

**Professionalism in dental education:
Perceptions and influences on
development of learners**

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**Submitted in partial fulfilment of the
requirements of the Degree of Doctor of
Philosophy**

STATEMENT OF ORIGINALITY


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ABSTRACT

The General Dental Council in its latest educational review placed professionalism at the heart of its education agenda and developed corresponding learning outcomes (GDC, 2015).

This interpretivist qualitative study aimed to delineate perceptions about dental students' development of professionalism and explore significant influences on this development by examining the perceptions of dental students, their patients and teachers. Purposive sampling of students, patients and teachers ensured representation of diverse perspectives through focus groups and individual semi-structured interviews. An initial inductive thematic analysis was compared with theoretical perspectives on learning and the Illeris (Illeris, 2004) model of learning was selected for further theoretically driven analysis.

Students, patients and teachers identified relational skills as an essential part of professionalism. Differences lay in the emphasis placed by students on being a '*well-rounded professional*', patients wanting to be treated as a '*person as well as a patient*' and teachers focusing on '*professional values*'.

As the students' clinical responsibility increased, their perceptions evolved from abstract values to pragmatic reality which mirrors the trajectory of the professionalism literature over the past twenty years. Students were influenced by planned curriculum content and unplanned experiences. Patients motivated students with feedback and reassurance and acted as mentors. Their teachers served as positive and negative role models. Teachers' expressed confusion and identified a gap between the actuality and ideal teaching of professionalism. Learning occurred as a result of simultaneous and multiple interactions within the individual, with the environment and with patients.

This study validates the multidimensional intricacy of professionalism. Students identified constructive and adverse experiences which allowed them to develop empathy, take on responsibility for patient care and model themselves on their teachers. The emotional and social interactions involved in these experiences generated a creative '*tension field*' of learning leading to the development of professionalism.

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LIST OF ABBREVIATIONS

ABIM	American Board of Internal Medicine
ADEE	Association of Dental Education in Europe
ASME	Association for the Study of Medical Education
BDA	British Dental Association
BDS	Bachelor of Dental Surgery
BMA	British Medical Association
BSODR	The British Society for Oral and <i>Dental</i> Research
CanMEDS	The Canadian Medical Education Directives for Specialists
CPD	Continuing Professional Development
HSME	Human Science and Medical Ethics
HPC	Health Professions Council
GDC	General Dental Council
GMC	General Medical Council
IADR	The International Association of Dental Research
LDS	Licence in Dental Surgery
NICE	The National Institute for Health and Care Excellence
ORE	Overseas Registration Examination
OSCE	Objective Structured Clinical Examination
RCP	Royal College of Physicians

ACKNOWLEDGMENTS

My initial thanks are to my supervisors; Professor Elizabeth Davenport and Professor Della Freeth who have been a constant source of help in guiding me throughout the PhD. I am immensely grateful to you both for constantly challenging me in the pursuit of excellence. I am particularly indebted to Liz for her assistance and her encouragement to develop as a learner. I am delighted that Della has instilled an interest in qualitative research in me, and am thankful to her for demonstrating an attention to detail in writing with which I was not familiar.

My thanks also go to my initial supervisor Viv Cook and to past and current Deans Professors Farida Fortune and Mike Curtis for believing in me and encouraging me in my career.

I would like to express sincere thanks to my mentor and colleague Jenny King for her guidance and reassurance throughout this project. Your advice has been invaluable and insightful. I am grateful for your confidence in me to undertake a PhD. Moreover without your unwavering support and understanding, it would never have been completed. I am fortunate to have such an inspirational and caring friend.

I would especially like to thank the students, patients and teachers in the study, for giving me their time and allowing me to interview them. Without their honesty and integrity this work would not have been possible. Further, I would also like to thank all the staff at the Institute of Dentistry, Queen Mary University of London, for their unfailing assistance. A special thanks to Lorraine Low for her help in preparing the layout of this manuscript.

I would like to recognise the contribution of my parents, Dev and Shobha. I love them very much and am forever grateful for their unstinting love and encouragement. Finally, to my dearest husband Karl, thank you for everything all the love, sacrifice and support. To my children, Jai and Amar, I love you both dearly.

Chapter 1
Introduction to
professionalism in
dental care

1. Introduction

The notion of professionalism can be traced back to Hippocrates but has been revisited over the last century especially since there have been many changes in society and technological advances in healthcare. Professionalism as a term evades a single definition. Currently within the literature in medical and dental education, there are many proposed definitions but with slightly different emphasis. It is unlikely that any one definition will be applicable in all contexts. Consequently, no single instrument has been identified to measure professionalism (van Mook et al., 2009f pp.199-200). However, teaching institutions are expected by their respective regulatory bodies to implement curricula to incorporate teaching and assessment of this complex construct (GMC, 2009, GDC, 2015).

The General Dental Council has seen a 110% increase in the number of complaints it has received from the public between 2011 to 2014 (GDC, 2014). This may be one reason why the regulatory body has changed the emphasis on the teaching and assessment of professionalism in the undergraduate curriculum, in order to embed this topic and reduce the number of future complaints. However, research into what is understood as professionalism in dentistry has not been extensively conducted in the United Kingdom.

The impetus for this doctoral study emerges from the lack of clarity in how to teach and assess professionalism. Additionally there is concern that behaviour considered to be unprofessional in practising clinicians is observable at earlier stages of training. Papadakis found that for example action against doctors by state medical boards in the United States could be predicted by factors such as disciplinary action in medical school (Papadakis et al., 2004). Addressing professionalism at an early stage requires that professionalism be well understood by dental educators.

There are differences of definitions and perspectives on how to teach and assess professionalism. From the literature, these can be separated into at least three main approaches, abstract, behavioural and contextual. Van Mook observes that in the United States professionalism is widely viewed as a theoretical construct described in the abstract and this contrasts with a more practical definition of professional behaviour that van Luijk and colleagues proposed in the Netherlands (van Mook et al., 2009b, van Luijk, 2005). These educators configure professionalism as a set of observable behaviours which can also be used as a basis for assessment. However, Arnold and

Ginsburg suggest that academic literature tends to focus primarily on measurement of discernible professional behaviours and not the attitudinal elements of professionalism because behaviour can be observed whereas attitude is more difficult to assess (Arnold, 2002a, Ginsburg et al., 2000b). Additionally, there has been work identifying context as a key variable in how undergraduate medical students develop their professionalism (Hilton and Slotnick, 2005, Ginsburg and Lingard, 2011).

This makes the teaching and assessment of professionalism complicated as there is a need to address several different behaviours and attitudes within different and sometimes challenging contexts such as students witnessing lapses in professionalism in their teachers. Medical educators in the UK have explored the challenge of teaching and assessing professionalism. As a result of these explorations, what has become clear is that professionalism is a multidimensional concept which needs to be taught and continuously assessed in several different ways (Lovas et al., 2008, Cruess et al., 2009, Howe et al., 2009).

There is a need to understand how professionalism is defined within dentistry to illuminate how it is perceived by the different participants in the undergraduate dental education context. The General Dental Council's Education Committee reviewing education for the dental team has recommended that *'professionalism as it is envisaged by the Council is placed at the heart of the educational agenda'* (GDC, 2008). To highlight this, an extensive range of learning outcomes have been established under the domain of professionalism within the recently published and then recently updated *'Preparing for practice, Dental team learning outcomes for registration'* document (GDC, 2015).

The dental undergraduate programme is a demanding programme of study. Students are expected to learn and practice the attitudes, behaviours and skills of a dentist. Undergraduate dental training involves acquisition of knowledge and skills and also habituating students to the norms and expectations of the profession. Models of learning and assessment underpin the dental curriculum (Section 2.4.2).

The students are ultimately expected to demonstrate 'does' as in Millers pyramid (Section 2.4.2) by providing excellent dental care to patients (Miller, 1990). Parallels can be drawn between Millers pyramid and the learning outcomes for dental education from the General Dental Council (GDC, 2015). The complexity increases upwards in the Miller's pyramid and the learning outcomes also follow a similar trajectory and

increase in complexity. An example of this is the learning outcome in the domain of professionalism, '*Recognise and act within the GDC's standards and within other professionally relevant laws, ethical guidance and systems*', (GDC, 2015 p.24). This may be interpreted in the early years as acquiring knowledge of standards, law and guidance. However in the later years students would be expected to demonstrate how they would interpret and act according to the standards and ethical guidance.

A broad synopsis of a typical dental curriculum in a UK dental school has been described below. The student journey (Figure 1) where this study was undertaken is typical of the majority of dental schools in the United Kingdom. The study of dentistry is an intensive programme over five years.

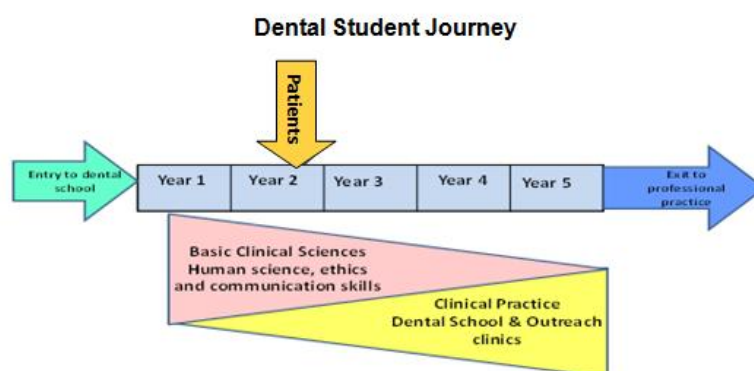


Figure 1 Typical dental student journey in the undergraduate curriculum in the UK

The first year of the curriculum consists mainly of preclinical academic study of basic biological principles, primarily through lectures, seminars, practical and some clinical sessions in the dental hospital giving grounding in the scientific basis of clinical practice. Year two continues to build on the knowledge gained in the first year and apply this to learn about the body systems in both health and disease. At this point students at the dental school where this study took place are introduced to human sciences, medical ethics and communication skills. Students train in the clinical skills laboratory on manikins. Students start caring for patients towards the end of this year. In years 3 and 4 students increase their clinical experience in dental practice in dental clinics outside the main dental hospital known as outreach centres. They care for a diverse group of patients, in which students devise strategies for preventative dentistry and carry out treatment. In the fourth year, the majority of time is spent in clinical

contact with patients, coupled with complementary educational activities, including seminars, laboratory classes, tutorials, e-learning projects and library activity. In year 5, the final year students consolidate the knowledge and skills developed in preparation for professional dental practice and continue patient care.

The new emphasis on professionalism is an indicator for further exploration within dentistry. There is little consensus in the United Kingdom about what professionalism means and how it might be taught systematically in dental schools. Discussion has arisen around definitions, ethical issues, professionalism in relation to revalidation and on the practice of dentistry within the difficult context of managing a business (Trathen and Gallagher, 2009). Zijlstra-Shaw and colleagues having explored the literature concluded that without a validated definition of the construct of professionalism, assessment of professionalism within dental education will be compromised (Zijlstra-Shaw et al., 2012).

The concept of professionalism is problematic. It is defined through abstract official documents but is also given shape and meaning by undergraduate students, their patients and teachers as they engage with the realities of clinical practice. The purpose of this research is therefore to explore perceptions and influences on development of professionalism in dental undergraduate students, patients and teachers. The three main aims comprise exploration of the concept of professionalism as it is understood by undergraduate dental students, dental patients and their teachers, key factors which influence the development of professionalism and to develop a conceptual model of professionalism within dental undergraduate education. Following the literature review, five areas of enquiry were developed to provide a specific research focus.

This study has used a qualitative study design to build up a richer understanding of different perceptions of professionalism and its development in the undergraduate curriculum. Consideration of the similarities and differences in three different groups, students, patients and teachers, should provide a more holistic and complete understanding. The significant influential experiences that are identified by students take into account the multidimensional nature of professionalism. The findings have been scrutinized inductively by thematic analysis and then examined using a theoretical perspective. This has facilitated the development of two conceptual models of how professionalism is learnt and a model proposing development of empathy as fundamental in the development of professionalism. This has the potential to inform the wider dental education community

Chapter 2

Literature Review

2. Literature Review

This literature review considers the concept of professionalism in two sections; the first part (Section 2.1) explores how the concept of professionalism has evolved in the literature within medicine and dentistry prior to data collection. It provided a base line for the study.

The discussion has focused on professionalism in medicine and dentistry, though this subject is not limited to medicine and dentistry alone and much has been written on professionalism within health care generally. The researcher has concentrated on this literature as the topic of professionalism in dentistry is largely predicated by the work in medicine. However, occasionally reference was made to the wider literature from other health care professions.

Introduction

This section will aim to provide a broad synopsis of the origins and evolution of the concept of professionalism in medicine and dentistry. This has been updated to include contemporary literature on the topics of:

- Historical roots of how the concept of professionalism and professions have evolved in medicine and dentistry in the United Kingdom
- Efforts to define and describe professionalism within medicine and dentistry
- Perception of professionalism by students, patients and teachers
- Influences on the development of professionalism

2.1. Historical roots of the concept of professionalism in medicine

According to the Oxford English dictionary, '*profession*' as a concept and the word first appeared in 1425 (Soanes and Stevenson, 2005 p.75.). The term '*professional*' came to be used in the 17th century and '*professionalism*' and '*professionalize*' in 1856 (Soanes and Stevenson, 2005). The term professionalism became popular in healthcare in the early 1990's particularly in the United States as a response to the

numerous challenges facing the health care system. The provision of healthcare involved financial incentives as well as restrictions and fierce market competition under the control of independent health organizations. It was feared that the context in which medicine was being practised would lead to core ethical values associated with medicine being eroded. Hence, the term 'professionalism' started being debated to bring *humanistic* qualities such as compassion and altruism, back into the medical world (Byszewski, 2007).

Though the term itself and its association with medicine is relatively new, guidance for doctors was formulated by Hippocrates, an ancient Greek Physician considered to be the father of western medicine, over 2500 years ago. Certain values inherent in the Hippocratic Oath are echoed in modern views of professionalism. Attributes such as honesty, continue to define modern expectations of all health care professionals.

2.1.1. Evolution of the medical and dental profession in the United Kingdom

In the United Kingdom, medicine can trace its roots as far back as 1368 when the Royal Colleges of Surgeons of England was established with the foundation of the 'Guild of Surgeons' (Newsome and Langley, 2014). A charter of principles was granted giving privileges and compelling duties including that all apprentices should be literate and be taught by masters who had complete knowledge of anatomy and surgical procedures.

Licensing soon followed in 1421 when doctors petitioned parliament demanding that nobody without appropriate qualifications be allowed to practise medicine. Initially Parliament placed regulation of the medical profession in the hands of the Church. The church managed the regulation of the UK medical profession for over three centuries and by the mid-nineteenth century it was becoming clear that they were incapable of regulating the profession and to act to protect the public from false practitioners and so the government created licensure systems. In 1858 the right to grant entry into the profession was taken from the Royal Colleges to the newly created General Medical Council (GMC) by the Medical Act 1858 (GMC, 2015).

The practice of dentistry was still a long way from achieving professional status in the United Kingdom. This changed in the 19th century, as there was increased pressure for reform of the profession to prevent the increasing malpractice and incompetence (Menzies Campbell, 1963). The development of the dental profession occurred mainly

in the Victorian era. By 1879 dental schools were set up in London and the 1878 Dentists Act meant that only qualified and registered practitioners could hold the title of 'dentist' or 'dental surgeon'. A time line for the establishment of the dental profession is shown in (Table 1) and is described below.

Table 1 Evolution of The Dentists Act and its key changes.

Act	Purpose	Key Changes
The Dentists Act 1878	<ul style="list-style-type: none"> required all dentists to undertake the Licence in Dental Surgery (LDS) qualifying examination register in order to call themselves a dentist. 	<ul style="list-style-type: none"> Protected the term dentist
The Dentists Act 1921	<ul style="list-style-type: none"> restricted practice to qualified persons only 	<ul style="list-style-type: none"> Unqualified practitioners, as unregistered dentists still outnumbered the qualified at this time. This was because the 1878 act had protected the term dentist, not the practice of dentistry. Regulatory work entrusted to the Dental Board (predecessor of GDC) which functioned under the General Medical Council.
The Dentists Act 1956	<ul style="list-style-type: none"> To give powers to the Dental Board for self regulation of dentistry 	<ul style="list-style-type: none"> Entrust Dental Board with authority on discipline, registration and education. General Dental Council (GDC) created
The Dentists Act 1983	<ul style="list-style-type: none"> To promote high standards of all dental education undergraduate and post graduate Introduction of the Health Committee, which gave the GDC power to control the registration of dentists whose fitness to practise was seriously impaired by physical or mental ill health 	<ul style="list-style-type: none"> GDC became responsible for the oversight of dental education at all its stages. Large numbers of overseas dentists were wishing to register – temporary registration and statutory examination established (now called the Overseas Registration Examination ORE) Compulsory vocational training Continuing professional development as part of lifelong learning was being considered (became compulsory in 2002)
The Dentists Act 1984	<ul style="list-style-type: none"> Prevented dentists from using any title or description to suggest a qualification that they did not possess 	<ul style="list-style-type: none"> the constitutional powers of the GDC were reduced
The Dentists Act 2005	<ul style="list-style-type: none"> Further measures to protect public Extension of regulation of the dental team 	<ul style="list-style-type: none"> Legal requirement to have indemnity Increased powers on how the GDC deals with allegations of impaired fitness to practise Regulating professions complementary to dentistry – to bring regulation of hygienists and therapists to the same level as dentists and to extend regulation to dental nurses and dental technicians Abolished the prohibition on corporate bodies carrying on the business of dentistry

The British Dental Association (BDA) was formed in 1880, with Sir John Tomes as president and also played a major role in prosecuting illegally practising dentists between 1880 and 1921. Despite the BDA's efforts to regulate dentistry, unregistered dentists still outnumbered the qualified members of the dental profession. There was public pressure to reform further.

The Dentists' Act 1921, restricted practice to registered persons only, and addressed unethical advertising practice which was rife. The regulation of dentistry was entrusted to the Dental Board (predecessor of GDC) which functioned under the General Medical Council. The Act was amended again in 1956 and the Dental Board was replaced by the General Dental Council (GDC), making the regulation of the profession distinct from medicine. All the previous laws relating to the practice of dentistry were consolidated into one Act by the Dentists' Act 1957. The Dentists' Act 1983 gave the GDC further powers to regulate the profession with regard to registration, professional education, professional conduct and fitness to practice.

The Dentists' Act 1984 was formulated to consolidate the Dentists' Act 1957 to 1983, with an amendment to give effect to a recommendation of the Law Commission and the Scottish Law Commission (BDA, 2015)

The most recent amendment in 2005 to the 1984 Act provides for the regulation of dentists and dental care professionals by the GDC. The amendments deal amongst other matters with giving the GDC broader powers to deal with impaired fitness to practise; increasing competition and choice by removing restrictions on Dental Bodies Corporate; regulating professionals complementary to dentistry introducing a system to deal with non-NHS complaints, and requiring registrants by law to have indemnity cover before registration.

The GDC is a statutory corporation; its powers and duties are set out in the Dentists Act 1984. It regulates the dental professions by setting standards, quality assuring education, and maintaining a register. The standards document '*Standards for the Dental Team*' sets out the standards of conduct, performance and ethics that govern dental professionals. These standards are also applicable to dental students. The GDC's expectation of undergraduates goes beyond academic achievement, and incorporates the attitudes, values and behaviours needed for registration of a professional who is a safe beginner. The GDC reviewed and published new standards over the period of 2005-2015. This is in part a response to changes in attitude towards

dental professionals and increasing complaints against the registrants. The GDC standards known previously as '*Standards for dental professionals*' (GDC, 2005) have been updated most recently to the '*Standards for the Dental Team*' (GDC, 2013). The six principles in 2005 guidance standards have also been updated to nine principles in the 2013 current version (Table 2). Table 2 compares the standards from 2005, against the most recent set of standards from 2013. The standards have become explicit particularly in areas where the GDC has observed an increase in complaints.

Table 2 Standards published by the General Dental Council in 2005 and 2013

<i>Standards for dental professionals (GDC, 2005)</i>	<i>Standards for the dental team (GDC, 2013)</i>
Putting patients' interests first and acting to protect them	Put patients' interests first
Respecting patients' dignity and choices	Communicate effectively with patient
Protecting the confidentiality of patients' information	Obtain valid consent
Co-operating with other members of the dental team and other healthcare colleagues in the interests of patients	Maintain and protect patients' information
Maintaining professional knowledge and competence	Have a clear and effective complaints procedure
Being trustworthy	Work with colleagues in a way that is in patients' best interests
	Maintain, develop and work within your professional knowledge and skills
	Raise concerns if patients are at risk
	Make sure your personal behaviour maintains patients' confidence in you and the dental profession

Medical and dental professions and their characteristics

The establishment of the medical and dental profession in the United Kingdom (Section 2.1.1) highlighted certain features which typified membership of these professions. Newsome and Langley observe that historically four characteristics; education, self regulation, discipline and status define a profession (Newsome and Langley, 2014). Individuals are expected to learn theoretical knowledge and specialised practical skills over an extended period of time. The professional regulatory bodies (GMC, GDC) are responsible for overseeing governance of this education and maintain their self-governing status. Self-regulation is a fundamental and defining characteristic. In the

past the memberships of the GMC and GDC were composed entirely of professional members and it was only in 2012 that lay members were appointed. This has been criticized as a demonstration of a profession with self-interest as the primary motive (Section 2.1.2). Members of these professions are expected to adhere to a strict code of ethics and standards demonstrating altruistic behaviour. The regulators have the power to deregister individuals if they fall short of these expectations. The maintenance of such discipline bestows status and prestige to individuals within the professions. Newsome and Langley suggest that these ideals do not represent the diverse, multi-cultural population and changing world today, hence the need to re-evaluate professionalism in the contemporary context.

2.1.2. Re-evaluation of professionalism in medicine and dentistry

The force to reconsider professionalism is driven by the discord experienced by clinicians between the realities of a world which has witnessed huge scientific, economic and social changes in health-care organisation.

The British Medical Association (BMA) council chair Mark Porter said '*the failings at Mid Staffordshire showed how patient safety could suffer because of a combination of managerial obsessions and disillusioned clinical staff*'. The enquiries into the lapses at Mid Staffordshire and in other NHS organisations have driven the need to reinforce and encourage a stronger medical professionalism (BMA, 2014).

Historically, professionalism has been seen as a quality of an individual doctor, a combination of values, knowledge and skills, integrity and good judgement but has had paternalistic qualities associated with it. This is in contrast to the more modern approach which still values concepts such as integrity and good judgement but is set within the context of patients wanting a more equal relationship with their doctor (Millward, 2011). The desire to differentiate between old professionalism and the new is not recent.

Margaret Stacey, Professor of Sociology, whilst a lay member of the General Medical Council, (1976 to 1984), was well placed to analyse the role and conduct of the Council in regulating the activities of the medical profession. In her book, '*Regulating British Medicine: General Medical Council*', she examined the function and attitudes of the GMC and wrote that '*old-style professionalism has had its day*'. She also went on to

identify the persistent internal conflict between doctors' self-interest and their service ethic (Stacey, 1992).

In addition, there has been a growing lack of trust in professionals to act altruistically, which has been exacerbated by critical incidents, such as the paediatric cardiac surgery scandal in Bristol and the Harold Shipman killings (Bolsin, 1998, Baker, 2004). Such cases have led to a reconsideration of professional values in medicine and throughout healthcare.

Furthermore, societal factors such as the rapid expansion of medical knowledge and skills, the revolution in information technology, and increased media attention to health care issues have prompted a renewed interest in professionalism. Traditional perceptions of doctors providing services in the interest of society have been replaced by the concept of profit in health care organisations with more emphasis on remuneration (van Mook et al., 2009a). The concept of making a profit is relatively new in medicine in the United Kingdom. Within dentistry, patients have had to pay towards their dental treatment and the business of dentistry continues to present ethical dilemmas for dental practitioners as they struggle with the issue of inequality in the provision of dental services (Holden, 2013). The issues described above create a challenging environment for new graduates within medicine and dentistry. Papadakis and colleagues have identified that unprofessional behaviours and attitudes during undergraduate years may have an impact later on in professional careers (Papadakis et al., 2004).

In order to be able to teach and assess professionalism, teachers need to understand what it means. This lack of any general agreement on how to define professionalism creates a problem for educators.

2.2. Efforts to define professionalism in medicine and dentistry

Changes within society, political issues and adverse experiences have led to a need to re-examine and re-define professionalism in the contemporary context. Finding a definition to satisfy all dimensions of professionalism has been difficult. This section will consider the key approaches to defining professionalism within medicine and dentistry and discusses how different definitions have evolved, then considers how recent debate has centred on the need for professionalism to be viewed in the context that it occurs, that is to include behavioural aspects and the influence of the environment.

2.2.1. Professionalism defined: Values, behaviours and context

The concentrated enquiry to find a universal meaning has led to numerous definitions of medical professionalism, for example those agreed by the American Board of Internal Medicine (ABIM, 2002) and the Royal College of Physicians (RCP) (Royal College of Physicians 2005). Early work focuses on definitions which highlight abstract values (Section 2.2.1.1).

2.2.1.1. Values

One of the main pieces of work was undertaken by the American Board of Internal Medicine, which commissioned '*Project Professionalism*'. This defined the components of medical professionalism with value laden terms such as altruism, accountability, excellence, duty, honour/integrity and respect (ABIM, 1995). This project was influential on a global scale as it fuelled the development of discourse on professionalism.

