details and, umm, getting you to sign the for:m.</p> <p>Pt: =Okay.</p> <p>Ph: Umm, s::o(.) This will just take a few moments, if that's alright with you?</p> <p>Pt: =mmm</p>	Student H HLA, No 2
Give deference	To give patient chance to choose their preference	<p>Ph: Okay. So while that gets ready (.) can I just(.) Do you have a preference to which hand you want me to(.)</p> <p>Pt: [This hand will be fine.</p> <p>Ph: Do you have preference to any finger or should I(.)</p> <p>Pt: =No.</p> <p>Ph: Okay,</p>	Student G HLA No 11,12
		<p>Ph: Did you have a preference for what you'd like?</p> <p>Pt: No, just something that will get rid of the redness.</p> <p>Ph: Something that will get rid of the redness. Okay,</p>	Student I, RTS, No. 31

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	To express respect by showing humbling to patient	Ph: Hello, my name is ( ) I'm the pharmacist. How can I help please↓? Pt: Hi, I'm really interested in your healthy living assessments. umm, I really want to have a blood glucose test. Ph: Okay, umm we can do that today. That's fi:ne.	student D HLA, No 1
State FTA as general rule	To explain the procedure steps	Ph: Umm, b... Before I do that, I'm just gonna explain what the cholesterol: I test consists of. So, I'm gonna have a lancet and it's just gonna prick your finger and (.) that will allow it to bleed out some blood. Pt: mmm ((patient nodded his head)). Ph: Using that blood, I'm gonna put it onto the machine, which will give me a reading. ((patient nodded his head)).	Student G HLA, No 2
	To inform patient about general recommendation	Ph: Okay, so like I said, it is recommended to have 150 minutes of exercise, per we:ek. The benefit of having good exercise is it does reduce your risk of cardiovascular disease, and also it can be a stress reliever. So, if you have any problem with your blood pressure, it can also help to reduce that, and it will also help to reduce your cholesterol Pt: ↓mmm (( Pt nodded))	Student I HLA. No 44
	To inform patient about normal result	Ph: The, umm result we normally aim for is five or below. Pt: Okay.	Student G HLA, No 18
Apologize	To ask patient to repeat	Ph pardon what do you say? = Pt =Something for headache Ph Something for a headache. Ok	Student C RTS, No 2
		Ph Sorry. I didn't hear Pt oh. Sorry ( )It's okay. I just want to buy things for sore in the to:es.i need to work really quicly. Ph you need it to work really quickly	Student B RTS, No 2
		Ph: Sorry. Do you currently have any medical medications? Pt: (.hhh) Yeah, I have high blood pressure. Ph: Okay,	Student J HLA, No 18
	To request an information from patient	Ph: Sorry, I'm just checking. Pt: It's fine.	Student I, RTS 49
	To fix incorrect information provided to patient	Ph: Oh sorry. I read (.) I misread it, I do apologize. Um, it says it will give relief for 6 to 10 hours,	Student H, RTS, no.29

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**Table 20 Examples of application of the 'Off record' strategy.**

Type of FTAs	Examples (Key: highlighted text is coded to off record, in the left-hand column).	Excerpt reference number
Offer	<i>Ph:</i> <b>There is a tissue.</b> <i>Pt:</i> =I've got a tissue. <i>Ph:</i> Oh, you've got a tissue. Okay, that is brilliant. And then that should give me a reading, which is (4.5). Brilliant. Okay,	Student F HLA, No 13
	<i>Ph:</i> <b>Um, so here's a pen.</b>	Student E HLA, No 6

### 4.3.3. Unexpected incidents resulting in the loss of patient face

Despite the participants' efforts to maintain the patients' face needs in terms of desirability and autonomy, there were some instances in which they still caused embarrassment or imposition by unintentionally impeding the patients' positive or negative face needs, or both. These incidents, where patient face was lost, were marked by patients' dis-preferred responses (i.e. delayed or no response). There were 11.94% dis-preferred responses (from patients) that accompanied negative FTAs. However, there were more dis-preferred responses (from patients) that accompanied the positive FTAs (30.77%) and positive and negative FTAs (41.89%), as shown in Table 21.

**Table 21 The frequency of simulated patient responses versus the type of face threatening act (FTAs).**

Patient Response	Type of FTAs			Total
	Negative FTAs	Positive FTAs	Negative and positive FTAs	
Preferred	651/739 (88.1%)	25/37 (67.6%)	40/72 (55.6%)	716
Dis-Preferred	88/739 (11.9%)	12/37 (32.4%)	32/72 (44.4%)	132
Total	739	37	72	848

In fact, the pharmacy students mainly paid attention to patients' negative face needs, protecting their autonomy; for example, some types of advice (negative FTAs) elicited resistance from the patients. Such incidents were identified by the

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patients' insistence, for example, to be given a medication instead of being referred to their GP (as shown in Figure 10), presenting the patients' desire conflicting with the participants' advice. This advice often faced resistance from the patients, especially if they expected to receive medication instead of being referred to the GP. In these cases, the participants tried to convince patients to agree with their advice before eventually providing appropriate medication on the patients' insistence.

By contrast, when patients disclosed undesirable lifestyles (positive and negative FTAs), such as heavy smoking, physical inactivity, or excessive alcohol consumption, they usually expressed some dis-preferred features in their own responses, such as long hesitation, a delayed response, minimisation of their acts, or justification of the behaviour. Figure 11 presents an excerpt of patients' efforts to save their own positive face (to be desirable). It appeared that patients tried to enhance their own positive face by giving reasons for their behaviour (e.g. 'I drink just to relax after work', or 'I don't exercise because of lack of time'), or they tried to minimise it (e.g. drinking only a couple of times in the month). However, the participants, in most of these particular cases, responded insensitively by either showing their surprise about the behaviour (e.g. by saying "*Interesting*", or "*Really?*") or asking more detail, without considering patient face, resulting in the loss of the positive face of patients, as shown in Figure 11.

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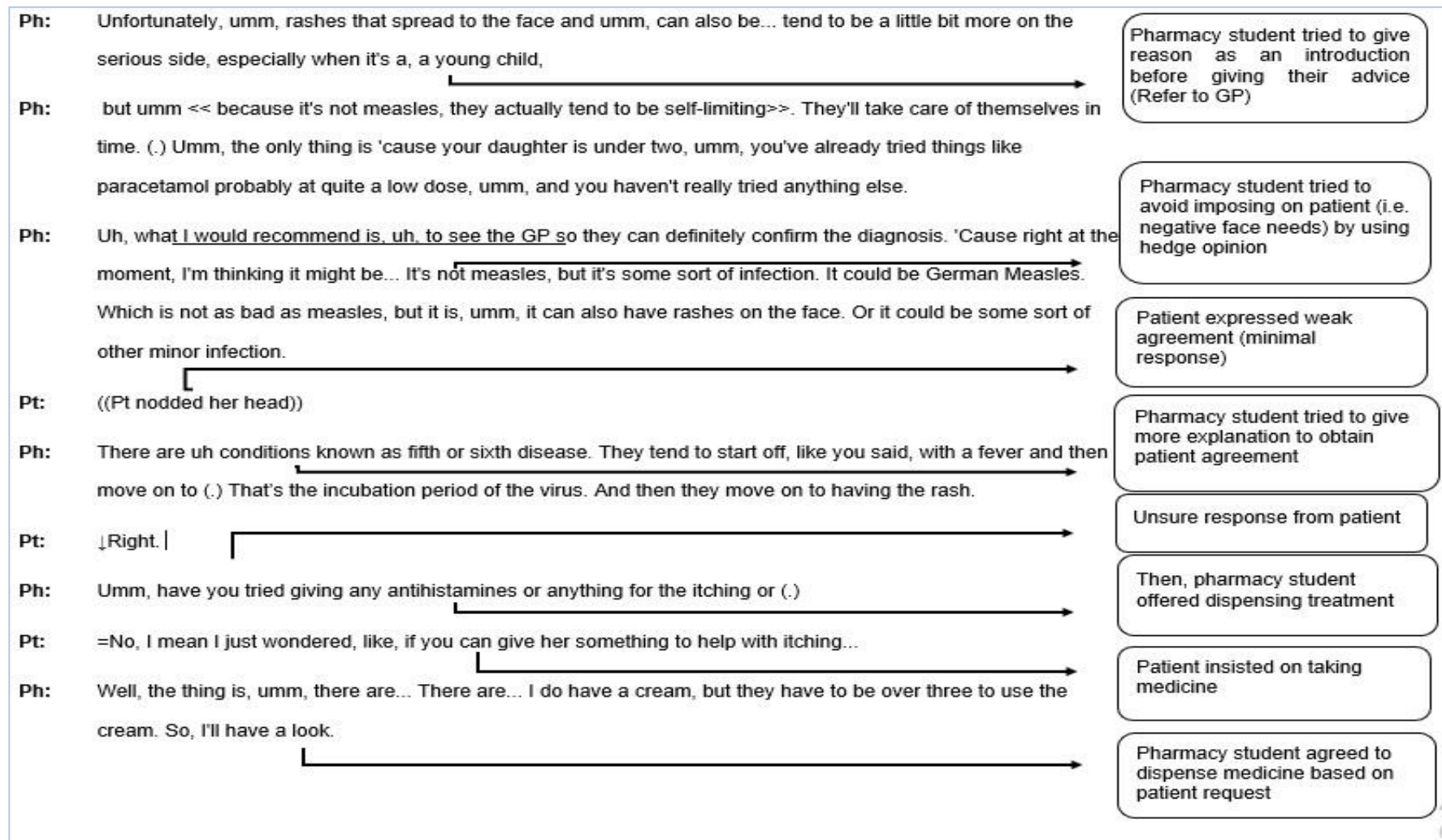


Figure 10 Excerpt showing student F maintaining the negative face of patient.

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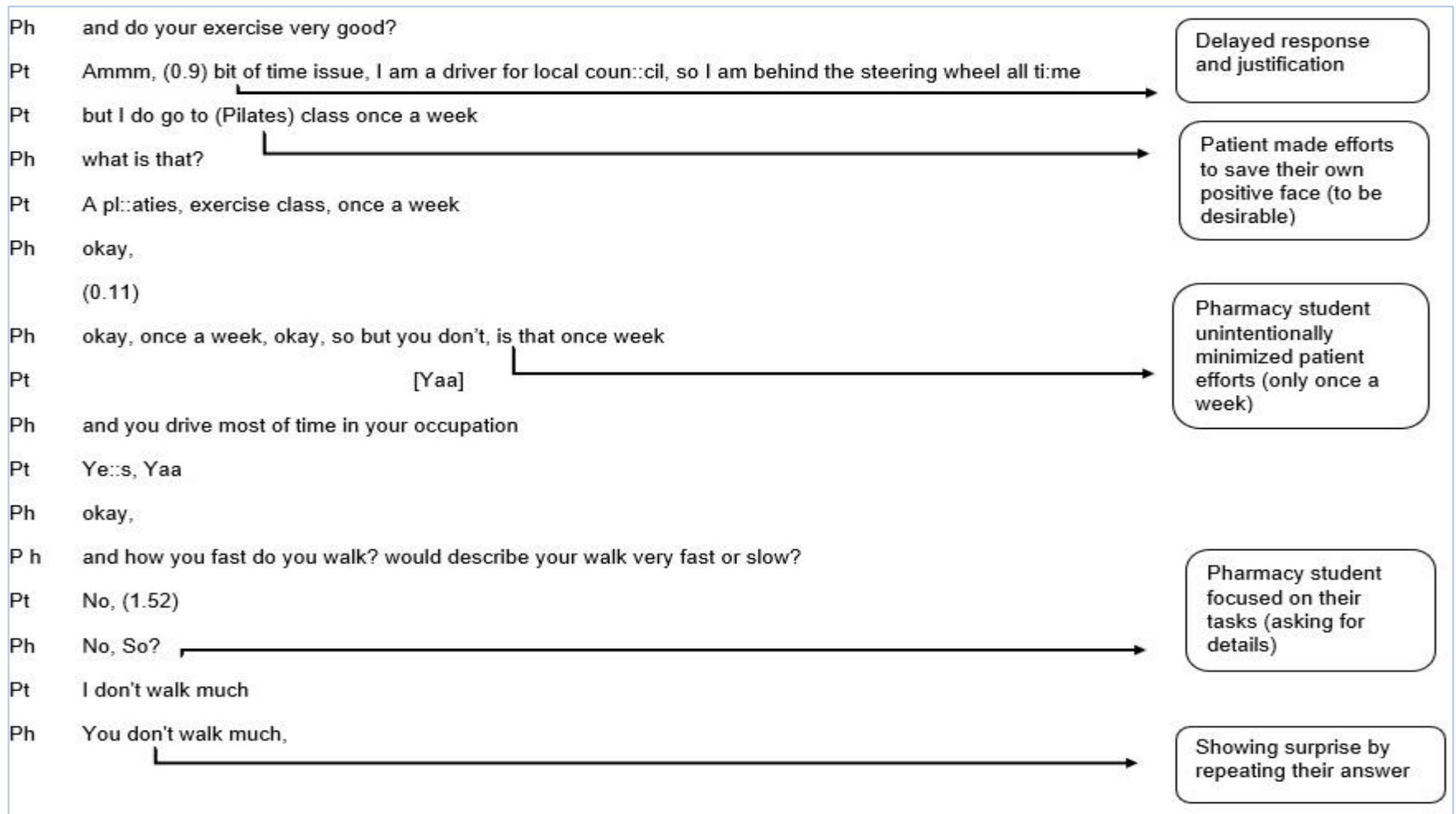


Figure 11 Excerpt showing student C was unaware that the patient's positive face had been lost.

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There were also other unexpected cases that highly conflicted with a patient's positive or negative face needs, without the apparent knowledge of the pharmacy student. Although these cases were quite uncommon, it is important to draw attention to them, which can help improve practice in the future. For example, in some cases, the pharmacy students repeated or re-asked the same question many times, which indicated that they were not actively listening to the patient. Other incidents involved the pharmacy students failing to connect a patient's answers. For example, when the patient requested medication for diarrhoea, the pharmacy student asked them "*Do you have diarrhoea?*". In another incident, the pharmacy student was busy performing their task (filling in a form) and apparently intentionally ignored the patient who was talking about their concerns. In addition, it was observed that patients expressed some dis-preferred responses when the pharmacy students asked them unexpected personal questions. For example, "*Do you have children*", when advising the patient to "*Keep medication away from children*" or suggesting that they "*Walk with your children*". Another minor incident occurred when a pharmacy student misspelled a patient's name, affecting the positive face of the patient. Table 22 presents a summary of incidents in which patient face needs were unintentionally highly affected. Further details and excerpt examples of these incidents are presented in Table 23.



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**Table 22 A summary of incidents where patient face needs were highly affected.**

Description of the incidents	The impact on face needs
Expressing disapproval for patient behaviour	Positive face need of patient is highly threatened
Referring patient to GP when they expected to be given a medicine	Negative face need of patient is threatened
Giving patient recommendation, particularly advice related to their lifestyle.	Positive and negative face need of patient is threatened
Ignoring patient when talking and being busy with filling the form.	Positive face need of patient is threatened
Not actively listening (unable to link patient answers or repeating the same question)	Positive face need is threatened for both parties
Mis-spelling patient name	Positive face need of patient is threatened
Asking patient personal questions (esp. if these questions are unnecessary questions)	Positive and negative face need of patient is threatened

**Table 23 Description of the unexpected incidents resulting in losing the positive face of the patient.**

Incidents	Incident (Key: highlighted text is coded to pharamcy student responses in high threatening situations, in the left-hand column)	Excerpt reference number
Expressing disapproval of or surprising to inappropriate behaviour	<p><i>Pt:</i> Uh yeah. I mean, every, every, every day. And then umm a couple of times a month, I'll go out to the pub with my football team.</p> <p><i>Ph:</i> [Mmmm]</p> <p><i>Pt:</i> Umm, (.hhh) and that usually stops by the end of the evening, it's usually you know ↓ maybe 5-6 ↓ pints ↓ of beer.</p> <p><i>Ph:</i> [↓ Interesting. ↓ Yeah.</p> <p><i>Pt:</i> And uh to be ↓ honest, ↓ quite often shots as well.</p> <p><i>Ph:</i> ↑Shots as well. Okay.</p> <p><i>Pt:</i> Yeah. Maybe some tequila-</p> <p><i>PH:</i> ((laughing quietly))</p> <p><i>Pt:</i> I always feel ( ) suddenly but that's okay. It's only a couple times a month.</p> <p><i>Ph:</i> Okay, only a few times a month that happens. Okay, that's fine.</p>	Student D HLA, no 22
	<p><i>Ph</i> so umm (.) we can maybe lower your blood pressure because I think one of &gt; the contributing factors can be your diet &lt; umm I can see that you have quite a lot of chocolate throughout the day and like I think the food that you eat is quite salty, so for example curriesPh and um what do you say you are having for lunch so:rry?</p> <p><i>Pt</i> Sausage sandwich</p> <p><i>Ph</i> Sausage sandwich exactly</p> <p><i>Ph</i> amm I think &lt;you missing up five fruit and veg a day, so that's quite essential&gt;.</p>	Student A HLA, no 37-38
	<p><i>Ph:</i> And umm(.) do you exercise?</p> <p><i>Pt:</i> (0.77) No, I don't</p> <p><i>Ph:</i> ↑You don't exercise.</p>	Student G HLA, No 25
	<p><i>Pt:</i> Uh, I suppose, you know, when I do go out, maybe there's a way of(.) I mean, maybe I don't need to drink the shots. I mean tequila's disgusting, right?</p> <p><i>Ph:</i> Yeah (( laughing quietly)) . ↑ Exactly.</p>	Student D HLA no 30