In 1996, the Canadian Medical Education Directives for Specialists (CanMEDS) organisation, consisting of medical specialists from the College of Physicians and Surgeons of Canada, defined seven roles expected of a competent specialist:- medical expert, communicator, collaborator, manager, health advocate, scholar and professional. In contrast to the American definitions, they grouped certain aptitudes which they felt were essential for a physician. CanMEDS suggested three core competencies that a physician should be able to do, to demonstrate professionalism, deliver care with honesty, exhibit appropriate professional behaviours and practise medicine ethically (Frank et al., 1996).

In 2002, a collaborative project between the European Federation of Internal Medicine, the American College of Physicians and the American Society of Internal Medicine published '*Medical Professionalism in the new Millennium: a physicians charter*'. It highlighted that despite differences in systems of health care, common themes emerged regarding what professionalism entails. This charter consists of three fundamental values (primacy of patient welfare, patients' autonomy and social justice) and ten professional responsibilities (commitment to competence, honesty, confidentiality, relationships, and quality of care, access to care, distribution of finite resources, scientific knowledge, managing conflicts, and responsibilities) (ABIM, 2002). The CanMEDS and the ABIM projects were intended to provide a framework to guide doctors on the subject of professionalism as a combination of values and

competencies. Though recognizable as values associated with a doctor, they are difficult to visualize and challenge and have been difficult to apply in day to day settings. The additional challenge was to put into practice these values for teaching. Simply presenting students with lists of what is involved in professionalism may be overwhelming and counter productive which has compelled the need to find a more pragmatic definition.

2.2.1.2. Behaviours

The quest for a more realistic definition led to the examination of professional behaviours. Behaviour being observable seemed like the palpable way to base assessment and guidance on professionalism.

Dr Herbert Swick, whilst a scholar-in-residence at the Association of American Medical Colleges in contrast to his American colleagues, proposed that the concept of medical professionalism must be grounded both in the nature of a profession and in the physicians' work (Swick, 2000). He proposed nine behaviours (Table 3) which he suggests comprise a normative definition of professionalism. He recommended that physicians must demonstrate these behaviours to meet their obligations on two dimensions, to their patients and to their communities made up of the society and the profession at large. Swick has extended the behavioural definition to not just an individual doctor but also to interaction with others (Swick, 2000).

Table 3 Behaviours which comprise medical professionalism (after Swick 2000)

1	Physicians subordinate their own interests to the interests of others
2	Physicians adhere to high ethical and moral standards
3	Physicians respond to societal needs, and their behaviours reflect a social contract with the communities served
4	Physicians evince core humanistic values, including honesty and integrity, caring and compassion, altruism and empathy, respect for others, and trustworthiness.
5	Physicians exercise accountability for themselves and for their colleagues
6	Physicians demonstrate a continuing commitment to excellence
7	Physicians exhibit a commitment to scholarship and to advancing their field
8	Physicians deal with high levels of complexity and uncertainty
9	Physicians reflect upon their actions and decisions

Ginsburg observed that a behaviour based approach to defining professionalism may be more reflective of day to day practice as this may be assessed by observation. Hence, this has served to shift the focus towards observable behaviours in an attempt to improve reliability and validity of evaluations of professionalism (Ginsburg et al., 2004). In a similar realistic approach, a more practical definition of professional behaviour has been proposed by a working group in the Netherlands, which outlined professionalism as observable behaviour and categorised these behaviours into three main dimensions, dealing with tasks/work, dealing with others and dealing with oneself (van Luijk, 2005), which is not too dissimilar to Swick's dual dimension described previously (Swick, 2000).

In the UK, The King's Fund, an independent charitable organisation that works to improve healthcare in the UK by providing research and health policy analysis, published a discussion paper which acknowledged how the medical profession was facing challenges arising from changing expectations of patients, governments and managers (Rosen and Dewar, 2005). Shortly after this, The Royal College of Physicians (RCP) tasked itself to discover what was understood as professionalism, to formulate a description and to make recommendations on how each doctor should aim to aspire towards the RCP's defined standard of professionalism in their daily practice (Royal College of Physicians 2005).

The RCP definition of professionalism is:

“Medical Professionalism signifies a set of values, behaviours, and relationships that underpins the trust the public has in doctors.”

The accompanying description is as follows:-

“Medicine is a vocation in which a doctor’s knowledge, clinical skills, and judgement are put in the service of protecting and restoring human well-being. This purpose is realised through a partnership between patient and doctor, one based on mutual respect, individual responsibility, and appropriate accountability.”

In their day-to-day practice, doctors are committed to:

- *Integrity*
- *Compassion*
- *Altruism*
- *Continuous improvement*
- *Excellence*
- *Working in partnership with members on the wider healthcare team*

These values, which underpin the science and practice of medicine, form the basis for a moral contract between the medical profession and society. Each party has a duty to work to strengthen the system of healthcare on which our collective human dignity depends.”

(Royal College of Physicians 2005pp.14-15)

Figure 2 Professionalism defined by the Royal College of Physicians 2005

The 2005 definition discarded the old values of professionalism such as clinical autonomy, privilege, and professional self-regulation and exchanged these for competence, excellence and judgement:

- Competence is defined within the document as the ability or capacity to do something.
- Excellence stresses the possession of abilities to an eminent or commendable degree more than mere capability
- Judgement is understood as the need for application of critical reasoning to solve a problem presented by a patient (Smith, 2006)

In conclusion, The RCP suggested that each doctor reflects on the above definition and description of medical professionalism, recognising that he or she is a role model for

other doctors and health professionals. They also recommended that doctors assess their values, behaviours, and relationships against its definition, and that they take personal responsibility for ensuring that the standard of modern professionalism is met in their daily practice (Royal College of Physicians 2005).

During this period, and most recently in 2013 the General Medical Council (GMC) produced an important publication, '*Good Medical Practice*', which describes the duties of a doctor as 'providing good clinical care, maintaining good medical practice, teaching and training, relationships with patients, working with colleagues, probity and health' placing emphasis on behaviours which nurture good clinical relationships (GMC, 2006, GMC, 2013). This document identifies specific behaviours which map to the core principles articulated in the '*Physicians Charter*' in 2002 (ABIM, 2002).

Two publications, '*On being a doctor: Redefining medical professionalism for better patient care*' and the Royal College of Physicians document '*Doctors in Society: Medical professionalism in a changing world*' were an impetus for what followed (Rosen and Dewar, 2005, Royal College of Physicians 2005). The King's Fund and the Royal College of Physicians jointly conducted a series of consultations involving 800 people to stimulate debate and disseminate the findings of the previous two documents. This resulted in the formulation of '*Understanding Doctors- Harnessing Professionalism*' which elicited opinions on how medical professionalism could evolve to offer a strong value based framework within which doctors could shape the improvement of health care (Levenson et al., 2008).

2.2.1.3. Context

Considering behaviours makes the evaluation of professionalism more tangible, but this does not take into account the person observing the behaviour and the environment that the behaviour occurs in. Stern in his dissertation observed that professional behaviours are highly context-dependent (Stern, 1996). The role of context has gained a great deal of attention in the literature in recent years. This mainly emerged as a response to exploration into how the learning environment shaped professionalism in medical education and training.

Ginsburg and colleagues' early work acknowledged that '*professional behaviour is much more context dependent than has usually been identified*' (Ginsburg et al., 2000ap.S9). Further exploration of context by Ginsburg, identified that there was a gap

between formal definitions and what the medical students perceived as professionalism. They suggested that to support undergraduate medical students' maturing professionalism, it is necessary for teachers to understand the professional challenges and dilemmas that the students perceive to be in the clinical setting (Ginsburg et al., 2002b).

Van de Camp and colleagues in their systematic literature review identified ninety elements of professionalism. Further analysis of these elements revealed three main themes within the concept of professionalism (Van de Camp et al., 2004a). These themes have been described in the Table 4 below.

Table 4 Van de Camp's three themes within the concept of professionalism

Theme	Description
Interpersonal professionalism	Encompasses elements of professionalism that refer to prerequisites for effective and adequate contact with patients and other health care professionals
Public professionalism	Encompasses elements of professionalism that relate to the demands that society places on the medical profession
Intrapersonal professionalism	Encompasses elements of professionalism that relate to demands that have to be met effectively and adequately in the medical professional as an individual i.e. personal characteristics or behaviours

Van de Camp, as with Ginsburg's findings, postulates the concept of professionalism as multidimensional. Van de Camp suggests that diverse environments place emphasis on different elements of professionalism. The research also draws attention to the determinative role of context as an explanation for variability of definitions described in the literature (Van de Camp et al., 2004a). Lesser and colleagues have built on this notion of context and propose multiple layers influence doctor's behaviour (Figure 3). The model below conceptualizes doctors' professionalism as emerging in a series of different settings. Each setting requires a doctor to negotiate multiple interests and competing priorities.

Lesser views professionalism as,

‘grounded in understanding health care as a complex adaptive system, characterised by a dynamic network of interactions across multiple dispersed and decentralized agents whose actions influences one another’
(Lesser et al., 2010p.2736)

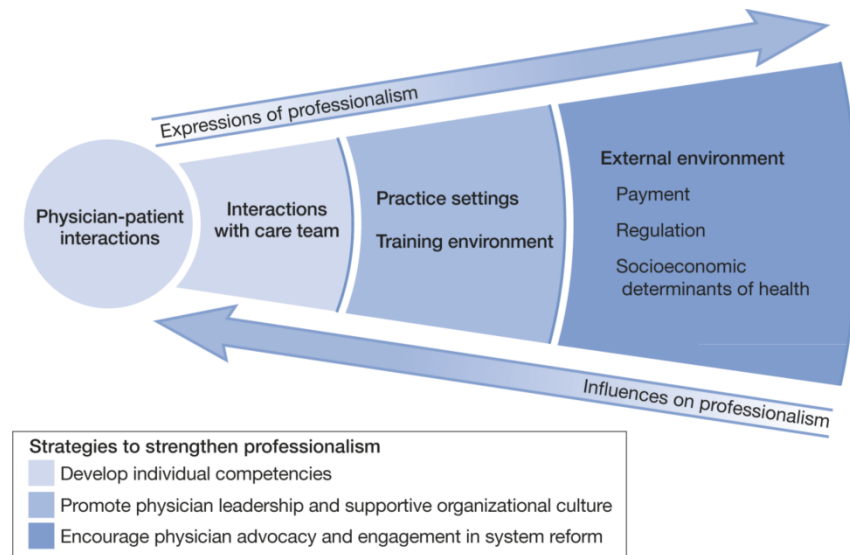


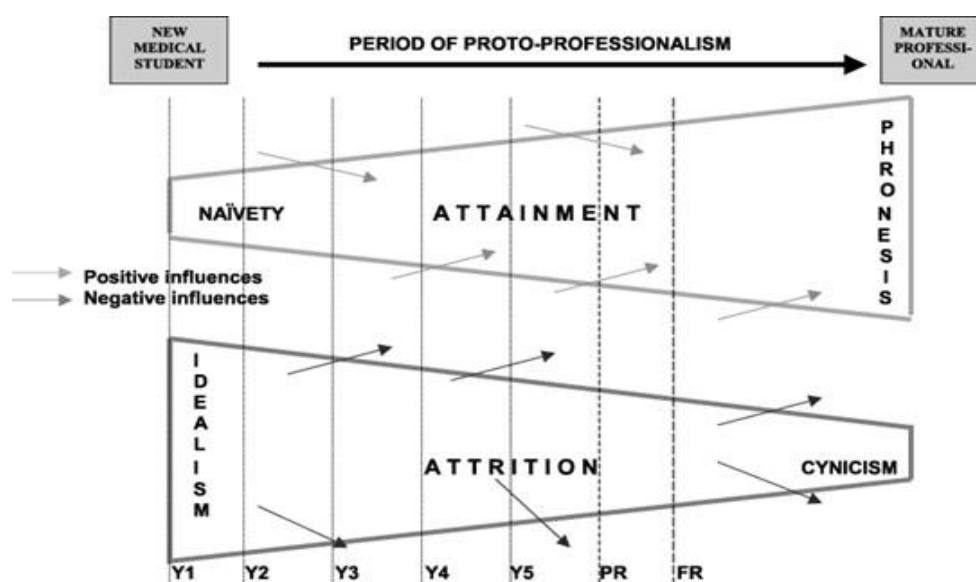
Figure 3 Lesser and colleagues Model of Systems View of professionalism
(Reproduced with kind permission from Dr Cara Lesser)

Lesser suggests that professional behaviours are influenced by the external environment, that is the organizational and environmental context. These external forces need to be supportive and not inhibit professionalism in practice (Lesser et al., 2010).

Maturing professionalism

Hilton and Slotnick offer the term *‘proto-professionalism’* to describe the concept of a lengthy state in which the medical student learner develops the skills and knowledge, and gains the experience needed to acquire professionalism (Hilton and Slotnick, 2005). They suggest a multifaceted view of professionalism incorporating six domains, ethical practice, reflection and responsibility (focused on the doctor as an individual) and respect for patients, teamwork and social responsibility (requiring collaboration). They postulate that these six domains feature consistently in definitions of

professionalism and also address aspects of the social contract. However, they add that an effective description of professionalism requires '*phronesis*'. They use this Greek term meaning practical wisdom to suggest that phronesis is acquired only after an extended period of experience and reflection on this experience. In the period during which this practical wisdom is acquired, learners are proto-professionals rather than unprofessional, as they have not yet acquired full professional maturity. Hilton and Slotnick identify the context (Figure 4) in which the student's development progresses due to positive influences described as attainment, ranging from curriculum design to clinical environment, and classify negative influences as attrition which results from adverse effects of the environment (Hilton and Slotnick, 2005) as seen in the figure below.



(Y1-Y5 = 5 year undergraduate medical programme, PR= Provisional registration, FR= Full registration, Arrows- light arrows= positive influences, dark arrows = negative influences) (Hilton and Slotnick, 2005)

Figure 4 Proto-professionalism as illustrated by Hilton and Slotnick 2005
(Reproduced with kind permission from Dr Hilton)

Similarly, Lucey and Souba propose that development of professionalism occurs longitudinally which is acquired and enriched over time spanning an individual clinician's entire career (Lucey and Souba, 2010). The notion of a continuously developing professional is reinforced by the GDC who define newly qualified dental professionals as '*safe beginners*' reinforcing the idea that these individuals will develop professionally throughout their careers (GDC, 2015).

Sociological perspectives on professionalism

Professionalism is framed in the medical literature as a list of abstract values, characteristics, attitudes and behaviours which have been critiqued as a simplistic approach (Hafferty and Levinson, 2008). However sociologists and medical educators have previously emphasised the importance of incorporating the political, economic and social dimensions into how professionalism is understood (Wear and Kuczewski, 2004, Cruess and Cruess, 2004). There is a significant body of work within this area which acknowledges that professionalism cannot be understood without the inclusion of a sociological perspective. The epigrammatic overview below focuses on a small proportion of literature in relation to medical and dental education.

Freidson in his seminal work defined professionalism within a sociological framework (Freidson, 1988). He proposed that a profession is a specific type of occupation, one that performs work with special characteristics while competing for economic, social and political rewards. He acknowledged that changes were occurring in medicine's relationship with the general public which was due to expanding medical knowledge and expertise and increasing formalisation into rules and procedures; particularly with the advent of computer technology and the information and communication revolutions. However, he held that medicine was not letting go of its control and its monopoly over its expertise. Freidson expressed that individual physicians must consider the consequences of being seen to put self-interest above that of their patient and altruistic and ethical conduct must serve as the backdrop against which medicine is practised (Freidson, 1988). Evetts also reinforced the notion of changes over time and states, *'The meaning of professionalism is not fixed and sociological analysis of the concept has demonstrated changes over time both in its interpretation and function'* (Evetts, 2003pp. 395-415).

Martimianakis and colleagues have argued that professionalism is socially constructed in interaction, which cannot be isolated to be taught and assessed. Therefore, curricula should encourage reflection on how individual actions relate to broader systemic concerns (Martimianakis et al., 2009).

Burford and colleagues recommend that education on professionalism should prepare students for the realities of professional practice by raising awareness of conflicts and sub-optimal environments (Burford et al., 2014). They highlight failures at the Mid-Staffordshire NHS Trust (Francis, 2013) which was the result of not an individual but "a

system and culture that enabled aberrant behaviour to develop and become habituated over time” (Burford et al., 2014p.18). The notion of a broader definition of professionalism is reinforced by the work of Pearson and colleagues who propose that preparing medical students for the realities of practice in the 21st century must mean addressing professionalism in the context of social accountability (Pearson et al., 2015).

Dentistry is a profession within healthcare; however, in the United Kingdom ninety percent of the profession work in general dental practice which is often perceived as a business rather than health care. Patients are required to pay charges or make co-payments for dental care (Hewitt, 2007). Welie believes there are two models of dentistry, one as a profession, the other as a business which are not concurrent. He also suggests that these are conflicting demands, and there cannot be a coexistence of a professional's social contract and the pursuit of business (Welie, 2004c). This is illustrated by the current increased demand for improved aesthetics which is pushing the dental profession further toward the business model. Trathen and Gallagher propose *“it would be unethical if the dental profession did not make an appropriate use of resources, both human and financial”* (Trathen and Gallagher, 2009 p.252).

Undergraduate dental education must therefore prepare students for the realities of dental practice and give consideration to the business of dentistry and the challenges this creates to maintaining professionalism and professional behaviour when students graduate and leave dental school.

2.2.2. Professionalism and dentistry

Professionalism has been examined intensely in medicine but has received less attention in dentistry. Much of the work on professionalism within dentistry emanates from North America. A central theme is the conflict of dentistry as a profession compared to dentistry as business. This has meant that much of the discussion in dentistry has incorporated the issue of context and its influence on a dentist's professionalism. Ozar and Sokol advocate that dentists have moral obligations which arise because of the obligations to the profession as a whole, and to the community at large rather than commercial accountability (Ozar and Sokol, 2002 pp.11-23). In contrast to this, The Association of Dental Education in Europe (ADEE) describes professionalism as a competence that includes ethical principles, professional attitudes and behaviours. This normative definition focuses on competencies and values in synergy with definitions within medicine focusing on behaviour (Cowpe et al., 2010,

Royal College of Physicians 2005). The obligation to the community, discussed by Ozar and Sokol (Ozar and Sokol, 2002 pp.11-23) has since been identified by Welie in his definition of professionalism. When he considered whether dentistry can call itself a profession, he questioned the coexistence of a professional's social contract and the pursuit of business (Welie, 2004). Extending from this idea, Masella suggested that the concept of the professional as a guardian of a social contract is being displaced by *'the notion of the professional as a purveyor of expert services'* (Masella, 2007). This adds further tensions between definitions which highlight normative values against a social environment which portrays an opposing image of professionalism.

Trathen and Gallagher exploring professionalism in general dental practice have suggested that analysis and debate over what it means to be a professional dentist in the UK is lacking in contemporary dentistry (Trathen and Gallagher, 2009). Most dentists work in General Practice in the United Kingdom and due to the way in which this is remunerated it is perceived as operating as a business when compared to medicine. This is mainly due to the fact that most patients pay towards their dental care. They suggest that this financial aspect adds greater weight to the ethical implications of being professional. The conflict between the ethical and business challenges in dentistry was also described in the narratives of the general dental practitioners who participated in Steele's independent review of NHS Dental Services which considered aspects of professional frustration in the UK (Steele, 2009). Trathen and Gallagher in 2009 suggested an amended definition of professionalism for dentistry based on the definition by the Royal College of Physicians but also recognised the financial element in dentistry (Figure 5).

Dental professionalism signifies a set of values, behaviours and relationships that underpins the trust the public has in dentists.

Dentistry is a vocation in which a dentist's knowledge, clinical skills, and judgment are put in the service of protecting and restoring human well-being. This purpose is realised through a partnership between patient and dentist, one based on mutual respect, individual responsibility, and appropriate accountability.

In their day-to-day practice, dentists are committed to:-

- Integrity
- Compassion
- Altruism
- Continuous Improvement
- Excellence
- Working in partnership with members of the wider healthcare team.

These values, which underpin the science and practice of dentistry, form the basis for a moral contract between the medical profession and society. Each party has a duty to work to strengthen the system of oral and dental healthcare on which our collective human dignity depends, **within the context of a realistic economic framework** that will permit the extension of this system to all those in need both now and in future”

(Trathen and Gallagher, 2009 p.253)

Figure 5 Definition of professionalism in dentistry by Trathen and Gallagher 2009

Zijlstra-Shaw in her exploration of professionalism found four key areas, professionalism as a second order competence, the expression of professionalism as dependent on context, reflection as a necessary component and professionalism encompasses both tacit and overt personal aspects (Zijlstra-Shaw et al., 2013). These results were then incorporated into a conceptual model of dental professionalism (Figure 6)

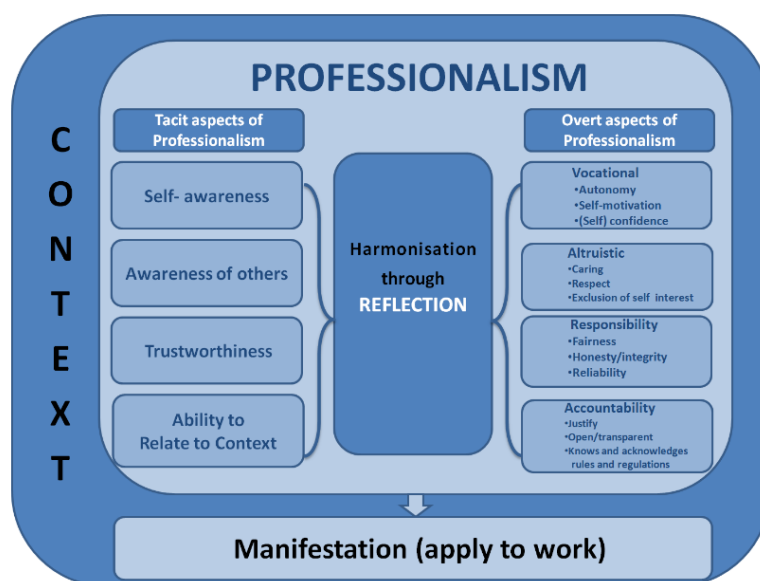


Figure 6 Model of professionalism for dentistry illustrated by Zijlstra-Shaw 2013
(Reproduced with kind permission from Dr Zijlstra-Shaw)

2.3. Perceptions of students, patients and teachers

Literature on teaching and assessment of professionalism has placed emphasis on the perceptions of teachers but there has been less emphasis on the perceptions of undergraduate students themselves and the patients they care for.

2.3.1. Students

Students' perceptions of what constitutes professionalism focus predominantly on their observations of role models and their environment. This is hugely challenging as students are taught abstract idealistic values such as honesty and respect and yet they may observe lapses in professional behaviour in the environment around them.

Ginsburg and colleagues aimed to understand the professional challenges and dilemmas in the teaching clinical setting. The students in their study identified specific lapses in professionalism which ranged from poor communication skills to physical harm to patients and others (Ginsburg et al., 2002b). Hilton and Slotnick highlighted the detrimental influence of adverse environmental conditions such as negative role models on the professional development of students (Hilton and Slotnick, 2005). This was also identified in a smaller study in Saudi Arabia in which medical students observed a lack of positive role models and poor clinical experiences (Adkoli et al., 2011). Similarly, a cross sectional study in Turkey compared perceptions of

professionalism in first and final year medical students, found clinical practice and role models as key determinants in development of professionalism (Kavas et al., 2015).

These studies draw attention to the influence of the hidden curriculum and the environment on student perceptions of professionalism. However, in the wider healthcare literature, a study by the Health Professions Council (HPC) explored perceptions of professionalism in undergraduate students in three groups of its registrants, chiropodists, occupational therapists and paramedics (Health and Care Professions Council, 2011). Professionalism was perceived as a holistic concept and as a set of specific appropriate behaviours grounded in the context of practice. Most interestingly, professionalism was not perceived as an absolute but as an interaction between the individual and context, finally concluding professionalism as a judgment rather than a skill. The students in this study are analogous to dental students, as they are involved in undergraduate programmes which engage students in responsibility for patient care. However, this study did not identify any differences between students of different years.

2.3.2. *Patients*

Patient perceptions explored by Brosky and colleagues at the School of Dentistry, University of Minnesota, found patients associated professional attire and behaviour of dental care providers with professional integrity and competence (Brosky et al., 2003). Patients' placed varying importance on appearance and observed behaviours according to their expectation of the individual providing their care. An example of this was the first impression created by students had greater importance in how patients perceived students, compared to faculty members. This was possibly due to differences in expectations of experience and expertise between the two groups. They concluded professionalism to be multi-factorial and although patients' first impressions of dental students were perceived to be important in engendering confidence, other factors such as communication skills, behaviour and attitude were thought to have a greater impact on the overall patient relationship. This study led them to define professionalism as '*having an image*' that will promote a successful relationship with the patient, thus proposing that professional attire and appearance can influence patients' perceptions of professionalism (Brosky et al., 2003). In contrast, Wiggins and colleagues found patients felt communication skills and compassion was more important to them than social behaviours such as appearance (Wiggins et al., 2009).

Wofford and colleagues investigating patient perceptions of professionalism found patient complaints about physician behaviours focused on disrespect in a Medical Centre in North Carolina (Wofford et al., 2004). The patients' believed the health care provider's discourtesy was intentional. '*Rudeness*', '*abuse*', '*condescending*' and '*insulting*' were the terms that were encountered in this category of complaints. The researchers concluded that the complaint categories identified in their study would be useful when developing curricula related to professionalism (Wofford et al., 2004). To date there are no published accounts of attempts to do this within undergraduate education, however Van Mook and colleagues identified that behaviour such as poor communication was perceived as unprofessional by patients although not so by the treating clinicians (van Mook et al., 2012). These studies concur that patients perceive communication skills as an important part of professionalism.

2.3.3. Teachers

The literature on teachers' perceptions of professionalism has focused on mainly on teachers' unprofessional behaviour and on the challenges of standardising assessment of lapses in professionalism in students.

Ginsburg and colleagues exploring teachers found six critical issues with the behaviour exhibited by teachers that challenged medical students' professionalism:

1. teachers poor communication skills (with patients and other clinicians)
2. role resistance (students unsure of expectations when managing patients)
3. objectification of patients (patients treated as objects)
4. accountability (lack of responsibility to others in team)
5. physical harm (inappropriate or unnecessary pain or injury to patients)
6. crossfire (being put in the middle of a struggle between superiors).

Therefore Ginsburg and colleagues proposed development of an effective curricula to counteract the environment and the observed unprofessional behaviour of teachers (Ginsburg et al., 2002b). Ginsburg's further work with teachers highlighted difficulty experienced by educators when evaluating medical students in professionally challenging scenarios as the expectation was for students to 'just know' what to do. Teachers acknowledged that this may reflect the complexity and ambiguity surrounding decision making in such situations (Ginsburg et al., 2008).

The environment is recognised by teachers as having an influence on the handling of complex professional dilemmas. Hilton and Slotnick recognise the environment as an attritional element which can negatively impact on the expected professional behaviour of teachers and is shown in the model (Figure 4) (Hilton and Slotnick, 2005). Bryden and colleagues also identified the influence of context on professionalism in teachers. The teachers identified their own lapses in professionalism and their failure to address these with one another as the greatest hurdle to teaching professionalism. As a result of this, the teachers perceived themselves and their colleagues as colluding to create a medical education culture of '*permissiveness and non-confrontation*' around minor and moderate lapses in professionalism. Bryden and colleagues concluded that teachers' development should discuss any societal, professional or institutional cultures (Section 2.4.3) in which they practice and that may influence their perception of professionalism (Bryden et al., 2010).

Teherani and colleagues at the University of California conducted a follow up study (Section 1) to their work with Papadakis (Papadakis et al., 2004) and they explored teachers perceptions of unprofessional behaviour (Teherani et al., 2005). Three domains of unprofessional behaviour were identified: unreliability and lack of responsibility of students, lack of self-improvement and insufficient adaptability and poor initiative and motivation. They also acknowledged that there was lack of standardisation amongst teachers as to what constitutes unprofessional behaviour.

2.3.4. *Perceptions of professionalism in different groups*

The views of students, patients and teachers need to be taken into account for a complete understanding of professionalism. The literature has drawn on varying methods to conceptualise perceptions of different groups. Zijlstra-Shaw incorporated perceptions of professionalism of dentists, dental professionals and patients to develop a model (Figure 6) to conceptualise professionalism within dentistry. She concluded that '*professionalism is a second order competence*' explicated as a competence which is demonstrated only when carrying out another, first order competence such as technical skills, communication and interpersonal skills, and leadership and management skills. (Zijlstra-Shaw et al., 2013 p.5). Wagner and colleagues compared perceptions of professionalism of medical students, residents, faculty and patients (Wagner et al., 2007). They found that patients focused on themes associated with relationships; younger student doctors were concerned that they would not want to hurt someone, unlike the more experienced students whose perception of duty, was being

available and adaptable 24 hours a day to help each other as a team. The maturing professionalism in the participants is articulated as they change from an emotional and empathetic perspective in the younger clinicians to a sense of obligation in the more senior clinicians. Green and colleagues designed a study to prioritize behavioural signs of professionalism that are relevant to patients, physicians and nurses and found that each group provided different perspectives on the importance of behaviour. They concluded that by including different groups involved in a clinical setting provided shared understanding of what constitutes professional behaviour which could be an important step to facilitate assessment of professionalism (Green et al., 2009).

2.4. Teaching Professionalism

The active teaching of professionalism as a component of the medical curriculum was emphasised over fifteen years ago (Cruess et al., 2014). The commonly stated educational objectives of a curriculum on professionalism was to ensure learners at all levels understood the cognitive base of professionalism, embodied the values of the medical profession, and constantly demonstrated the expected behaviours (Cruess et al., 2009). Professionalism has also been made explicit within dental undergraduate training. The new emphasis on teaching and assessment of professionalism in the most recent learning outcomes from the General Dental Council has prompted dental education to consider how professionalism is taught and assessed (GDC, 2013, GDC, 2015).

In order to examine teaching and assessment of professionalism, the current literature has been explored. Firstly, recognition of why professionalism should be systematically taught (Section 2.4.1) and assessed (Section 2.4.4) is considered, then how can professionalism be taught (Section 2.4.2) and assessed (Section 2.4.5) , followed by what can be taught and assessed (Section 2.4.3) and finally what has been achieved and areas of further work in teaching and assessment of professionalism has been examined.

2.4.1. Why teaching professionalism is important?

There are several reasons that accentuate the need to teach and assess professionalism. Paul Mueller a clinician and professor in biomedical ethics from Rochester , USA, presented eight reasons below at the meeting of The Keio Medical Society in Tokyo in 2008 (Mueller, 2009 p. 137).

- 1. Teaching and assessing professionalism does not occur by chance alone*
- 2. Patients expect physicians to be professional*
- 3. Medical professional societies expect professionalism to be taught and assessed*
- 4. Professionalism is associated with improved medical outcomes*
- 5. Unprofessional behaviour is associated with adverse medical outcomes*
- 6. Accreditation organizations require that professionalism be taught and assessed*
- 7. Professionalism can be taught and learned*
- 8. Professionalism can be assessed*

The first assertion is grounded in evidence which explains that professionalism needs to be taught explicitly in a formal curriculum (Stern and Papadakis, 2006). Second, patients expect professional behaviour. Bendapudi and colleagues asked patients to identify ideal behaviours of a doctor which revealed seven behaviours, confident, empathetic, compassionate, viewing the patient as a person, honest, respectful and meticulous were identified (Bendapudi et al., 2006). Third, regulatory bodies such as the General Medical Council and the General Dental Council expect professional behaviour as a requirement of undergraduate education and also as part of their professional standards (GMC, 2009, GDC, 2013). This has been explored in detail later in this chapter in Section 2.6.2.

Fourth and fifth, professionalism is associated with improved outcomes such as increased patient satisfaction and trust, increased patient compliance with treatments and fewer complaints (Reed et al., 2008). However unprofessional behaviour is associated with adverse outcomes which is reinforced by a survey which reported that 95% of doctors had observed unprofessional behaviours such as belittling patients, swearing, hurling surgical instruments and sabotaging meetings (Weber, 2004). Nurses also reported observing unprofessional behaviour of doctors (Rosenstein and O'Daniel, 2008).

Finally, the sixth, seventh and eighth reasons support the idea that professionalism can be taught and assessed. Cruess and Cruess explain,

'The teaching of professionalism should start with the recognition that there is a cognitive base to professionalism which must be taught explicitly'

(Cruess and Cruess, 2006 p.207)

There is also evidence that learners gain most of their knowledge of professionalism from role models (Baernstein et al., 2009, Gordon, 2003). There is an acceptance in the literature that the influence of role models has the most impact on the development of professionalism in students (Huddle, 2005, Johnston, 2006, Levenson, 2010). The literature supports the idea that professionalism can be assessed but recognises that measuring professionalism is a difficult task (Collier, 2012). Assessment of professionalism places importance on the topic and gives learners an opportunity to demonstrate that a desired standard has been achieved (Arnold, 2002b, Stern, 2006b pp 3-13).

2.4.2. How can professionalism be taught?

The most commonly used model in the development of a medical or dental clinical curricula is based on Millers triangle or pyramid (Figure 7) (Miller, 1990). In his model, Miller described the difference between meeting learning objectives as firstly what a student should 'know' or 'understand', followed by gaining competency and performance based learning demonstrated by being able to 'show how' and 'to do' respectively (Miller, 1990). Most dental undergraduate programmes typically use the four stages to build an educational programme that begins with the assimilation of abstract knowledge (reading lectures, books and articles) and progresses through the achievement of clinical skills to development of performance in clinical practice.

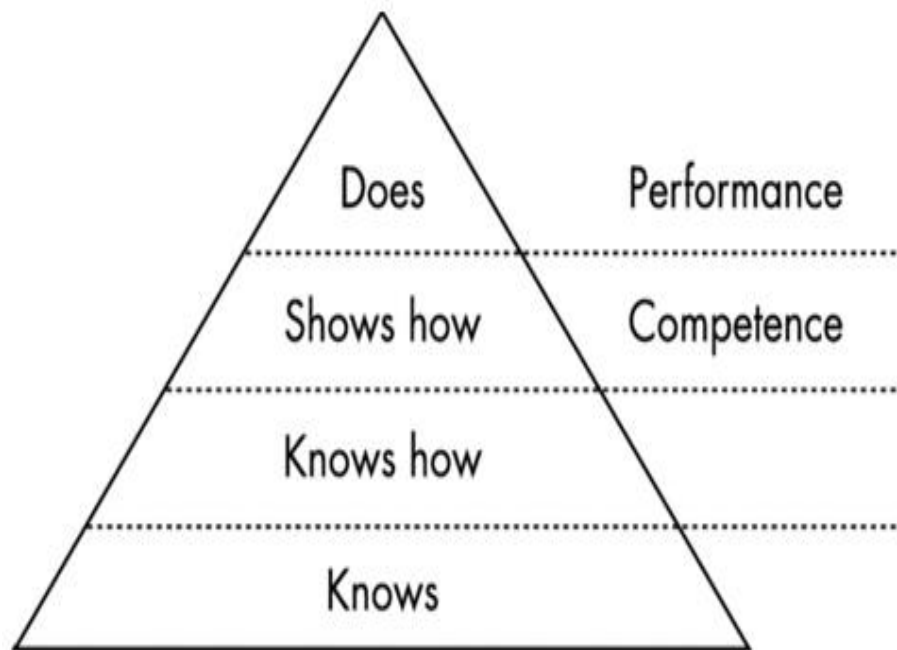


Figure 7 Miller's Triangle used to develop medical and dental curricula *(This work is licensed under a Creative Commons Attribution-Non Commercial-Share Alike 2.0 UK: England & Wales License.)*

The influence of context increases with each level. The two lowest levels (knows and knows how) test aspects of cognitive knowledge and the upper two levels (shows how and does) focus on behavioural aspects which includes clinical skills, decision making and also professionalism. Professional behaviour assessments developed to measure the 'does' level of Miller's pyramid has been critiqued as it does not take into consideration reflection as a skill which promotes development of professionalism (Zijlstra-Shaw et al., 2012).

As a means to develop learning in a clinical environment, educationalists have looked to how reflective practice enhances the overall learning process. Kolb conceptualizes learning as 'the process whereby knowledge is created through transformation of experience' (Kolb, 1984p.41). Kolb's cycle (Figure 8) moves through concrete experience, reflective observation, abstract conceptualization, and active experimentation. This can be a useful tool to develop teaching of professionalism by including reflection of learning experiences.

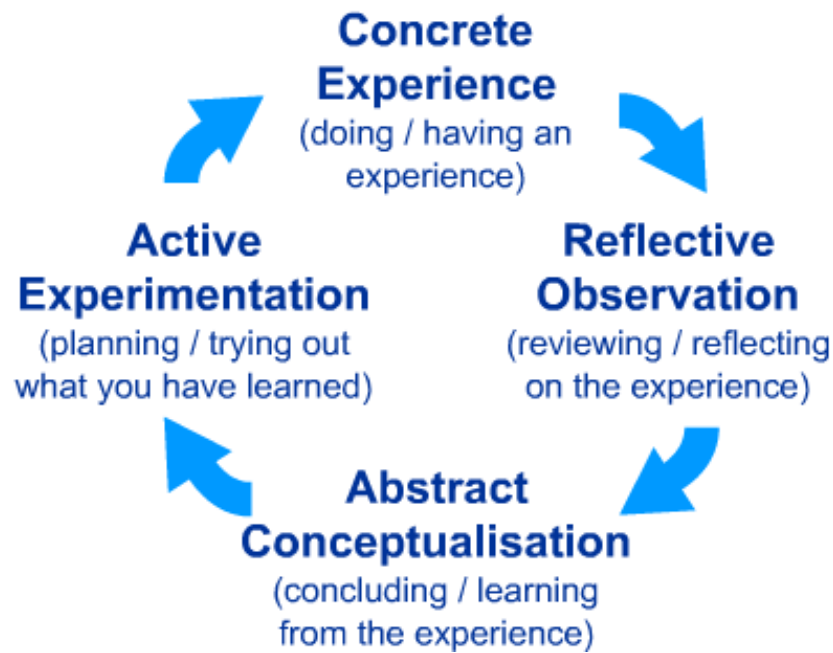


Figure 8 The Kolb experiential learning cycle *(This work is licensed under a Creative Commons Attribution-Non Commercial-Share Alike 2.0 UK: England & Wales License.)*

The Kolb learning cycle enhances the experiential learning which is applicable to teaching professionalism in medicine and dentistry. The cycle has two methods of grasping experience namely concrete experience and abstract conceptualization and two methods of transforming experience namely reflective observation and active experimentation. There is some evidence that experiential learning de-conceptualizes the process and emphasizes personal/individual experience while neglecting many factors that could influence learning such as social status, gender and culture (Kayes, 2002).

Clinical dental education is based on learning through practice, both in clinical settings and through simulation. Dental students take on responsibility for patient care early in the dental curriculum. The clinical environment in which the students learn is replicated by the dynamic of a ‘real’ dental clinic environment. In this context, Eraut proposed that work-based learning occurs as a by-product of work activities such as solving problems and ‘trying things out’ (Eraut, 2010 p. 186). Work-based learning is prominent in dental education which allows dental students to actively participate in a clinical setting. Cook and colleagues have recently examined the implications of work-based learning with novice teachers concluding that this type of learning can play a significant role in professional development but critically highlight that such learning could also be variable and inconsistent (Cook et al., 2012). The inconsistency of teaching especially

from novice teachers may impact on role modelling, which could influence teaching of professionalism. Gobbi in her work within general nursing explained that learners could face competing messages in work-based learning as they may observe conflicts between evidence-based practice and the tacit knowledge of the practitioners in their environment. She suggests that clinical educators need to reflect on this in their role and identify this to learners (Gobbi, 2005).

2.4.3. Principles for designing a curriculum for teaching professionalism

Cruess and Cruess, key researchers in the field of medical education and professionalism, have dedicated a textbook to, '*Teaching Medical Professionalism*'. Table 5 below demonstrates the key principles they propose including a summary of the constituents of each of the factors (Cruess et al., 2009). Each of these are further discussed in terms of design, delivery and learning of professionalism. Some of the sections have been expanded to reflect the prolonged literature associated with the factor such as experiential learning.

Table 5 Principles for teaching Professionalism (Summarised from (Cruess et al., 2009 pp73-84))

Factor	Constituents
<i>Institutional Support</i>	Active participation of dean and program directors including allocation of space, teaching time and financial resources
<i>The Cognitive Base</i>	Students must be taught the historical roots of professionalism, and its relationship to medicine social contract with society. Definition and description of professionalism as the students will be evaluated on these; communication skills; multidisciplinary communication skills; understanding of ethical and legal principles; clinical competence
<i>Experiential Learning</i>	Stage- appropriate opportunities for gaining experience and reflection. Additionally tacit knowledge is gained by situated learning
<i>Continuity</i>	Professionalism must be taught throughout the curriculum
<i>Role Modelling</i>	The destructive effect of negative role models versus the potent effect of good role models
<i>Faculty Development</i>	Role models need to understand the role they are modelling. Faculty agreement on definition of and characteristics associated with professionalism
<i>Evaluation</i>	Students need to know if they are meeting expectations
<i>The Environment</i>	Institutional culture can support or subvert professional behaviour. Formal/Informal/hidden curriculum (Hafferty and Franks, 1994)

Institutional support

Institutional support is essential for designing a program for teaching and learning professionalism and includes financial and human resources as well as time which must be allocated (Cruess et al., 2009). Mueller and colleagues reinforce this notion as they suggest without institutional support a curriculum on professionalism would be ineffective (Mueller, 2015). When developing new curricula financial and human resource constraints may make it difficult, however, evidence suggests that many of the learning experiences that teach professionalism are already taking place without being identified explicitly (Steinert et al., 2007, Smith et al., 2007). This could potentially provide learning experiences which could be adapted for a new curriculum on professionalism. The literature however advocates the need to allocate responsibility for directing a programme for teaching professionalism to ensure teaching is supported and evaluated (Hafferty, 2006, Goldstein et al., 2006).

Cognitive base

The cognitive base of professionalism such as its historical roots and moral origins is an important part of teaching professionalism as it provides the foundation which must be understood by learners. The definition and description of professionalism is also important as they set out the expectations. Regulatory framework and guidance also contribute to these expectations (Cruess and Cruess, 1997, Cruess, 2006, Brater, 2007). Cruess and colleagues recommend that a consensus needs to be reached about a definition that can apply to all levels within an organisation. The chosen definition should reflect professionalism that is flexible enough to accommodate contemporary practice (Rosen and Dewar, 2005, Royal College of Physicians 2005). Mueller identifies specific knowledge and skills, communication skills and ethics as the foundations of teaching professionalism. He further describes teaching of attributes of professionalism – excellence, humanism, accountability and altruism using different methods including role-play, discussion groups, and simulation with patient actors, team learning and role modelling with discussion in a safe and confidential environment (Mueller, 2009). The literature concurs that early teaching of professionalism must include its cognitive underpinning.

Experiential learning

Maudsley and Strivens refer to experiential learning as the process by which “*Novices develop into experts by incrementally acquiring skills that depend on accruing experience*” (Maudsley and Strivens, 2000 p. 539). Professor Peter Jarvis, an educationalist and scholar in the field of adult education suggests how learning occurs from experiences. He defines biography as the accumulation and processing of experiences that may or may not lead to learning. He suggests that in adult learning, students bring their own biographies to learning and some previous experiences may be helpful to the learning process whilst other experiences may hinder it (Jarvis, 1987 p.196). Jarvis explains that ‘*All learning begins with experience and all people experience the world in a variety of ways at the same time*’ and links this to evidence in the literature of hidden curriculum. He articulates that it is not just the provision of experiences that leads to learning but that the significance of the environment cannot be overlooked. Jarvis discusses how experiences can be used in professional practice learning such as work based-learning where learners bring their existing knowledge and skills (biography) to the work situation and have to think and learn in a unique situation. The learners will have a useful learning experience if the learners consider this experience with their teachers by reflection and discussion (Jarvis, 1987 pp.199-200).

Viewing the world from another’s perspective

The experience of viewing the world from another’s perspective can influence the development of professionalism. The literature regarding the concept of empathy is extensive (Batson, 1991, Hoffman, 2000, Hojat, 2007). General conclusions from the literature around the development of empathy can be applicable to development of empathy in dental students. Carl Rogers, the creator of patient-centred therapy defined empathy as

‘the ability to perceive the internal frame of reference of another with accuracy as if one were the other person, but without ever losing the as if condition’
(Rogers, 1951) cited in (Nash, 2010p.571).

The health professions have increasingly identified the importance of empathy in the doctor –patient relationship. Halpern, a psychiatrist and philosopher suggests that empathy makes the care of doctors more effective (Halpern, 2001).

Studies in the field of evolutionary biology suggest that empathy is based on the parental care that is required for the development of all mammals (Darwin, 1859) cited in (Nash, 2010p.568). It is suggested that empathy has the ability to foster cooperative behaviour and therefore improve the ability to thrive. This has been further argued that caring behaviours are drawn out when distress evokes empathy (Hoffman, 2000).

Educationalists have recognized the ability to empathise as a requirement for entry into healthcare education. A number of instruments have been developed to measure empathy, including '*The Jefferson Scale of Physician Empathy*' (Hojat et al., 2002). Hojat's instrument has been used extensively in the wider literature (Kane et al., 2007, Fjortoft et al., 2011). Amongst the findings of these studies is that cognitive empathy declines during medical education (Neumann et al., 2011). This has been attributed to a number of factors including lack of role models and time pressures (Hojat, 2009). Eikeland and colleagues (Eikeland et al., 2014) explored medical students in Norway who explained how academic skills have been prioritised over humanistic knowledge throughout medical school. Eikeland and co-workers concluded that inhibitors of empathy may originate in the hidden curriculum.

Hojat's instrument to measure empathy, described above, focuses specifically on the cognitive dimension of empathy and excludes the emotional component. Hojat explains his exclusion of the emotional component is because this dimension of empathy is not significant for health professionals since they need to maintain a '*detached concern*', that is not allow their emotions to influence their interactions with patients. In contrast, Halpern explains that empathy outside the field of medicine is a '*mode of understanding that specifically involves emotional resonance*' but in medical education is often defined as '*detached cognition*'. She assesses this critically and proposes that emotional empathy enhances clinical practice as emotions help to focus on the patient's perspective and concludes that '*empathy makes being a physician more meaningful and satisfying*' (Halpern, 2003 pp.670-673).

David Nash, a dental educationalist from Kentucky in considering ethics, empathy and dental education argues that there is a considerable difference between recognising the circumstance of another (intellectual empathy) and being motivated to care and help (emotional empathy). He explains that intellectual empathy can be developed but emotional empathy is a personality characteristic developed in childhood supported by evolutionary biology. He suggests that in applying ethical principles it is not enough to recognise another's circumstance, it must be acted upon. He recommends further work

in developing a measurement for assessment of emotional empathy for applicants for admission to dental school (Nash, 2010). To date, there are no published accounts of attempts to do this.

Learning from patient contact

The experience of being in early contact with patients is recognised in the literature as important in learning professionalism. Goldie and colleagues found, medical students were motivated by patient contact which promoted their '*socialisation into the profession of medicine*' (Goldie et al., 2007 p.615). A 2006 survey by the Association for the Study of Medical Education (ASME) found that clinical placements provided crucial opportunities for patient contact and addressed a number of learning outcomes in medical education (Hastings, 2006). Further evidence suggests patient interaction offers medical students an insight into the day-to-day role of a doctor and the patient perspective on specific conditions. It also encouraged empathy, motivated students to learn and promoted confidence (Howe, 2007, Howe et al., 2007).

The British Medical Association (BMA) in a discussion paper has recognised the importance of patient involvement in medical education and particularly in having more active roles, such as acting as a teacher (BMA, 2008). The Health Foundation, an independent charity working to improve the quality of health care in the UK, produced a recent report entitled, '*Can patients be teachers? Involving patients and service users in healthcare professional education*', and considered the active role of patients as educators. Spencer and colleagues in exploring the literature found patient involvement increased learner satisfaction and gained patient approval (Spencer, 2011).

Towle and colleagues proposed a spectrum of involvement model which identified six main educational roles from a basic level as a simulated patient to highest level of involvement at institutional level in curriculum development (Towle et al., 2010). The Spencer report made recommendations including making explicit connections between patients and their involvement in education. Much of the literature which explored this concept was based in medical education, though there was suggestion that this could be broadened to look at patient involvement in education across all health and social care professional groups. Most recently, Richards reported on an innovative change in one of Netherlands' largest hospitals, Radboud University Medical Centre in Nijmegen, which has been described as a model of patient participation including involvement in developing a new undergraduate medical curriculum (Richards, 2014).

Learning from negative experiences

Experiences which are negative or evoke negative emotions can also contribute in the development of professionalism. Rees and colleagues exploring the impact of professionalism dilemmas on moral distress made recommendations for medical educators to help students construct coherent and emotionally integrated narratives to make sense of negative professionalism dilemmas (Rees et al., 2013). Benbassat has more recently explored the literature to draw attention to undesirable features of the medical learning environment. He concluded that the major challenge of contemporary medical education was to advance a clinical medical learning environment, where errors and uncertainties are acknowledged rather than denied, and trainees are trusted and supported, rather than judged (Benbassat, 2013). Similarly, Rougas and colleagues suggest that when learners observe lapses in professionalism, the medical educators should use remediation to address the underlying issue. This can have a positive impact on medical students. While failure to address lapses, or to do so ineffectively, can have long-term consequences for learners and potentially patients (Rougas et al., 2015). This evidence proposes transparency and support when managing lapses in professionalism.

The observation of lapses in professionalism can be described as a critical incident (Hodges et al., 2009). The critical incident is then considered to promote reflective learning. It allows the learner to reflect on formative experiences which address ethics and professional values including the negative influences of the hidden curriculum. Branch recommends that a skilled and respected teacher would ideally need to undertake this task (Branch, 2005). Branch referred to educational theory proposed by Mezirow and Brookfield. Their work hypothesized that a critical incident may improve learning by providing access to experiences that facilitate growth. Mezirow called this transformative learning (Mezirow, 1990, Brookfield, 1990).

Hilton and Slotnick concluded that professional identity arises '*from a long term combination of experience and reflection on experience*' (Hilton and Slotnick, 2005 p 63). Cruess and colleagues also suggest that learners need the ability to experience diverse situations (in the classroom and the clinical setting), observe and reflect on what they have learned, develop their own theory and understanding of the world. Experiential learning and reflection on the experience gained including work based learning (Section 2.4.2) have always been thought to be inherent within medical and dental curricula but the challenge in designing a program on professionalism is to

engage the learners in reflecting in the context of professionalism. Cruess and workers propose this type of learning should be prioritised above all else (Cruess et al., 2009).

Continuity

The literature especially related to medical education is consistent that professionalism must be taught in an integrated manner throughout the undergraduate and postgraduate curriculum (Stern, 2006a, Steinert et al., 2005, Inui, 2003, Maudsley and Strivens, 2000). The need for continuity in such a curriculum is for the learners to be able to reflect on their development of professionalism as they engage in different types of learning experiences and that student at all levels need to be constantly reminded of the importance of professionalism in healthcare.