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Referring patient to GP when they expected to be given a medicine	<p>Ph: Uh, what I would recommend is, uh, to see the GP so they can definitely confirm the diagnosis. 'Cause right at the moment, I'm thinking it might be... It's not measles, but it's some sort of infection. It could be German Measles. Which is not as bad as measles, but it is, umm, it can also have rashes on the face. Or it could be some sort of other minor infection.</p> <p>Pt: ((Pt nodded her head))</p> <p>Ph: There are uh conditions known as fifth or sixth disease. They tend to start off, like you said, with a fever and then move on to (.) That's the incubation period the virus. And then they move on to having the rash.</p> <p>Pt: ↓Right.</p> <p>Ph: Umm, have you tried giving any antihistamines or anything for the itching or (.)</p> <p>Pt: =No, I mean I just wondered, like, if you can give her something to help with itching...</p>	Student F RTS no.25-2
Giving patient recommendation, particularly advices related to their lifestyle	<p>Ph so in the mean time before you see GP I do stress is very important see G:P, .hhh (0.91) (patient no response)</p> <p>Ph but in the meantime, just try working on your diet (patient no response)</p>	Student A HLA , no 41
Ignoring patient when talking and be busy with filling the form.	<p>Pt: And that's, that's a good idea, maybe you know, a glass of water every pint of beer, that sounds like a. quite a nice option actually (2.2) ((Ph wrote while Pt was talking then Pt stopped talking))</p> <p>Pt: That makes sense? (1.02)</p> <p>Ph: Yeah. [I'm just making some notes (12.15)</p> <p>Pt: [( ), Okay] (10.20)</p> <p>Ph: Well, I'm glad we were able to get something down on that and come to a, you know,(.) mutual agreement</p>	Student F HLA, No 33
Not active listening (by repeating same question or unable to join between patient answers)	<p>Ph: Okay. And, um, are you taking any other medication?</p> <p>Pt: (1.5) Um, as in just any medicines?</p> <p>Ph: Yeah, any medicines.</p> <p>Pt: Yeah, so I take Salbutamol inhaler.</p> <p>Ph: [Mmmm.</p>	Student G, RTS, no.11-1

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	<p>Pt: And a Symbicort inhaler and I only use Salbutamol when I need to.</p> <p>Ph: Oh, okay.</p> <p>Ph: Are you taking anything herbal or over-the-counter?</p> <p>Pt: No.</p> <p>Ph: And could you have any allergies to any medicines or food?</p> <p>Pt: (0.71) Uh, yes. So I'm allergic to house &lt;&lt; dust mites&gt;&gt; according to my doctor</p> <p>Ph: Oh, okay.</p> <p>Ph: Oh, okay. And do you have any other medical conditions?</p> <p>Pt: Asthma.</p> <p>Ph: ↑ Asthma, Okay.</p>	
	<p>Ph Have you been vomiting or having diarrhoea or anything like that? ((Patient complaint is diarrhoea))</p> <p>Pt ((laughing))</p> <p>Ph oh Sorry you have diarrhoea. Have you been vomiting?</p> <p>Pt No. I haven't</p>	Student A RTS, No 28
Mis-spelling patient name	<p>Ph: Umm, ( Ph checked the consent form) blood glucose. Yeah, so Mr. Peter Fingston.</p> <p>Pt: Kingston.</p> <p>Ph: Kingston, (chuckle quietly) okay. Okay</p>	Student D HLA , no 6
Asking unrelated or unnecessary questions	<p>Ph okay, would you described you self as (standard pattern)=</p> <p>Pt =Yes, I would standard</p> <p>Ph ammm you are fema, [Yaa</p> <p>Pt [Yaaa]</p>	Student C HLA , no 21
	<p>Ph so if you if yo:u walk maybe with your frie::nds o:r and do you have children?</p> <p>Pt No</p> <p>Ph No, okay</p>	Student C HLA , no 41
	<p>Ph: Um, but yeah. I think that's, um, everything. You said it's for yourself. So it says not to use for children. I don't know if you have any children.</p> <p>Pt: ↓↓No.</p> <p>Ph: Okay. Um, because it says not to use it on them as well. Um and that's all I have to say on that one.</p>	Student H, RTS, No 35

#### **4.4. Discussion**

A higher number of negative FTAs were observed during the OSCE assessments compared with situations in which the patients' positive face needs were threatened. However, while the participants generally succeeded in addressing patients' negative face needs (i.e. avoiding imposing on the patient), this was not the case for patients' positive face needs (i.e. avoiding patient embarrassment), particularly when discussing sensitive topics. The pharmacy students appeared unaware that the patient's positive face had been lost and generally did not try to lessen the patient's embarrassment or recover their face. Enabling students to become aware of FTAs and the application of strategies for saving patient face could help them to build better rapport and trust within their future work, arguably also increasing patient satisfaction.

To our knowledge, this study is the first to examine the concept of 'patient face' by applying PT and CA within pharmacy practice to examine interactions with patients. This concept has not been explored extensively in pharmacy practice. The two studies that have previously applied the politeness theory of Brown and Levinson (1987) in a pharmacy setting were conducted by Lambert (1996) and Wilby *et al.* (2019). Lambert (1996), examining written communication, stated that the degree of politeness was more noticeable in communications in which recommendations were made than when simply reporting information, as recommendations are more face threatening than reports. This attests to pharmacists' ability to recognise and deal with sensitive situations affecting negative FTAs, at least in written communication. (Wilby *et al.*, 2019) also applied PT to examine the degree of politeness used by

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assessors in their written narrative comments to justify the marks they had awarded in OSCE assessments. They concluded that assessors were less likely to provide their comments using politeness strategies, such as hedging, and more likely to use no politeness strategy. This is clearly understandable, since the situation in which OSCEs are marked is time limited (thus requires succinct writing), and importantly, there is no face consideration involved, as the written comments are normally internal to the assessors only. Two recent studies also explored face needs and demands in pharmacy settings by applying other theories (Murad, A. Spiers and Guirguis, 2016; Chevalier *et al.*, 2017). These studies corroborate the general finding from our work, which is that, upon recognising them, the participants intrinsically attempt to mitigate FTAs through a range of politeness strategies while interacting with patients.

In this study, the identified FTAs were considered to be directly related to pharmacists' duties as healthcare professionals. (NHS, 2015; ACPE, 2011) This reflects the high frequency of FTAs identified when interacting with patients. According to the literature on the communications of healthcare professionals, such as physicians and nurses, patient consultation involves many acts that interfere with patients' face needs (Matsuoka and Poole, 2010; Spiers, 2000; Guxholli, Voutilainen and Peräkylä, 2022). However, in our study, the patient actors' responses were mainly to agree with the participants' requests (often by using minimal responses, e.g. Ummm, Yaa), which does not reflect the reality of healthcare practice. Therefore, our findings in this regard are different from those of Murad, A. Spiers and Guirguis (2016) who found that pharmacists face some challenges from patients

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who, for example, rejected their advice. Interestingly, Murad, A. Spiers and Guirguis (2016) proposed that educating patients about the nature of pharmacist roles could enhance the acceptance response and decrease resistance (e.g. to advice) by patients within real practice. However, from an educator's perspective, there is also the onus of teaching pharmacy students to recognise FTAs and work to mitigate these for more concordant consultations. This is in line with the findings of the Matsuoka and Poole (2010), who concluded that the unawareness about politeness strategies contributed to the difficulty of the new healthcare professionals in interacting with the patient. Thus, it has been suggested that communication in healthcare could be improved through more effective politeness strategies (Matsuoka and Poole, 2010).

According to PT, it is acceptable to perform task-orientated using bald on-record strategies without mitigating the threat (Brown and Levinson, 1987). In these cases, FTAs, such as 'keep medicines away out of children's reach', are more important than patient face needs. Pharmacists, in some cases, provide important information in a direct manner to patients, as suggested by the findings of Murad, A. Spiers and Guirguis (2016). This is consistent with Yin *et al.* (2012) findings, who found that physicians generally utilised bald on-record, direct, and non-redressed communication strategies during patient counselling in outpatient clinics.

However, when reviewing the sequences of acts in which the participants applied a bald on-record strategy, the patients' permission had already been obtained in advance in most cases. In fact, the participants appeared to be mainly interested in

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maintaining patient autonomy (i.e. negative face needs of patients). This is perhaps because meeting negative face needs is considered part of the rights of all patients (NHS, 2021; ACPE, 2011; Medina *et al.*, 2013). Accordingly, obtaining patient consent and agreement with healthcare goals are considered a standard part of practice (Medina *et al.*, 2013; ACPE, 2011; Granger, 2013), and given prominence within our pharmacy programme's training and assessment. This potentially explains the high prevalence of negative FTAs within the observed scenarios and the students' general success in maintaining patients' negative face needs. For example, the pharmacy students addressed patients' negative face needs by giving them a chance to refuse any acts, especially when asking their permission by saying '*Is that okay?*'. This agrees with Adams (2013) conclusion that negative politeness strategies were widely used when obtaining patient consent forms in GP settings. Even when patients were resistant to advice, such as when being referred to their GP within RTS scenarios, the participants considered on the appropriateness of the referral and re-evaluated their approach.

Declining a recommendation is one of the most challenging aspects of communicating with patients. In real patient counselling, the physician tries to balance the need to provide the best care with the right of the patient to decline recommended treatment (Adams, 2013). In such situations, the application of politeness theory, for example, asking the patient for reasons, such as saying "*Tell me more*", can reduce conflict by allowing patients to express their concerns and ideas (Adams, 2013). Thus, patient autonomy and respect for their freedom were



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well-maintained by the participants in this study (Murad, A. Spiers and Guirguis, 2016).

However, there were certain failures to maintain the patients' positive face needs. For example, patient actors disclosing their seemingly inappropriate lifestyle experienced a high level of threat to their positive face needs, despite the setting being scripted OSCE scenarios. This is consistent with the results of an analysis of a real patient consultation, which found that asking patients lifestyle questions is highly detrimental to their face needs (Matsuoka and Poole, 2010). The participants, apparently unaware of losses to patients' positive face, did little to lessen the patients' embarrassment or help them recover their face in these instances. This might be because in our programme, students are trained in general communication and consultation skills but are not taught about patient face needs or how to respond to patient responses in a way that considers these face needs. The positive politeness strategies that were applied by the participants to express their respect and trust to the patients (such as introducing themselves by mentioning their names to the patients at the beginning of the consultation, warmly welcoming the patient, thanking them for visiting, or expressing sympathy) (Granger, 2013; Chevalier *et al.*, 2017; Murad, A. Spiers and Guirguis, 2016) had been taught within the context of consultation structure models rather than in the specific context of politeness theory or face needs.

#### **4.5. Chapter summary**

The findings in this study demonstrated that the participants intrinsically exerted efforts to mitigate threats to patient face during OSCE interactions, especially when patient autonomy was under threat. However, patient actors' positive face needs were not addressed in some cases, and need to be managed appropriately for rapport to be maintained. The observations from this study led to several questions being raised. It is critical to know what factors might affect the type of patient response (preferred versus dis-preferred) during patient consultation. This means what might cause a patient to feel embarrassed or imposed upon. It may also be of interest to observe how pharmacy students respond to such situations. For example, whether or not they can relieve patients' embarrassment or protect their autonomy. The following chapter includes a set of hypotheses developed based on observations from this study. All hypotheses are tested for validity and relevant recommendations are made.

## **5. Chapter 5: Factors Affecting Patients' Embarrassment and Feelings of Imposition During OSCE Interactions**

### **5.1. Introduction**

In the previous chapter, using qualitative analysis, all FTAs that occurred within pharmacy student-patient communications were identified, and all politeness strategies used by pharmacy students to address these acts during OSCE interactions were classified. It was revealed that patient interactions pose challenges; in particular, the most effective ways to avoid embarrassment and imposition on patients were identified (e.g. considering the patient's face need). For example, if patients' dis-preferred responses (i.e. hesitation) were observed when discussing unhealthy or inappropriate lifestyles, such as tobacco usage, sexual activity, or alcohol consumption, this might indicate embarrassment on the part of the patient and show conflict with their need for approval (i.e. positive face needs). Another challenge in providing care for patients involves their resistance to recommendations given by healthcare professionals because receiving advice is inherently in conflict with their need to be 'free' and autonomous (i.e. their need to preserve their negative face). These dis-preferred responses explored in the previous chapter were automatic actions that were expressed because of a patient's sense of embarrassment or feeling imposed on via constraint on their freedom. This chapter examines the factors that affected patients feeling embarrassed or imposed upon and assesses pharmacy students' responses in such situations and whether

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they exert an effort to relieve patients' feelings of embarrassment or ensure their freedom. This chapter begins with a background of patient responses in medical consultations. Then the hypotheses set based on the qualitative analysis will be examined in terms of patients' responses and pharmacy students' feedback.

### **5.1.1. Patient responses in medical consultations**

Patient response has been the subject of much research when assessing communication effectiveness (Adams, 2013; Mileva, 2019; Spiers, 2000). The sequence organisation of conversation analysis facilitates the assessment of patient responses (Have, 2007). However, it is important to highlight that most of these studies have focused on using the techniques afforded by CA alone when exploring patient responses, rather than explicitly linking it with patients' face needs and PT. Within the conventions of CA, responses are 'preferred' (address face needs) when the person receiving the message responds quickly and without a gap in the conversation or any hesitation. The responses are 'dis-preferred' when the person receiving a message delays their response or does not respond at all (Pomerantz, 1984). During medical consultations, patients' responses to questions, recommendations, or diagnoses vary and range from preferred responses (i.e. quick response, no gap or hesitation) to dis-preferred responses (delayed response or no response) (Jones, 2003; Maynard and Heritage, 2005; Beach, 2013) Thus, it should be possible not only to examine patient responses within the conventions of CA but also to link these with their face needs and how these have been addressed.

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As discussed earlier in Chapter 4, patient consultations include various activities that can potentially cause embarrassment or impose on patients' autonomy. This is particularly evident in highly sensitive situations where patients' face needs are concerned. As a result, patients often express their discomfort or reluctance to engage in such circumstances. For example, receiving disapproval for their behaviour, such as excessive alcohol consumption, often results in patients feeling embarrassed and, therefore, responding with a dis-preferred response. Similarly, giving recommendations or obtaining personal information from a patient could impact the patient's autonomy, hence leading to dis-preferred responses from patients. Moreover, the pharmacists' handling of such situations might worsen or alleviate patients' feelings in terms of what they say and how they say it (Adams, 2013). This study aimed to statistically examine a series of *a priori* hypotheses to identify factors affecting patients' responses and pharmacy students' feedback.

### 5.1.2. Suggested hypotheses

Using both methods (i.e. qualitative and quantitative analysis) consecutively is recommended for gaining a broad understanding of research areas (Foss and Ellefsen, 2002; Alsubaie, Grant and Donyai, 2021). The application of qualitative analysis in the previous study enables us to explore the face phenomena in OSCE interactions and then use quantitative analysis to examine the suggested hypotheses. Thus, these hypotheses were formulated based on observations made using CA and PT. These were to identify factors that might affect patients' responses (SPP), in terms of whether they were embarrassed or felt imposed upon, by examining the

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types of FTAs (H1), the degree of the directness of participants' speech when asking a question (H2), and the type of information released by the patient (H3). Then, to assess pharmacy students' ability to relieve patients' embarrassment or feeling of being imposed upon, pharmacy students' feedback (third part) in relation to different patient responses within the interaction (H4) and the type of patient behaviour disclosed (H5) were assessed. All the proposed hypotheses are illustrated in the flowchart in Figure 12.

H1: There is an association between the types of FTAs expressed in the FPP by the pharmacy students (i.e. whether positive FTAs, negative FTAs or both) and patients' responses in the SPP (i.e. whether expressing preferred or dis-preferred responses).

H2: There is an association between the degree of directness when the pharmacy students ask questions in the FPP (i.e. whether asking questions directly or using at least one of the politeness strategies) and patients' responses in the SPP (i.e. whether expressing preferred or dis-preferred responses).

H3: There is an association between the type of information disclosed by the patient in the SPP (i.e. whether disclosing about their healthy or unhealthy behaviours) and how they respond (i.e. whether expressing preferred or dis-preferred responses).

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H4: There is an association between patients' response type in the SPP (i.e. whether expressing preferred or dis-preferred responses) and pharmacy students' feedback to support their face needs in the third part (i.e. whether students made attempts to enhance patients' face needs or not).

H5: There is an association between the patient's disclosed behaviour (i.e. whether expressing preferred or dis-preferred responses) and pharmacy students' feedback to support their face needs in the third part (i.e. whether students made attempts to enhance patients' face needs or not).

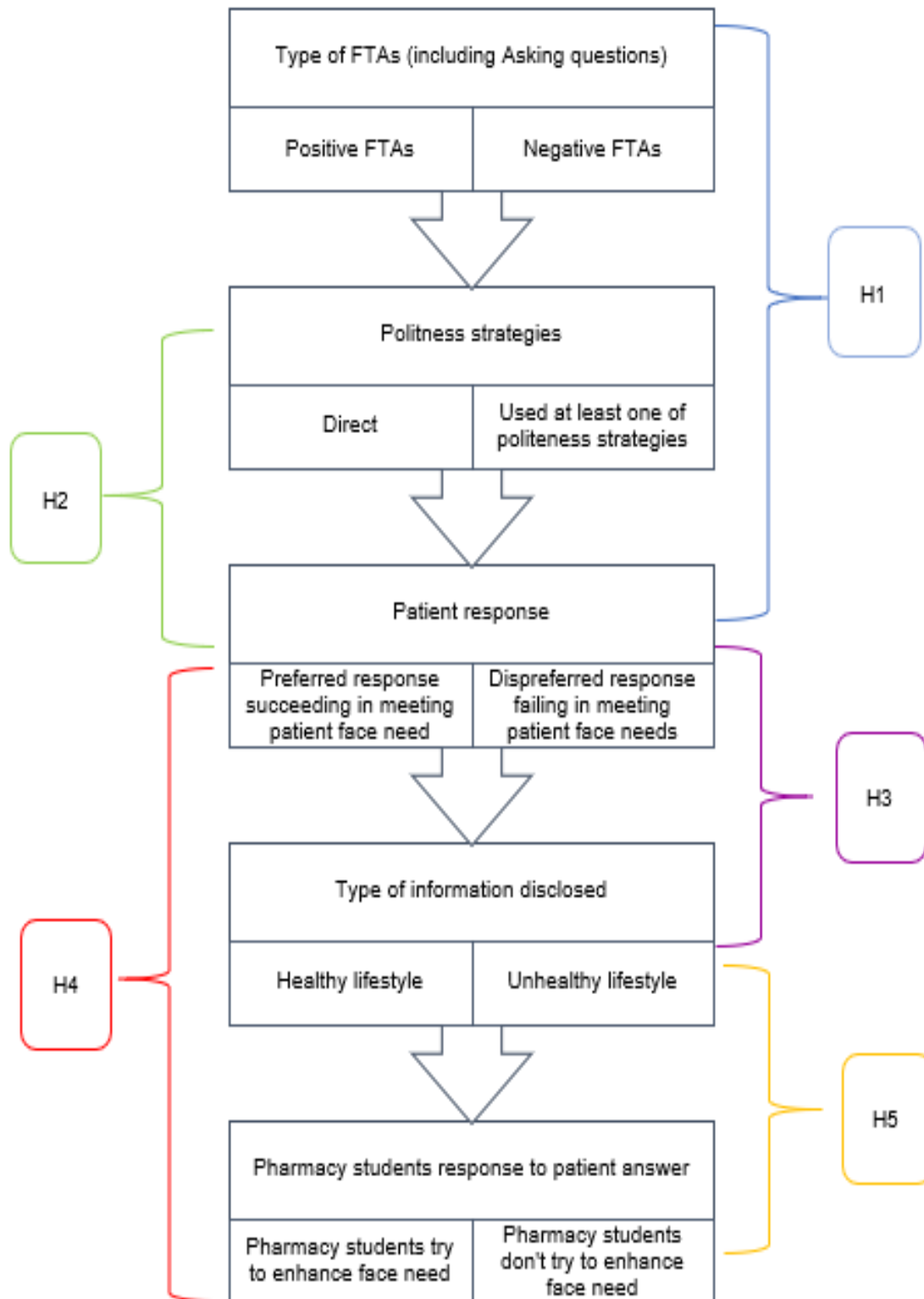


Figure 12 Flowchart illustrating the relationship between the suggested hypotheses.



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This study aimed to identify the factors affecting patients' responses (i.e. embarrassment or feelings of imposition ) during OSCEs and assess pharmacy students' ability to identify and mitigate these situations by providing suitable feedback.

### **5.2. Method**

This study employed quantitative tools to statistically examine the proposed hypotheses, formulated based on observations in a previous qualitative study. The study was reviewed and approved by the University of Reading's Research Ethics Committee (reference no. 14/19). The full details of data collection, transcription, and analysis were provided in Chapter 3. The subsequent subsections provide a summary of the main points.

#### **5.2.1. Collected sample**

Ten students agreed to participate in the study. Four were from the 2017/18 year, and six from the 2018/19 year. Only OSCE stations that involved simulated patients were included; these were the healthy living assessment (HLA) and Responding to Symptoms (RTS) stations.

#### **5.2.2. Transcription**

The videos analysed were transcribed using ELAN software (ELAN, 2022) based on the Jeffersonian transcription system. Then, the transcriptions were exported to Microsoft Word for analysis and storage.

### **5.2.3. Inter-rater reliability coding**

Approximately 20% of the data were coded by a second coder, Hannah Piekarz. We used Cohen's kappa value to assess the percentage of agreement between the two coders. The Excel software was used to keep the data and perform statistical analysis. The results are shown in Table 11.

### **5.2.4. Statistical testing**

All data from the qualitative study were quantified to complete suitable statistical tests. The PT framework was used to categorise a pharmacy student's utterances into FTA types and any politeness strategies used to maintain or enhance patients' face needs. CA facilitated judging the patient response based on work by Pomerantz (1984) to define a preferred response versus a dis-preferred response (as discussed in Chapter 3). All the proposed hypotheses were statistically tested using the *chi-square* test. The residual value was considered to assess major contributors' cells, to reject the null hypothesis (in case of  $p$ -value < 0.05) together with the expected value (i.e. the value if there is no association) of each cell, and to enable comparison with the observed value (actual value), meaning that the type of association (positive or negative) could be predicted. SPSS (version 27) was used to perform all statistical tests.

### **5.2.5. Reporting checklists of included studies**

The EQUATOR Network was used to identify the most relevant reporting checklist for this work. The STROBE Statement was used for this study's reporting checklist, and all criteria were achieved (Appendix N).

### 5.3. Results

Overall, 848 FTAs were identified within the dataset. The data were analysed using a chi-square test. The summary of the results, including the *p*-value and *chi-square* of each hypothesis, is presented in Table 24.

**Table 24 A summary of all proposed hypotheses' results.**

Hypothesis	Chi-square	<i>P</i> -value	Interruption
Hypothesis 1	$\chi^2(2) = 61.21$	$P < 0.001$	Accepted the alternative hypothesis.
Hypothesis 2	$\chi^2(1) = 1.7$	$P = 0.17$	Accepted the null hypothesis.
Hypothesis 3	$\chi^2(1) = 64.33$	$P < 0.001$	Accepted the alternative hypothesis.
Hypothesis 4	$\chi^2(1) = 14.56$	$P < 0.001$	Accepted the alternative hypothesis.
Hypothesis 5	$\chi^2(1) = 16.48$	$P < 0.001$	Accepted the alternative hypothesis.

#### 5.3.1. Factors affecting patients' responses

Factors affecting patients' responses (i.e. embarrassment and feelings of imposition) were analysed as outlined below.

- **Hypothesis 1 (Type of FTAs performed by pharmacy students versus patient response):** The data were analysed using a chi-square test ( $\chi^2 = 61.21$ ,  $df = 2$ ,  $p < 0.001$ ). The analysis revealed a statistically significant association, so the null hypothesis was rejected in favour of the research hypothesis that there

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is a statistically significant association between FTA types and patients' responses. While pharmacy students were more likely to meet the face needs (indicated by preferred responses) with negative FTAs (88.1%), they were less likely to meet the face needs with positive FTAs (67.6%) or positive and negative FTAs (55.6%; indicated by a dispreferred response). The full details of the test results, including the number of each category, expected value, and adjusted residual value, are outlined in Table 25 below. The data analysis shows that the residual values of all included categories were  $>1.96$ , meaning that all values significantly contributed to the test results.

**. Table 25 The detailed statistical results of Hypothesis 1.**

Hypothesis 1			Patient preferred		Total
			Yes	No	
Type of FTAs	negative FTAs	Count	651a	88b	739
		Expected Count	624.0	115.0	739.0
		% within Type of FTAs	88.1%	11.9%	100.0%
		Adjusted Residual	7.7	-7.7	
	positive FTAs	Count	25	12	37
		Expected Count	31.2	5.8	37.0
		% within Type of FTAs	67.6%	32.4%	100.0%
		Adjusted Residual	-2.9	2.9	
	negative and positive FTAs	Count	40a	32b	72
		Expected Count	60.8	11.2	72.0
		% within Type of FTAs	55.6%	44.4%	100.0%
		Adjusted Residual	-7.1	7.1	
Total		Count	716	132.0	848.0
		% within Type of FTAs	84.4%	15.6%	848

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- Hypothesis 2 (Politeness strategies used by pharmacy students versus patient response):** The data were analysed using a chi-square test ( $\chi^2 = 1.7$ ,  $df = 1$ ,  $p = 0.17$ ). The null hypothesis was accepted. This means that the politeness strategies used by pharmacy students in terms of the degree of directness when asking questions (e.g. directly asking a question versus using at least one politeness strategy) had no statistically significant association with patients' responses (preferred or dispreferred responses). The full details of the test results, including the number of each category, expected value, and adjusted residual value, are outlined in Table 26.

**Table 26 The detailed statistical results of Hypothesis 2.**

Hypothesis 2			Patient preferred response		
			Yes	No	Total
Pharmacy students did not use any politeness strategies.? Not exert effort to maintain patient face	Yes	Count	217a	52a	269
		Expected Count	222.2	46.8	269.0
		% within politeness strategy used	80.7%	19.3%	100.0%
		Adjusted Residual	-1.4	1.4	
	No	Count	134a	22a	156
		Expected Count	128.8	27.2	156.0
		% within politeness strategy used	85.9%	14.1%	100.0%
		Adjusted Residual	1.4	-1.4	
Total		Count	351	74	425
		% within politeness strategy used	82.6%	17.4%	100.0%

**Hypothesis 3 (Type of information disclosed by the patient versus patient response):** The data were analysed using a chi-square test ( $\chi^2 = 59.74$ ,  $df = 1$ ,  $p < 0.001$ ). The analysis revealed a statistically significant association, so the null hypothesis was rejected. The analysis revealed an association between the type of information disclosed by a patient and their response. While the patients expressed more preferred responses when disclosing healthy behaviours, they expressed more dispreferred responses when disclosing unhealthy behaviours. The full details of the test results, including the number of each category, expected value, and adjusted residual value, are outlined in Table 27. The data analysis shows that all the residual values of all included categories were  $>1.96$ , meaning that all values significantly contributed to the test results. The full details of the test results, including the number of each category, expected value and adjusted residual value were outlined in Table 27. The analysis of data shows that all the residual values of all included categories were  $> 1.96$ , which means that all values made a significant contribution to the test results.

**Table 27 The detailed statistical results of Hypothesis 3.**

Hypothesis 3behaviour			Patient preferred response		
			Yes	No	Total
Did the patient disclose their healthy behaviour?	Yes	Count	39a	2b	41
		Expected Count	22.2	18.8	41.0
		% within patient response	95.1%	4.9%	100.0%
		Adjusted Residual	8.0	-8.0	
	No	Count	0a	31b	31
		Expected Count	16.8	14.2	31.0
		% within patient response	0%	100.0%	100.0%
		Adjusted Residual	-8.0	8.0	
Total		Count	38	33	72
		% within patient response	59.2%	40.8%	100.0%

### 5.3.2. Factors affecting pharmacy students' tendency to provide positive feedback

The analysis revealed that patients expressed dispreferred responses 15.6% of the time (132 of 848 FTAs), as shown in Table 28. Of the 132 dispreferred responses expressed by the patients, within 41 cases ( $\approx 31.8\%$ ), the pharmacy students did exert some effort to support the patient's face needs by applying one or more politeness strategies, such as expressing sympathy or understanding. However,



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within 91 cases ( $\approx 68.2\%$ ), the students focused on their clinical tasks while role-playing as a pharmacist.

**Table 28 The percentage of patients' preferred and dis-preferred responses versus type of FTAs.**

Type of FTAs	Preferred patient response	Percentage %	Dis-preferred patient response	Percentage %	Total
Bring bad news (positive FTAs)	18	72%	7	28%	25
Expression dis-approval	7	63.63%	4	36.36%	11
Instruct to conduct the procedure or to use medication	106	93.8%	7	6.19%	113
Recommendation	98	80.99%	23	19.01%	121
Request for information (negative FTAs)	312	88.13%	42	11.86%	354
Request for information (negative and positive FTAs)	40	55.55%	32	44.44%	72
Offer	46	92%	4	8%	50
Request for permission	71	95.94%	3	4.05%	74
Request for agreement	16	64%	9	36%	25
Total	716	84.43%	132	15.56%	848

- **Hypothesis 4 (Patients' response type versus pharmacy students' responses):** The data were analysed using a chi-square test ( $\chi^2 = 14.56$ ,  $df = 1$ ,  $p < 0.001$ ). The analysis revealed a statistically significant association between patients' responses (preferred or dispreferred responses) and pharmacy students' third response (attempting to enhance face needs or not). While the pharmacy students were less likely to make an effort to enhance face needs with a dispreferred response, they were more likely to enhance face needs with patients' preferred responses. The full details of the test results of Hypothesis 4, including the number of each category, expected value, and adjusted residual value, are outlined in Table 29. The data analysis shows that all the residual values of all included categories were  $>1.96$ , meaning that all values significantly contributed to the test results.

**Table 29 The detailed statistical results of Hypothesis 4.**

Hypothesis 4:			Pharmacy student's response attempt to enhance face need		
			Yes	No	Total
Patient Preferred response	Yes	Count	357a	359b	716
		Expected Count	336.9	379.1	716.0
		% within pharmacy students' response	49.9%	50.1%	100.0%
		Adjusted Residual	3.8	-3.8	
	No	Count	42a	90b	132
		Expected Count	62.1	69.9	132.0
		% within pharmacy students' response	31.8%	68.2%	100.0%
		Adjusted Residual	-3.8	3.8	
Total		Count	399	449	848
		% within pharmacy students' response	47.1%	52.9%	100.0%

- Hypothesis 5 (Patient behaviour type versus pharmacy students' responses):** The data were analysed using a chi-square test ( $\chi^2 = 16.48$ , df = 1,  $p < 0.001$ ). The analysis revealed a statistically significant association between the type of patient behaviour (i.e. healthy versus unhealthy behaviour) and the pharmacy students' tendency to give positive feedback. While the pharmacy students attempted to provide a positive response (i.e.

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enhance face needs) more often when the patients disclosed their healthy behaviours, they were less likely to enhance face needs when the patients disclosed unhealthy behaviours. The full details of the test results of Hypothesis 5, including the number of each category, expected value, and adjusted residual value, are outlined in Table 30. The data analysis shows that all the residual values of all included categories were  $>1.96$ , meaning that all values significantly contributed to the test results.

**Table 30 The detailed statistical results of Hypothesis 5.**

Hypothesis 5			pharmacy student's response (attempt to		
			Yes	No	Total
Patient disclosing about their healthy behaviour	Yes	Count	23a	18b	41
		Expected Count	14.8	26.2	41.0
		% within patient response	56.1%	43.9%	100.0%
		Adjusted Residual	4.1	-4.1	
	No	Count	3a	28b	31
		Expected Count	11.2	19.8	31.0
		% within patient response	9.7%	90.3%	100.0%
		Adjusted Residual	-4.1	4.1	
Total		Count	26	46	72
		% within patient response	36.1%	63.9%	100.0%

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It found that most of the pharmacy students' response was to either gather more information from the patient, immediately provide a recommendation, or offer positive feedback after collecting all the information needed, without any consideration for the patients' feelings and their face needs. Table 31 represents some examples of different types of pharmacy students' third responses.

**Table 31 Examples of the different pharmacy students' feedback.**

Ref	Example (Key: highlighted text is coded to pharmacy student third response, in the right-hand column).	Explanation
Expert 1 Student B, 26	<p>Ph fantastic, Ummm what is your alcoholic intake, if I can ask?</p> <p>(0.75)</p> <p>Pt we:ll, I, I do 'usually' to have one( )of my friends, we go away on( ) and usually have around five glasses of wine, that main</p> <p>Ph O:key. it is once a week?</p> <p>Pt No, we meet on &lt;&lt; Aaaa Wednesday, and Friday, and Saturday,&gt;&gt;</p> <p>Pt So I would have five glasses each of those night, I don't drink (all)</p> <p>Ph [above of this three night?</p> <p>Pt [Yes]</p> <p>Ph Okay,</p> <p>Ph Amm, I am noting whatever say to me is (health and tru- ) <b>is confidence,</b></p> <p>Ph I am her to help you, and just want to (recognise) <b>that it is common thing, (1.09) or can be common, people believe that if not if not drinking daily that is (fine), as drinking just few nights they seem the thing that it's it's okay</b></p>	The pharmacy student attempted to enhance the patient's positive face by ensuring privacy and generalizing his behaviour as a common thing.
Excerpt 2 Student A, 32	<p>Ph aaa, soo mm do you exercise as well?</p> <p>(0.88)</p> <p>Pt ↓n:o not really</p> <p>Ph <b>that's fine,(.)</b></p>	The pharmacy student tried to enhance his face by saying 'that's fine' to express understanding with patient.
Excerpt 3 Student A, 38	<p>Ph and um what do you say you are having for lunch so:rry?</p> <p>Pt aa (0.8) Sausage sandwich</p> <p>Ph Sausage sandwich exactly</p> <p>Ph <b>amm I think &lt;you missing up five fruit and veg a day, so that's quite essential&gt;,</b></p>	The pharmacy student immediately criticises their diet, which is another FTAs.
Excerpt 4 Student F, 23	<p>Ph: Okay, that's brilliant. Umm, oh, h-h-how's your alcohol intake?</p> <p>Pt: 0.8 (hhh.) Well, yeah ↓( I like a glass of wine every evening just to relax)</p> <p>Ph: <b>↑Every evening?</b></p> <p>Pt: =Ye::ah, I mean, get home from work. Umm, just one large glass of wine every evening.</p>	The pharmacy student failed in meeting face needs by showing their surprise at the patient's answer when the patient disclosed his

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	<p>Ph: Okay.</p> <p>Pt: It just helps me relax.</p> <p>Ph: Okay.</p> <p>Pt: And..(.) And then other than that it's only a couple of times a month that I maybe go out on a Saturday night.</p> <p>Ph: Okay. So you know wine is more of a constant thing, and then you go out occasionally.</p> <p>Pt: Yeah [Yeah]</p> <p>Ph: Umm, have you ever considered cutting down on your alcohol?</p> <p>Pt: Uh (2.61) aaaa Not especially,</p>	<p>excessive alcohol consumption, by repeating their answer then giving recommendation.</p>
Excerpt 5 Student,32	<p>Ph: And what's your exercise like?</p> <p>Pt: (0.8) I don't do much exercise at all, because I work like at my desk, I work for a local council.</p> <p>Ph: Okay</p> <p>Ph: Okay. And what's your alcohol consumption like?</p> <p>Pt: I don't drink.</p> <p>Ph: = You don't drink, okay.</p> <p>.....</p> <p>Ph: Do you get any exercise at all?</p> <p>Pt: (0.67) ↓ Nothing. At all</p> <p>Ph: Have you thought about how you could do(.) Have you thought about maybe wanting to increase some physical activity?</p> <p>Pt: ((0.766)) ↓ I haven't thought about(.) I need to consider.</p> <p>Ph: You haven't thought about it?</p> <p>Pt: No.</p> <p>Ph: Okay</p>	<p>The pharmacy student failed in meeting face needs by repeating the same highly threatening question again.</p>
Excerpt 6 Student H, 34	<p>Ph: Okay, so that's great. So just run through(.) Your blood pressure is i::n normal range. Umm, you don't drink, you don't smoke, and you get enough exercise, and they're all really good health behaviours to have. Umm, we just want (change) your diet, improve your diet.</p> <p>Pt: ((Pt nodded his head))</p> <p>Ph: Cut down some fat, salt, sugar. Go for more fruit and veg. Do some home cooking. That sounds good.</p> <p>Pt: Yeah Okay.</p>	<p>The pharmacy student postponed their response until gathering all information needed, then they gave their recommendation, which is mostly began with positive feedback about the patient then expressing disapproval, and providing a recommendation.</p>

#### **5.4. Discussion**

The results of this study demonstrate that pharmacy students were largely unable to meet patients' positive face needs (avoiding patient embarrassment) during conversations with them, as indicated by the high rate of automatic dis-preferred responses expressed by patients, which occurred with acts that interfered with their positive face needs, compared with acts that interfered with their negative face needs. Pharmacy students were less interested in maintaining positive face needs during OSCEs, even though patients noticeably expressed some dis-preferred features. Matsuoka and Poole's (2010) study found that politeness strategies were ineffective when taking patient histories and disclosing undesirable information. Patient embarrassment cannot be ignored due to the undesirable impacts on patient health, as their behaviour is impacted, resulting in increased nonadherence, the pursuit of misleading information and even avoiding medical visits (Gilbert, 2017; Harris and Darby, 2009).