Role Modelling

Role modelling is defined as the process whereby *'faculty members exhibit knowledge, attitudes and skills; demonstrate and articulate expert thought processes; and manifest positive professional behaviours and characteristics'* (Irby, 1986 p.38). This process involves conscious and unconscious activities. It is the combination of explicit and implied that amplifies the complexity of learning from role models (Epstein et al., 1998). Kenny and colleagues suggest that learning from role modelling has an impact on learners professional character formation and is learnt in experience and critical reflection (Kenny et al., 2003). Role modelling occurs in the formal curriculum at all levels including the hidden curriculum, from peers to senior clinicians (Hafferty, 1998). Many of the abrading effects of negative role models occur in the hidden curriculum (Baldwin et al., 1998). Cruess and colleagues recommend the recognition of the importance of role modelling in a teaching program.

Birden and colleagues reiterate that the most significant impact on development of professionalism is through the influence of clinicians they encounter in the course of their education (Birden et al., 2013). It is the behaviour observed by students that will influence development of professional identity more than formally taught behaviour (Cruess, 2006, Levenson, 2010).

It is the divide between the formal and hidden curricula that confuses current and future clinicians and can promote cynicism as these individual learn that the taught principles

do not match the realities seen in daily practice among their role models and those in their clinical environment (Inui, 2003). Susceptible students are likely to emulate the modelled behaviour or at least not challenge it (Brainard and Brislen, 2007). Literature also recognises a need for culture change in teaching hospitals and university departments such as a supportive environment that promotes self- and group reflections. Jones also emphasises the importance of providing a safe environment for learners to share their observations in reflection (Jones, 2004). Medical students in a Saudi Arabian study admitted that they had very few teachers as positive role models. The students describe several incidents such as aggressive behaviour towards students, ill treatment of students and absenteeism from scheduled teaching. Adkoli and colleagues concluded that issues of professionalism such as faculty recruitment and development, curriculum reform and an organizational culture that supports professionalism needed to be addressed (Adkoli et al., 2011). Byszewski and colleagues in exploring perceptions of professionalism amongst medical students found they identified role modelling as the most important aspect of professionalism. Students wanted information on how to report lapses and breaches of professionalism (Byszewski et al., 2012). Most recently, a study in Turkey exploring medical students' perceptions of professionalism found there to be an inconsistency between their academic teaching and realities of clinical work. These results highlight the contradictory influences of the hidden curriculum. The students highlighted clinical practice and role models to be the most important determinants (Kavas et al., 2015).

Cruess and colleagues propose suspension of contact with individuals who are consistently detrimental to professional development of learners (Cruess et al., 2009). Though in theory this seems like a pragmatic solution, the emotional implications of this could be destructive in a teaching institution and needs to be managed sensitively.

Faculty development

Faculty development has been defined as a broad range of activities that a institution uses to renew or assist teachers in their roles (Centra, 1978). This type of training programme for teachers can allow individuals to consider different perceptions and definitions of professionalism, its characteristics and standards of behaviour. Well-designed programmes can be instrumental in bringing about change, revising curriculum, impacting on behaviours of role models and provide support to teachers (Cruess et al., 2009).

Evaluation

Evaluation of a curriculum on professionalism is essential. This will assist in evaluating the knowledge and performance of learners and in acknowledging the hidden curriculum. Cruess and colleagues also propose evaluation of professionalism of the faculty to provide and insight into the hidden curriculum (Cruess et al., 2009).

Environment

The environment has been identified as influential on the development of professionalism. The environment encompasses the physical environment n the social interactions which occur within it. Jean Lave a social anthropologist and Etienne Wenger a teacher at the time, first published their theory in *Situated Learning: Legitimate peripheral participation* (Lave and Wenger, 1991) and later in work by Etienne Wenger (Wenger, 1998).Lave and Wenger draw together the concept of 'legitimate peripheral participation' and 'communities of practice' which they describe as '*a descriptor of engagement in social practice that entails learning as an integral constituent*'. They proposed the idea that learning '*is a process of participation in communities of practice, participation that is at first legitimately peripheral but that increases gradually in engagement and complexity*' (Lave and Wenger, 1991 p.35).

A 'community of practice' is therefore defined as people who engage in a process of collective learning in a shared domain of human endeavour such as a tribe learning to survive or a group of engineers working on similar problems. According to Etienne Wenger, three elements are essential in distinguishing a community of practice from other groups and communities:

- **The domain** - *A community of practice is something more than a club of friends or a network of connections between people. 'It has an identity defined by a shared domain of interest. Membership therefore implies a commitment to the domain, and therefore a shared competence that distinguishes members from other people'.*
- **The community** - *In pursuing their interest in their domain, members engage in joint activities and discussions, help each other, and share information. They build relationships that enable them to learn from each other.*

- **The practice-** *Members of a community of practice are practitioners. They develop a shared repertoire of resources: experiences, stories, tools, ways of addressing recurring problems, in short a shared practice. This takes time and sustained interaction' (Wenger, 1998 p.45).*

McHarg and Kay in their paper describe the design of an innovative dental curriculum for a new dental school at Plymouth University (based on educational theory). They highlight that '*socialisation into a profession occurs through novices co-constructing knowledge with several different experts*'. They further explain that in dentistry it is '*about learning to be a dentist not learning oral science*'. They identify Lave and Wenger's theory of situated learning, '*everyday unconscious learning occurs by reference to activity, context and the culture in which it takes place*' (McHarg and Kay, 2008 p.636). The newly developed curriculum is supported by a community of practice which recognises its role in modelling professionalism and facilitates the students' development on their journey from novice to expert.

The institutional culture can either support or challenge professional behaviour. The environment in which clinical education occurs is influenced by the ethos within the institution but also by the health care system itself (Hafferty and Franks, 1994, Hafferty, 1998, Freidson, 2001, Lesser et al., 2010). The hidden curriculum can be very powerful and interpersonal in creating an environment which can support learners or be a hindrance. It occurs in any situation including where teachers and learners are present at all levels (Stern, 1998, Inui, 2003). The evidence suggests that the detrimental effect of the hidden curriculum cannot be overlooked and must be accounted for when developing a curriculum for professionalism (Coulehan et al., 2003, Huddle, 2005, Coulehan, 2005, Inui, 2003).

There is disparity in the literature about whether a single curriculum can be developed for all medical education or development of a custom-built curriculum which reflects the environment of the institution in which it is taught (Howe, 2002, Cruess and Cruess, 2006).

Cruess and colleagues suggest the implied intention of a curriculum on professionalism has been to ensure development of clinicians with a professional identity. They recommend explicit teaching of professionalism with emphasis on professional behaviours but propose a principal goal of education to be the development of a professional identity with emphasis on social interaction, role models, mentors,

experiential learning, and explicit and tacit knowledge acquisition (Cruess et al., 2014). Similarly, Vivekananda-Schmidt and colleagues in their work with medical and dental students propose that participation in a professional role impacts development (Vivekananda-Schmidt et al., 2015). The implications of such a curriculum would be the need for the learner to be involved in continuous reflection of their learning experiences and the impact on their development.

2.4.4. Assessing professionalism: Why?

Assessment of professionalism is essential for several purposes. When assessed in the summative form, it indicates whether students have met standards and in the formative form it can guide an individual's development (Arnold, 2006). Miller stated that '*Assessment drives learning*', and this phrase encapsulates the central role of assessment (McGuire, 1999). In addition to this, assessment conveys the importance of professionalism to both learners and teachers.

2.4.5. Assessing professionalism: How?

Nearly a hundred different methods of assessing Professionalism have been established in medical education (Stern, 2006b). Stern offers a theory-to-practice textbook entitled '*Measuring Medical Professionalism*', focused on ways to evaluate professional behaviour and to reliably assess professionalism in education (Stern, 2006b). Patient perceptions of professionalism are identified as a method to assess professionalism.

Currently, the most commonly used approaches are peer assessment, the objective structured clinical examination (OSCE), direct observation of behaviour by faculty members, critical incident reports and learner maintained portfolios. These tools and others should meet the criteria of validity, reliability, feasibility (including cost) and acceptability by all involved.

In practice, it is a compromise and context dependent. In summative assessments, reliability will have higher priority whereas in the context of formative assessment, where the final decision is based on triangulation of different assessments reliability may be compromised partially in favour of education impact (van Mook et al., 2009c). Several reviews on assessment of professionalism have been published. Some of the

key reviews have been discussed below (Arnold, 2002b, Epstein and Hundert, 2002, Lynch et al., 2004, Wilkinson et al., 2009).

Arnold categorized instruments derived from 170 papers over a 30 year period into three groups:-

1. Assessment of professionalism as part of clinical performance
2. Assessment as a comprehensive entity
3. Assessment of separate elements of professionalism such as ethical decision making and humanism.

She emphasises the need for the development of qualitative methods to strengthen pre-existing quantitative methods to acknowledge the context in which professional behaviours occur. Arnold concludes that without solid assessment tools, questions about the efficacy of approaches to educating learners about professional behaviour will not be effectively answered (Arnold, 2002b).

Ginsburg has subsequently delved deeper into the issue highlighting the fact that evaluation of professionalism should focus on behaviour and include context and conflict to ensure assessments were relevant and valid (Ginsburg et al., 2002a). Lynch further argued that there needs to be better understanding of how the environment in which these assessments take place might influence the outcome. Lynch and colleagues propose educators should focus on improving existing assessments rather than devising new ones (Lynch et al., 2004).

Epstein and Hundert conclude that assessment methods rarely relied on observations in real situations or incorporated views of either peers or patients. More importantly, they also postulate that inadequate systems of feedback, mentoring and remediation will undermine the most well-conceived and validated examination (Epstein and Hundert, 2002). Wilkinson and co-workers in their exploration of the medical literature attempted to group elements of professionalism into assessable components. They identified that because of the multifaceted nature of professionalism, a person could be excellent in one aspect and deficient in another. They conclude no single tool would be adequate to measure an individual's professionalism (Wilkinson et al., 2009)

2.5. GDC regulation of undergraduate dental education

The GDC is responsible for registering all new graduates and sets out the standards required prior to their registration. As part of their educational role, they have developed a set of learning outcomes that lead to registration. Dental schools use these learning outcomes to develop their curriculum. The education provider has to be able to demonstrate how each outcome will be taught and assessed in the programme.

Prior to 2015, two sets of learning outcomes existed one for dentists (GDC, 2002) and another for dental care professionals (GDC, 2004). This has now been combined into just one set of learning outcomes, though there are some accommodations to allow for differences in scope of practice. Table 6 compares the learning outcomes in relation to professionalism from 2002 against more recent set in 2015 (GDC, 2002, GDC, 2004 , GDC, 2015).

Table 6 Learning outcome domains for professionalism for the dental team

The First Five Years (GDC, 2002)	DCP's: Developing the Dental team (GDC, 2004)	Preparing for practice- Dental team learning outcomes for registration (GDC, 2015)
<i>Patient management</i>	<i>Attitudes</i>	<i>Clinical</i>
<i>Communication and appropriate attitudes</i>	<i>Law, ethics and professionalism</i>	<i>Communication skills</i>
<i>Ethical understating and legal responsibilities</i>		<i>Professionalism</i>
		<i>Management and Leadership</i>

The GDC have placed significant emphasis on professionalism in the learning outcomes. It is essential that educators develop effective methods to ensure that students meet the criteria to become competent, registered professionals (Taylor and Grey, 2015).

2.6. Summary

There is a sense of progression in the literature as the definition of professionalism has evolved from an abstract definition based on values (Section 2.2.1.1) to descriptions of behaviour that demonstrates these values (Section 2.2.1.2), to the impact of context on an individual's behaviour and moving the focus from individuals to institutions (Section 2.2.1.3). There is an increased emphasis amongst educationalists to focus on behaviours rather than attributes, as behaviour is more tangible (Section 2.2.1.2).

The literature indicates that students, patients and teachers may view professionalism with a different emphasis and variation in the attributes, behaviours and values which are considered as most important (Section 2.3.4). The issue of context is also a key contributor of how professionalism is perceived. There is also evidence that issues presenting in later careers may be associated with similar concerns in training. There needs to be clarity about the purpose of education and assessment. The assessment of professionalism should aim to use multiple methods, in varied contexts, preferably as realistic as possible (van Mook et al., 2009c). Additionally as Hilton and Slotnick propose that *'looking for evidence of mature professionalism is premature at best'*, hence it imperative that evidence of proto-professionalism should be sought in undergraduate learners including their own reflection on their learning (Hilton and Slotnick, 2005p 64). Similarly, the GDC refer to newly qualified dentists as *'safe beginners'* reinforcing the idea that these individuals will mature over their practising careers (GDC, 2015).

The key points arising from this Section of the literature review are:

- There is a new emphasis on professionalism in health care education (GDC, 2015).
- There is as yet no common single definition of professionalism held by dental education (Trathen and Gallagher, 2009)
- There has been a shift in the literature from abstract concepts to behaviour and the importance of context (Ginsburg et al., 2000a)
- Professional behaviours are influenced by environmental factors (Lesser et al., 2010)
- Professionalism is a multifaceted and multi-layered concept that matures during a professional lifetime (Van de Camp et al., 2004a, Hilton and Slotnick, 2005)
- Most research comes from the perspective of teachers. The perspectives of patients and of students is less well researched (Wagner et al., 2007, Ginsburg et al., 2008)
- Experiential learning is an essential factor of learning professionalism (Maudsley and Strivens, 2000, Jarvis, 1987, Halpern, 2001, Spencer, 2011, Goldie et al., 2007)
- Appropriate management of negatives experiences influence development of professionalism (Rees et al., 2013, Benbassat, 2013, Branch, 2005)

- Role modelling is key component of learning professionalism (Epstein et al., 1998, Kenny et al., 2003)
- The environment influences development of professionalism (Lave and Wenger, 1991, McHarg and Kay, 2008)
- Teaching of professionalism must be accompanied by appropriate assessment (Stern, 2006b)

2.7. Justification of the proposed research

The concept of professionalism has many dimensions and matures during a professional lifetime. It concerns the attitude and conduct that forms professional relationships with individuals, with colleagues in the local work environment, and the wider professional community. In order to be able to teach the concept of professionalism within the dental curriculum, it is important to understand how professionalism is interpreted by different groups of people, the students, the patients who are receiving dental care and the supervising clinical teachers. There is insufficient research from the perspectives of students and patients. The perceptions of the students will develop as they experience the dental curriculum and interact with patients and their teachers. The literature provides a broad understanding of what could support development of professionalism but there is insufficient insight into specific experiences that help develop professionalism in undergraduate dental students.

This doctoral study will use qualitative methodology in keeping with the research approach commonly adopted to study professionalism. This research will help to identify the perceptions of professionalism of students, patients and teachers and identify any specific events in the dental undergraduate's curriculum and the environment which is perceived as influential in the development of professionalism

2.8. Proposed research questions

Following this literature review, five areas of enquiry were developed to provide a specific research focus. These included an exploration into the perceptions of professionalism and similarities and differences in dental undergraduate students, patients and teachers; identification of episodes or interactions by participants as having an impact and the effect of the environment. Finally the study will investigate the possibility of developing a conceptual model of learning for development of

professionalism within dental education. The aims, objectives and specific research questions have been set out in the next chapter

Chapter 3
Aims,
objectives
and
research questions

3.

3.1. Aims and objectives of the main study

The purpose of this research is to explore perceptions of professionalism in dental undergraduate students, patients and teachers and to investigate influences on development of professionalism. Three aims and their corresponding objectives are described below.

Aim 1: To explore the concept of professionalism as it is understood by three groups of people, undergraduate dental students, dental patients and their teachers

Objectives

- To undertake a literature review of existing work on professionalism within medicine and dentistry to inform the proposed research (Section 2)
- To explore the views of dental students, patients and teachers of dentistry about what they perceive as professionalism (Section 5.2- Section 5.4.4)
- To establish if there are areas of similarity and difference between the undergraduate dental students, patients, and teachers of dentistry (Section 5.5 - Section 5.6)

Aim 2: To explore key factors identified by undergraduate dental students, patients and teachers which influence the development of professionalism.

Objectives

- To explore episodes and interactions identified by the undergraduate dental students during their undergraduate programme that impact on the development of professionalism (Section 6.1.1- Section 6.2.3)
- To investigate how the learning environment impacts on the development of professionalism (Section 6.3.1 – Section 6.3.3)

Aim 3: To develop a conceptual model of professionalism within dental undergraduate education.

Objectives

- To identify any patterns that emerge from the data (Section 6.4)
- To bring together the different layers to construct a composite picture (Section 7.7)

These aims and objectives shaped the research questions.

3.1.1. Research questions

The research questions were developed to move a broad interest to a specific research focus. Five questions were formulated. Questions one to four were used to guide the data collection in order to support the objective of answering question five.

1. What are the perceptions of professionalism in dental undergraduate students, patients and teachers?
2. Are there similarities and differences in perception in dental undergraduate students, patients and teachers?
3. Are there any episodes or interactions identified by participants as having an impact on development of a dental student's professionalism?
4. Is the environment perceived to have an effect on the development of professionalism?
5. In relation to all of the above, is it possible to develop a conceptual model of learning

Chapter 4
Study design:
Methodology
and
methods

4. Study Design

4.1. Purpose of study

The purpose of this research is to enhance the theoretical understanding of professionalism in dental education from the perspectives of students, patients and teachers and to identify key elements of the undergraduate curriculum which they recognize as having an impact on the development of professionalism. This will facilitate the advancement of a curriculum on professionalism to support the learning outcomes set out by the GDC and ultimately will benefit patients who receive dental care.

4.2. Methodology: Research Practice

The literature review in the previous chapter identified gaps in a holistic understanding of professionalism and what influences its development in undergraduate dental students, which this study seeks to address.

The design of the study was influenced by Mason, who recommends addressing key questions to understand the focus of the proposed research (Mason, 2002 pp.13-14).

4.2.1. Ontological position (philosophical perspective)

What is your ontological position (the nature of the social world being explored)?

The researcher explored the different ontological perspectives and concluded that this study is positioned in interpretivism within a philosophical framework of subtle realism i.e. the social world exists independently of individual subjective understanding, but it is only accessible to us via the participants' interpretations which may then be further interpreted by the researcher (Hammersley, 1992). This is defined as 'an attempt to represent that reality rather than to attain 'the truth'' (Mays and Pope, 2000 p.51).

One of the criticisms of interpretivism is that it does not allow for generalisations because it encourages the study of a small number of cases that do not apply to the whole population (Hammersley, 2003). However, others researchers have argued that the detail and effort involved in interpretive inquiry allows insight into particular events as well as a range of perspectives that may not have come to light without that scrutiny (Macdonald, 2002).

The issue of quality and rigour has created debate in the literature (Lincoln and Guba, 1985, Denzin, 2009). This has manifested itself in a proliferation of guidelines for undertaking and evaluating qualitative work (Mays and Pope, 1995, Blaxter, 1996, Tong et al., 2007, NICE, 2012). It has been noted that although checklists can be useful in improving qualitative methods they may also be limiting and technical (Barbour, 2001).

Qualitative research in healthcare still attracts criticisms from the perspective of validity, reliability and generalisability. This study has been evaluated using The National Institute for Health and Care Excellence (NICE) checklist, which is of special relevance in the field of healthcare research and has been presented in a summarised format in the appendix (Appendix 1) (NICE, 2012). The association of these quantitative terms with qualitative research has created debate and confusion. Lincoln and Guba suggest an alternative framework using the terms truth value, consistency and applicability, which this doctoral study will use for evaluation this study (Appendix 2) (Lincoln and Guba, 1985). It is hoped that by evaluating this doctoral study using both frameworks, it will reinforce the quality and rigour of this study to both clinical dental educators and qualitative researchers (Section 8.4).

4.2.2. Epistemological position (philosophical perspective)

What is your epistemological position (How can your view of social reality be captured?)

The researcher identified an interpretivist approach in identifying the epistemological position. This is grounded in the belief that the accounts of participants give 'an insiders view' and uses the language, conceptualisation and categorisation that is the researchers rather than the participants (Mason, 2002 p.56). This can be drawn out by the researcher in the discussion with participants which allows co-creation of knowledge by social interaction. However, the possibility of misrepresenting the research participants' perspectives poses a challenge in the interpretive approach. This risk needs to be balanced by demonstration of reflexivity.

Reflexivity refers to reflection on ways in which bias may creep into research including the researcher's background and beliefs. This is especially important in this study as

the researcher is actively engaged in dental education and is therefore best described as a practitioner researcher (Section 4.2.4).

4.2.3. Qualitative methodology (Theoretical perspective)

This study has used an inductive approach, that is no theories were applied at the beginning instead the researcher looked for patterns and associations in the narratives of the participants. She then read more widely to find any applicable theoretical models that were described in the literature (Section 7.1). This process identified a model of learning suggested by Illeris (Illeris, 2004). The researcher thus developed empirical generalisations and identified relationships as the analysis progressed (Chapters 5 and 6), subsequently comparing these to the wider literature (Chapter 8). This is sometimes called a '*bottom up*' approach (Meyer, 2000).

4.2.4. Reflexivity of researcher

Reflexivity is understood as the sensitivity of the researcher to the ways in which the '*researcher and the research process have shaped the collected data*' (Mays and Pope, 2000p.51). Mason proposes Seale's argument for demonstration of reflexivity by revelation of '*methodological, theoretical and practical steps*' taken to show '*reflexive methodological accounting*' (Seale, 1999) cited in (Mason, 2002p. 41).

The researcher considered reflexivity in three sections (Greenaway, 2010):

- Reflection: '*An examination of the filters and lenses through which you see the world.*' (Mason 2006) cited in (Greenaway, 2010). Being a practitioner researcher meant that the researcher lived in the world that she was going to explore. This meant her personal history and personal values could be included.
- Critical reflection in relation to a particular study which helps the researcher to explore, learn and understand what they bring to their research and how they influence it. This involved reflecting on the one's relationship to the participant, and how the relationship dynamics affect responses to questions.
- Application and use of reflexivity within qualitative research studies and research writing. This meant making the research process itself a focus of inquiry, laying open pre-conceptions and becoming aware of the context in which the researcher and participant are jointly involved in knowledge production (Ritchie, 2003)

The researcher inhabited multiple roles within this study. As a clinical lecturer with a special interest in teaching ethics, law and communication skills, she has experience working with students from all years of the dental curriculum and is involved with curriculum development, supervision of dental students within clinical environments and classroom teaching in seminars, lectures and small group workshops. This includes teaching and assessment of student professionalism over the course of the five year curriculum. It is possible that student participants may have reacted to this the role of the researcher as a teacher of professionalism when discussing professionalism. However, she described her role as a researcher at the outset of discussions with all participants. Her role as teacher of professionalism and communication skills has provided a practical insight into how professionalism develops in the undergraduate dental curriculum. However this also has the potential for bias and presumptions when conducting this doctoral study (Section 8.4.1).

4.3. Methods

Qualitative data collection methods include interviews (individual or group), observations and textual or visual analysis (e.g. from books or videos) (Silverman, 2000). However in healthcare research interviews and focus groups are the most commonly used methods (Britten, 1999, Legard et al., 2003). Focus groups and individual semi- structured interviews were used to draw out reflections, perceptions and views of the participants. The analysis of these narratives was initially descriptive thematic analysis. A small pilot study was conducted before the main study.

4.3.1. Pilot Study

Pilot studies have been advocated as essential for good study design as they provide valuable insight for researchers (Van Teijlingen et al., 2001).

The aims of the pilot study were to develop and test the qualitative methodology:- develop a topic guide for the discussion in the focus groups:- explore the perceptions of professionalism in dental undergraduate students, the people they treat and teachers of dentistry and to explore any emerging patterns in the findings to inform development of the main study. The findings of the pilot study have been described in Appendix 3.

4.3.1.1. Influence of the pilot study on the main study

The pilot study focus groups with students and patients worked well and a decision was made to use focus groups with these participant groups. The facilitator observed the teacher pilot focus group dynamics of the participants were limited by their opportunity to represent their feelings, opinions and experiences. It was thought that the teachers may have felt uncomfortable in voicing their views, particularly when their opinions were different to the ones of the institution or others in the group. On reflection, it was felt individual semi-structured interviews would be appropriate for teachers, to allow more detailed exploration of the subject when delicate or complex issues emerged.

4.3.2. Topic guide for pilot and main study

A topic guide was developed which was informed by the literature review (Krueger, 1998a) including research using focus groups and the researcher's teaching experience. The guide was constructed with a view to yielding as much information as possible and also to address the aims and objectives of the research (Section 3). In accordance with the literature (Gibbs, 1997) the questions were constructed to be open-ended, neutral, sensitive and understandable. The initial questions were straight forward to encourage participants to be able to answer them easily and then proceeded to more difficult topics. This allowed the participants to be at ease, build rapport and confidence which would allow rich data to be generated (Britten, 1999). This study employed a topic guide to ensure that the same basic line of inquiry was pursued with each participant. The topic guide was evaluated in the pilot study to test its suitability. The topic guide developed in the pilot study was used in the main study (Figure 9).

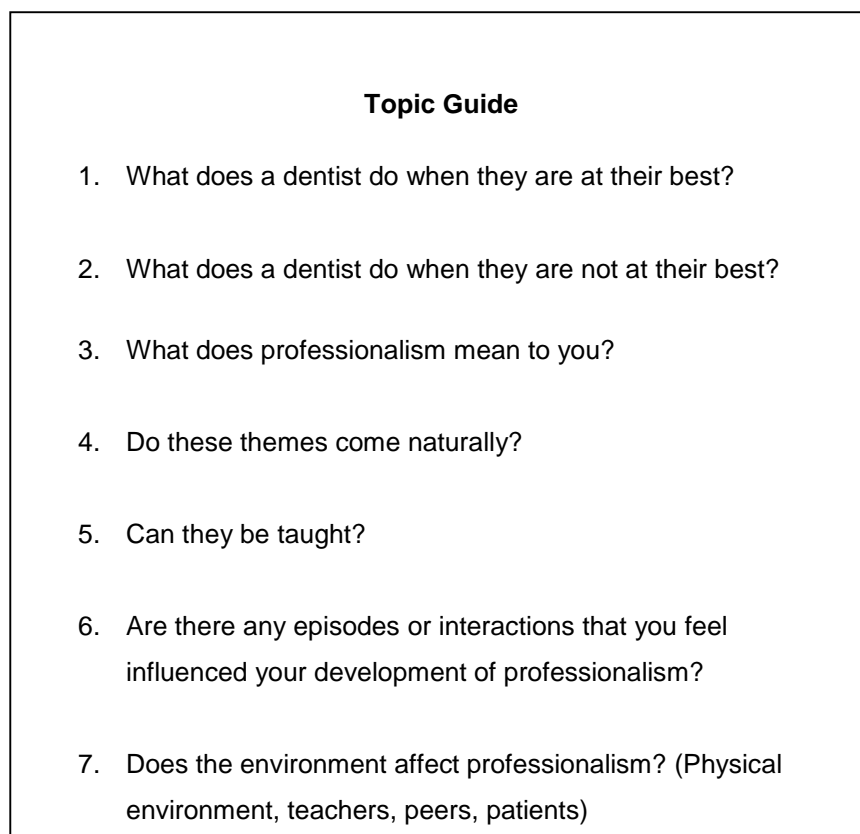


Figure 9 Topic Guide developed in the pilot study and used in main study

4.3.3. Sampling of participants

Qualitative studies use non – probability samples. The purpose is not to establish a random or representative sample drawn from a population but rather to identify specific groups of people who either possess characteristics or live in circumstances relevant to the social phenomenon being studied (Mays and Pope, 1995). This type of purposive sampling enables diversity in the selected participants (Ritchie and Lewis, 2003).

Purposive sampling was undertaken in this doctoral study. The first stage was to identify the study population (undergraduate dental students, their patients and their teachers). Purposive samples are designed to be diverse as possible and participants are selected because they hold a characteristic that is known to be important to the research study (Mason, 2002 pp.77-108). The undergraduate dental student group at the dental school where this study took place is typically made up of equal numbers of male and female students. Most of the students are school leavers, a few students who have previous degree (graduate entry students) and 10 students who join the dental students in the second year till their third year as hygiene/therapy students. A review of

the literature provided the demographic characteristics that are known to impact on the subject (Bebeau, 2002).

A sample matrix was formulated to recruit a relevant sample (Appendix 4). The sampling criteria which were used as primary variables in the matrix were age in the case of students and teachers and gender (Ritchie and Lewis, 2003). This ensured the groups were representative of participants (students, patients and teachers) at the dental school. Other variables considered and included for the students' comprised of educational level at entry (school leavers, students with a previous degree and hygiene/therapy students). Two variables considered for patient participants, firstly English as a first language which was not included as all patient participants felt this did not impact on their participation in the focus group discussions and secondly the requirement to have been under the care of the same student for 18 months or more was included to give an insight into observation of changes in the students. The variables for teachers include age and their involvement in clinical and academic teaching to students. The variables described above were applied for maximum diversity and homogeneity of the group.

The study was designed to include the following participants:

Pilot study

- One focus group with students, one with patients , one with teachers

Main Study

- Five focus groups of students one for each year of study
- Two focus groups of patients
- Twelve teachers of dentistry in individual semi-structured interviews

4.3.3.1. Recruiting participants

Participants were invited to take part in writing by email or letter and provided with a Study Information Sheet outlining the details of the study (Appendix 5 and Appendix 6) Participants who volunteered via email came to their scheduled focus group. A few participants attended unannounced that offset those who did not come or were recruited on the day.

The focus groups were held during lunchtime or at the end of the day at 5.30pm which did not conflict teaching and curriculum content in the student, patient and teacher schedule. Informed written consent was obtained prior to the commencement of the data generation for those choosing to participate (Appendix 7 and Appendix 8).

4.3.4. Focus groups in pilot and main study

Focus groups have been used as the chosen method of data collection in the main and the pilot study alike, because this method involved organised discussion with a selected group of individuals to gain information about their views and experiences of a topic. Focus groups were found to be particularly suited as it was possible to obtain several perspectives about the same topic.

This is reinforced by the literature which highlights that focus groups can generate collective views and the meanings that lie behind those views which provides a rich insight into views of participants (Morgan, 1998). A key feature of focus groups is the spontaneity that arises from the interactions and responses to each other, participants reveal more of their own frame of reference on the subject of study (Ritchie and Lewis, 2003). However, focus groups may not be effective when participants know each other and this familiarity may limit disclosure. The size of the group in a typical focus group is usually six to eight participants to allow active participation by everyone (Krueger, 1994).

Only the participants and the investigator were present during the focus groups and individual semi-structured interviews (see next section) except in the pilot student focus group and in the pilot patient focus group at which the supervisor was present to observe and provide feedback on the moderating skills of the novice researcher. Moderating is recognised as a task which requires complex skills which include the ability to moderate without participating, to facilitate group discussion and to prevent the discussion being dominated by one participant (Krueger, 1998b). Students and patients in this doctoral study indicated that the presence of an additional person did not hinder the interview process in any way.

4.3.5. Individual semi-structured interviews for teachers in main study

Individual interviews rather than focus groups were used with teachers in the main study. This was to allow teachers to express themselves more freely. This change was based on the researcher's experience of how a few voices dominated the conversation at the expense of other participants in the pilot focus group with teachers (Section 4.3.1.1)

Semi-structured interviews consist of questions that help to define key areas to be explored but also allow flexibility for the interviewer to pursue an idea or response in more detail. The advantage of this type of interview is that the flexibility allows discovery and elaboration of views that are important to the participant (Britten, 1999).

4.3.6. Additional activity

In the main study, when a focus group or individual semi-structured interview came to a natural conclusion, a final activity was introduced. The main themes identified by each group in the pilot work were introduced in the form of cards and a blank card was provided for participants to add their own ideas (Appendix 9). The participants were asked to agree or disagree with the presented themes and add new ideas of their own. Each participant completed this task individually and then discussed their ideas. This allowed further thoughts to be elicited both on the data from the pilot but also for any new views to emerge.

4.3.7. Conduct of focus groups and individual semi-structured interviews

The conversations were audio taped with a digital voice recorder with a conference microphone and transcribed using unique identifiers for all participants in preparation for analysis. Hand written field notes were taken by the researcher shortly after the focus groups and interviews. The recordings were checked for accuracy against the researcher's field notes after each focus group or individual semi-structured interview. The recordings were then transcribed using a professional transcription service. The whole recording was transcribed and the transcript read by the researcher to check for accuracy including clarification of any inaudible parts of the recording using the field notes and checking the transcripts.

4.4. Data analysis methods

In qualitative studies research design, data collection and analysis are simultaneous and continuous processes (Bryman, 1994). The process of data analysis includes data management, descriptive accounts and explanatory accounts (Ritchie and Lewis, 2003). The analysis of data informs and shapes the process allowing the researcher to refine questions, develop hypotheses and pursue emerging lines of enquiry into further depth (Pope et al., 2000). However, analysis also occurs as an explicit step in conceptually interpreting the data set as a whole using specific analytic strategies to transform raw data into a new and reasoned representation (Thorne, 2000). There are a number of qualitative data analysis computer programs available. They are unable to conceptualise the data into meaningful findings but are useful to sort and organise sets of qualitative data (Thorne, 2000). The analysis of the pilot and main study data are described in the section below.

4.4.1. Analysis of pilot study

In the pilot study, a structured thematic analysis was conducted using the Framework approach (Ritchie and Lewis, 2003). This was to enable the novice researcher to be guided in the process of thematic analysis.

4.4.1.1. Data management in pilot study using the software 'Framework'

The data from the pilot focus groups was managed using a software programme developed for qualitative analysis called 'Framework' (framework@natcen.ac.uk). This is no longer available and has been integrated into N-Vivo 9.2 as discussed later. The analytic hierarchy used follows a structured pathway described by Ritchie and Lewis (Ritchie and Lewis, 2003). This involved initial familiarisation with the raw data in transcription to develop framework of themes and sub themes. This involved a process called indexing where sections of transcripts were summarised under key words. This was further refined as more themes emerged. The data was sorted and summarised to reduce the volume, keeping key language, expressions and phrases, and then charted into the relevant part of the framework grid. An example of the frame work grid can be found in the appendix (Appendix 10).

A concept map was then drawn to aid the development of a visual model of the perceptions of professionalism. The map represented the main themes and connecting

networks found in the pilot study. This allowed comparison of how the three different groups perceived professionalism and has been presented in the appendix (Appendix 3).

4.4.2. Analysis of main study

Thematic analysis of the main study was carried out as an iterative process with constant interaction between the data, the principal researcher and a colleague who assisted and reviewed the analysis process. The transcripts were read through several times for the researcher to become familiar with the raw data. During the reading, initial ideas about emerging themes were noted. The researcher and the experienced colleague read the transcripts independently and then compared notes about key ideas from the initial reading. This included manually colour coding recurring ideas and quotes to identify patterns within the data.

4.4.2.1. Data management in the main study using the software N-Vivo 9.2

The transcripts were uploaded into the data management software N-vivo 9.2, which allowed large volumes of data to be managed in a structured manner. The data was categorised into themes using textual codes which is called creation of nodes within N-Vivo. Examples of nodes are shown in Appendix 11, Appendix 12 and Appendix 13. This is also called coding or indexing in other qualitative analysis approaches. Initially there were a large number of themes and sub themes. Further reduction by re-examination and discussion with the experienced colleague allowed the sub themes to be charted and mapped against the main themes. Some sub themes needed examination of the context of the conversation and discussion to ascertain meaning. This allowed refining of themes. The analytic process which reinforced themes was iterative, reflexive and innovative. Some of the coded data was grouped under each theme and some extracts could be connected to more than one theme. Examples of transcripts with coding are shown in Appendix 14, Appendix 15 and Appendix 16.

The principal researcher and her colleague focussed on identifying important elements that were missed, discrepancies and alternative interpretations. The analysis revealed that saturation of themes had been achieved in the data set. The mapping of themes enabled a visual representation of ideas and connections.

4.4.2.2. Analysis of the card activity

The written data from the card activity which was discussed by the participants was incorporated into the textual data and analysed in the same way as transcripts.

4.5. Theory led analysis

The analysis moved from inductive categorisation of data to the development of a pattern in identifying what influences development of professionalism. The analysis was taken beyond the most basic and descriptive (Section 7). This pattern suggested a link between key themes and this was replicated in students, patients and teachers. This pattern was analogous to an existing model of learning. The identification of a theoretical model of learning by Illeris led to a theory led analysis (Chapter 7) (Illeris, 2004). This was undertaken by moving towards an iterative testing and retesting of the data through the identified theoretical lens. This assisted in the construction of propositions from the data (Sections 8.1 - 8.3).

4.6. Ethics

The proposals for this study were submitted and approved by the QMUL Research Committee, (QMREC2010/23) (QMREC2011/93) prior to the commencement of the study (Appendix 17 and Appendix 18). Orb and colleagues suggest the use of the ethical principles of autonomy, beneficence and justice as guides to address the tensions between '*the needs and goals of the research and rights of participants*' (Orb et al., 2001 p.93) .

Potential participants were informed why the research was being carried out and what it hoped to achieve. This information was delivered verbally and in the written format (Appendix 5 and Appendix 6).

The data collection methods employed in this doctoral study involved interaction between the researcher and students she taught, patients cared for and teachers who were her colleagues. The practitioner researcher made her role clear as a researcher in the context of the doctoral study. This included reassurance of confidentiality of all discussions. In addition to this the researcher tried to actively listen to the ideas contributed by participants without revealing her own opinions and preferences in all the focus group and interview discussions. Though conducting research in one's place of work can be beneficial in gaining trust and rapport with participants, it may also be

challenging, especially if participants do not feel they are able to confide in their colleague (Field, 1992). The researcher made a conscious effort to separate her three roles of clinician, dental educator and researcher.

Autonomy was respected and informed consent was obtained from all participants both verbally and in writing. In upholding beneficence, every effort was made to maintain anonymity and confidentiality of all participants. Participants were informed that transcripts will be made available to the supervisors in the anonymised format. The ethical principle of justice was upheld by due consideration being given to the voices of all participants. Findings that were negative or sensitive were also included.

4.7. Presentation of Findings

The main emerging themes were illustrated with quotes (chapter 5) and interpretive figures (Figure 10-Figure 12 on pages 88, 92 and 94). These were prepared to help to display the data in a meaningful way. This was done for all five student focus groups, two patient focus groups and twelve teacher individual semi-structured interviews.

In chapters five and six, the emerging themes within Perceptions of Professionalism (Chapter 5) and Influences on Development of Professionalism (Chapter 6) have been explored from the perspectives of students, patients and teachers. The pilot and main study findings demonstrated similar patterns and therefore were presented together. In chapter six, inductive analysis moved from descriptive to theory-led and explanatory. The Illeris model of learning provided a theoretical lens through which to view the findings (Illeris, 2004).

Chapter 5

Findings: Perceptions of professionalism

5. Findings Perceptions of professionalism

This chapter describes the emerging themes on perceptions of professionalism from the focus groups and individual semi-structured interviews. It addresses the first and second research questions to explore the concept of professionalism as it is understood by three groups of people, dental students, dental patients and their teachers and identify any similarities and differences (Section 5.5).

Section 5.1 describes key characteristics of the participants in the focus groups for the pilot and the main studies and those who contributed individual semi-structured interviews for the main study. Section 5.2 presents the findings from the students on their perceptions of professionalism and identifies any patterns of change as students progress through the undergraduate dental curriculum. Sections 5.3 and 5.4 present the findings from patients and teachers respectively on their perceptions of professionalism. Section 5.5 brings the analysis together by setting out the similarities and differences between the three different groups of participants.

5.1. Participants

Table 7 describes the participants in both the pilot and main studies. This includes gender for all participants, for students their education level at entry into dental school and for the teachers, their age range and whether they were clinical teachers who supervised students treating patients (clinical) or involved in teaching which did not entail patient care supervision (academic).

The participants were labelled in the following manner; students (S), patients (P), teachers (T), gender male (M) or female (F) and a unique identifier number. For students their year of study (1-5) is included and for patients (1) for first focus group and (2) for second focus group. For example a fourth year female student could be S4- F7:- S for student, 4 for fourth year of study, F for female and 7 for the unique student identifier. This labelling was used to link individual participants to the quotes.

Table 7 Characteristics of participants: undergraduate dental students (S), patients (P), teachers (T) in the pilot and main study

STUDENTS (S)	Number	M	F	Educational level at entry into dental school			
				School leavers	Previous Degree	Hygiene / therapy students	
Pilot focus group	8	5	3	6	1	1	
Main focus groups							
Junior							
Year 1	8	4	4	6	2	0	
Year 2	8	3	5	4	2	2	
Senior							
Year 3	9	6	3	5	2	1	
Year 4	8	3	5	5	3	0	
Year 5	7	2	5	4	3	0	
PATIENTS (P)	Number	M	F				
Pilot focus group	8	4	4				
Main focus group							
1	6	2	4				
2	5	5	1				
TEACHERS (T)	Number	M	F	Age range- Younger (30-45 years)	Age range- Older (46-60 years)	Clinical	Academic
Pilot focus group	6	3	3	2	4	6	0
Main interviews	12	7	5	6	6	11	1

5.2. Views of undergraduate dental students

The section below will present and consider emerging themes on perceptions of professionalism from students. The students were asked in focus groups about their views and perceptions of professionalism using two questions (topic guide, Section 4.3.2, Figure 9).

1. What does a dentist do when they are at their best?
2. What does professionalism mean?

The students in the main study agreed with the themes of values, knowledge and technical skills, communication skills and 'patient relationships that had emerged from pilot study and been presented to them in the card activity (Appendix 9). Four themes emerged in the main study, organisational skills, insight into limitations, well-rounded professional and trust as shown in Table 8 below. Later in the analysis, communication skills and patient relationships were combined to the term relational skills.

Table 8 Emerging themes from students in the pilot and main studies

Pilot Study (8 Students)	Main Study (40 Students)
Values Knowledge /technical Skills Relational Skills (<i>combined from communication skills and patient relationships</i>)	Values Knowledge /technical Skills Relational Skills (<i>combined from communication skills and patient relationships</i>) Organisational Skills Insight into limitations Well rounded professional Trust

Initially each theme will be presented separately to reveal its component parts. A pictorial representation is shown in Figure 10 below. The multi-factorial and diverse nature of the seven themes is represented by the different shapes analysed to reveal their components and their interconnections eventually leading to the formation of Figure 11 in section 5.2.8.

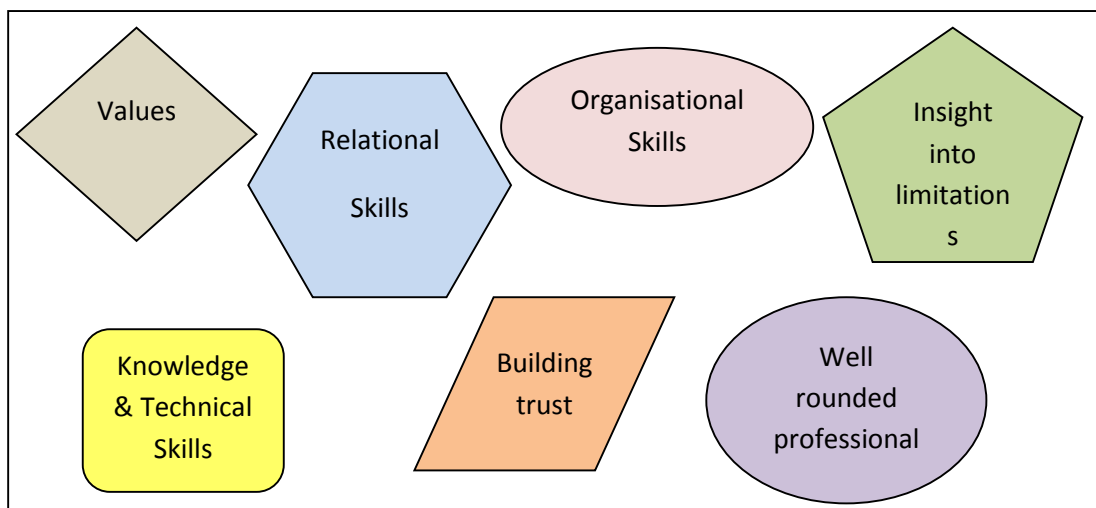


Figure 10 Key emerging student themes of perceptions of professionalism

Students identified the following characteristics of honesty, integrity, doing your best, having a positive attitude, conscience, empathy, genuineness, being open and respectful. These can all be regarded as ‘values’ as described in the wider literature on professionalism (Epstein and Hundert, 2002, Kirk, 2007). Values were also applied to moral reciprocity which is the golden rule in ethics, that is doing to others what you would have done to yourself. Two student quotes below feature these ideas,

I do think my character values is the basis of, being a health care professional because you have to be honest and you have to be real and have the patients interests first. (S4, F2)

I just think treat your patients as if you’d be treating your own family, at the same level; you’d do exactly the same thing for them as you would your closest. (S2, M7)

The significance of values emerged repeatedly and students in all years placed importance on these values in their perceptions of professionalism. The junior students related these characteristics by applying the principles in the individual sense whilst the senior year students extended their beliefs to the wider dental profession.

5.2.2. Knowledge and technical skills

Students stressed the importance of specialised knowledge and technical skills of dentistry, which were largely gained from the formal curriculum. Students described the significance of this theme in developing professionalism. A student explained,

As a fellow professional then you would put knowledge and technical skills high on the agenda for what makes a good dentist. (S2, M8)

We didn't all come with the knowledge of being a dentist and the technical skills and that is something that you learn throughout the course and you practise and the more practice and exposure you get the better you're going to be. (S4, F2)

Students from all years maintained the importance of learning the knowledge and skills to become a professional dentist, for some this meant learning new skills and for others this meant honing skills. This variation reflected individuals' stage of learning and their perceptions of limitations demonstrating insight.

5.2.3. Relational Skills

Students identified how good communication skills could build rapport and a trusting relationship as illustrated in the quotes below,

I think communication skills and patient relationships are key with professionalism. (S5, M7)

If you can get the patient relationship right you can fulfil the patient's expectations of you, which I think is the definition of professionalism. (S3, M5)

Communication skills is largely what is required for a patient to feel at ease and actually trust you. (S3, F3)

Though students connected maintaining patient relationships and communication skills together, they evidently extended this association to assemble and build trust in their professional relationships.

5.2.4. Organisational skills

This theme of organisational skills consisted of the ability to manage oneself, being well prepared and professional appearance. Managing patients' appointments and being organised were also identified as part of this theme. Students stressed the importance of managing time and not keeping patients waiting. Students were also keen to have an appropriate appearance. Three senior students explained,

Organisation is a very important thing for professionalism in terms of even the actual appointment having all the instruments that you require ready, or when you're booking your own patients as well giving them plenty of notice. (S5, F5)

She [teacher] highlighted to me the importance of appearance and how they're smart and clean ironed tunic and stuff like that. (S5, F5)

I think time management you need to be on time for your clinic but I think when you're in practice as well you need to try and keep time. (S4, F1)

The students perceive that tasks of preparation and time keeping could influence the holistic appearance of being an all rounded professional.

5.2.5. Insight into limitations

Students also recognised the need to have insight into limitations. One student highlighted this as,

I think it's really important to acknowledge within yourself if you have, things that you don't know how to do and things that you have to work on. (S4, F7)

Students professed the need to have insight into boundaries of their abilities. They suggested this reflected honesty to patients. This notion was reciprocated by patients (Section 5.3.5).

5.2.6. Trust

The word trust was used to discuss the outcome of a successful clinical relationship. Being trustworthy is reinforced by codes of clinical practice and GDC standards. A student explained how your values allow you to build a mutually trusting relationship,

If you're without good character values you can't also build the trust up as well so that's also about patient relationships. (S5-F2)

Students maintained trust as a culmination of the other themes of professionalism.

5.2.7. Well-rounded professional

Students identified that having only one of the identified components of professionalism alone was not enough and a combination of all the components were necessary. They joined themes together,

You couldn't really choose one to be more important than the other if you want to be a well-rounded professional. (S2-M3)

I think that professionalism is all of these things combined together and I feel like it is difficult to differentiate between them. (S5-F5)

The student participants articulated how the different aspects of professionalism assemble together to produce a well-rounded professional.

5.2.8. Model linking student perceptions of professionalism

The notion that in order to be a well-rounded professional seven key themes have been identified from the students perceptions of professionalism. Values, relational skills, knowledge and technical skills, insight into limitations, organisational skills, and building trust are interrelated to develop a composite picture.

These seven themes do not happen in isolation but are interconnected as shown in Figure 11. The foundation is made up of central values, such as honesty and integrity which are then built through four pillars, knowledge and technical skills, relational skills, organisational skills and insight into limitations. This leads to the building of trusting relationships between students and patients. The ceiling is being able to develop all the themes into becoming '*well rounded professional*'.

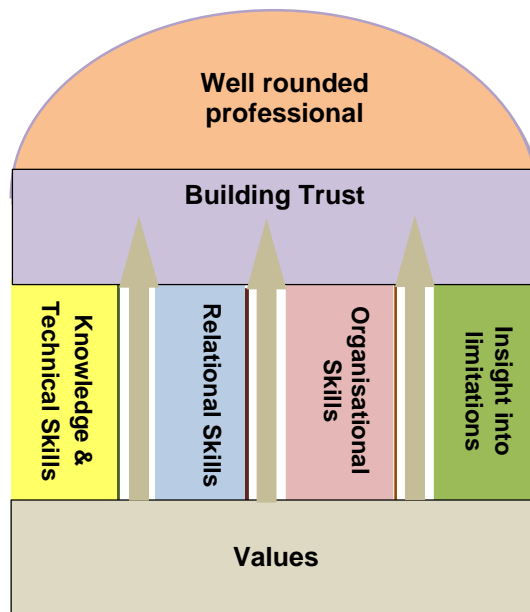


Figure 11 Links between the seven themes of student perceptions of professionalism

5.2.9. Change in students perceptions of professionalism over five years

The inductive thematic analysis allowed a deeper understanding of the importance of each of the themes in the overall analysis. Although students in all the years identified with the seven themes, there was a gradual shift in emphasis as illustrated by the in the different years from year one to five.

- First year students focused on abstract values,
- Second year students emphasised the importance of acquiring knowledge and technical skills,
- Third year students thought building patient relationships was particularly important,
- Fourth years students as they gained more clinical experience emphasised the critical importance of having good organisational skills
- Fifth year students recognised the need to combine all the themes to be a well-rounded professional

The theme of insight into limitations was not mentioned often and trust was linked with other themes. Therefore these two themes have not been included in the following summary. Table 9 shows the comparative emphasis within the data from the students of the five themes, values, knowledge and technical skills, relational skills,

organisational skills and being a well-rounded professional from the students in years one to five.

Table 9 Comparative emphasis in coding of five main themes in year one to five

Year	Values	Knowledge	Relations	Organisation	Rounded
1	√√√	√√	√√	√	√√
2	√	√√√	√	√	√
3	√	√√	√√√	√	√√
4	√√	√√	√√	√√√	√√
5	√	√	√√	√√√	√√√

√√√- *Strong emphasis*; √√- *Some emphasis*; √- *Little emphasis*

Students perceived values as an essential component of professionalism throughout the five years; however the first year students placed the most emphasis.