Factors affecting patient responses were established in terms of the types of FTAs (H1), the politeness strategies used by pharmacy students (H2) and the type of information released by patients (H3). Testing Hypothesis 1 resulted in support for its assertion that patients' positive face needs were more likely to be neglected by pharmacy students during interactions. The high number of dis-preferred responses accompanied positive FTAs rather than negative FTAs, a finding that aligned with observations from a previous study (Chapter 4) (Alsubaie, Grant and Donyai, 2022a), that observed how pharmacy students were mostly able to meet negative



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face needs (i.e. maintaining autonomy) compared with positive face needs (i.e. avoiding being embarrassment). This might be because meeting patient's positive face needs of is more challenging and complex during healthcare conversations. For example, giving a patient the opportunity to refuse healthcare advice, such as when being asked for consent or permission before conducting an actual examination, or by when agreement is requested after offering a recommendation or healthcare plan, enables the preservation of patient autonomy (negative face needs). However, achieving positive face needs (i.e. making the patient feel comfortable) requires a comprehensive understanding of each situation, particularly individual needs and different patient expressions (whether e.g. they express a delayed or hesitant answers) (Mohanty and Mukherjee, 2018; Harris and Darby, 2009).

One factor identified as posing the greatest threat to to patient face needs was lifestyle questions, which is in line with (Adams, 2013) and (Matsuoka and Poole, 2010); Adams (2013), as they were associated with a high rate of patients' dis-preferred responses among patients because they naturally interfered with patients' positive and negative face needs simultaneously (Brown and Levinson, 1987). Therefore, obtaining information from a patient in a proper manner is essential to preventing patient embarrassment or an imposition when beginning to take a patient's history, which might affect later conversations and could result in ineffective communication and in decreased patient satisfaction (Gilbert, 2017; Harris and Darby, 2009; Feng *et al.*, 2017). However it was found that lifestyle questions were

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asked in the same manner as non-lifestyle questions regardless of face needs (Alsubaie, Grant and Donyai, 2022b). Hypothesis 2, which posited that the strategies used by pharmacy students when performing FTAs had no association with the patient response, was supported, an outcome that can potentially be explained by the findings of Mohanty and Mukherjee (2018), who stated that using politeness strategies may not always meet face needs. According to them, maintaining patient face needs depends on factors other than the use of politeness strategies that might affect the degree of patient embarrassment, such as the type of relationship with the patient (whether a first meeting or there is a pre-existing relationship), the patient's cultural background (as topic sensitivity can vary between cultures), patient gender (with women more likely to feel embarrassed than men) (Harris and Darby, 2009; Brown and Levinson, 1987) and the type of information disclosed (Matsuoka and Poole, 2010).

The latter factor affects not only patients' face needs but also their responses, where nondisclosure was most commonly reported as an attempt to avoid being judged or lectured, hearing the detriments of the behaviour and feeling embarrassment (Levy *et al.*, 2018). Basically, this was related to the threat of positive face. Hypothesis 3, which asserts that patients were more likely to express a preferred response when disclosing healthy behaviours and vice versa, was proven true, which agreed with the findings of Harris and Darby (2009) and Feng *et al.* (2017). For example, if a patient discloses an unhealthy behaviour, such as excessive alcohol consumption, their positive face is naturally lost, as indicated by a delayed patient response,

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hesitation, voice lowering, slow speaking, trying to minimise the action (by saying e.g. “*just*”, “*only*”), and explaining or justifying the behaviour (reasons). Their responses may result from their concern with their public self-image (i.e. face) and the risk of the patient being judged if their behaviour is inappropriate or viewed as unhealthy, such as being overweight or smoking (Gilbert, 2017). Discussing personal topics associated with lifestyle and health cannot be avoided; however, being familiar with how to deal with these situations is important to be able to minimise the potential impact on patients’ face needs (Matsuoka and Poole, 2010; Adams, 2013). Thus, pharmacy students’ responses were examined to assess their ability to manage situations that threaten patients’ face needs significantly.

In this study, patient responses were assessed to determine pharmacy students’ ability (in the case of preferred responses) and inability (in the case of dis-preferred responses) to maintain patient face needs (Brown and Levinson, 1987). Hypothesis 4 was supported in its assertion that pharmacy students are more likely to try to meet positive face needs following a preferred patient response and less likely to try to meet enhance positive face following a dis-preferred response, despite the latter being important to address. The pharmacy students’ response indicates that they were more focused on their clinical duties, such as offering recommendations or obtaining more detailed information, as many pharmacy communication skills programmes encourage providing patients with blanket positive feedback, such as showing interest in the patient by listening, expressing sympathy and showing understanding, but none is linked to the use of these strategies in relation to patients’ face needs (Beardsley, 2019; Berger, 2005; Wallman, Vaudan and

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Sporrong, 2013; ACPE, 2011; ACPE, 2016). Thus, pharmacy students were able to apply numerous positive politeness strategies in response to patient answers, such as sharing common ground, including themselves and the patient in the same activity, giving positive feedback about the patient, showing understanding, practicing empathy, actively listening or seeking for agreement (as discussed previously Chapter 4) but without regard for the patient's face needs. It seems pharmacy students are unaware of the importance of maintaining a patient's positive face, such as by preventing the patient from experiencing embarrassment by providing suitable feedback to them (Harris and Darby, 2009), particularly if the patient discloses what might be considered an unhealthy behaviour..

Disclosing lifestyle information was considered a critical moment in the students' interactions with the patients, especially if the conversation included disclosure of an unhealthy behaviour, such as noncompliance with a healthy diet among diabetic patients (Matsuoka and Poole, 2010). Hypothesis 5 was supported in its indication that pharmacy students were more likely to meet patient's face needs when the patients' behaviour was considered acceptable by society (i.e. 'healthy') and less likely when the behaviour was unhealthy. This agrees with the research hypothesis that pharmacy students are unaware of the undesirable impact on patients' positive face associated with asking lifestyle questions or discussing patients' lifestyles. Preparing pharmacy students to deal with such situations is required to meet patient face needs (Harris and Darby, 2009). In fact, communication with patients requires a high level of awareness about highly threatening situations, such as disclosing

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unhealthy behaviours and understanding different patient responses, to provide suitable feedback in meeting patients' face needs (Matsuoka and Poole, 2010; Adams, 2013). For example, if a patient expressed any dis-preferred responses (such as justification, hesitation, a long gap or no response) to indicate an imposition or embarrassment, this is considered a red flag, prompting the application of face-enhancement strategies, such as understanding. Gilbert (2017) outlined many strategies that could be used to minimise the risk of patients feeling ashamed, such as expressing care and compassion. However, caution should be taken to avoid downplaying the negative impact of the patient's unhealthy behaviour and the importance of making lifestyle improvements.

### **5.5. Chapter summary**

The findings of this quantitative data analysis highlight that pharmacy students failed to consider patients' positive face needs (avoiding embarrassment) when they expressed some dispreferred responses, which were mainly related to their feelings of embarrassment (i.e. threatening positive face needs) when disclosing unhealthy lifestyle behaviours. The findings of this chapter, combined with the findings of the qualitative analysis (Chapter 4), demonstrate the deficiencies in pharmacy students' abilities to maintain positive patient face during consultations. An overall discussion of all findings (Chapters 4 and 5) will be provided in the next chapter (Chapter 6).

## 6. Chapter 6: Discussion and Conclusion

The overall aim of this thesis was to improve education relating to practical communication skills within pharmacy settings. The work was conducted by assessing the communication abilities of students in addressing highly challenging situations (i.e. threatening patient's face needs) during OSCE interactions. This approach enabled me to consider the current status of education programmes to explore any deficiencies in this area and to note appropriate recommendations. In my study, pharmacy student-simulated patient interactions were analysed in detail using PT and CA, where it was. It was observed that most pharmacy students' activities had the potential to impact patients' negative face needs (i.e. desire to act autonomously, e.g. upon the pharmacy students making a request), positive face needs (i.e. desire to be liked and not embarrassed, e.g. upon the pharmacy students making a diagnosis) or both (e.g. upon the pharmacy students discussing sensitive topics). Pharmacy students used a variety of positive politeness strategies, including avoiding disagreement (e.g. hedging opinions) or 'giving gifts' (e.g. expressing understanding). They also used negative politeness strategies, including being indirect (e.g. using hedging or being pessimistic) or minimising the imposition. This is in line with the previous literature (Adams, 2013; Matsuoka and Poole, 2010; Yin *et al.*, 2012; Murad, A. Spiers and Guirguis, 2016; Spiers, 2000). In some situations, however, patients expressed some dis-preferred responses due to a threat to their face needs. Bylund, Peterson and Cameron (2012) reported that prior research has widely applied PT in the context of patient interactions, particularly physician-patient interactions. Further, the discoursediscourse

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analysis approach was primarily used for these studies, as was content analysis to achieve their objectives (Bylund, Peterson and Cameron, 2012).

This study demonstrated that interacting with patients is not without challenges, and it identified the best ways to avoid patient embarrassment (i.e. by considering positive patient face needs) and impositions (i.e. by considering negative patient face needs). For example, discussing personal, sensitive topics, such as tobacco usage, sexual activity or alcohol consumption, especially if there is reluctance to confess what might be considered an unhealthy or inappropriate lifestyle, might embarrass patients and conflict with their need to be liked (i.e. positive face needs) (Levy *et al.*, 2018; Guassora, Reventlow and Malterud, 2014). This agrees with Guassora, Reventlow and Malterud (2014) findings that patients were happy and proud to disclose their healthy behaviour, but felt depressed when their behaviour became problematic (i.e. unhealthy behaviour) . They reported further that patients will take initiative in easing their own embarrassment, while general practice does not play a significant role in such situations. Another challenge is patient resistance to recommendations given by healthcare professionals (Adams, 2013), which inherently conflict with their need to be 'free' and autonomous (i.e. negative face needs) (Brown and Levinson, 1987), as finding that is in agreement with previous studies (Adams, 2013; Maynard and Heritage, 2005; Guxholli, Voutilainen and Peräkylä, 2022; Albury *et al.*, 2022). Indeed, any acts during patient consultations that negatively affect the patient's self-esteem or autonomy could be considered an FTA. Such acts could have adverse effects on a patient's healthcare outcome and might prevent them from seeking medical assistance in the future. Therefore, it is critical to identify such acts and ameliorate

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them, if possible, during patient consultations. However, it is the pharmacy's duty to offer recommendations, gather information from patients during consultations or diagnose the patient condition, and previous studies emphasised that using appropriate politeness strategies could help in performing these acts better, particularly in relieving patient conflicts, thus enhancing patient satisfaction and leading to better health outcomes (Ayeloja and Alabi, 2018; Yin *et al.*, 2012).

In addition, the study findings emphasise the importance of considering that the sequences of acts during communication have a significant impact on the consideration of patients' face needs (Feng *et al.*, 2017; Sacks, Schegloff and Jefferson, 1978). The results of this study also indicate that using politeness strategies does not guarantee face needs will be met, and other factors affect patient responses, such as the sequences of turns (SPP). The results agree with Matsuoka and Poole (2010). Being familiar with the overall situation and being able to interpret the sequences of utterances are required to meet others' face needs successfully and hence to achieve effective communication with patients. A comprehensive understanding of the situation requires consideration of the type of information disclosed, as well as whether it impacts face needs in any way (Matsuoka and Poole, 2010). There are other factors to consider regarding face needs, such as the type of relationship with the patient (whether this is the first meeting or there is a pre-existing relationship). As the social distance between participants in a pre-existing relationship decreases, politeness strategies arguably become less necessary. Further, it is crucial to consider a patient's ethnic background (as the sensitivity of topics varies between cultures), as well as their gender (women, very generally speaking and due to social conditioning,



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are more likely to feel embarrassed than men) (Harris and Darby, 2009; Brown and Levinson, 198(Matsuoka and Poole, 2010)7).

The findings of this study prompted a further investigation into the educational programmes relating to communication skills in terms of the concept of 'face' and politeness theory. Pharmacy programmes, at least if the course examined herein is representative of others, do not teach or consider patients' positive face needs, which is in line with standard practice, as the concept of 'face' is not considered (ACPE, 2016; GPhC, 2021; Marriott *et al.*, 2008). As a result, pharmacy students were not well prepared to deal properly with situations that provoked the feelings of embarrassment in patients. It is evident that pharmacy students were not adequately trained to address the issues of embarrassing patients, particularly when a patient disclosed unhealthy behaviour. Patients appeared embarrassed by their an unhealthy behaviour and attempted to justify or minimise it, whereas pharmacy students appeared more interested in their duties without any consideration of the needs of patient's face needs. In fact, students have been taught to deliver positive feedback, to show empathy, and to express acceptance; however, education does not involve how and when it is necessary to provide positive feedback in different situations. Positive feedback had been taught within the context of consultation structure models rather than in the specific context of politeness theory or patient's face needs. This explains why pharmacy students were more likely to provide positive feedback when there was no impact on positive face needs (i.e. no feeling of patient embarrassment) rather than when there is an urgent need to provide positive feedback to lessen feelings of embarrassment.

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It is important to avoid embarrassing patients, as it can have negative effects on their health and well-being. Embarrassing situations can make patients feel uncomfortable, which can lead to reluctance in seeking further medical care. It is thus crucial to provide a safe, comfortable and respectful environment for patients, where they can feel at ease and confident in sharing their health concerns (Levy *et al.*, 2018). To avoid or ease patient embarrassment, pharmacy students should always be respectful, sensitive and empathetic towards their patients. Thus, teaching students when and how to show empathy towards patients is required, as is awareness that discussing patient lifestyle issues is one of the FTAs that results in patients feeling embarrassed, particularly if a patient discloses an unhealthy behaviour. Providing the patient with positive feedback, such as expressing empathy and understanding the patient's position, is a positive conversational politeness strategy that could be used to decrease the risk of causing embarrassment to patients (e.g. when discussing sensitive topics) in real practice. For example, recovering patient face would involve saying something to acknowledge and redress the threat to the patient's face and make them feel better, such as, "*Oh, we've all drunk a glass of wine on a Friday night!*". This type of training has the potential to improve rapport with patients and improve their engagement in the health conversation. In addition, ensuring confidentiality and maintaining patient privacy are essential when discussing personal topics or when patients are disclosing any information. Conversely, pharmacy students have been well-trained to seek patient agreement and obtain patient consent before performing any test or asking questions (i.e. maintaining patient's autonomy). Thus, pharmacy students were mainly interested in meeting the negative face needs of patients (their autonomy) rather than their positive face

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(to avoid patient embarrassment). Veit and Spiekermann (2019) concluded that patient embarrassment is a common issue in health care settings, but it is not adequately addressed in physician qualification training. The lack of appropriate training for students may therefore be a primary factor contributing to the students' failure to consider the positive face needs of their patients, resulting in decreased communication effectiveness.

As another factor that might contribute to student failure in addressing patient's positive face needs, student familiarity with marking criteria plays a significant role. In fact, participants were provided with a copy of the marking criteria in advance of the OSCEs, which focus primarily on clinical assessment using a global assessment of communication skills (ACPE, 2006; ACPE, 2016), and specify neither details of patients' positive face needs nor patient embarrassment. Thus, the nature of their acts is skewed by a desire to meet all of the marking criteria relating to clinical skills, which mainly focus on asking questions and obtaining patient's consent and agreement. Thus, it was found that the pharmacy students applied what they had been taught in the training courses, as well as demonstrated the skills required to obtain a high grade. Understanding patients' face needs is necessary to improving the communication skills of students as an important component in building good rapport. As such, how to teach students to meet patient face needs is discussed later in this chapter.

Furthermore it seems that education programmes related to communication skills do not consider the sequences of acts (i.e. assessing patient responses). Pharmacy students have not been taught to consider the different responses of patients in the way PT would suggest is important (GPhC, 2021; ACPE, 2016).

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Recognising patient responses, particularly the dis-preferred ones, is one potential way to meet patient needs and concerns, thus building a trusting relationship. When patients are in a consultation, for example, about their diet or alcohol consumption, they are likely to express different responses that may range from preferred to dis-preferred. Nevertheless, those who interact with patients must be aware of all situations and understand the reasons for their responses. Having this knowledge may assist students in dealing effectively with different situations. Patients' dis-preferred responses may indicate communication problems. For example, it is possible that patients' dis-preferred responses reflect automatic reactions prompted by embarrassment when discussing sensitive topics or by an imposition on their freedom when being given recommendations. Dis-preferred responses may also reflect other issues in communication; for example, when a question is being asked and the patient is expressing hesitation or a delayed answer, this indicates either a problem with the question (i.e. the patient does not understand the question), or a problem with the answer (Nguyen, 2013). Therefore, it is important to observe patient responses, including verbal and non-verbal signs.

This study calls for improvements to the educational and practical programme to include the context of patient face needs and conversational strategies for properly dealing with different situations. Introducing politeness theory in communication skills education programmes can help students develop a deeper understanding of social dynamics and improve their communication skills. Thus, there is a need for pharmacy students to learn how to recognise different type of FTAs and the best ways to mitigate these for more concordant consultations. It

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has also been concluded that instructional methods are more effective than exposure methods in learning politeness pragmatics (Rose and Kasper, 2001; Félix-Brasdefer and Mugford, 2017). Thus, students need to be instructed and assessed on the use of politeness strategies. For example, this might involve teaching and then assessing how a student deals with any acts that highly impact patient face needs, particularly whether there are delays or hesitations in the patient response or minimisation of or justification for their act. This is because patient responses can be considered indicators that patients feel embarrassed, necessitating support strategies to meet patients' positive face needs.

Implementing this teaching strategy, from an educator's perspective, can be achieved by drawing on existing knowledge. For example, how to teach students in the classroom to use politeness in their communication has been a topic among many researchers in the field of linguistic pragmatism (Félix-Brasdefer and Mugford, 2017; Bou-Franch and Garcés-Conejos, 2003; Rose and Kasper, 2001) and numerous models have been suggested for this purpose that include the following steps:

1. Raising awareness of politeness and face concepts: The politeness theory framework is an essential tool for communication skills education, because it provides students with the tools to construct more effective and respectful communication in various contexts. Indeed, by introducing the concept of face, students can learn about positive face (the desire for approval and confirmation) and negative face (the desire for autonomy and independence), as well as how to balance the two in different situations. By teaching politeness strategies, students can learn how to

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adopt indirectness and to hedge and mitigate language, which will help to avoid offending while still conveying their message effectively. These strategies will help to avoid offending others while still accomplishing the tasks effectively.

2. Enabling comparisons between different situations (e.g. politeness vs [im]politeness): Analysing different real-life situations, where effective communication was not achieved due to politeness misunderstandings (impoliteness), can help convey the importance of awareness of politeness strategies in various contexts.
3. Giving learners the opportunity to analyse case studies: Case studies allow students to analyse real-life scenarios and identify the positive and negative face needs of patients. By discussing these cases, students can develop a better understanding of how to address patients' needs in different situations.
4. Roleplaying exercises: Roleplaying can be used to give students practice in applying politeness strategies in different scenarios. By roleplaying, students can experience different perspectives and develop empathy for others.
5. Recognising inter-cultural similarities and differences in relation to politeness: For effective patient communication, it is crucial to understand and respect the norms and value of each patient's culture. Pharmacists should provide a safe and respectful environment that meets patients' positive and negative face needs, regardless of their cultural or linguistic background. This can be achieved by developing education programmes that incorporate courses promoting cultural competence and sensitivity to

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ensure healthcare professionals are equipped with the necessary tools to provide culturally appropriate care and to adjust said care accordingly.

This also could help students develop their cultural and communication competence and to avoid cross-cultural misunderstandings (Bou-Franch and Garcés-Conejos, 2003).

6. Educational programmes can offer feedback on students' performances, which can aid them in understanding others' perspectives and their strengths and weaknesses, as well as encourage them to consider patients' positive and negative face needs.

### **6.1. Significant research findings**

The findings of this study are presented as a scheme, as shown in Figure 13, the key findings of which are as follows:

- Roter's method can be used to describe briefly interactions with patients and to assess the effectiveness of training courses, while CA methods can be used to explore the specific detailed features of interactions and sequences of discussions.
- Most acts during patient consultation had the potential to impact patients' negative face needs (i.e. desire to act autonomously), positive face needs (i.e. desire to be liked) or both.
- Pharmacy students intrinsically try to mitigate most face-threatening acts while interacting with patients (assessors/actors) during OSCEs by using a variety of positive and negative politeness strategies.

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- The students were mainly interested in maintaining patients' negative face needs (their autonomy) rather than their positive face needs (to be desirable).
- Significant threats to face were identified when students discussed sensitive topics (e.g. alcohol consumption) and gave recommendations (e.g. referral to GP) within OSCEs.
- Patients dispreferred responses mainly related to their feelings of embarrassment (i.e. threatening positive face needs), particularly when associated with disclosing unhealthy lifestyle behaviours.
- Pharmacy students failed to consider patients' positive face needs (avoid embarrassment) by not providing positive feedback when patients expressed some dissatisfaction.
- Improving educational programmes to include the context of patient face needs and conversational strategies for properly dealing with different situations is necessary to build better rapport.



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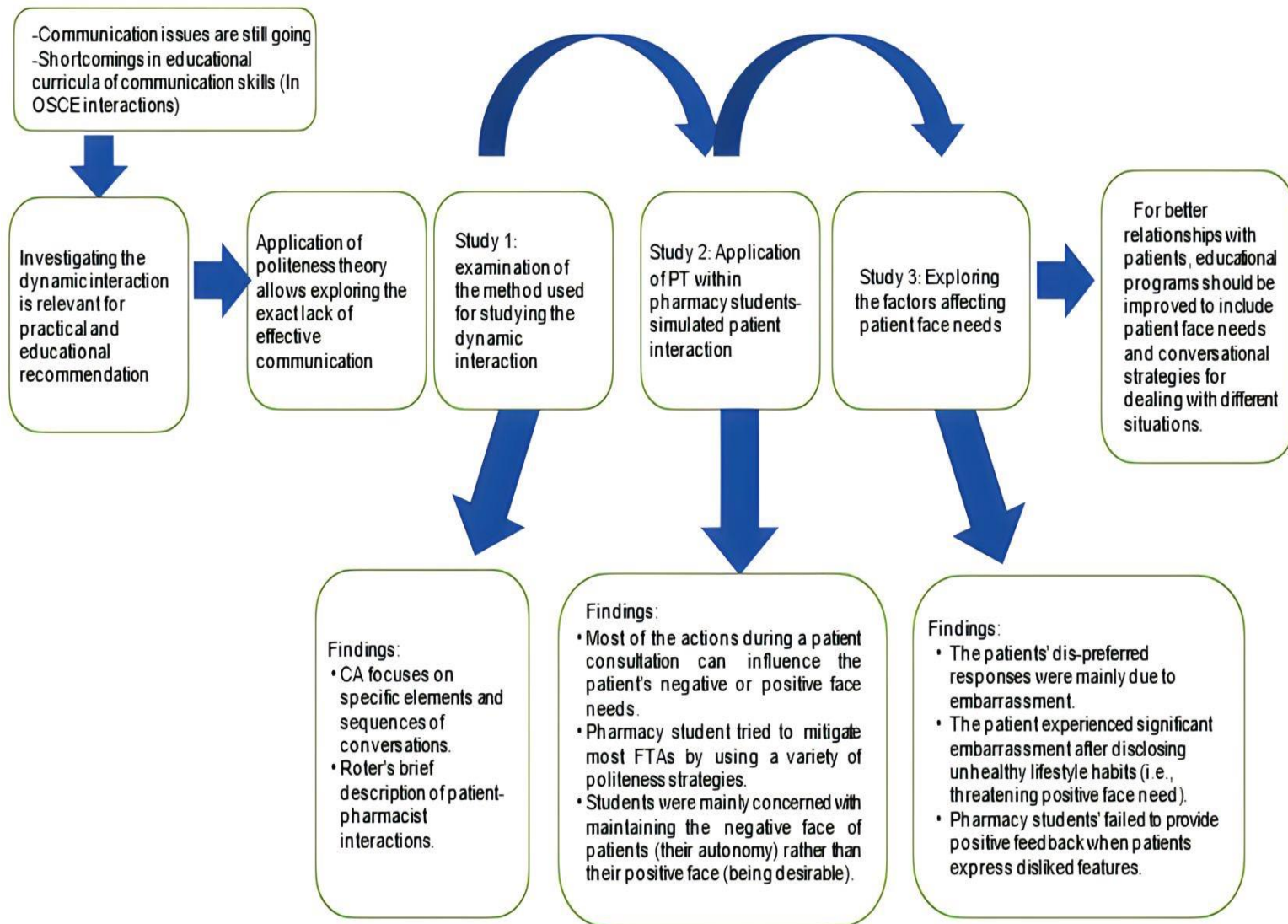


Figure 13 The findings of this study are presented as a scheme.

## **6.2. Research strengths and limitations**

One of the strengths of this study is the use of CA together with PT to consider the sequencing of acts as well the presence of FTAs and the politeness strategies used. The adoption of these two frameworks provides a detailed analysis of how people use language to express their preferences and manage social relationships. By examining the relationship between the preference organisation of CA and face-saving strategies of PT, researchers can gain insights into how pharmacy students—or healthcare professionals in general—use language to maintain social relationships with patients during social interactions. Thus, conversation analysis can be applied to understand how politeness is achieved through conversational practices, which means researchers can study the ways in which participants in a conversation manage face needs, employ politeness strategies and achieve politeness within the conversation context. .

Furthermore, the data were analysed using both qualitative and quantitative methods (i.e. PT and CA, as well as statistical analysis) to provide the reader with a full understanding of the subject matter. Using both methods sequentially enabled the identification of specific ongoing issues, including how to make improvements (via PT and CA), and generalisation of the findings (using statistical analysis) to enrich communications research.

However, some limitations exist in this research study, which are highlighted as follows:

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1. Failure to consider cultural and personality factors, such as the gender and culture of participants, was a potential limitation of this work, as these factors may impact patients' face needs (Harris and Darby, 2009).
2. Although the sample size is sufficient for CA studies, there was potentially selection bias in the examination of data from one setting only, as the local culture and teaching practices could have impacted the findings.
3. The sample was self-selected. Thus, it is possible that only certain types of student volunteers took part in the study, although it is not possible to know for certain.
4. Another weakness of this study was its inability to divulge information about the students' performance and work experience history, which may have also impacted the results.

### **6.3. Contribution to knowledge**

In this thesis, the dynamic interaction between pharmacy students and patients was examined. As part of the methodological contribution, a flowchart (Figure 6) demonstrating the utility of two different established methods for assessing dynamic interactions within pharmacy settings (RIAS and CA) was proposed to help other researchers choose the appropriate method(s) for their own research. As far as I am aware, this study is the first to investigate the dynamic interactions with simulated patients using politeness theory and conversation analysis, which offers a significant contribution to the fields of theory and practice. The application of conversation analysis, in combination with Brown and Levenson's politeness theory (1987),

provides a unique approach that considers the sequences of acts and nonverbal communication, as well as the politeness strategies used. This research makes a significant contribution to the field of education and the practice of communicating with patients, both in pharmacy settings and in the medical field. It investigated the concept of patient face needs, the different expressions of patient needs and the conversational strategies employed by pharmacy students to address patient face needs.

### **6.4. Recommendations**

The aim of this study was to produce recommendations for improving communication with patients. In light of this, the findings of this study offer some recommendations to improve educational programmes and thus practical settings. It is important to highlight that the findings of this study can be applied more broadly to patient communication within pharmacy practice and other medical fields.

From an educational viewpoint, the findings of this study recommend increasing educators' awareness of concepts relating to patient face needs and PT and developing a training programme to introduce the topic of patient face needs. In addition, assessment tools must be developed to include students' ability to maintain patient face in the communication skills assessment. Furthermore, it is suggested that a teaching programme for pharmacists and healthcare professionals be developed that considers patient responses (preferred versus dispreferred). All

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these educational proposals to improve teaching and assessment methods will ideally advance communication skills and pharmacy practices.

From a practical perspective, pharmacy staff are advised to continue their education to stay up to date with the latest research on and best practices in addressing the positive and negative face needs of patients. This requires increasing pharmacy staff awareness of the concept of PT (the cases of FTAs in interaction with patients and the best strategies to use), as well as a CA preference system (preferred versus dispreferred responses).

### **6.5. Future research work**

According to the presented research study findings, there is an apparent need for further research on the concept of 'face' within different settings. My research used OSCE interactions between pharmacy students and simulated patients to investigate patients' face needs using PT and CA. Thus, further investigation involving qualified pharmacists is required. In addition, pharmacists—or healthcare professionals in general—have their own face needs related to autonomy and the desire to be liked. It was noted in this study and elsewhere that pharmacy professionals' positive face needs are also affected when patients refuse their recommendations, such as when encountering resistance when referring a patient to their GP (Murad, A. Spiers and Guirguis, 2016; Salter, 2010). Thus, a future study might examine how pharmacy students, and healthcare professionals more

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generally, preserve their own face needs, particularly when they conflict with patient face needs.

A future study could also focus on exploring the impacts of gender or cultural factors on maintaining patient face needs, which will aid in identifying other issues related to face concepts. Meanwhile, further research could focus on assessing the impact of new training programmes that involve face concepts and that use politeness strategies on students' communication skills before and after the course, as well as whether saving patient face necessitates aid towards increasing patient empowerment and patient-centred approaches.

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## Appendices

**Appendix A : The full version of Brown and Levinson (1987) with examples. Bald on record: (where S want to complete the FTA with maximum efficacy more than s/he wants to satisfy H face).**

Category	Strategy	Example
Cases of non-minimisation of face threat	Urgency	Help! Your pants are on fire!
	Imperative	Excuse me Forgive me Accept my thanks
	Task orientation	Lend me a hand
	FTA doing is primarily in H's interest: Sympathetic advice or warning	Your headlights are on Take care Enjoy Don't be sad
	S wants to be rude S does not care about H's face	Get angry
	S's want to satisfy H's face is small ( S is more power than H)	Bring me wine, Jeeves
Cases of FTA oriented bald on record	Each participant attempts to foresee what other participant is attempting to foresee (actually face oriented) S insists that H may impose on his negative face (welcoming, offer) or transgress on his positive face (farewell)	Come in Come again Sit down Don't worry about me

## Positive politeness (redress in relation to positive face).

Category	Subcategory	Strategies	Description	Example
Claim common ground	Convey X is admirable interesting	Notice attends to H	Noticeable changes, anything which looks as though H would want S to notice or If H make faux pas S should indicate that he is not embarrassed by it by joking or including him/herself	Goodness you cut your hair!  We ate too many buns tonight, didn't we?
		Exaggerate	Exaggerate intonation, stress, other intensifying modifiers	What a fantastic garden you have? For sure, exactly, really, absolutely
		Intensify interest to H	S shares some of H wants to intensify the interest of his/her own wants	
	Claim in-group membership:	Use in-group identity marker: Using any innumerable way to convey in-group membership	Address form	Help me with this bag, will you son/ luv?
			Use of in-group language or dialect:	The phenomena of code-switching (from one language or dialect to another where one considered as high prestigious and other low domestic)
			Contraction and ellipsis Use of jargon or slang	Lent us two quid then would mate?
	Claim common ground	Seek agreement	Allows S to stress his agreement with H and thus to satisfy H's desire to be right by:	A: John went to London this weekend! B: To London
			Safe topic or Repetition	

		Avoid disagreement	Token agreement: Pretending to agree	A: That's where you live, Florida? B: That's where I was born
			Pseudo- agreement	I'll be seeing you then (then and so often used where there is no prior agreement)
			White lies	Yes I like your new hat
			Hedge opinion	I really sort of / kind of ( think/ hope/ wonder )....
		Presuppose/ raise / arrest/ common ground	Gossip, small talk: S talking for a while about unrelated topics before doing FTA	
			Point of view operation: Personal centre switch: S speaks as if H were S	Dr : Now, have <u>we</u> taken our medicine? I had a hard time of learning to drive. <u>Didn't I?</u> I had a hard time of learning to drive. You know/ you see
			Point of view operation : Switch time: the use of vivid present. A tense shift from past to present.	John says he really loves your roses.
			Point of view operation: Switch place: use of proximal (here, this) rather than distal (that, there)→ seems to increase involvement and empathy	This was a lovely part. Here is a man I could trust
			Point of view operation: Avoidance adjustment of reports of H's point of view	

			Point of view operation: The use of verb movement to and from: Bring and take (p. 121) Come (to convey participation and cooperation) and go (to convey distance and less participation)	Do you want to come (go) with me?
			Point of view operation: Directly quoted speech	
			Presupposition manipulation: Presuppose knowledge of H's wants and attitude	Negative questions, presume yes as an answer Don't you want some dinner?
			Presupposition manipulation: Presuppose H's values are the same S's value	The use of scalar predicates assume that S and H share same criteria for placing people or thing on this scale
			Presupposition manipulation: Presuppose knowledge of H's wants	How about letting me have one of those (sniffing appreciatively at the smell of cookies wafting in) Oh! This is lovely (on walking into house) You know I've got this test coming up, well how about lending me your Encyclopaedias? (concerning S's needs)
			Presupposition manipulation: Presuppose familiarity in H-S relationship	The use of familiar address forms like honey sonny

		Jokes	Used to stress shared background or shared values In response to faux pas	Ok if I tackle those cookies now?
Convey that S and are co-operators in relative activity:	Indicate S knows H's wants and is considering	Assert or presuppose S's knowledge of and concern for H's wants	To put pressure on H to cooperate with S: Negative question	I know you want your car back by 5 pm, shouldn't I go to town now? I know you can't bear parties, but this one will really be good, do come?
	Claim reflexivity	Offer, promise	Claim that whatever H wants, S wants for him and will help to obtain. The natural outcomes of choosing this strategy	
		Be optimistic	Claim that H will co-operate with S because will be mutual shared interest Optimistic expressions of FTAs	You will lend me your bike, right? / I hope /won't you / I imagine / won't mind? I've come to borrow a cup of flour. A bit, for a second, a little.
		Include both S and H in the activity	Call upon cooperative assumptions and therapy	Let's ..... Us Shall we For our benefit
		Give or ask for reason	Reason to why S want and what he wants from including H In the activity	Why not lend me your .....? We will shut the window, the wind's coming in.
	Claim reciprocity	Assume or arrest reciprocity	S soften FTA by negating the debt aspect	I will do X for you, if you do Y for me.
Fulfil H's want for some X		Give Gift	Goods, Sympathy, Understanding, Cooperation	



Negative politeness (redress in relation to negative face).

Category	Strategies	Description	Subcategory	Example
Be direct:	Be conventionally indirect	on record delivery and redress the FTAs	Politeness and universality of indirect speech acts	Question: Can you please pass the salt?
			Degree of politeness Being pessimistic more preferred than hedge and question alone (p 142)	Could you (possibly/ I suppose/ perhaps/ by any chance) pass the salt please, couldn't you? Assertion: I'd like you to shut the door. You could not (possibly/ I suppose/ perhaps/ by any chance) pass the salt please, could you?
Don't presume/ assume: Make minimal assumptions about H's wants, what is relevant to H	Question/ hedge: Don't assume H is able/ willing to do A	Hedge: word, or phrase that modifies the degree of membership of predicate or noun phrase in a set	Hedge on illocutionary force	Hedge (sort of / a regular/ is a true/ pretty sure/ quite right/ not technically)
			Adverb – clause hedges	In fact, in a way as it were, I should not be surprised, it seems to me, don't you agree If you can If I may ask you If you don't mind

			Hedge addressed to Grice's Maxims	I think I believe I assume I would say
			Hedge addressed to politeness strategies	To be honest I hate to have to say..... Frankly
			Prosodic and kinetics hedge (salient clue)	Raise eyebrow, earnest frown, the umms and ahhs and hesitation that indicates the S's attitude toward what he is saying
Don't coerce H: Give H option not to do act Minimize threat	Be pessimistic	By explicitly expressing doubt that the conditions for the appropriateness of S's speech act obtain	Subjunctive	Could / would / might (can/ will/ might) you do this? I don't imagine/ suppose there'd be any chance / possibility / hope of you?
			The use of negative	
			The use of remote-possibility markers	
	Minimize the imposition	Is to indicate that intrinsic seriousness of imposition is not in itself great. Preceding an FTA with disclaimer: 'Nothing'		I just want to ask you if I can borrow a little (tiny bit of / single sheet of ) paper.
	Give deference	H is of higher social status than S S humbles and abases himself or S raises H	Encode deference in generalized forms of address	Sir, madam, lady, Mr. President, Lord
			Humbling S	I think I must be absolutely stupid but I simply can't understand this map

Communicate S's want to not impinge on H	Apologize	S indicate his reluctance to impinge on H's negative face	H wants more more important than S	Just as you like
			Hesitation	Uh
			Admit the impingement	I am sure you must be busy, but I'd like to ask you a big favour
			Indicate reluctance	I don't want to bother you, but I hope you don't mind me saying this, but.
	Impersonalize S and H	To phrase the FTA as if the agent were other than S	Give overwhelming reason	I am absolutely lost I simply can't manage to
			Seek forgiveness	Excuse me, but..... Forgive me
			Performatives	Do this for me
			imperatives	Take that out
			Impersonal verb	It is necessary that ... It appears to me that.....
			Passive and circumstantial voices	It would be appreciated if ... If it is possible.....
			Pluralization of You and I	We cannot accept responsibility

			Point-of-view distancing	I wondered whether I might ask you... I was wondering whether you could do me a little favour Could I borrow a tiny bit of <u>that/ this</u> paper?
			Replacement of the pronoun I and you by indefinites	One might think... Someone I know .....
	State the FTA as a general rule	To state the FTA as an instance of someone general rule, regulation		The committee requests the president..... We don't sit on tables, we sit on chairs
	Nominalize			
Redress others H wants: To offering partial compensation for the face threat in the FTA by redressing some other wants of H's	Incurring a debt or as indebting H		To explicitly claiming his indebtedness to H	I'd be eternally grateful if you would .....
			or To explicitly disclaim any indebtedness of H	I can easily do it for you

Off-record (using hints indirectly).