It's like honesty and integrity are like the base of professionalism. (S1, F5)

The acquisition of knowledge and skills was also recognized as important; however this came to the fore in the second year of study. The second year was an intensive year preparing students for transition to caring for patients' oral health. Much of the year involved, theoretical and clinical skills teaching in readiness for this, hence the emphasis on this theme.

I would personally put the technical skill, the quality of the work above everything else. (S2- F2).

Relational skills, comprising communication skills and building relationships with patients was emphasised by students in the third year. This would be expected as students begin clinical practice, engaging with new patients in order to provide dental care. A student pointed out,

I think communication skills and patient relationship probably rank slightly higher at this stage as well, because technical skills come with experience. (S3, F1)

The fourth year was the period when students were caring for adult patients, paediatric patients and patients in the outreach clinics. Much of their time was spent organising themselves and in the management of appointments. This involved booking

appointments, clinical chairs, clinical records and equipment which required good organisational skills to be efficient and competent; as a student explained,

Keep each patient within their time slot; you need to spend time in the first place, and you need to try and keep your sessions to time, because if I turned up to my dentist and every time I was waiting for an hour then I'd be fairly hacked off. (S4, F1)

Fifth year students, however were able to take a global view and appreciated the multidimensional nature of professionalism. They recognised the numerous skills required to be a 'well rounded professional'.

I think that they're all really important and I think that they kind of intertwined as well. (S5, F3)

Students' perceptions of professionalism broadened from focusing on abstract values in the early years to placing additional importance on relational skills and organisational skills in the later years. The change in emphasis was influenced by the teaching and the clinical work place environment as described later (Section 6.1.1 and 6.3.1). The model below (Figure 12) provides a visual representation of this progression.

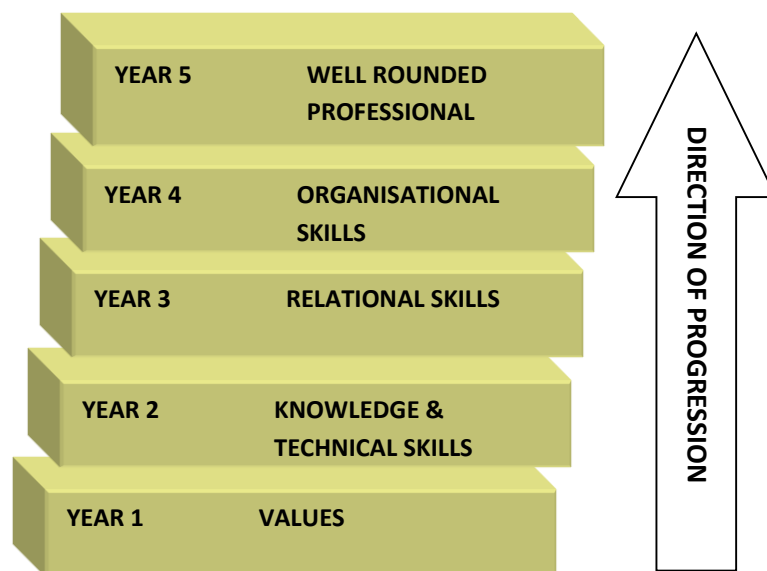


Figure 12 Changes in emphasis of students' perception of professionalism over five years: abstract values to well-rounded professional

Summary

The change in emphasis in students' descriptions of professionalism moved from early idealism to realities of practice as they engaged in their clinical work. The students' increasing contemporary concerns may crowd out their early idealistic values for a while as they gain experience and confidence in managing their practice, however these values do not disappear altogether as fifth year students also recognise values as a key component of professionalism (Figure 11). The main findings from the analysis of the focus groups with students are the identification of key themes which they perceive to be interconnected and contribute to the development of a well-rounded professional.

Next the perceptions of professionalism from the perspectives of their patients and their teachers will be explored. Unlike the students who were reflecting on themselves, the patients and teachers were giving their views on the student.

5.3. Views of patients

All the patients in the focus groups had been looked after by the same student for at least a period of eighteen months or more in some cases. Their views therefore reflected observations of changes in the students. Three main themes had emerged from the pilot study, patient relationships, communication skills, and values. The new themes emerging from the analysis of the two patient focus groups in the main study were: treating a patient as a person, being organised, appearance and insight into limitations. The theme of communication skills from the pilot study was repeated in the main study as shown in table 10 below.

Table 10 Emerging themes from the patients in the pilot and the main studies

Pilot Study (8 patients)	Main Study (12 patients),
Communication Skills Patient relationships Values	Communication Skills Treating a patient as a person Being organised appearance Insight into limitations

5.3.1. Communication skills

Patients highlighted communication skills, such as greetings and explanations of the planned treatment to gain consent, as important. One patient expressed how this relieved their anxiety and another patient described how they were made to feel welcome and valued by the way they were greeted and looked after.

I think the best thing is to know exactly what's going to be done to you and then it's less scary, or if it's going to be painful, to know how long and all that sort of thing. (P1, M2)

They welcome you, they sit down and explain what's going to happen and the treatment plan, and they explain what's going to happen all the way, through a nice welcome and a nice goodbye. (P1, F4)

Patients' narratives explained the positive effects of having good communication skills on the professional relationship.

5.3.2. A person as well as a patient

The patients discussed in detail the theme of acknowledging a patient as a person. This was fundamental to patients as a demonstration of professionalism. Sometimes the students needed to be reminded that there was a person behind the mouth.

I like to be a person as well as a patient. Professionalism to me means being people orientated. (P1, M6)

One notices if a student is working on you and forgetting that you're a person, one of the particular tutors will come along and say to you, hello, how are you doing, in a kind of pointed way to point out to the student that they're forgetting because they're getting into the mechanics of it. (P2, M2)

Patients were intuitive in drawing attention to the fact that in their opinion being treated as a person consolidates professionalism.

5.3.3. Being organised

A patient expressed how students who were organised when treating them came across as well prepared and professional,

They know what they're doing and they have everything laid out. (P2, M2)

Patients described how being organised and working together were important qualities of being professional.

The teamwork, everyone of them helping each other all the time. (P1, F4)

In contrast, another patient reflected on an occasion when observing a student who was not prepared and came across as unprofessional,

I've been in the chair sometimes and another student's wandered up to my student and said, oh, have you got this, or I've forgotten that. You can see that look on their face that he's not quite prepared. (P2, M3)

Patients also understood the impact of being organised. They sensed anxiety in students who were not prepared.

5.3.4. Appearance

The professional image of the student caring for them was deemed important by patients.

They need to be taught the first point of meeting the patient is appearance. I was always taught that when I was in the workplace. Appearance is most important. (P2, M4)

I think I look at their attire, they always wear white gown which is part of the uniform and things like that, looking professional again, that's important. (P1, M2)

Patients placed emphasis on looking professional as this reinforced the student's professional attitude.

5.3.5. Insight into limitations

Patients thought it was important for students to recognise their limitations. Recognising limitations can be particularly challenging for students as they are often doing a procedure for the first time. Being able to articulate lack of knowledge and skill could be difficult. Patients expected honesty and were empathetic to the idea of developing as result of learning from errors,

I would much rather the student was honest about their lack of knowledge, rather than trying to push through or boasting. (P2, F1)

If you don't make mistakes you don't get anywhere. Everyone makes mistakes. I've made a few in my life. (P2, M5)

In contrast, another patient was concerned about those students, who did not express their limitations,

Rather than say, I can do this and don't you worry. That scares the hell out of me. I'd rather there was a student that said, I'm not sure, I'll go and check. (P2, M2)

The patients identified the ability to have an insight into limitations as demonstration of honesty and concurred the students' perceptions on this theme

Summary

Patients talk about being asked if they are comfortable, being put at ease and being treated as a person and not just a patient. The level of detail becomes very specific, as the patients narratives emphasise the basis of professionalism to be grounded in relationships.

5.4. Views of teachers

The teachers' discussions in the main study revealed findings that agreed with the pilot study and new themes emerged. In the pilot study, teachers identified four main themes, values, communication skills, patient relationships, teamwork, and having experience. Similar themes and 'motivation' and 'appearance' emerged in the main study as shown in table 11 below.

Table 11 Emerging themes from the teachers in the pilot and the main studies

Pilot Study Focus group (6 teachers)	Main Study Individual semi- structured interviews (12 teachers)
Values Relational skills <i>(combined from communication skills and patient relationships)</i> Teamwork Experience	Values Relational skills <i>(combined from communication skills and patient relationships)</i> motivation appearance

5.4.1. Professional values

A teacher highlighted professional values as a fundamental aspect of professionalism. He linked this to patient relationships,

It is actually about professional values, it has a clear relationship to patient relationship, but it's really about the things that mark out an individual who is involved in healthcare and this is very much about their professional values, including ethics. (T2, M)

The teachers linked the concept of values with the influence of professional codes of ethical practice. A teacher explained,

I think it's your professional behaviour, and certainly for us in dentistry, we are regulated by the General Dental Council. We need to perform in a certain manner because we are dealing with patients and also here in the dental institute as educators, again with our students. (T5, M)

The teachers emphasised the concept of duty in maintaining standards and principles expected of dentists.

5.4.2. Relational Skills

The concept of developing patient relationships was associated with the ability to communicate well. A teacher gave such an example when a student had used her communication skills in building rapport in a challenging situation. Teachers felt that the development of social skills was as important as knowledge and technical skills,

there was one young lady [student] who was very good with a patient who had anxiety and phobic tendencies, so you look at that, and that's professionalism because that isn't done just by delivering dentistry, it's done by a lot of communication. (T2, M)

You could get very good A-Level scores but have no social skills whatsoever so you've got to have developed their social skills as well. (T1, M)

Teachers differentiated the skills required to develop relationships with patients against the ability to study and increase their knowledge.

5.4.3. Motivation

The motivation for studying dentistry and how this may influence professionalism was discussed by teachers at some length. They highlighted the difference between vocational motivations to help others, compared with the business aspect of dentistry. One teacher explained,

I would, in my opinion, feel that implicitly you are going into the healthcare profession for a certain reason and yes earning a living is one reason but it should not be the primary reason. (T8, M)

Teachers mention specifically that money should not be impetus to study dentistry. Yet dentistry is a business for the majority of dentists in the UK, and efficiency and cost-effectiveness are inherent elements in today's system (section 2.2.1.3).

5.4.4. Appearance

Teachers discussed the theme of appearance. Appearance and uniform were considered important in engendering professional behaviour.

I think that appearance is important because it helps the patient relationship. The patients, again subliminally, expect you to look a certain way, and I think they get reassured. (T6, M)

Things are changing. But you still want them to look professional and dress code helps towards that. (T3, F)

Teacher's placed importance on appearance and its link to professionalism, possibly due to a nostalgic attachment to representations of the old, traditional professionalism. They also correctly perceived that appearance was important to patients (Section 5.3.4).

Summary

Teachers place emphasis on professional regulation and duty of care and impact of the external environment. Teachers expressed professionalism as interactions with patients and colleagues and the wider professional community.

5.5. Perceptions of professionalism: Similarities and differences

The views of students, patients and teachers on perceptions have so far been considered separately. In this section they are combined to compare similarities and differences. Table 12 below summarises the emerging themes in all groups and enables a comparison. It highlights the striking similarities between the groups however there are also some marked differences in perceptions. Students, patients and teachers described explicit perceptions of professionalism. There are common themes of relational skills and organisational skills. The differences arose as students highlighted significant themes such as knowledge and technical skills, which were not so evident in the data contributed by patients and teachers. On the other hand, patients highlighted the importance of being seen as a *'person as well as a patient'* and teachers highlighted the motivation for studying dentistry.

Table 12 Similarities and differences in perceptions of professionalism

Theme	Students	Patients	Teachers
relational skills	√	√	√
Organisational skills (including appearance)	√	√	√
Values	√		√
Insight into limitations	√	√	
Knowledge& technical skills	√		
Well rounded professional	√		
Building trust	√		
person as well as a patient		√	
Motivation			√

5.5.1. Similarities in the three groups

All three groups identified relational skills as a key component of professionalism. Students and patients recognised this as clear explanations of treatment and putting patients at ease; in contrast teachers described relational skills as social and communication skills.

All three groups also identified having organisational skills as an essential component of being professional. In the final stages of analysis of the findings, it was decided that appearance was included within the theme of having organisational skills. Students placed emphasis on looking the part and creating a good first impression. They described being organised in preparing for delivering dental treatment, being on time and not keeping patients waiting. Teachers however, highlighted dress code and behaviour as a key component of being organised contrasting this with students who wear nail polish or wear jeans. A teacher also discussed how students' untidy appearance may reflect in their clinical ability as being disorganised.

5.5.2. Differences in the three groups

Students and teachers recognised values such as honesty and integrity as important. Students emphasised individual values such as being respectful and having a conscience. Teachers focused on principles and standards including the ethical code of practice that is expected by the General Dental Council (GDC, 2013). Patients

expressed values as respecting an individual as a whole person rather than as simply a patient.

The importance of students having insight into their limitations was a feature of the students' and patients' discussions. Students described this as an expectation of patients that clinicians have an insight into their technical competence and the onus is on the clinician to be honest about this. However, patients discussed this as being able to own up to making mistakes and being honest about lack of knowledge. Patients were empathetic towards students as they did not expect them to have insight all the time but wanted students to be able to own up to their lack of knowledge. Patients accepted that mistakes could occur, but felt it was vital that students owned up to this.

Further variation arose as students discussed the importance of knowledge and technical competence. Many emphasised that learning technical skills to become a dentist was a key feature of professionalism. Teachers highlighted teamwork and student motivation for studying dentistry. They identified that in dental practice good teamwork is vital. Teachers identified that the motivation for being a dentist had an impact on professionalism.

The importance of the multi-factorial nature of professionalism in building patients trust was commented on by the senior students. They expressed how dentists must have a combination of all components to become a well-rounded professional. Students discussed that a dentist-patient relationship is a relationship of trust.

The similarities and differences in perceptions of professionalism between the three groups are shown in Figure 13 below. Each circle represents one of the three groups, student, patients and teachers with the overlapping section showing common themes and explicit themes located with each circle.

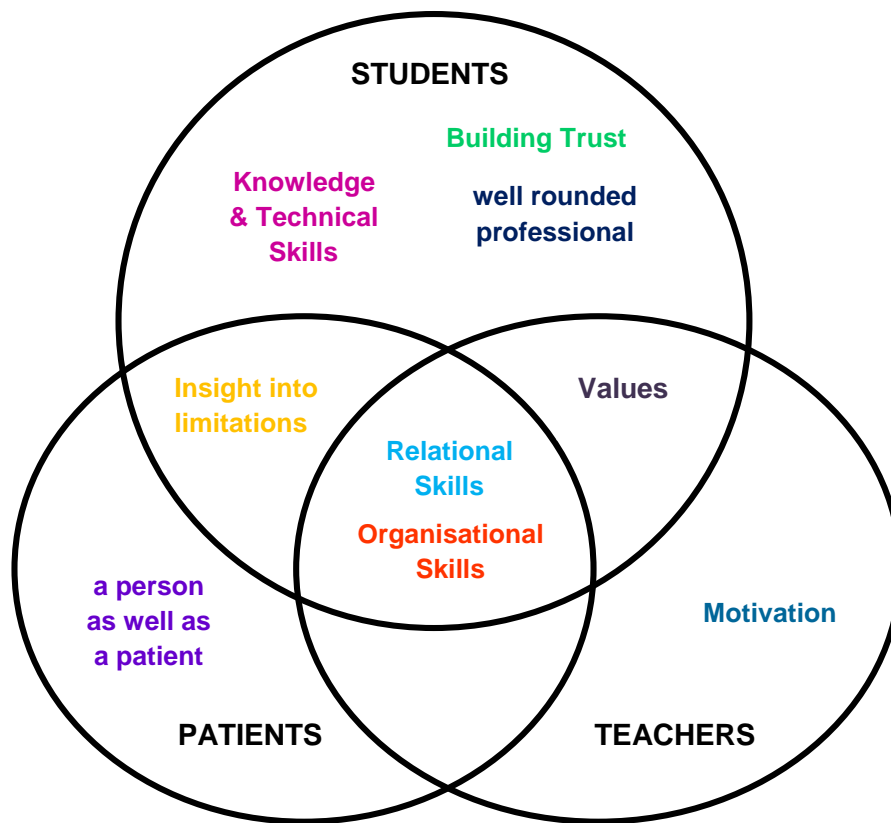


Figure 13 Summary of similarities and differences in perceptions of professionalism

5.6. Summary

The findings in this chapter have laid out the multidimensional landscape of professionalism from the perspective of students, the patients and their teachers. Students and patients share perceptions of professionalism which highlight the relationship dimension of professionalism. Students desire to put patients at ease shows an inherent understanding of what a patient wants. Patients also want to be understood by those treating them. Students in all years find shared aims in their perceptions but as they progress their understanding evolves to mirror their engagement with the community of practice. Teachers emphasise the broader perception of professionalism by engaging with what is expected by the professional community. Differences appear according to the stage of learning at which the participants are functioning, including patients at a consumer stage.

In order to comprehend, how these perceptions of professionalism are formed, each of the three groups was asked to identify factors that influence development of professionalism. In the next chapter the influences on development of professionalism will be considered.

Chapter 6
Findings:
Influences on development
of professionalism

6. Findings: Influences on development of professionalism

The previous chapter described the findings from students, patients and teachers on perceptions of professionalism. This chapter will now describe the findings from the same three groups of participants on the development of professionalism. This is to consider the third and fourth research questions (Section 3.1.1) which were to explore key influential factors, including the environment.

One of the most prominent findings was how students, patients and teachers were in broad agreement about three key influences on the development of professionalism, the teaching, the experiences, and the environment (Table 13). Each of these will be considered in turn.

Table 13 Agreement amongst the students, patients and teachers of the influences (of teaching, experiences and environment) on the development of professionalism

Development Themes	Students	Patients	Teachers
Teaching	√	√	√
Experiences	√	√	√
Environment	√	√	√

6.1. Teaching

The dental curriculum has formal teaching which is developed using guidance from the GDC in the form of learning outcomes. The dental programme is expected to meet standards for education when inspected by the GDC. Teaching takes many forms including lectures, small group teaching and workshops, laboratory teaching and clinical treatment of patients where teachers supervise patient care and give feedback. Teaching of professionalism also occurs by role modelling especially of professional behaviour, values and attitudes.

The curriculum progresses over five years from initially focusing on basic clinical sciences to increasing clinical practice. A distinctive feature of the dental curriculum

requires students to take responsibility for clinical patient care, under supervision, from early in their course. Clinical practice for the students studying at the dental school where this study was undertaken involves treating patients at the main dental hospital and in primary dental care settings in the locality and further afield as part of the 'outreach' programme.

6.1.1. Students views on teaching

Students discussed the impact of teaching and learning on their development of professionalism. They considered teaching of professional ethics, communication skills, clinical care of patients and supervision and feedback from teachers as important. They identified the particular importance of communication skills teaching in the early years,

I think a lot of what we've done this year with the communication skills things, and it guides you with the sort of approach to take to patients (S2, F6)

Students highlighted communication skills workshops in which they had to role play scenarios with actors as simulated patients,

It was communication skills taught with actors and I think that was fantastic. It showed me how to talk to people, when you come across barriers with people. (S3, F9)

What was so interesting from those actor sessions was the fact that we still hadn't started clinical practice yet, so there was a way of tackling the unknown without actually having been put in that position, you had some sort of safety net (S3, M5)

When explaining the most influential aspect of formal teaching of professionalism, one student described a particular series of lectures. Another student identified the lecture topic of moral reciprocity. This was also discussed as a perception of professionalism in connection with values (Section 5.2.1).

I'd say all the Human Science and Medical Ethics lectures (S2, M8)

She [ethics lecturer] taught me the one golden rule, which is do as you would be done by and I'll never forget that (S3, F9)

Students expressed how in hindsight they realised the importance of their earlier teaching as it was applied in practice in the clinical situations. One student referred to their teaching in human science & medical ethics and communications skills,

We didn't take it to be as important when we first started so later on in the course it became apparent that this is stuff that we do need to know and take seriously (S5, M4)

Students considered some episodes and interactions when treating patients which enabled them to develop professionally. A student explained how individual responsibility for patient care, which started towards the end of the second year, was pivotal in the development of his professionalism.

The actual physical act of treating a patient I think makes you step up, makes you act professional (S3, M5)

I think on one occasion I remember seeing a patient and she was really anxious and I explained every step of the procedure, what I was doing, and she said she found that much better (S4, F7)

Students treating patients on the clinic wanted feedback from their supervising clinical teachers and be given an opportunity for reflection to help them develop.

He had a very specific way of doing things and there were often times when I might have done something a little bit unprofessional without realising it and I was told immediately so I could then correct it (S4, M6)

I think how you develop in professionalism; I think feedback is quite important or self-feedback, when you reflect yourself (S1, M4)

I think that feedback of the tutor saying well this is what I saw of you and this is what I think you should improve on, that constant feedback I think would really help to mould someone into a more professional dentist at the end of this course. (S4, F2)

Students work in clinical pairings when taking care of patients. One of the pair assists the other in the role of a nurse. This involves close support and creates an environment where feedback from peers is constructive in development. A student described this,

I think as, when we're working pairs as clinical partners I think it's also quite nice like with mine we used to talk about how the session went and things of where we could improve or maybe what we said wasn't the right way and maybe other ways of wording it to make it a bit more effective so I think that was really good for myself (S5, F1)

6.1.2. Patients' views on teaching content

Patients' perceptions of what was taught related to their observations when they were being treated. They detected a change in the relationship between teachers and students,

My observation on their communication with their tutor has changed. Instead of being rather submissive in the beginning, gradually the conversation develops into one of collegiality, discussing things almost on the same level and discussing ideas. (P1, F1)

Another patient explained how the teachers role model good behaviour, which is replicated by students,

The students are as good as what the tutors make them (P2, M5)

Patients gave examples of how the teachers demonstrated attitudes and professional behaviours to the students. This included demonstration of good communication skills by teachers.

Explanations are given at all stages and communication with the tutors is very good and the follow up by the students (P1, M3)

The teachers have always come up and said, I'm Mr so and so, how are you and I think that's fantastic. And as you say, it spreads on to the students, nurses, everyone (P2, M4)

On the other hand, patients observed confusion in students if a teacher changed a treatment plan. One patient explained,

The only thing I find is, this is for the trainee [dental student], sometimes they do a treatment plan and the tutor comes along and you're all excited because you know what the treatment plan is. You come next time and see a different tutor and the plan changes. And the poor trainee doesn't know whether they're coming or going (P2, M4)

Another patient was very perceptive as he observed change in the students after a period of clinical attachment on the outreach programme,

When they came back from [outreach clinic] they'd just done solid work. There seemed to be a different atmosphere in the room. Everyone was now a dentist. (P2, M2)

6.1.3. Teachers views on teaching content

Teachers were able to identify teaching content that they felt helped students' in their development of professionalism. One teacher recollected the timetabled teaching from a waiting room observation exercise in their communication skills module,

I remember one group who did a module on the waiting room and the receptionist's attitude to parents, [of the paediatric patients], when they came in and they were absolutely appalled I think and they, I'm sure then realised how important professionalism was. (T11, F)

Another teacher explained the benefit and challenges of role play work with simulated patients in helping students,

it's one of the hardest things you have to do, but it makes you do it, role playing, give them scenarios, even though they're all theoretical they're only pretend scenarios but still it's a starting point I think, rather than coming straight into a clinic and not really knowing how to behave and talk. (T12, F)

Teachers were aware of their role in modelling expected professional behaviour. One teacher suggested learning of professionalism occurred by the engagement of students within the professional community,

If they observe the profession, the acting professionally, and they're wanting to move towards being a dentist, in our case then I think that's the best way to teach it. (T9, M)

6.2. Experiences

Some planned and unplanned learning experiences during the dental programme engaged students' emotions and these were remembered and identified as important influences. Over the years these experiences allowed the dental students to mature and make a transition to confident clinicians.

6.2.1. Students views on their experiences

The students identified how many experiences influenced the development of their professionalism. Jarvis describes the word biography as the accumulation and processing of experiences that may or may not lead to learning (Jarvis, 1992) (see Section 2.4.3 in the literature review chapter).

Students described the impact of their experiences and the environment (Section 6.3.1). They felt that they had grown from young people leaving school to more mature adults during their journey through the dental curriculum,

You grow up and your surroundings kind of shape your character (S4, M5).

There are specific periods of growth such as taking on responsibility for patient care. A junior and a senior student explained how taking on the responsibility for patient care was central in the development of their professionalism,

some of the people here are quite young you know and need to, not to be rushed into it but obviously next year we're going to have patients which is quite a big transition from living at home, being a child really and suddenly you're in charge of people's health. (S1, M3)

It doesn't sink into you, until I think you start second year and seeing patients (S4, F1)

Students felt that they matured as they progressed through the course. One student identified their transition over the five year curriculum,

You can see the change you make from 2nd year progressing into 5th year (S5, F1)

Students felt a sense of taking on responsibility. This belief was discussed by a junior student,

By just coming onto a course like dentistry just that, automatically you step up to the mark (S1, M6)

A senior student reflected on how early in the curriculum when first treating patients she felt the supervising clinical teacher was responsible for her patient, however as she had progressed she had taken on responsibility for patient care.