Category	Strategies	Description	Subcategory	Example
Invite conversational implicatures: To do FTA indirectly and H interprets what S really means (intends) to say.	Violate relevance Maxim	Give hints	Say something that is not explicitly relevant and invite H to interpret	What a hot day! (meaning: how about a drink?)
		Give association clues	Say something associated with act required of H	Oh God, I've got a headache again. (meaning: I want to borrow swimming suit)
		Presuppose	The use of again force H to search for the relevance of the presupposed prior event	I washed the car again
	Violate quantity Maxim	Understate	By saying less than required	It is all right / pretty nice/ ok (meaning: I don't particularly like it)
		Overstate	By saying more than required	There were a million people in the co-op tonight./ Why you are always smoking?
		Use tautologies	By saying patent and necessary truths	If I won't give it, I won't War is war
	Violate quality Maxim	Use contradictions	S makes it appear that he cannot be telling the truth	Are you upset about that?/ Well. Yes and no/ John is here and he isn't here
		Be ironic	By saying opposite of what means	John's a real genius (after John has done 20 stupid things)
		Use metaphor	Use of metaphor	He is a real fish

		Use rhetorical question	To ask question without intention of obtaining answer	How many times do I have to tell you? What I can say?
Be vague and ambiguous	Violate manner Maxim	Be ambiguous	Use of metaphor or Use of stretching term	John's pretty (sharp/smooth) cookie
		Be vague	By being vague about who is the object of the FTA	Perhaps someone did something naughty
		Over-generalize	General rule or proverbs	Mature people sometime help to do dishes He who laughs last laughs longest
		Displace H	S pretends to address the FTA to someone who wouldn't be threatened	
		Be incomplete, use ellipsis	S can leave the implicature hanging on the air	Well, I did not see you...

## Appendix B: Categories of the Roter Interaction Analysis System (RIAS) obtained from Cavaco and Roter (2010).

Functional grouping	Communication behaviour	Examples
Data-gathering skills	Open-ended question <ul style="list-style-type: none"> <li>• medical condition</li> <li>• therapeutic regimen</li> <li>• lifestyle and self-care</li> <li>• psychosocial topics</li> </ul> Closed-ended question <ul style="list-style-type: none"> <li>• medical condition,</li> <li>• therapeutic regimen,</li> <li>• lifestyle and self-care,</li> <li>• psychosocial topics</li> </ul>	What can you tell me about the pain? How are the meds working? What are you doing to keep yourself healthy? What's happening with his father?  Does it hurt now? Are you taking your meds? Do you still smoke? Is your wife back at home?
Patient education and counselling skills	Biomedical information <ul style="list-style-type: none"> <li>• about medical condition</li> <li>• therapeutic regimen</li> </ul> Lifestyle and self-care information Psychosocial exchange about problems of daily living, issues about social relations, feelings, emotions	Your blood sugar is still high—not any lower than last time. You will have to watch your diet more carefully, especially the carbohydrates. Getting plenty of exercise is always a good idea. I can give you some tips on quitting smoking. It's important to get out and do something with other people every day.
Relationship skills	Positive talk <ul style="list-style-type: none"> <li>• agreements</li> <li>• jokes and laughter</li> <li>• approvals/compliments</li> </ul> Negative talk <ul style="list-style-type: none"> <li>• disagreements</li> <li>• disapproval and criticisms</li> </ul> Social talk (non-medical, chit-chat) Emotional talk <ul style="list-style-type: none"> <li>• concerns</li> <li>• reassurance</li> <li>• legitimate</li> <li>• empathy</li> <li>• partnership</li> </ul>	Yes, I agree that is the way to go. I will have to take your blood again—you must think I am a vampire. You look fantastic, you are doing great.  No, I don't think that would work for me. I think you are wrong, you weren't being careful. How about them O's last night?  I'm worried about that. I'm sure it will improve in the next few days. Anyone would worry if they felt as bad as you do. I can see how angry that makes you. We'll get through this together.
Partnering skills	Partnering and activation <ul style="list-style-type: none"> <li>• asking for patient opinion,</li> <li>• asking for understanding,</li> <li>• paraphrase and interpretation</li> <li>• cues of interest (back-channel)</li> </ul> Orientation (directions, instructions)	What do you think would help? Do you follow me? Let me make sure I've got what you meant. I heard you say the meds didn't work for you because it made you feel jittery. Right, go on, ... I'd like to do a physical now. Get up on the table. Now we'll check your back.

# Appendix C: The search history for databases showing the queries constructed and the final yield.

## Cochrane Library Database

Search	Query	Items found
1	"Conversation analysis" title abstract keywords	24
2	S1 AND Pharm*	0
3	"Roter interaction analysis system" title abstract keywords	46
4	S3 AND Pharm*	1
5	"RIAS" title abstract keywords	246
6	S4 AND Pharm*	1
7	S2 OR S4 OR S6	1

## PubMed Database

Search	Query	Items found
S1	conversation* analy*	5918
S2	Pharm*	761779
S3	S1 AND S2	246
S4	S3 ("conversation* analy*") AND pharm* AND (hasabstract[text])	11
S5	S4 ("conversation* analy*") AND pharm* AND (hasabstract[text] AND English[lang])	11
S6	Roter* interaction analysis System	280
S7	"Roter* interaction analysis System"	262
S8	'RISA'	1370
S9	S3 AND ( S7or S8) (pharma*) AND ("RIAS" OR "Roter* interaction analysis System")	310
S10	S9 ( pharma*) AND ("RIAS" OR "Roter* interaction analysis System") AND (hasabstract[text])	310
S11	S10 (pharma*) AND ("RIAS" OR "Roter* interaction analysis System") AND (hasabstract[text] AND English[lang])	303
S12	S5 OR S11 ("pharma*[All Fields] AND "RIAS"[All Fields] AND ("hasabstract"[All Fields] AND "english"[Language])) OR ("conversation analy*[All Fields]	314

## PsycINFO Database

Search	Query	Items found
S1	Conversation* analy*	9236
S 2	"Conversation* analy*"	2650
S 3	Pharm*	25799
S 4	S2 AND S3	12



	" ("conversation analysis" and Pharm*).mp. [mp=title, abstract, heading word, table of contents, key concepts, original title, tests & measures, mesh]	
S 5	Roter interaction analysis system	198
S 6	"Roter interaction analysis system" "Roter interaction analysis system".mp. [mp=title, abstract, heading word, table of contents, key concepts, original title, tests & measures, mesh]	198
S 7	"RIAS" "RIAS".mp. [mp=title, abstract, heading word, table of contents, key concepts, original title, tests & measures, mesh]	274
S 8	S3 AND S7 "RIAS" AND Pharm* (Roter interaction analysis system and PHARM*).mp. [mp=title, abstract, heading word, table of contents, key concepts, original title, tests & measures, mesh]	5
S 9	S3 AND S6 Roter interaction analysis system AND pharm* (pharm* and "Roter interaction analysis system").mp. [mp=title, abstract, heading word, table of contents, key concepts, original title, tests & measures, mesh]	5
S 10	S4 OR S8 OR S9	20

## Scopus Database

Search	Query	Items found
S1	<b>Conversation analysis TITLE-ABS-KEY ( conversation AND analysis )</b>	24481
S2	<b>( "conversation* analy*" ) TITLE-ABS-KEY ( "conversation analy*" )</b>	5322
S3	<b>S1 AND Pharma* ( TITLE-ABS-KEY ( "conversation analy*" ) ) AND ( pharm* )</b>	165
S4	<b>S2 abstract limit AND English limits TITLE-ABS-KEY ( "conversation analy*" pharm* )</b>	19
S5	Roter interaction analysis system	924
S6	<b>"Roter interaction analysis system" TITLE-ABS-KEY ( "Roter interaction analysis system" )</b>	284
S7	<b>S5 "Roter interaction analysis system" AND pharm* TITLE-ABS-KEY ( "Roter interaction analysis system" pharm* )</b>	10
S8	RIAS	8,402
S9	<b>"RIAS" TITLE-ABS-KEY ( "rias" )</b>	2603
S10	<b>S8 "RIAS"AND Pharm* TITLE-ABS-KEY ( "RIAS" pharm* )</b>	58
S11	<b>S9 English limits TITLE-ABS-KEY ( "RIAS" pharm* ) AND ( LIMIT-TO ( LANGUAGE , "English" ) )</b>	55

S12	<b>S4 OR S7 OR S11 ( TITLE-ABS-KEY ( "RIAS" pharm* ) ) OR ( TITLE-ABS-KEY ( "Roter interaction analysis system" pharm* ) ) OR ( TITLE-ABS-KEY ( "conversation analy*" pharma* ) ) AND ( LIMIT-TO ( LANGUAGE , "English" ) )</b>	77
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ScienceDirect Database: note: does not support ( \* ) mark.

Search	Query	Items found
S1	conversation analysis	148117
S2	( "conversation* analy*" )	3289
S3	OR "conversation-analysis" pharmacy or pharmacist or pharmaceutical	58
S4	S3 plus Title, abstract, keywords limit	22
S5	( Roter AND interaction AND analysis AND system )	<b>11,854</b>
S6	"Roter interaction analysis system"	358
S7	"Roter interaction analysis system" AND (pharmacy or pharmacist or pharmaceutical )	31
S8	S7 add limit Title, abstract, keywords	3
S9	"RIAS"	148665
S10	"RIAS" AND (pharmacy or pharmacist or pharmaceutical )	3874
S11	S10 add limit Title, abstract, keywords	3
S12	S4 OR S8 Or S11	26

#### Summon Database

Search	Query	Items found
S1	conversation AND analysis	1,670,638
S2	("conversation analysis")	24344
S3	S2 AND Pharm*	1430
S4	S3 plus and English language limit	1259
S5	S4 add limits abstract	23
S6	Roter interaction analysis system	7600
S7	"Roter interaction analysis system"	1096
S8	("Roter interaction analysis system") AND (Pharm*)	274
S9	S8 abstract	15
S10	S9 plus and English language limit	13

S10	RIAS	479,636
S11	("RIAS") AND (Pharm*)	102,939
S12	11 + Abstract	579
S13	S12 English	480
S14	S5 OR S9 or S13	505

#### Web of Science Database

Search	Query	Items found
S1	(conversation* analy*)	32,256
S2	("conversation* analy*")	5538
S3	("conversation* analy*" pharma*)	27
S4	S3 AND English language	25
S5	Roter* interaction analysis system	316
S6	"Roter* interaction analysis system"	289
S7	"Roter* interaction analysis system" And Pharm*	12
S8	S7 AND English language	12
S9	("RIAS")	2621
S10	"RIAS" pharma*	417
S11	S10 ADD English language	404
S12	S8 OR S11	404
S13	S4 OR S12	429

**Appendix D An illustration of compliance with the reporting guideline for qualitative systematic reviews: Enhancing transparency in reporting the synthesis of qualitative research: ENTREQ.**

	Item	Guide and description	Included
1	Aim	State the research question the synthesis addresses.	Y
2	Synthesis methodology	Identify the synthesis methodology or theoretical framework which underpins the synthesis, and describe the rationale for choice of methodology (e.g. meta-ethnography, thematic synthesis, critical interpretive synthesis, grounded theory synthesis, realist synthesis, meta-aggregation, meta-study, framework synthesis).	Y
3	Approach to searching	Indicate whether the search was pre-planned (comprehensive search strategies to seek all available studies) or iterative (to seek all available concepts until they theoretical saturation is achieved).	Y
4	Inclusion criteria	Specify the inclusion/exclusion criteria (e.g. in terms of population, language, year limits, type of publication, study type).	Y
5	Data sources	Describe the information sources used (e.g. electronic databases (MEDLINE, EMBASE, CINAHL, psycINFO, Econlit), grey literature databases (digital thesis, policy reports), relevant organisational websites, experts, information specialists, generic web searches (Google Scholar) hand searching, reference lists) and when the searches conducted; provide the rationale for using the data sources.	Y
6	Electronic Search strategy	Describe the literature search (e.g. provide electronic search strategies with population terms, clinical or health topic terms, experiential or social phenomena related terms, filters for qualitative research, and search limits).	Y
7	Study screening methods	Describe the process of study screening and sifting (e.g. title, abstract and full text review, number of independent reviewers who screened studies).	Y
8	Study characteristics	Present the characteristics of the included studies (e.g. year of publication, country, population, number of participants, data collection, methodology, analysis, research questions).	Y

	Item	Guide and description	Included
9	Study selection results	Identify the number of studies screened and provide reasons for study exclusion (e.g, for comprehensive searching, provide numbers of studies screened and reasons for exclusion indicated in a figure/flowchart; for iterative searching describe reasons for study exclusion and inclusion based on modifications to the research question and/or contribution to theory development).	Y
10	Rationale for appraisal	Describe the rationale and approach used to appraise the included studies or selected findings (e.g. assessment of conduct (validity and robustness), assessment of reporting (transparency), assessment of content and utility of the findings).	Y
11	Appraisal items	State the tools, frameworks and criteria used to appraise the studies or selected findings (e.g. Existing tools: CASP, QARI, COREQ, Mays and Pope; reviewer developed tools; describe the domains assessed: research team, study design, data analysis and interpretations, reporting).	Y
12	Appraisal process	Indicate whether the appraisal was conducted independently by more than one reviewer and if consensus was required.	N
13	Appraisal results	Present results of the quality assessment and indicate which articles, if any, were weighted/excluded based on the assessment and give the rationale.	Y
14	Data extraction	Indicate which sections of the primary studies were analysed and how were the data extracted from the primary studies? (e.g. all text under the headings “results /conclusions” were extracted electronically and entered into a computer software).	Y
15	Software ENDNOTE	State the computer software used, if any.	Y
16	Number of reviewers	Identify who was involved in coding and analysis.	Y
17	Coding	Describe the process for coding of data (e.g. line by line coding to search for concepts).	Y

	Item	Guide and description	Included
18	Study comparison	Describe how were comparisons made within and across studies (e.g. subsequent studies were coded into pre-existing concepts, and new concepts were created when deemed necessary).	Y
19	Derivation of themes	Explain whether the process of deriving the themes or constructs was inductive or deductive.	Y
20	Quotations	Provide quotations from the primary studies to illustrate themes/constructs, and identify whether the quotations were participant quotations of the author's interpretation.	Y
21	Synthesis output	Present rich, compelling and useful results that go beyond a summary of the primary studies (e.g. new interpretation, models of evidence, conceptual models, analytical framework, development of a new theory or construct).	Y

## **Appendix E: Circulating e-mail for recruiting participants.**

Dear student/alumni

Study title: Using conversation analysis to examine pharmacy student OSCEs

Would you be willing to share your video-recorded OSCEs with a Postgraduate Research student, Sarah Alsubaie?

Sarah is working with myself and Dan Grant.

The purpose of our project is to look in detail at the strategies that pharmacy students such as yourself use when dealing with scenarios within OSCEs. This will involve us retrieving the video recordings of your OSCEs (already recorded for quality assurance of the assessment) and examining them using a research method called Conversation Analysis.

We ideally need 10 students to take part in our study and share their videos with us. To take part, please could you reply to this email, enclosing the consent form (attached) with your name or signature and date inserted at the foot of the page? You don't need to do anything else.

We are unsure of the level of interest but would like to hear from you as soon as practically possible. If you are selected for our study, we will let you know and then send you an electronic £5 Amazon voucher via email within a few days to thank you as a result.

Please find enclosed a full information letter and consent form.

Please email me to ask any questions you have about the study or to send in your agreement to take part: p.donyai@reading.ac.uk

Please note that we would like to hear back from you by 1 July 2019.

Thank you in anticipation,

Parastou

Cc Sarah Alsubaie, PhD student, Dan Grant, Associate Professor

## Appendix F: Participant Information Letter.

### **BACKGROUND**

**We are interested in studying the OSCE performance of pharmacy students. We are interested in the way in which pharmacy students use conversational strategies to communicate with the examiner/actor. We want to do this study so that we can understand what works well (and less well) so that we can help the training of other students.**

We would like to invite you to take part in our study, which is about conversation strategies used by pharmacy students during OSCEs. We are contacting you as a present/previous student at Reading School of Pharmacy, having taken part in OSCEs.

### **Why are we conducting this project?**

We are conducting this study as part of a PhD project at the University of Reading. We hope this project will allow us to create an understanding about pharmacy students' communication

strategies, so that we can map what works well (and what works less well) for future students.

### **What will you have to do if you agree to take part in this project?**

If you are interested in taking part in this study, you would be emailing back a signed copy of the consent form to give us consent to access the recorded videos of your own OSCEs. You can email Parastou Donyai: [p.donyai@reading.ac.uk](mailto:p.donyai@reading.ac.uk) to send back the consent form and/or to ask any questions you have about the study. We need around 10 students to consent. We would also give you the option to view your videos again, in an office at the university, to see the material we will be using for the research.

### **Will you receive any payment for participating in this project?**

You will be thanked with a £5 electronically delivered Amazon voucher if your videos are selected for the study.

### **How much of your time will this project take?**

Your involvement will be to send back the signed consent form. If your project is selected and you wanted to see your OSCE videos again, to be sure of the material that is being used, there would also be some time implications there.

### **Will your personal information and participation remain confidential?**

If you agree to take part in this project, all your personal information will remain confidential and will never be shared with any other party. Your videos will only be accessed by the PhD student (Sarah Alsubaie) and the supervisors, Parastou Donyai and Dan Grant. To ensure your confidentiality and anonymity, your name or any identifiable information about you will never be documented against any OSCE transcript or anywhere else.

### **What are the advantages of taking part in this project?**

Taking part in this study will hopefully help to



improve other pharmacy students' education and training in the future. It will also help the training of the PhD student and potentially others who might read any resulting publications.

### **What are the disadvantages of taking part in this project?**

There are no obvious disadvantages in participating in this project. We would only access OSCEs that already been marked and finalized so there is no risk of your OSCE grades changing.

### **What will happen to the results of the study?**

The study results will be used in the PhD report of Sarah Alsubaie and any resulting presentation or publication. The outcomes may be presented at conferences and in peer-reviewed journals. If you volunteer for the study and you request so, you will be given access to your video recordings before they are used in the research. We will let you

see the videos once, within a private office at the University. You can also have access to the project results as we develop our findings. With your permission we would like to keep, share and reuse anonymised (meaning any information identifying you will be removed) study information after the project ends (e.g. transcripts of interactions).

### **Do you have to take part in this project?**

No. Taking part in this study is completely voluntary. You are not obligated to take part if you do not want to. If you do not wish to participate in this study you do not have to give a reason and you will not be contacted again. Also, if you agree to take part and are selected, you are free to withdraw from the study, up to two weeks after giving consent; this is because after 2 weeks we would have progressed too far into the project to remove your contribution from it.

### **What if there is a problem?**

If you have any complaints about the way you have been dealt with during the study, please contact us – see below.

### **What happens now?**

If you would like to participate in the study, please contact Parastou Donyai by email so that she can answer any questions you have and/or simply to receive your signed consent form. If you decide not to participate in the study, then no further contact is needed.

### **Who is organising and funding the research?**

This study is being conducted with the University of Reading acting as the academic institution for Sarah Alsubaie's PhD project.

### **Who has reviewed the study?**

This study has been reviewed and approved by procedures set out by the University of Reading Research Ethics Committee.

## **Data Protection**

The organisation responsible for protection of your personal information is the University of Reading (the Data Controller). Queries regarding data protection and your rights should be directed to the University Data Protection Officer at [imps@reading.ac.uk](mailto:imps@reading.ac.uk), or in writing to:

Information Management & Policy Services, University of Reading, Whiteknights, P O Box 217, Reading, RG6 6AH.

The University of Reading collects, analyses, uses, shares and retains personal data for the purposes of research in the public interest. Under data protection law we are required to inform you that this use of the personal data we may hold about you is on the lawful basis of being a public task in the public interest. If you withdraw from a research study, which processes your personal data, dependant on the stage of withdrawal, we may still rely on this lawful basis to continue using your data if your withdrawal would be of significant detriment to the research study aims. We will always have in place appropriate safeguards to protect your personal data.

If we have included any additional requests for use of your data, for example adding you to a registration list for the purposes of inviting you to take part in future studies, this will be done only with your consent where you have provided it to us and should you wish to be removed from the register at a later date, you should contact Professor Parastou Donyai (p.donyai@reading.ac.uk).

You have certain rights under data protection law which are:

Withdraw your consent, for example if you opted in to be added to a participant register

Access your personal data or ask for a copy

Rectify inaccuracies in personal data that we hold about you

Be forgotten, that is your details to be removed from systems that we use to process your personal data

Restrict uses of your data

Object to uses of your data, for example retention after you have withdrawn from a study

Some restrictions apply to the above rights where data is collected and used for research purposes.

You can find out more about your rights on the website of the Information Commissioners Office (ICO) at <https://ico.org.uk>

You also have a right to complain the ICO if you are unhappy with how your data has been handled. Please contact the University Data Protection Officer in the first instance.

**PhD Student Name:** Sarah Alsubaie

**Contact Information :** [s.alsubaie@pgr.reading.ac.uk](mailto:s.alsubaie@pgr.reading.ac.uk)

**Supervisor names:** Parastou Donyai, Dan Grant

**Primary email contact:** [p.donyai@reading.ac.uk](mailto:p.donyai@reading.ac.uk) (or alternatively [d.t.grant@reading.ac.uk](mailto:d.t.grant@reading.ac.uk))

**Phone:** 0118 378 4704

**Address:** Reading School of Pharmacy

Harry Nursten building, Whiteknights, PO Box 226, Reading RG6 6AP, UK

## Appendix G: Consent form.

Study title: Using conversation analysis to examine pharmacy student OSCEs

**Name of Researcher:** Parastou Donyai and Sarah Alsubaie

I confirm that I have read and understand the information sheet dated 1/05/19 v2 for the above study. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily.

I understand that my participation is voluntary and that I am free to withdraw at any time without giving any reason.

I understand that I have the right to end my participation in this project up to 2 weeks after consenting.

I understand that my participation in this study involves a researcher looking at my OSCE videos in order to identify features of communication. I give my permission to the researcher to examine and make transcripts of these videos.

I understand that my confidentiality as a participant in this study will remain secure and that the transcript of my videos will not contain my name.

I have received a copy of this Consent Form and of the accompanying Participant Information Sheet.

I give the researcher permission to preserve some or all the data I have provided over the long term and to make the data available in an anonymised form, either openly or subject to appropriate safeguards, so that it can be consulted and re-used by other researchers.

I wish to be contacted again about this study (e.g. to be updated on project progress or consulted on any findings or results summaries). For that purpose, my email address is: s.alsubaie@pgr.reading.ac.uk

9. I agree to take part in the above study.

Name.....

Signed.....Date.....

This project has been subject to ethical review, according to the procedures specified by the University Research Ethics Committee, and has been given a favourable ethical opinion for conduct.

Please  
initial  
box


## Appendix H: The Jefferson Transcription System Symbols (Jefferson, 2004).

SYMBOL	DESCRIPTION
(.)	A micro pause - a pause of no significant length.
(0.7)	A timed pause - long enough to indicate a time.
[ ]	Square brackets show where speech overlaps.
> <	Arrows showing that the pace of speech has quickened.
< >	Arrows showing that the pace of the speech has slowed down.
( )	Unclear section.
(( ))	An entry requiring comment but without a symbol to explain it.
Underlining	Denotes a raise in volume or emphasis.
↑	Rise in intonation
↓	Drop in intonation
→	Entered by the analyst to show a sentence of particular interest. Not usually added by the transcriber.
CAPITALS	Louder or shouted words.
(h)	Laughter in the conversation/speech.
=	Will be at the end of one sentence and the start of the next. It indicates that there was no pause between them.
:::	Colons - indicate a stretched sound.

## Appendix I: An example of the analysis sheet.

Document1 - Word

Table Tools

Sarah Alsubaie

File Home Insert Design Layout References Mailings Review View Help EndNote 20 Design Layout Tell me what you want to do Share

Student A

NO.	Transcription	Type of FTA	Politeness strategy of FTA	Type of patient Response	Student third response
1.	Ph Hi, I am XXX and am pharmacist. How can I help? Pt Aaa↑ (that's) blood pressure check please. Ph = Okay that's fine.	Request for information (negative FTAs)	Positive politeness: 8. Offer 15. give gift	Preferred response	Positive politeness: seek opportunity for agreement
2.	Ph before we start, ummm can I just take your name? Pt = Ya XXX XXX = Ph = XXX XXX nice to meet you.	Request for information (negative FTAs)	Negative politeness: 2) Question/ hedge 4) Minimizing the imposition  Positive politeness: Include both in the same activity	Preferred	Positive politeness: Seek opportunity for agreement.  Give gift (warm welcoming)
3.	Ph umm So are you aware of mmm what blood pressure test is? (0.75) Pt mmm, well, I have one but five years (...) Ph = okay.	Request for information (negative FTAs)	Negative politeness: 2) Question/ hedge	Dis-preferred	Positive politeness: seek opportunity for agreement
4.	Ph Yes, so what basic would blood pressure test is? Ummm we put the cuff around your arm Pt ((patient nodding)) Ph and just measure how your heart is working and like may be your heart under stress or not. bbb. (0.52) Ph so that's all it is,	Instruct to conduct the procedure (negative FTAs)	Negative politeness:  4) Minimizing the imposition  Positive politeness: Include both in the same activity	Preferred (Weak agreement)	
5.	Ph ummm before we start if you don't mind ask you, ( ) would you give me favour and print the consent= Pt = Yes sure Ph Perfect thank you very much, so how do you feel today? Pt = Ya good thanks (2.42) ((Pt read the consent form))	Request for permission (negative FTAs)	Negative politeness: 1) Be conventionally indirect 2) Question/ hedge 3) Be pessimistic  Positive politeness: Include both in the same activity.	Strongly Preferred	Positive politeness:  Exaggeration  Give gifts (concerns about patient)

Page 1 of 7 2366 words English (United Kingdom) 80%

## Appendix J: An example of the analysis Excel spreadsheet.

final Test hypothesis 1, 2, 3 Succeed in maintaining face need.docx - Excel

Sarah Alsubaie

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O1

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U
	Ref	Student	Station	supre FTAs	Type of FTAs	PS used by student	is patient response preferred ?	is ph st do effort to maintain pt. face													
1	1.	A	HLA	(negative FTAs)	Request for informatio	PP	Yes	Yes													
2	2.	A	HLA	(negative FTAs)	Request for informatio	PP and NP	Yes	Yes													
3	3.	A	HLA	(negative FTAs)	Request for informatio	NP	No	Yes													
4	4.	A	HLA	(negative FTAs)	Instruct to conduct the procedure	PP and NP	Yes	No													
5	5.	A	HLA	(negative FTAs)	Request for permissio	PP and NP	Yes	Yes													
6	6.	A	HLA	(negative FTAs)	Instruct to conduct the	NP	Yes	Yes													
7	7.	A	HLA	(negative FTAs)	Request for permissio	PP and NP	YES	No													
8	8.	A	HLA	(negative FTAs)	Request for informatio	BR	yes	Yes													
9																					

hypothesis 1 hypothesis 2 hypo 3 hypo 4 hypo 5 dis-preferred main sheet check ...

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## Appendix K: Application Form for Internal (School) Approval.

### SECTION 1: APPLICATION DETAILS

**Project Title:** Using conversation analysis to examine pharmacy student OSCEs

Date of Submission: 1 May 2019

Proposed start date: 1 July 2019

Proposed End Date: 1 July 2020

**1.2 Principal Investigator:** Professos Parastou Donyai

Office room number: 1.02 Harry Nursten Building  
4704

Internal telephone: 0118 378

Email address: p.donyai@reading.ac.uk Alternative contact telephone:  
(Please note that an undergraduate or postgraduate student cannot be a named  
principal investigator for research ethics purposes. The supervisor must be declared  
as Principal Investigator)

**Other applicants**

Name: Sarah Alsubaie (Student) Email: s.alsubaie@pgr.reading.

Name: Dan Grant, Email: d.t.grant@reading.ac.uk

....

### 1.3 Project Submission Declaration

I confirm that to the best of my knowledge I have made known all information relevant to the SCFP Research Ethics Committee and I undertake to inform the Committee of any such information which subsequently becomes available whether before or after the research has begun.

I understand that it is a legal requirement that both staff and students undergo Criminal Records Checks when in a position of trust (i.e. when working with children or vulnerable adults).

I confirm that a list of the names and addresses of the subjects in this project will be compiled and that this, together with a copy of the Consent Form, will be retained

within the School for a minimum of five years after the date that the project is completed.

Signed Prof. Parastou Donyai **Parastou** (Principal Investigator)

Date:...1/5/19

Sarah Alsubaie (PhD Student)

Date:

Dan Grant (Other named investigators)

Date:

#### 1.4 SCFP (Internal Approval) Ethics Committee Applications

Projects expected to require review by the SCFP **Ethics** Committee must be reviewed by a member of the School research **ethics** committee and the Head of School before submission.

Signed..... (Head of  
Department) Date:.....

Signed.....  
(SCFP **Ethics** Administrator) Date:.....



## SECTION 2: PROJECT DETAILS

2.1 Please provide a summary of the project in **non-specialist terms** that could be understood by **non-scientist members of the public**, which includes a description of the scientific background to the study (existing knowledge), the scientific questions the project will address and a justification of these. Please note that the description must be sufficient for the committee to take a reasonable view on the likely scientific rigour and value of the project

This project is set within the field of 'social and cognitive pharmacy' and involves the use of Conversation Analysis. It explores features of communication within oral performance-based exams to develop teaching resources.

The focus is on the way final-year pharmacy students interact with 'patients' within Objective Structured Clinical Examinations (OSCEs). OSCEs are standardised oral assessments which test a range of skills by getting students to act out what they would do in a real healthcare setting. An important feature of OSCEs is what pharmacy students do with what they know rather than what they know and remember. This project will use a credible research method called Conversation Analysis (CA) to examine video recordings of pharmacy students taking part in OSCEs within Reading School of Pharmacy. CA's rules are that the things people say, within an interaction, perform social action (e.g. taking a medication history), are connected in sequences (statements are inter-dependent and build up the social action), and that these sequences have a stable pattern so that how one person says something (e.g. asking about medication taking) affects, and somewhat predicts, how the other responds. This means that using CA allows us to identify and describe specific outcomes from how certain statements are made when people communicate. Although OSCEs are designed to use standardised patient answers, the founding basis of this research is that how students interact (the way they say something and what they say) will impact on the response they get from their 'patient' and so on. Exploring the link should help identify features of good and bad communication within performance-based exams. These findings can then be put into a resource to help improve the skills of other students in the future. Based on a similar project last year where we recruited 4 students, we have started to explore this area and will now focus on examining rapport building in more detail before finalising the training resource for students. For this, we need some additional videos and are hoping to recruit 10 additional students this year. Completing this work will enable the PhD student Sarah Alsubaie to develop conversation analytic expertise before she extends her work to real-world interactions for the remainder of her PhD.

(This box may be expanded as required – **Word Limit Maximum 250**)

### 2.2 Procedure

Please describe concisely what the study will involve for your participants and the procedures and methodology to be undertaken (**you may expand this box as required**).

The Part 4 OSCEs completed by MPharm undergraduates in the past 3 years have been video recorded and are stored securely on an external hard drive kept within the department for quality assurance purposes relating to teaching and assessment. Our plan is to contact students who have undertaken Part 4 OSCEs and ask their permission to use the video recordings of their OSCE station interactions in our research. We will contact present Part 4 students who have completed their degree in 2018/19 and hope to receive a sufficient response from that cohort. On receiving consent, each video will be retrieved, stored on a separate drive, password protected (and given restricted access) and subjected to closer scrutiny using CA methodology. The PhD student have started to work with the principal supervisor to learn about CA methodology by reading relevant textbooks and paper and completing a preliminary literature review. This training includes learning about the Jeffersonian transcription notation (<http://www.sscnet.ucla.edu/soc/faculty/schegloff>). Part of the training will involve close and repeated viewing of the videos for identification of segments for study. These segments will then be closely transcribed into word using Jeffersonian transcription notation, and analysed using CA methods. The transcribed data will then be analysed in detail using CA methods. This includes marking out the turn taking, sequence organisation, repair and word selection, which are the mainstay of the CA method for analysis. The aim will be to create a collection of similar conversational strategies in order to explore what action is achieved through these strategies (e.g. building rapport/not building rapport).

The general objectives are outlined here:

Learn about transcription of video using CA convention

Select OSCE videos across different students and scenarios

Engage in-depth with the selected videos to identify a narrower focus of analysis

Transcribe segments of videos relevant to the analysis

Undertake CA and identify the strategies that pharmacy students use in their OSCE interactions and the specific qualities that result in good (and bad) OSCE communications

Development of a teaching resource for pharmacy students preparing for OSCEs

Production of a conference abstract for submission to the Health Services Research and Pharmacy Practice Conference in October 2019

(Note: All questionnaires or interviews should be appended to this application)

2.3 Where will the project take place? **University of Reading**

If the project is to take place in Hugh Sinclair Unit of Human Nutrition, projects must be reviewed and approved by the Hugh Sinclair Manager (Dr Michelle Weech, [m.weech@reading.ac.uk](mailto:m.weech@reading.ac.uk))

Signed..... (Hugh Sinclair Unit Manager)

Date:.....

2.4 Funding

Is the research supported by funding from a research council or other external sources (e.g. charities, business)? No

If Yes, please give details:

Please note that all projects (except those considered as low risk, which would be the decision of the School's internal review committee and require Head of Department approval) require approval from the University Research Ethics Committee.

## 2.5 Ethical Issues

Could this research lead to any risk of harm or distress to the researcher, participant or immediate others? Please explain why this is necessary and how any risk will be managed.

This qualitative research is being completed using videos of OSCE consultations from the past. The students have given consent for the recording of these videos for use by staff for the purposes of assessment and quality assurance. However, students have not given permission for the videos to be used formally for research. As such, there are ethical issues to consider, described here. The main ones are outlined under the main headings for considering research ethics (as per the British Psychological Society code of human ethics) below:

Respect for the autonomy and dignity of persons: some people may not want for their videos to be used. Therefore, we will only access and use videos on explicit permission of the students. To do this, we will use an information sheet to detail the study. The information sheet makes it very clear that taking part in this research is completely voluntary and that any participant who wishes to, can either not give consent to start with or withdraw their consent at any time before, during and after the beginning of the study without any repercussions. This means that if people agree to participate but then change their minds, their data will be removed from the study and destroyed, and it will be made clear that this would be possible up until the completion of the data analysis (i.e. 2 weeks from their consent date). We will respect the privacy of individuals by making sure that they are not personally identifiable: any data collected (e.g. participant quotes transcribed from the interactions) will be anonymised so that these cannot be traced back to the individual.

Maximising benefit and minimising harm: we do not anticipate that the participants will be exposed to any harm. The only risk from a study such as this (i.e. examining videos of OSCE interactions from the past) is the risk of embarrassment that might arise from a narrow focus on behaviour that consenting participants will not be aware of. Therefore, the researchers will give participants who consent to take part the option to view their OSCE videos again before going ahead to fully share these with the research team.

(this box may be expanded as required)

## 2.6 Deception

Will the research involve any element of intentional deception at any stage (i.e. providing false or misleading information about the study, or omitting information)?

[If so, this should be justified. You should also consider including debriefing materials for participants, which outline the nature and the justification of the deception used]

No

### **2.7 Payment**

Will you be paying your participants for their involvement in the study? Yes

If yes, please specify and justify the amount paid

We believe it would be reasonable to make a payment of £5 in Amazon Vouchers to thank the participant for sharing their videos for our study. This is a minimal sum that is not considered to be coercive.