The patient is more their [teacher's] responsibility but when you get further on, you're doing everything by yourself and it's your own decision making and your own relationship and you hardly consult the tutors,... you actually feel like a professional dentist as opposed to a student (S5, F2)

The value of practical clinical experience was highlighted by students as this gave them confidence,

A lot of the development of my knowledge I feel was done through practical experience (S5, M7)

Another student experienced a challenging encounter with a father and his child which helped her develop professionally,

I remember one episode in the [outreach clinic] the parent came in and he was very angry with me, and he was shouting at me and he was saying we've been waiting for such a long time. All I did was apologise for a good 10 minutes but he was still shouting at me and then when I saw his child. I acted as professionally as I could do, I was patient with the child I helped him with his problem, then the parent realised that he was a bit out of order and kind of apologised to me and that kind of helped me and I think that helped improve my management of patients and their parents when they're angry and aggressive with you and so that really helped professionalism. (S5, F5)

The concept of experience leading to increased emotional confidence was acknowledged by students. A student described how the vocational aspect of the course enhanced his development,

I was just thinking about a lot of the development of my knowledge I feel was done through practical experience so a lot in [outreach] because to me that feels like a more realistic situation (S5, M7)

The students had constructive and adverse experiences which impacted on their emotions. One student described an adverse experience,

I get nervous, if a tutor has said anything bad about you in front of a patient or anything again, going back to how tutors interact with us as well, it just turns me into a mess (S3, F8)

However, another student responded,

I think its scenarios and experiences like those that test our professionalism, and how you treat that, as well as the good points and the bad points is also part of the learning experience. (S3, M5)

6.2.2. Patients' views of students experiences

Patients observed how students developed and demonstrated increasing confidence and competence as their clinical experience increased,

Many years I've been coming here and seen students grow. And I think when they're not at their best I think it's a confidence issue. (P2, M3)

They start off very cautious, it doesn't matter what it is, but by the end of it they're just getting in there and doing it. And yes, it's experience. (P2, M2)

When they first started they were very nervous, and then six months later, nine months later, you've seen this transition and it's beautiful. It's just lovely. (P1, F1)

Patients noticed a change in students over time,

I see a marked improvement in how she explained what was actually happening, she was more relaxed with me (P2, M5)

6.2.3. Teachers views of students experiences

Teachers commented on how students grew and developed during the five year curriculum. They recognised the natural continuum of growth, the students' increasing experience and the impact of taking on responsibility for the care of patients.

A teacher noted how taking responsibility for patient care brought about a change in students,

I think it's just as the students have evolved during their training. (T5, M)

Interaction with patients, results in quite a marked change in how students perceive themselves and their place in the world and I think the challenges of managing patients also highlights shortcomings perhaps and difficulties. (T4, M)

Teachers were aware that the motivation for doing dentistry influences how an individual develops professionally. Having a vocational reason for studying dentistry puts the need to help others as a priority,

One would hope that the fact that they got into study this that there is a desire to help people. Before they even start the application, that desire is there. (T1, M)

6.3. Environment

The students were learning professionalism all the time. The physical and social environment was perceived to have a significant influence by students, patients and teachers.

6.3.1. Students views of the environment

Students used the word environment to describe the physical environment and the observation of interactions between different members of the dental team.

Students identified how the environment influenced their development of professionalism; this included the expectations and the behaviour of their supervising clinical teachers and observation of their peers, nursing and reception staff.

I think the more professional the environment is the more inclined you are to act professionally. (S2, M3)

Students were keen to highlight the positive environment created in one of the outreach dental clinics;

[Outreach clinic] *The whole environment is a lot more positive and it makes you feel that you're more of a dentist, you can do more, you're more confident.*
(S3, M6)

Observing teachers was seen as an important factor in learning professional attitudes and behaviours which the dentals students wished to replicate. Students identified teachers as role models,

The best way of learning about professionalism is watching someone who's got vast experience and has been there and done it, and yes, copying.
(S2, M8)

I think our tutors I think have a lot of kind of influence on us. (S4, M5).

Another student described how teachers had made him feel competent,

I also think [Outreach clinic] is good because even if you're not technically amazing, the tutors still make you seem professional in front of the patient, they don't bring you down in front of them. (S3, M2)

Another student described unintentional learning, sometimes referred to as the hidden curriculum,

I also think subconsciously we pick up kind of attitudes and manners from our tutors and from our peers. (S5, F1)

Students explained how there were other people such as nurses and reception staff who were all part of creating a professional environment. The junior students often looked up to the students in the older years as they saw them on the clinic treating patients,

The environment is also important; like in clinics I think it's important that the nurses and all of the clinical staff have that professionalism as well. (S1, F8)

I think it's sometimes nice when you're on clinic when you see students that are fourth or fifth year but they're working with a patient and you're thinking in your head yeah I want to be like that. (S1, F7)

Students in their interactions with the people in their environment had constructive and adverse experiences. Some of these influenced their development in a negative manner as they detected belittling behaviours and attitudes. This was particularly challenging as students discovered that their confidence was affected. One student reflected on her early years and felt that clinical learning was influenced by her teacher,

When it's very much the teachers in charge and they know best and you are treated like a child it makes it very difficult to be professional with them. I certainly struggled when I was spoken to like a child because I think well actually I'm not, I'm an adult and okay I'm not a qualified dentist yet but I treat you with respect so I think it needs to work both ways and that's more of a staff student interaction. (S4, F7)

Students were able to identify attitudes and behaviours which they described as unprofessional,

You can see certain tutors, not really acting professionally ... their attitudes, time management and all I used to think was I hope I'll never be like that. (S4, F4)

6.3.2. Patients views of environment

Patients described how good teamwork created a harmonious working environment and a professional atmosphere,

They all spread happiness through the building so therefore that spreads on to the patient. I don't think I've ever come here and seen sad faces about. So I'm sure if everyone's got that, it's infectious and it spreads on to the patient and spreads on to the whole area. (P2, M4)

However, another patient believed the environment could be challenging to students,

It [environment] could be a hindrance to certain students who are not so confident and they may be a bit shaky about what to say in case someone else is listening or they feel like they don't want to make a fool of themselves. (P, M8Pilot)

6.3.3. Teachers views of the environment

Teachers identified the environment as having both a positive and negative influence on the development of students. One teacher commented on the sub-conscious impact of his own professionalism,

I think we're probably unintentionally teaching professionalism on a regular basis, just by the way we look and act and deal with our own students. (T6, M)

The whole environment was attributed to creating an atmosphere that was professional

I think the working environment does have a profound impact and I think it's very important to create an atmosphere where the environment itself is professional so the individuals in that environment can act professionally. (T9, M)

However, teachers identified hurdles in creating this environment. One teacher reflected on the hidden curriculum,

There's stuff written down in the curriculum as to their professionalism development but there's stuff happening around them that isn't written down anywhere and that is the environment that they're in, which is multi-factorial. (T8, M)

For instance the influence of treating patients in the outreach programme was seen as positive in contrast to the hospital setting where institutional limitations were described as detrimental to the development of professionalism.

They feel like they are proper dentists when they are working there [outreach clinic] because the physical set up is more akin to a practice setting. (T4, F)

Teachers were aware that they were responsible as role models.

I think you can teach all you like about professionalism, if people aren't role modelling it then it is a waste. (T4, F)

I am talking about the culture that is sort of laid down by the teachers. So for example there's no point us saying to the students that they must always turn up on time if we don't. (T7, M)

One teacher suggested that how doing the right thing is not always easy,

We've all been in situations where we've sort of avoided doing the right thing because it is easier for us. (T7, M)

One teacher suggested that there ought to be a course for teachers as well as students on professionalism.

We need to have this sort of second curriculum running alongside which is for the teachers. (T4, F)

6.4. Similarity between the three groups

All three of the groups recognised the impact of teaching, students' experiences, which included their growing maturity, confidence and increasing experiences including responsibility for patient care and the environment on their development of professionalism.

The impact of teaching was important. Students were able to identify key ethics lectures and simulated patient role play in communication skills teaching in the preclinical years, as influential in their development of professionalism. The students clearly recognised how seeing patients '*makes you act professional*'. Key episodes and some challenging interactions with patients were identified as powerful determinants of development of professionalism. Teachers reflected on this in a different way. They discussed the expectations placed on them as role models and the difficulty they experienced. They wanted more clarity in how to teach and assess professionalism.

Students reflected on the emotional experiences that allowed them to make a transition. This included change in responsibility from leaving home to being responsible for another person's dental health. Students experienced constructive and adverse incidents. Patients noticed increasing confidence with experience and maturing relationships of students with their teachers. Teachers too detected how interacting with patients led to a change.

The impact of the environment included the physical environment and the observation of teachers, peers, nurses and reception staff in the clinic. The positive and negative influence of teachers as role models was described at some lengths by the students.

The junior students found observing their senior colleagues instructive in their development. Patients noted how teachers demonstrated good attitudes and behaviours to students; they were aware of the responsibility teachers had for the students delivering care to patients.

6.5. Unanticipated findings

The descriptive analysis revealed two unanticipated findings, firstly the role of patients as active participants in the development of the students' professionalism and secondly the tension in teachers as they balanced multiple roles.

6.5.1. Patients as active participants in development of students professionalism

An unexpected finding was how patients contributed to a nurturing and supportive relationship with the student who cared for them,

*I got a good feeling of contribution to the students training and future careers.
(P1, M6)*

A patient described how she reassured the student and gave him confidence to continue treatment that could be painful,

*I can say on the changing one, when I first met him; he was very nervous, very shaky and very concerned because he was left handed. And I actually said to him, now listen here, my boy. You have nothing whatsoever to be concerned about. You are absolutely wonderful. I said, now, you just calm down and you'll be fine. He was worried he was going to hurt me. And I said, listen, let's laugh about it. You go to the gym, what do they say? No pain, no gain. If you hurt me, I'll tell you. Don't worry. And that boy has absolutely bloomed.
(P1, F5)*

6.5.2. Tension within the teachers

The other unexpected finding was from the teacher participants. They demonstrated tension in discussing issues of professionalism. Their tensions centred on defining professionalism, as teachers trying to balance their roles as a teacher and clinician and finally the difference between what they described as the old and the new professionalism. Teachers articulated difficulty in defining professionalism and acknowledged this during the interviews.

I suspect that we all here have our own different versions of what professionalism is. (T6, M).

Teachers expressed uncertainty in teaching and assessing professionalism. They identified lack of clarity in defining professionalism as a possible cause for this.

I'm not sure there's an absolute clarity about what it is that people are meant to be teaching. And I think clarity is also important for professionalism. (T2, M)

Many spent time discussing professionalism but never quite reached a conclusion or resolution in its meaning. Some recognised there was a difference in what was expected of them and what they demonstrated. This constant conflict could be sensed throughout the twelve interviews. A teacher explained,

It's been pinpointed that clinical setting teaching supervisors have great difficulty in putting into practice what they feel is what is expected of them in terms of behaviour and they have difficulty in challenging unprofessional behaviour. (T9, M)

The teachers, who supervise students undertaking clinical work, have vicarious responsibility for patient care. This creates a tension where teachers have to balance their responsibility to the patient undergoing treatment against the responsibility to the student learning clinical techniques. One teacher described this as juggling many balls at the same time,

You have the overall say on the responsibility so ... being a firm professional, being a courteous professional but still trying to finish the clinic and teach and juggle however many balls at the same time, hopefully that's what they see. You know a good teacher and mentor. (T12, F)

The same teacher also described difficulty in managing difficult situations,

To try and manage the situation without losing your own control, sometimes you can't say everything you want to say. (T12, F)

Another teacher reflected on how when undertaking dental treatment, the dental professional is responsible for consenting including challenging discussions about uncertainty and risk of treatment to obtain consent. The clinician's professionalism was challenged in this scenario,

It requires, I think a personality that can handle uncertainty. (T6, M)

The older teachers differentiated between the old professionalism which they had been taught and the new professionalism. This concept applied to new definitions of professionalism and patients' perceptions of dentists. One teacher recollected his own interview for entry to another dental school,

When I applied to do dentistry, what I really recall was what the interviewer actually said about professionalism. To his mind, and he may be slightly dated now in a more modern society, as far as he was concerned, there are only three professions in this world, according to him, it's either the clergy, the law or medicine, which I suppose now encompasses healthcare. As far as he was concerned everything else wasn't a profession full stop. (T8, M)

The same teacher elaborated on his own views of a more contemporary understanding based on professional ethics,

I suppose if you ask me now the words that professionalism means I think the main thing I would think is being ethical. (T8, M)

Another teacher explained how patients' perceptions had also changed towards the dental profession,

I think they [patients] have changed, I think that probably in the past, patients would respect and trust what you said to them, and there was a slight hierarchy, you've got a consultant, you've got a patient. Now, I think they question everything. (T11, F)

Teachers' uncertainty and how they managed the developing students and care for a patient was a constant balancing act.

6.6. Summary

Students named formal teaching content, their experiences and the environment which helped them to develop. The patients and teachers also discussed how they had an important role in the development of students' professionalism.

The next chapter will consider three individual scenarios as examples to examine in more detail the interaction between the content of teaching, the experiences of the

learner and their social environment. The inductive thematic analysis was compared with theoretical perspectives on learning and the Illeris model of learning (Illeris, 2004) was selected for further theoretically driven analysis.

Chapter 7
Analysis
of findings using a
theoretical
model of learning

7. Analysis of findings using a theoretical model of learning

The findings reported in the preceding chapters have highlighted the complexity of understanding professionalism and its multidimensional nature. The findings in chapters 4 and 5 illustrated how the students were influenced by the teaching content, their experiences, and the environment.

This chapter will first look at three significant scenarios from the data and then explore these through the analytical lens of a theoretical model of learning described by Illeris (Illeris, 2004). The three events were selected because comparable episodes were described in the pilot study as well as in the main study, reinforcing these as key episodes that the participants identified as having an influence on the development of professionalism. The three events include an observation task in the dental waiting room (Section 7.2); the reprimand of a student by a teacher in the presence of a patient (Section 7.3) and the availability of instruments to treat patients (Section 7.4).

7.1. The Illeris model of learning and findings from this study

A theoretical model described by Illeris (Illeris, 2004) helps to deepen understanding of how learning experiences contribute to the development of professionalism in practice.

The emerging themes identified in this study on influences on the development of professionalism revealed three key themes, the learning content, the emotions and experience of the student and the impact of the environment (Section 6.6). The dynamic interactions between these themes could be called a tension field of learning similar to the Illeris model of learning described below.

In a book entitled '*The Three Dimensions of Learning*', the Danish educationalist Knud Illeris, suggests that learning occurs by two different processes:-

- (i) acquisition which involves psychological processing between the learning content being taught explicitly and the emotions of the individual learner
- (ii) social interaction between the individual and individuals in the environment

He illustrated this with a simple model initially (Illeris, 2002). This was then defined in further detail and related more specifically to different contexts in a number of other texts (Illeris, 2004, Illeris, 2007) as illustrated in Figure 14.

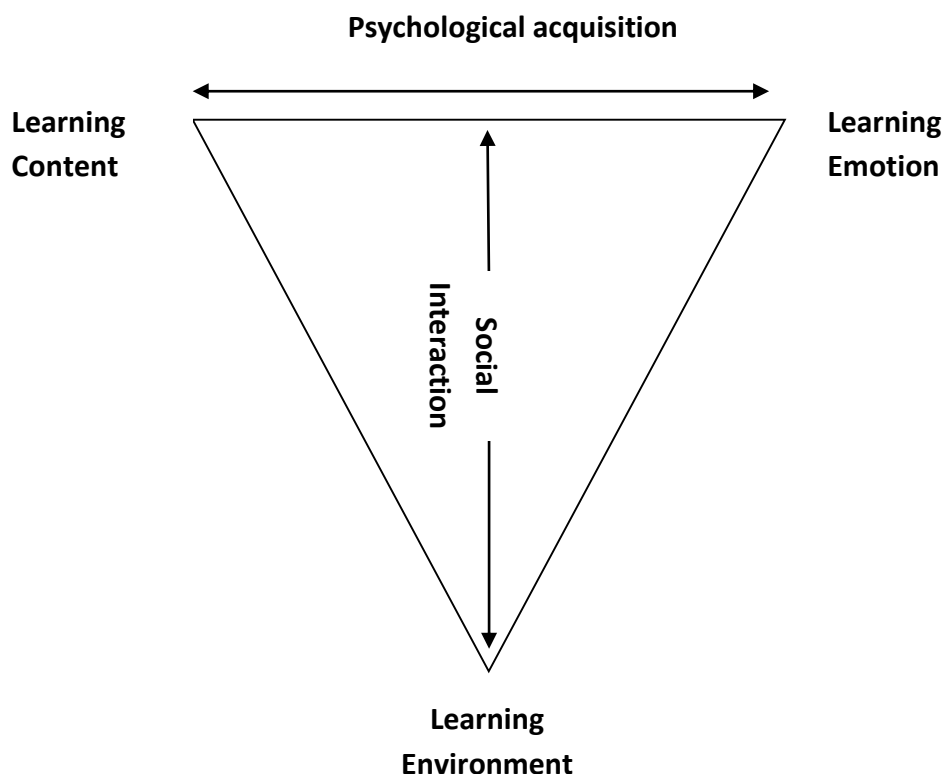


Figure 14 The Illeris model of learning summarises the relationships between the three poles, learning content, learning emotions and the learning environment (*Reproduced with kind permission from Professor Knud Illeris*)

Learning content

The learning content which is placed at the top left hand corner of the triangle is essential as there can be no learning without content, i.e. learning 'something'. This is about what is learned and includes skills, opinions, attitudes, comprehension as well as the acquisition of culture and the social contexts in which the learner exists. Illeris acknowledges the traditional role of knowledge, skills and attitudes as part of learning but takes an understanding of the learning content further that '*in modern society, the content of learning must be understood in some much more far-reaching categories*' (Illeris, 2007 p.73)

Emotions of learner

The emotions of the learner that are placed at the top right hand corner represent the motivation and interest for learning to be undertaken. This is the mental energy to carry out the learning, the motivation, volition and emotions. The emotional balance is maintained between a learner's psychological balance and their understanding. Illeris goes on to suggest that learning related challenges depend on the learner's interest and qualifications (Illeris, 2007 p.95).

Environment

The environment is at the base of the triangle. Illeris explains this dimension of learning can result from perception, transmission, experience, imitation, activity or participation. Illeris suggests that '*All learning is situated*', that is it takes place by interaction within a certain context of society. Illeris divides the environment into features of the immediate learning situation and learning space and more general cultural and societal conditions.

Interaction – At the individual level is a horizontal line which depicts psychological acquisition, between the end points of learning content and emotions of the learner. The individual is at the top of the triangle and the environment at the base of the line. This social interaction is given as a vertical line. The triangle depicts what Illeris describes as the tension field of learning. As there is interplay between the poles of the triangle, a state of balance is created which is constantly trying to maintain equilibrium, which results in a learning experience.

7.2. Observation task in a dental waiting room

An observation task in the waiting room of a busy dental clinic is timetabled in the first year of the curriculum. Students are expected to sit in one of the dental waiting areas for approximately thirty minutes, observe the interactions that occur around them and then write an observation report. This task is set as an assessment at the end of a series of communication skills workshops.

Students are able to observe interactions not only between dental students and patients but also between reception staff, clinicians, nurses and patients. The students start by sitting incognito blending into the background where people are sitting and waiting to be seen for a dental appointment. The student learners are indistinguishable

from patients and are able to watch and reflect on the interactions within this environment. Students remembered this relatively small task in the formal curriculum as having a significant influence in the development of their professionalism.

I think part of our project, to sit in the waiting room and observe patients or what it's like to be a patient and observe the staff as well. I think that's a really good thing to do and I think it will really teach us well. (S1, M8)

One student in her final year of study remembered this teaching from her first year in some detail,

We had a communication skills exercise where we had to sit in the waiting room and watch how students call patients into the clinic, and some people were terrible and other people were quite good and now when I call patients in, I remember that and think that other people and patients are watching you and how you behave. (S5, F7 Pilot)

The context of the waiting room environment offered the students a powerful learning experience. Their observations generated an emotional response as students began to empathise with patients experience in the waiting room. They observed what it is like when communication is good and also when it is not so good. The students made judgements about their observations which might have arisen out of the communications skills workshops that precede this observation task, or perhaps from their own experiences of waiting for an appointment. This observation allowed the individuals to compare their observations against their own experiences of the waiting room. This led to a social interaction between the students' internal learning and the external environment.

The student observations provoked positive and negative emotions which, as in the quotation above (labelled S5, F7 Pilot) can create further internal learning about what works and what does not work well. The internal mental acquisition process links new interactions to earlier learning. This learning is retained and subsequently used to guide professional communication within clinical practice.

This task in the waiting room environment draws on the taught content in the students' communication skills curriculum and contextualises it in a real environment. This has an impact on the student. This silent observation allows the students to view the environment from another's perspective which generates empathy in the students for

the patients. The task elicits an emotional response; a judgment about the quality of the communication skills demonstrated by staff and more senior students' when inviting patients from the waiting room in to the clinic. This task creates an experience which the students remember later in the course.

7.3. Reprimand of a student by a teacher in the presence of a patient

The second illustrative example is that of a student being reprimanded in the presence of a patient in the clinic. From their second year of study dental students take responsibility for carrying out clinical procedures for patients as part of their timetabled clinical learning. The content of learning here is not only learning the technical skills of dentistry but also involves practising good communication skills with the patients and teachers, which leads to development of their clinical and professional skills. Teachers must take vicarious responsibility for the students' clinical work and assist them during the clinical procedures. Then at the end of the clinical session, teachers reflect with students who are given verbal feedback on their clinical skills and professionalism. However, the manner in which feedback is given to students could be potentially unhelpful,

If the tutor talks to you in an inappropriate way it does affect you as a student, I've personally had a tutor who I felt uncomfortable with and I felt, that whole year I didn't learn. (S4, F8)

The student felt perturbed, such that it affected her relationship with that teacher for the remainder of the year. The clinical teacher in this episode is unable to empathise with the student and this causes a lack of confidence in the student.

Another student recollected a similar event when her clinical partner felt mortified, when spoken to improperly by the teacher in the clinic environment but on this occasion in the presence of the patient,

My clinical partner's actually been in tears over being very humiliated by a tutor and consequently the patient lost faith in her and she, for a short while, lost faith in herself. (S3, F3)

This could lead to the patient feeling that the student was incompetent to carry out the required procedure and result in the patient not returning for treatment, although this was not probed during the focus group. The outcome was not constructive as the

student perceived the patient as having lost faith in her. Such an experience creates a barrier to learning.

This event particularly highlights how an experience can evoke negative emotions within the student due to a social interaction with the teacher in the clinical environment. The student has been humiliated in the clinic and this has become a barrier to learning. Illeris suggests that '*barriers to learning can lead to possible learning being rejected or to something being learned that is different from what was intended by the learner or other*' (Illeris, 2007 p.174).

A teacher may embarrass a student but here the student receives the support of the patient.

I myself was embarrassed by [the teacher] and my patient turned around and said to me, she said, 'I like you'. (S3, F7)

There is an additional interaction between the student and the patient. The effects of the unconstructive comments by the teacher are compensated for by the positive reinforcement of confidence by the patient. In this scenario, the patient empathises with the student. This may have changed learning from being rejected to something different and more constructive being learnt instead.

The learning experience could have been quite different if the teacher had had this discussion with the student away from the clinic but then the patient would not have had the opportunity to express their reassurance and support to the student. Another teacher reflected,

If we didn't empathise with our patients or with our students then you can still be a good teacher but I think it takes away a very human and compassionate part of being a teacher, because whenever I teach what is uppermost in my mind is how I was when I was a dental student . (T12, F)

7.4. Availability of instruments to treat patients

The third example is about instrument availability and is set in a learning environment in which students provide dental care for members of the public. The dental clinic runs like any other dental clinic, patients check in with a receptionist and wait in the waiting room until they are called through for their treatment. Professional services are in place to ensure that sterile instruments and necessary consumables are available. Students

work in pairs and clinical teachers supervise the students' work. This learning environment is primarily a place for students to develop their technical expertise, communication skills and most importantly for this study contributes to the development of their professionalism.

A situation sometimes arises when there is a shortage of equipment. Unplanned events such as this can also contribute to the learning experience of a student, alongside the formal curriculum and planned clinical practice. If the necessary equipment is not available, it becomes impossible to carry out the dental treatment and the procedure may have to be postponed. This kind of unpredictable problem is uncomfortable for students, patients and for teachers alike. The emotions sparked by this discomfort can be linked to students' developing conceptions of professionalism for example one said;

It is very difficult for the students to be professional when the equipment isn't available. (S4, F1)

The student empathises with what it must be like for a patient who has made an effort to attend their appointment only to find that the treatment cannot proceed. A student elaborated on this,

The person, the patient that you're seeing, has taken the effort to take time off work, to come here, and is here for a two and a half hour appointment, and you send them back straight away because there's no rubber dam [dental equipment]. (S3, M5)

The student feels empathy for the patient and is frustrated that this situation is out of his control.

However, there is evidence from the patient data that students are able to deal with such a scenario. This patient's account gives an insight into how one student managed this event in a professional manner.

I'm just reflecting on the time when the materials that the student needed wasn't available, it's not the students fault, but she actually managed that. She was extremely polite. Apologetic, so at least I knew what the particular problem was. So it wasn't her problem, it was something in relation to her working environment. It was out of her hands. But she acknowledged that and I felt acknowledged because she did. (P1, F1)

The unplanned learning from this incident occurred when the student was able to put into practice skills and knowledge from other parts of the curriculum such as communication skills workshops or observations on the clinic. The student having to deal with the shortage of equipment activated some prior learning; recognising that a response such as an apology and explanation was needed. The choice of such a professional response by the student by not blaming or criticising is an example of putting into practice something learnt from previous experiences. This student was able to manage her emotions and to interact with the environment using good communication skills. However, people may feel different emotions and draw different learning experiences. This challenging scenario could have created negative emotions in a learner who might have found it difficult to manage or who had encountered a patient who felt aggrieved and angry.