Note: excessive payment may be considered coercive and therefore unethical. Travel expenses need not to be declared.

### **2.8 Data protection and confidentiality**

What steps will be taken to ensure participant confidentiality? How will the data be stored?

Confidentiality will be ensured for all participants involved in the study. All the information gathered in the study will be used for scientific purposes only (i.e. making transcripts for qualitative analysis, and publication of findings in research papers or through conference presentations or workshops etc.). The participants' written consent will be obtained via email before each video is formally included as a research artefact. The researcher will then use a computer to view the videos and will make anonymised transcripts of them for analysis. The copy of the videos will be stored on a university password-protected computer in an encrypted file and will only be accessible to the researcher and the supervisors. The transcripts of the videos will be made onto Microsoft word documents with no indication to the participant's name or any information that might identify them. The electronic copies of the video transcripts will only be accessible to the researcher and the supervisors. All electronic copies of the research material will be stored in a university drive as an encrypted file only.

### **2.9 Consent**

Please describe the process by which participants will be informed about the nature of the study and the process by which you will obtain consent

All potential participants will receive an email with the information sheet (description of the study, reasons why the research is being conducted, reasons they have been chosen to volunteer to participate in the study, nature of the analysis that will be completed) and a consent form. Before consenting, potential participants will be given the opportunity to see their own videos within an office at the University. Also, the researcher will explain to the participant their right to withdraw from the study when communicating with them via email.

Written consent emailed through will be obtained before including each video as a formal part of the analysis.

Please note that a copy of consent forms and information letters for all participants must be appended to this application.

## 2.10 **Genotyping**

Are you intending to genotype the participants? Which genotypes will be determined?

No

Please note that a copy of all information sheets on the implications of determining the specific genotype(s) to be undertaken must be appended to this application.

## SECTION 3: PARTICIPANT DETAILS

### 3.1 **Sample Size**

How many participants do you plan to recruit? Please provide a suitable power calculation demonstrating how the sample size has been arrived at or a suitable justification explaining why this is not possible/appropriate for the study.

In line with Conversation Analysis methodology, the aim will be to identify a collection of similar phenomena thus rather than focussing on how many participants to be recruited, it is about the richness of the data. However, it is planned that around 10 students will be willing to take part and will therefore be recruited.

3.2 Will the research involve children or vulnerable adults (e.g. adults with mental health problems or neurological conditions)? No

If yes, how will you ensure these participants fully understand the study and the nature of their involvement in it and freely consent to participate?

(Please append letters and, if relevant, consent forms, for parents, guardians or carers). Please note: information letters must be supplied for all participants wherever possible, including children. Written consent should be obtained from children wherever possible in addition to that required from parents.

3.3 Will your research involve children under the age of 18 years? No

Will your research involve children under the age of 5 years? No

3.4 Will your research involve NHS patients, Clients of Social Services or will GP or NHS databases be used for recruitment purposes? No

Please note that if your research involves NHS patients or Clients of Social Services your application will have to be reviewed by the University Research Ethics Committee and by an NHS research ethics committee.

### **3.5 Recruitment**

Please describe the recruitment process and append all advertising and letters of recruitment.

Present students will be recruited through email and we hope to receive sufficient responses in this way. T Recruitment will be through an email sent directly to the participants or via a closed circulation list. The email and information sheet provide detailed information about the study and provides the researchers' email addresses. The information sheet includes a description of the study, reasons why the research is being conducted, reasons they have been chosen to participate in the study, and the nature of the analysis that will be completed. If potential participants indicate their interest to take part in the study, the researcher will obtain written consent via email before proceeding further.

### **Important Notes**

The Principal Investigator must complete the Checklist in Appendix A to ensure that all the relevant steps and have been taken and all the appropriate documentation has been appended.

If you expect that your application will need to be reviewed by the University Research Ethics Committee you must also complete the Form in Appendix B.

For template consent forms, please see Appendices C.

## Appendix A: Application checklist

**This must be completed by an academic staff member (e.g. supervisor)**

Please tick to confirm that the following information has been included and is correct.

Indicate (N/A) if not applicable:

### Information Sheet

Is on headed notepaper

☒

Includes Investigator's name and email / telephone number

☒

Includes Supervisor's name and email / telephone number

☒

Statement that participation is voluntary

☒

Statement that participants are free to withdraw their co-operation

☒

Reference to the ethical process

☒

Reference to Disclosure

☐

N/A ☒

Reference to confidentiality, storage and disposal of personal information collected

☒

### Consent form(s)

☒

Other relevant material

Questionnaires

☐

N/A ☒ Advertisement/leaflets

☐

N/A ☒

Letters

☐

N/A ☒

Other (please specify)

☒

N/A ☐

EMAIL TO POTENTIAL PARTICIPANTS

**Expected duration of the project**

(months)

**Name (print) Parastou Donyai**

**Signature**

**Appendix B**

**Project Submission Form**

Note All sections of this form should be completed. Please continue on separate sheets if necessary.

**Principal Investigator:** Prof. Parastou Donyai

**School:** School of Pharmacy

**Study title:** Using conversation analysis to examine pharmacy student OSCEs

**Proposed starting date:** 1 July 2019

**Brief description of Project:**

This is a Conversation Analytic project focusing on student interactions in OSCEs with the aim of identifying features of effective interactions.

I confirm that to the best of my knowledge I have made known all information relevant to the SCFP Ethics Committee and I undertake to inform the Committee of any such information which subsequently becomes available whether before or after the research has begun.

I confirm that a list of the names and addresses of the subjects in this project will be compiled and that this, together with a copy of the Consent Form, will be retained within the School for a minimum of five years after the date that the project is completed.

Signed... (Investigator) Date 1/5/2019

.....(Head of Department)

Date.....

.....(Student)

Date.....

(Where applicable)

**Checklist**

1. This form is signed by my Head of Department



The Consent form includes a statement to the effect that the project has been subject to ethical review, according to the procedures specified by the University Research Ethics Committee, and has been allowed to proceed



3. I have made, and explained within this application, arrangements for any confidential material generated by the research to be stored securely within the



University and, where appropriate, subsequently disposed of securely.



4. I have made arrangements for expenses to be paid to participants in the research, if any, OR, if not, I have explained why not.



5. Tick **EITHER (a) OR (b) - Head of School to sign if (b) ticked**

The proposed research does **NOT** involve the taking of blood samples;



**OR**

(b) For anyone whose proximity to the blood samples brings a risk of Hepatitis B, documentary evidence of protection prior to the risk of exposure will be retained by the Head of School.



Signed.....(Head of Department)      Date.....

6. Tick **EITHER (a) OR (b)**

(a) The proposed research does **NOT** involve the storage of human tissue, as defined by the Human Tissue Act 2004;



**OR**

(b) I have explained within the application how the requirements of the Human Tissue Act 2004 will be met.



7. Tick **EITHER (a), (b) OR (c)**

The proposed research will not generate any information about the health of participants;



**OR**

In the circumstance that any test reveals an abnormal result, I will inform the participant and, with the participant's consent, also inform their GP, providing a copy of those results to each;



**OR**

- (c) I have explained within the application why (b) above is not appropriate. ☐

8. Tick **EITHER (a) OR (b) - Head of School to sign if (b) ticked**

the proposed research does not involve children under the age of 5; ☒

**OR**

- (b) My Head of School has given details of the proposed research to the University's insurance officer, and the research will not proceed until I have confirmation that insurance cover is in place. ☐

Signed.....(Head of Department) Date.....

This form and further relevant information (see Sections 5 (b)-(e) of the Notes for Guidance) should be returned to, Barbara Parr, SCFP Ethics Administrator. You will be notified of the Committee's decision as quickly as possible, and you should not proceed with the project until then.

## Appendix L: The approval letter from Ethical Committee.

### Re: Ethics approval - Amendment to Study Number 14/19

(If you are unable to download the document, please email [am.hollywood@reading.ac.uk](mailto:am.hollywood@reading.ac.uk) for a PDF version of the document.)

---

**From:** Amelia Hollywood <[a.hollywood@reading.ac.uk](mailto:a.hollywood@reading.ac.uk)>  
**Sent:** 13 May 2019 10:33  
**To:** Parastou Donyai <[p.donyai@reading.ac.uk](mailto:p.donyai@reading.ac.uk)>; Daniel Grant <[d.t.grant@reading.ac.uk](mailto:d.t.grant@reading.ac.uk)>; Sarah Alsubaie <[s.alsubaie@pgr.reading.ac.uk](mailto:s.alsubaie@pgr.reading.ac.uk)>  
**Cc:** Barbara Parr <[b.l.parr@reading.ac.uk](mailto:b.l.parr@reading.ac.uk)>  
**Subject:** Ethics approval - Study Number 13/19

Dear Parastou, Dan and Sarah

I am pleased to inform you that Professor Becky Green has given a favourable opinion for conduct for your study 'Using conversation analysis to examine pharmacy student OSCEs' via the in-School exceptions route. This email constitutes your permission to proceed with the studies as described in your application. The following study number has been assigned to your study and you should quote this number in any correspondence you undertake about your studies.

STUDY Number – 14/19

If you feel that you need to make changes to the way your studies are run, please let us know at the earliest opportunity and we can advise you of whether a formal amendment to your proposal is required or not.

I wish you the best of luck with the projects and finish by reminding you of the need for safe custody of project data at all times (a service that Barbara Parr, copied in, can provide if you require it).

Kind regards  
Amelia Hollywood

Dr Amelia Hollywood PhD, CPsychol, FHEA  
Health Psychologist, Lecturer in Health Services Research  
School of Pharmacy, University of Reading  
1.05b Harry Nursten Building, Whiteknights, Reading, RG6 6AP  
Tel: +44(0)118 378 4940      Email: [A.Hollywood@reading.ac.uk](mailto:A.Hollywood@reading.ac.uk)      Twitter: @AmeliaHollywood

Website: <http://www.reading.ac.uk/pharmacy/about/staff/a-hollywood.aspx>

**Appendix M: An illustration of compliance with Standards for Reporting Qualitative Research (SRQR)\* of Qualitative research: obtained from Enhancing transparency in reporting the synthesis of qualitative research: ENTREQ.**

		Page/line no(s).
<b>Title and abstract</b>		
1	<b>Title</b> - Concise description of the nature and topic of the study Identifying the study as qualitative or indicating the approach (e.g., ethnography, grounded theory) or data collection methods (e.g., interview, focus group) is recommended	P 110
2	<b>Abstract</b> - Summary of key elements of the study using the abstract format of the intended publication; typically includes background, purpose, methods, results, and conclusions	P 17
<b>Introduction</b>		
3	<b>Problem formulation</b> - Description and significance of the problem/phenomenon studied; review of relevant theory and empirical work; problem statement	P 110-112
4	<b>Purpose or research question</b> - Purpose of the study and specific objectives or questions	P 112
<b>Methods</b>		
5	<b>Qualitative approach and research paradigm</b> - Qualitative approach (e.g., ethnography, grounded theory, case study, phenomenology, narrative research) and guiding theory if appropriate; identifying the research paradigm (e.g., postpositivist, constructivist/ interpretivist) is also recommended; rationale**	P 113
6	<b>Researcher characteristics and reflexivity</b> - Researchers' characteristics that may influence the research, including personal attributes, qualifications/experience, relationship with participants, assumptions, and/or presuppositions; potential or actual interaction between researchers' characteristics and the research questions, approach, methods, results, and/or transferability	P 101
7	<b>Context</b> - Setting/site and salient contextual factors; rationale**	P 114
8	<b>Sampling strategy</b> - How and why research participants, documents, or events were selected; criteria for deciding when no further sampling was necessary (e.g., sampling saturation); rationale**	P 107

<b>9</b>	<b>Ethical issues pertaining to human subjects</b> - Documentation of approval by an appropriate ethics review board and participant consent, or explanation for lack thereof; other confidentiality and data security issues	<b>P 104</b>
<b>10</b>	<b>Data collection methods</b> - Types of data collected; details of data collection procedures including (as appropriate) start and stop dates of data collection and analysis, iterative process, triangulation of sources/methods, and modification of procedures in response to evolving study findings; rationale**	<b>P 108-109</b>
<b>11</b>	<b>Data collection instruments and technologies</b> - Description of instruments (e.g., interview guides, questionnaires) and devices (e.g., audio recorders) used for data collection; if/how the instrument(s) changed over the course of the study	<b>P 108-109</b>
<b>12</b>	<b>Units of study</b> - Number and relevant characteristics of participants, documents, or events included in the study; level of participation (could be reported in results)	<b>P 108-109</b>
<b>13</b>	<b>Data processing</b> - Methods for processing data prior to and during analysis, including transcription, data entry, data management and security, verification of data integrity, data coding, and anonymization/de-identification of excerpts	<b>P 92-94</b>
<b>14</b>	<b>Data analysis</b> - Process by which inferences, themes, etc., were identified and developed, including the researchers involved in data analysis; usually references a specific paradigm or approach; rationale**	<b>P 95-97</b>
<b>15</b>	<b>Techniques to enhance trustworthiness</b> - Techniques to enhance trustworthiness and credibility of data analysis (e.g., member checking, audit trail, triangulation); rationale**	<b>P 97</b>
<b>Results/findings</b>		
<b>16</b>	<b>Synthesis and interpretation</b> - Main findings (e.g., interpretations, inferences, and themes); might include development of a theory or model, or integration with prior research or theory	<b>P 116-169</b>
<b>17</b>	<b>Links to empirical data</b> - Evidence (e.g., quotes, field notes, text excerpts, photographs) to substantiate analytic findings	<b>P 116-169</b>
<b>Discussion</b>		
<b>18</b>	<b>Integration with prior work, implications, transferability, and contribution(s) to the field</b> - Short summary of main findings; explanation of how findings and conclusions connect to, support, elaborate on, or challenge conclusions of earlier scholarship; discussion of scope of	<b>P 170-173 and P 211</b>

	application/generalizability; identification of unique contribution(s) to scholarship in a discipline or field	
<b>19</b>	<b>Limitations</b> - Trustworthiness and limitations of findings	<b>P 210</b>
	<b>Other</b>	
<b>20</b>	<b>Conflicts of interest</b> - Potential sources of influence or perceived influence on study conduct and conclusions; how these were managed	<b>P</b>
<b>21</b>	<b>Funding</b> - Sources of funding and other support; role of funders in data collection, interpretation, and reporting	<b>P</b>
	*The authors created the SRQR by searching the literature to identify guidelines, reporting standards, and critical appraisal criteria for qualitative research; reviewing the reference lists of retrieved sources; and contacting experts to gain feedback. The SRQR aims to improve the transparency of all aspects of qualitative research by providing clear standards for reporting qualitative research.	
	**The rationale should briefly discuss the justification for choosing that theory, approach, method, or technique rather than other options available, the assumptions and limitations implicit in those choices, and how those choices influence study conclusions and transferability. As appropriate, the rationale for several items might be discussed together.	
	<b>Reference:</b>	
	O'Brien BC, Harris IB, Beckman TJ, Reed DA, Cook DA. <b>Standards for reporting qualitative research: a synthesis of recommendations.</b> Academic Medicine, Vol. 89, No. 9 / Sept 2014 DOI: 10.1097/ACM.0000000000000388	

**Appendix N: An illustration of compliance with the reporting guideline for quantitative studies (STROBE) obtained from Enhancing transparency in reporting the synthesis of qualitative research: ENTREQ**

	Item No	Recommendation	Page No
<b>Title and abstract</b>	1	(a) Indicate the study's design with a commonly used term in the title or the abstract	P 175
		(b) Provide in the abstract an informative and balanced summary of what was done and what was found	P 17
Introduction			
Background/rationale	2	Explain the scientific background and rationale for the investigation being reported	P 175-177
Objectives	3	State specific objectives, including any prespecified hypotheses	P 178
Methods			
Study design	4	Present key elements of study design early in the paper	P 178
Setting	5	Describe the setting, locations, and relevant dates, including periods of recruitment, exposure, follow-up, and data collection	P 181
Participants	6	(a) Give the eligibility criteria, and the sources and methods of selection of participants	P
Variables	7	Clearly define all outcomes, exposures, predictors, potential confounders, and effect modifiers. Give diagnostic criteria, if applicable	P 178-179
Data sources/measurement	8*	For each variable of interest, give sources of data and details of methods of assessment (measurement). Describe comparability of assessment methods if there is more than one group	P 182
Bias	9	Describe any efforts to address potential sources of bias	P 181
Study size	10	Explain how the study size was arrived at	P
Quantitative variables	11	Explain how quantitative variables were handled in the analyses. If applicable, describe which groupings were chosen and why	P
	12	(a) Describe all statistical methods, including those used to control for confounding	P

Statistical methods		(b) Describe any methods used to examine subgroups and interactions	P
		(c) Explain how missing data were addressed	
		(d) If applicable, describe analytical methods taking account of sampling strategy	P
		(e) Describe any sensitivity analyses	P
Results			
Participants	13*	(a) Report numbers of individuals at each stage of study—eg numbers potentially eligible, examined for eligibility, confirmed eligible, included in the study, completing follow-up, and analysed	P
		(b) Give reasons for non-participation at each stage	
		© Consider use of a flow diagram	
Descriptive data	14*	(a) Give characteristics of study participants (eg demographic, clinical, social) and information on exposures and potential confounders	P
		(b) Indicate number of participants with missing data for each variable of interest	P
Outcome data	15*	Report numbers of outcome events or summary measures	P183
Main results	16	(a) Give unadjusted estimates and, if applicable, confounder-adjusted estimates and their precision (eg, 95% confidence interval). Make clear which confounders were adjusted for and why they were included	P 184- 186
		(b) Report category boundaries when continuous variables were categorised	NA
		(c) If relevant, consider translating estimates of relative risk into absolute risk for a meaningful time period	NA
Other analyses	17	Report other analyses done—eg analyses of subgroups and interactions, and sensitivity analyses	NA
Discussion			
Key results	18	Summarise key results with reference to study objectives	P 192
Limitations	19	Discuss limitations of the study, taking into account sources of potential bias or imprecision. Discuss both direction and magnitude of any potential bias	P
Interpretation	20	Give a cautious overall interpretation of results considering objectives, limitations, multiplicity of analyses, results from similar studies, and other relevant evidence	P
Generalisability	21	Discuss the generalisability (external validity) of the study results	P



Other information			
Funding	22	Give the source of funding and the role of the funders for the present study and, if applicable, for the original study on which the present article is based	P