Equipment shortages and other unpredictable issues could be seen as a barrier to learning, especially if they happened frequently and thus thwarted planned learning. However, encountering problems in the workplace environment could be viewed as positive by prompting learning from involvement in the realities of everyday practice. A supervising clinical teacher can further support learning from unpredictable experiences by engaging in critical reflection and feedback to the student and so assist in the development of professionalism, resilience and communication skills.

7.5. A comparison of the scenarios

These three examples have demonstrated how the dental student learner is in a state of tension between the content of learning, the internal emotions evoked by the learning experiences and the external social interaction with the environment as described in the Illeris model of learning (Illeris, 2004).

The assignment to observe in the dental waiting room was found to be a positive learning experience by the students. Their interaction with the environment as silent observers positioned as members of the public in a waiting room allowed them to be part of the environment with minimal engagement, freeing attention for observation and reflection. The learning that occurred from the observation can be attributed to the interaction of emotions provoked by what they see and their previous knowledge and the values instilled by each student's individual biography (Jarvis, 1992). This experience allowed them to develop empathy for patients who were waiting for their appointments.

In contrast, the clinic environment is more complex and less predictable. The student has to engage with many different aspects and contend with multiple interactions when treating patients and being observed by clinical teachers. The stakes are high and there are consequences if mistakes are made. This type of environment has the potential to evoke strong emotions. This can range from being embarrassed on observing unprofessional communication skills in the waiting room (Section 7.2); to losing confidence in their ability when reprimanded by a teacher in the presence of a patient (Section 7.3); or frustration when instruments are not available (Section 7.4). The students are motivated to care for patients and are enthusiastic about this part of the curriculum as highlighted in Section 6.1.1. However the emotions created both internally within the learner and externally by social interaction with the environment have the potential to influence their learning in positive or negative ways.

The learning challenges in the clinic that arise for students as a result of the active participation and interaction with patients, clinical teachers and the environment can lead to student growth. The key to ensuring that this is a positive experience is firstly to recognise that in each situation the potential to develop empathy will assist in the development of professionalism (Hoffman, 2000, Halpern, 2001) and secondly to recognize the need for clinical teachers to be skilled at engaging learners in critical reflection in a sensitive manner (Illeris, 2007).

7.6. The significance of the Illeris model for dentistry

The examples in this chapter revealed the emotions experienced by students in their interactions with the environment during planned and unplanned learning opportunities. These were powerful experiences which were retained and recollected by the students. The wider literature (Section 2.4.3) suggests that adverse learning experiences when managed in a structured manner could promote reflective learning and lead to transformative learning (Mezirow, 1990). There has been limited research which has explored the impact of observation of lapses in professionalism in dental education (Section 2.2.2).

The interactions, both psychological and social, described in the Illeris model (Illeris, 2004) have been demonstrated in these scenarios within dental undergraduate education. It is not just the content of the curriculum but the learners' emotional response and the influence of the social environment that must be taken into account.

The role of patients in students' development was found to be prominent in the narratives from students and cannot be disregarded. The patients' role is central in all three scenarios described earlier in this chapter. Firstly, the scenario in which students observe a dental waiting room (Section 7.2) allows them to view the world from the patient's perspective. Interactions that occur contribute to learning by the provision of an important opportunity to empathise with patients in the future.

The second scenario describes the experience in which the student is reprimanded by a teacher in front of the patient (Section 7.3). This is an adverse experience as the student feels humiliated. However the patient empathises with the student and gives informal feedback on their ability reinforcing the student's confidence. It could be argued that the patient also benefits from being treated by a student who feels reassured rather than an individual who is doubtful of their own ability.

The third scenario describes an occasion when due to lack of availability of instruments, the student is unable to carry out treatment (Section 7.4). Students want to do their best for patients and are disappointed when this does not happen. Students empathise with patients when having to cancel an appointment. On the other hand, in the described scenario, the patient is understanding and appreciates that such a situation is not in the students control and is reassured by how the scenario was managed. The realities of practice may often place a clinician in a challenging situation which has to be managed professionally.

The active involvement of patients in dental education is clearly important for students in the development of professionalism. This research has presented an argument for consideration of the patient perspective in developing empathy and also giving feedback to students on their development. The recognition of patients as partners in dental education (Section 2.4.3) has important implications for understanding and enhancing teaching and assessment of professionalism in dentistry.

7.7. Development of a conceptual model

The final research question to be addressed is the development of a conceptual model of learning for professionalism which can be applied within dental education. Illeris contributes a model which describes different dimensions of learning and the interactions between them (Figure 14) (Illeris, 2004).

Firstly there is horizontal psychological interplay between the **content** of what is learnt (which includes knowledge, skills, opinions, insight and competence) and the **emotion/incentive** of the learner (which includes mental energy for learning to take place, motivation). Secondly there is a vertical interaction between the learner (by action, communication and cooperation) with the **environment** achieving community and societal integration.

This model can be applied to the findings in this study exploring influences on what leads to learning professionalism in dentistry. There is an interaction between the dimensions of content (for example ethics and law lectures, communication skills, clinical skills and patient care), the learners emotion (for example students' increasing emotional maturity, responsibility and confidence which helps students to '*feel*' like a dentist and negative effects of reprimand) and the environment (for example the support of patients, the function of teachers as role models, and the impact of adverse experiences).

Figure 15 below represents the Illeris model of learning with superimposition of concepts from this doctoral study in blue and with the patient's role emphasised in red.

Teaching Content
 Communication Skills;
 ethics and law lectures;
 simulated patients;
 patient care

Student Emotion
 Maturity; responsibility;
 confidence; reprimand;
 All experiences
 (biography);
 empathetic relationships
 with patients

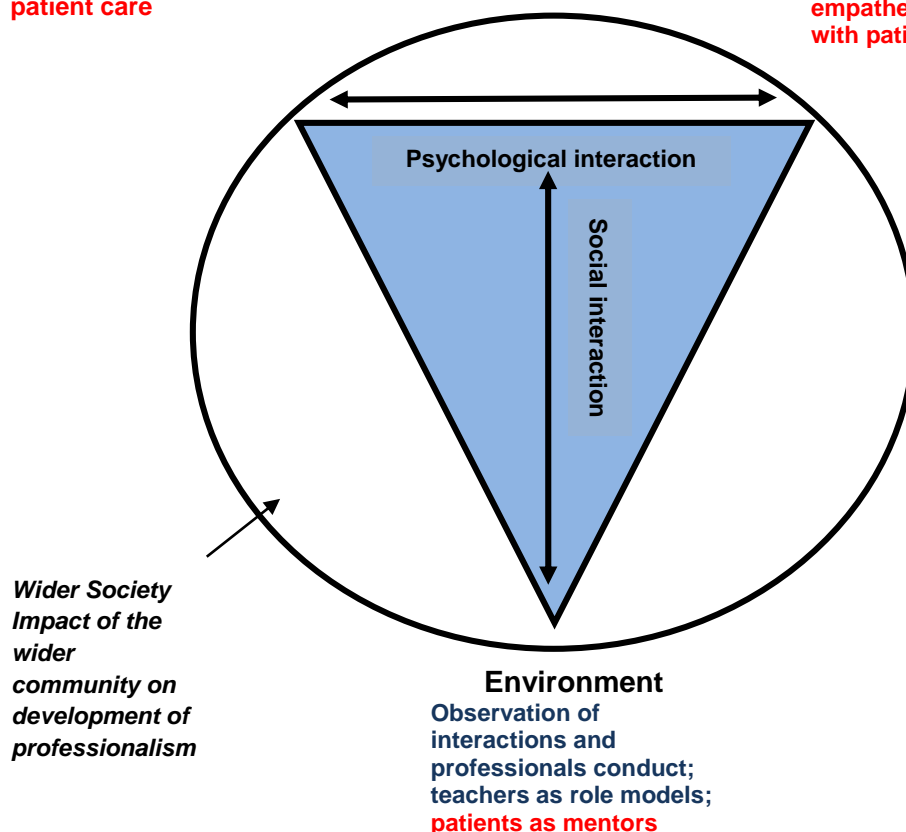


Figure 15 To demonstrate how the Illeris Model of Learning can be applied to the influences (teaching content, learner emotion and environment) which can impact on learning professionalism in dentistry

The triangle described in the Illeris model represents what he calls a tension field of learning. He suggests that the different interactions are occurring simultaneously (Illeris, 2004). Students learn by the psychological interaction between planned and unplanned learning experiences and the emotions evoked by this within the learner and the social interaction of the learner with the environment, which in undergraduate education is composed of teachers, peers and patients. These interactions generate a creative tension field which, when supported by reflection and feedback creates deep learning of professionalism.

7.7.1. Teaching content

Teaching content has been reinforced in the findings of this research as students identified specific content from the formal curriculum as influential in the development of professionalism (Section 6.1.1). Experiential learning such as dental care for patients has been described in the literature as significant for gaining knowledge (Section 2.4.3).

Current understanding of learning has been extended to include reflection as an integral part of development of professionalism, particularly self-reflection which '*increases self-awareness*' in learners (Hilton and Slotnick, 2005). Students in this doctoral study described how feedback from teachers allowed them to reflect and find meaning in events that occurred (Section 6.1.1). It is this drive to find meaning in learning that is termed emotion or incentive. This requires that mental energy be stimulated by the content of teaching.

7.7.2. Emotion/Incentive

Students were motivated by the fact that they would be responsible for patient care (Section 6.1.1). Teachers believed that the motivation for studying dentistry could be a determinant of professional behaviour. Although this study did not focus on dentistry as a vocation compared to dentistry as a business, the teachers felt this may influence an individual's professionalism. Crossley and Mubarik in their work found that medical students highlighted altruism and intellectual challenge as motivating factors for professionalism. By contrast, dental students demonstrated a commitment to personal and financial gain (Crossley and Mubarik, 2002). This was not explored any further in this study but, it can be expected to have important implications in understanding professionalism in dental education.

7.7.3. Psychological interaction

The content and emotion dimensions interact together in an internal process. So for example prior to undertaking care for patients, students are motivated to complete all the tasks of competence and assessments that will qualify them as ready for clinical practice. However there are planned learning opportunities such as the observation of a dental waiting room which allows them to empathise with what it is like to be a patient which evoke a different set of emotions. This teaching content positioned early in the curriculum was remembered much later by a student in her final year (Section 7.2).

7.7.4. Environment

The connection between the learner and their environment has been extensively explored. Illeris emphasises that all learning is situated. He refers to the seminal work of Lave and Wenger and their concept of '*Community of Practice*' in understanding the impact of the environment in learning (Lave and Wenger, 1991). Clinical students engaged in observing and undertaking care of patients are introduced into a community of dental practice. The dental learners start out as beginners on the periphery of the 'community of practice' and move towards becoming more experienced through observation, practice and reflection of the clinical environment in the dental school as well as in the outreach clinics. The students described how an overall professional environment motivated them to behave professionally (Section 6.3.1). Students described specific positive environments such as clinics managed efficiently and by teachers providing responsive clinical support technically and emotionally and by giving constructive feedback. This helped students to feel more confident as student clinicians.

Patients observed changes in students caring for them as their confidence and clinical experience increased. They noticed transformation from a mentoring to a collegial relationship between students and their teachers as students became increasingly integrated into the community of dental practice.

Students in this study emphasised the importance of teachers as role models. Teachers as positive role models were described as approachable, encouraging and motivational. They also highlighted teachers who were able to give constructive feedback. Byszewski and colleagues surveyed medical students at the University of Ottawa where they have identified the need for strong positive role models in their learning environment (Byszewski et al., 2012).

Negative role models were also part of the students' experience. They described detailed narratives about being embarrassed by their teachers which generated strong emotions as discussed in (Sections 6.3.1 and Section 7.3). The students felt humiliated as teachers reprimanded them in front of peers and patients.

Szauter and colleagues noted the negative impact of the use of derogatory language towards patients and the disrespectful treatment of others (Szauter et al., 2003). Hilton

and Slotnick have described influences such as negative role models as an '*attrition*' in the development of professionalism in medical students (Hilton and Slotnick, 2005). Keeling and Templeman found student nurses also identified positive and negative role models who influenced their perceptions of professionalism (Keeling and Templeman, 2013).

Apart from the teachers, the other main influence on students' development of professionalism was the patients. Though this would be expected as treatment of patients is part of the formal curriculum, the depth of patients' involvement in students' development of professionalism was an unexpected finding. Students in their interactions with patients were keen to demonstrate competence and confidence (Section 6.1.1). Patients were an incentive in stimulating development of professionalism.

Patients also discussed their ability to nurture and boost confidence in dental students. Patients viewed themselves as mentors to students offering positive feedback and reassurance which asserts their role as an active one rather than passive (Section 6.5.1). Patients observed development of professionalism in the students who cared for them over a period of time. Their observations included increasing confidence in the students; improvement in explanations and maturing relationships with their teachers. Recent literature has described the values of engaging with patients as teachers in curriculum development (Spencer, 2011).

7.7.5. Potential tensions in the relationships between students, patients and teachers

The social interactions between the three main participants, students, patients and teachers in clinical dental education also influence the development of professionalism.

Students progression through the course

The students engaged with their teachers in a mutual relationship to find their place in the community of practice (section 2.4.3) (Lave and Wenger, 1991). In contrast, a

student also observed how their relationship with the teachers could be strained as they felt they were treated as unequal,

It's very much the teachers in charge and they know best and you are treated like a child it makes it very difficult to be professional with them. I certainly struggled when I was spoken to like a child because I think well actually I'm not, I'm an adult and okay I'm not a qualified dentist yet but I treat you with respect so I think it needs to work both ways and that's more of a staff student interaction rather than a patient interaction but of course if you haven't got that mutual respect with your tutor then it does impact on the way you interact with your patient as well because you may be frustrated or hacked off or whatever it might be and even though you can hide it. It comes through so I doesn't lead to a particularly good atmosphere shall we say. (S4, F7)

However, the patients observed a development of maturity and confidence in students as they progressed through the course (Section 6.2.2). One patient commented,

My observation on the communication with the tutor has changed. Instead of being rather submissive in the beginning, gradually the conversation develops into one of collegiality, discussing things almost on the same level and discussing ideas. So it's gone on, in the academic sense, it's gone on a much higher level. Because that student has the confidence to do it. (P1, F1)

The patients in their observations saw a change in the relationship between students and teachers. They detected nurturing and acceptance by teachers as students developed.

Patients empathising with students

The patients sometimes perceived conflict for example when a patient empathised with a student, who had the treatment plan changed by different supervising teachers,

The poor trainee [student] doesn't know whether they're coming or going. Different tutors change the plan. (P2, M4)

The same patient also observed how sometimes teachers stepped in and carried out a procedure which the student was planning on carrying out,

Sometimes the student gets information for what she or he wants to do and the tutor does it for them, but they want to do it. (P2, M4)

The patient perceives this as intrusive. However; the patient does not explain or is unaware if the student has been unable to carry out a procedure and has requested the teacher's help discreetly.

The scenario considered already, described in section 7.3, when a student was reprimanded by a teacher in the presence of a patient highlights how a patient supports a student,

My patient turned around and said to me, she said, 'I like you'. (S3, F7)

Teachers as role models

Teachers recognised their responsibility as role models to the students (Section 6.3.3)

I think you can teach all you like about professionalism, if people aren't role modelling it then it is a waste. (T4, F)

Sometimes the teachers lack of empathy had a detrimental effect on students and patients. A teacher described such a scenario,

We say something inadvertently to a patient or to a student, and a dental nurse says 'that was a bit harsh, I think you upset them', I'd like to think that I as an individual would reflect on that and would apologise to the particular individual and would hope that it wouldn't happen again. The difficulty is when you don't realise that the way that you speak to people is quite hurtful and damaging. (T6, M Pilot)

The findings suggest in the interactions between students, patients and teachers, each of the groups encounter a dual role as shown in Figure 16 below. The students try to balance the expectations of patients as they carry out clinical care and concurrently seek recognition as student members of the dental profession from their teachers. The patients are recipients of care but also want the students caring for them to succeed and find themselves nurturing and mentoring students. The teachers balance responsibility for student development whilst simultaneously weighing up their vicarious responsibility to patients.

Although teachers wished to engage in nurturing students, there were occasions when their actions (Section 6.2.1 and Section 7.3) do not reflect this and this is perceived as indifference by students and patients.

These findings suggested a possible conflict between patients and teachers but also the potential to collaborate in mentoring and supporting students.

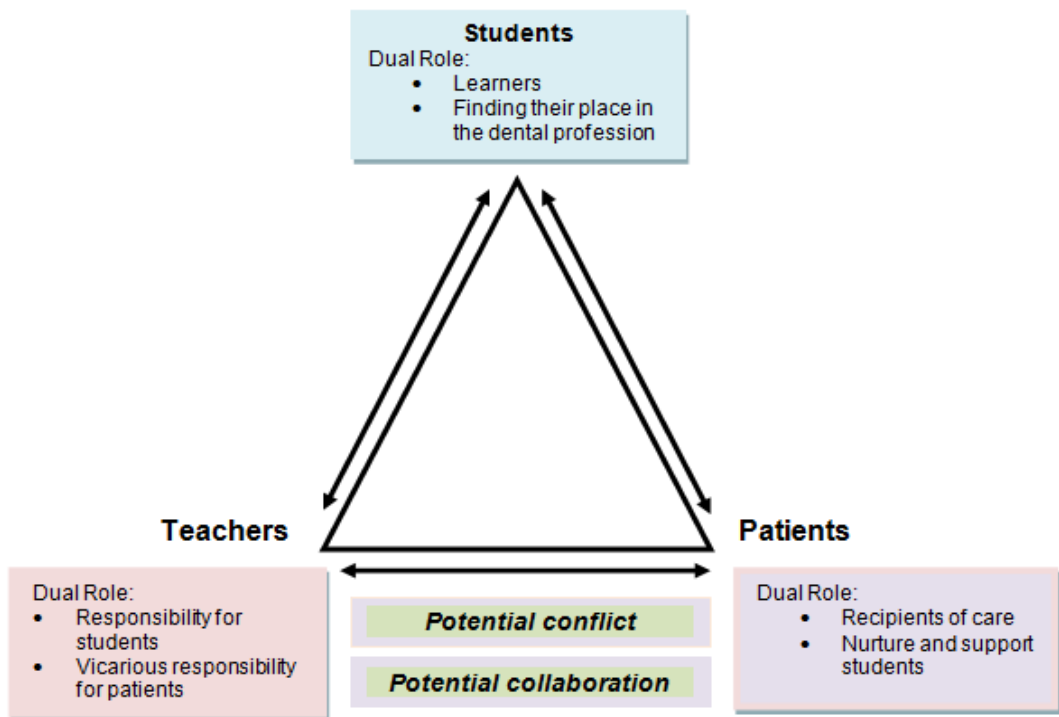


Figure 16 Potential tensions between the interactions between students, patients and teachers

The tensions brought about by the dual roles of all participants gives insight into the potential complexities of both the teaching of and the practice of professionalism within a clinical dental setting.

7.8. Two conceptual models for the development of professionalism in dentistry

In addressing the final research question (Section 3.1.1); two conceptual models of learning for the development of professionalism in dentistry are proposed (Figures 17 and 18).

7.8.1. The importance of the clinical relationship in development of professionalism

The responsibility for patient care has been identified by students as a turning point in the development of professionalism. The important influence of patients in the relationship adds another dimension to the learning process.

In their interactions, students empathise with patients. One junior student explained,

The patients make me professional. I want them to go away thinking that, that was a nice visit and that they were impressed with the dental school, not just you or the group or your tutor but with the whole atmosphere. (S1, M5Pilot)

Another more senior student commented,

We're taught in the very beginning to do whole patient care and the whole point of building relationships with the patients as well and if you're just going to see them as a filling and not actually a human being or person then I think the whole treatment becomes completely defective. (S5, F2)

The patients are not passive recipients of care but active in a synergistic relationship. They are intuitive about the students' lack of confidence and are discreet when motivating them. Their narratives describe instances when they have encouraged nervous students to carry out clinical procedures that are new to them with reassurance. One patient explained,

He was a bit confused, because everybody come in with their ideas and tell him something different. And I encourage him and I encourage him because he's only a young chap and he's just learning. (P2, M2)

The mutuality of this relationship was noted by another patient,

This whole thing is they're helping me; I should help them. (P1, M5)

Patients give informal feedback both as consolation and inspiration. These relational interactions formulate deep learning experiences that build confidence and development of professionalism. Spencer and colleagues in their report on patients as educators suggest that *'Medicine and dentistry have not developed patient/user involvement to anywhere near the same extent.'* as education for social care and non-psychiatric mental health and nursing (Spencer, 2011 p.61). Work by Anderson and colleagues found that patient involvement had a positive impact on student learning. They also observed changes within the faculty where a patient perspective was perceived as pivotal to all teaching and the patients themselves had benefited through the emotional and personal development and through being recognised as a member of the medical school (Anderson et al., 2011). In the first conceptual model, the triangular Illeris model of learning (Figure 14) and essentially the lower triangle in (Figure 17) has been opened up to form a diamond shape with patients as an additional pole.

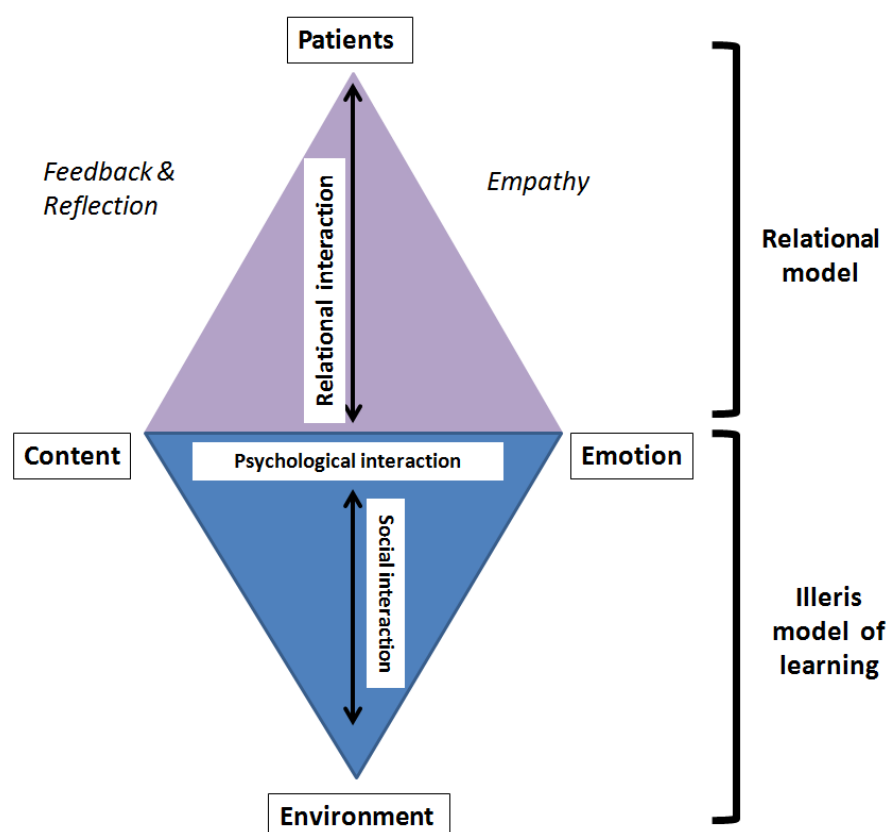


Figure 17 The inclusion of patients in a relational model of learning for the development of professionalism

This model positions the patient at the top of the model and demonstrates the expectation of the dental regulatory body, the GDC, to put patients' interests first and how students too view responsibility for patient care as the pinnacle of their learning. The patient generates feelings of empathy in the student and the patient also empathises with the student. It is this clinical relationship with patients that fosters the development of professionalism.

Dental education, presents an atypical clinical relationship as the patient also plays an active part in nurturing the student's development. For example in this study patients explained how they gave informal feedback and reinforced confidence in the students treating them. This relational interaction which is both psychological and social adds to the complexity of developing a conceptual model.

It could be argued that patients are a component of the environment as it is described in the Illeris model of learning. However, the role of patients is very evident in the development of professionalism for dental students which enables the Illeris triangle to be expanded to give the role of relationships with patients the prominence it deserves. This adds an important dimension to a better understanding of the development of professionalism in undergraduate dental education.

7.8.2. Opportunity to view the world from another's perspective

The students had many opportunities to view the world from another's perspective. The three scenarios described earlier in this chapter demonstrated the development of empathy. In the first scenario, the observation task in the dental waiting room (Section 7.2), the student empathises with what a patient might feel like whilst waiting. In the second scenario, the reprimand of a student by the teacher in the presence of the patient (Section 7.3), the student seeks empathy and understanding from their teacher but instead receives it from their patient. Finally, in the third scenario, the availability of instruments to treat patients (Section 7.4), the student empathises with the patient who had been inconvenienced.

In the clinical environment, students were constantly observing the interactions between patients, peers and teachers. This was illustrated in their comments. These observations allowed them to make judgments about whether a particular response, attitude or behaviour would be considered as professional or unprofessional.

A student described another student's behaviour and identified how a patient might have felt,

It was during my transition course and a colleague wanted to leave quickly, and one of the tutors was with another student, and they shouted across the room so loudly that, we were on the fourth floor and everyone heard, and I thought that was quite unprofessional, because we're allocated set times to be there, and that person should have just waited, because they were next in line anyway, instead of shouting across, because if there had been patients there, that would have looked very rude. (S2, F6)

Further opportunity for empathising arises for students when as part of their training they are expected to practice certain procedures on each other, such as the delivery of local anaesthetic. A student explained how being treated by another student earlier in the course influenced her,

I feel that when we started in second year it was quite important that we were actually patients at one point. I think putting yourself in the patient's shoes really helps at some point because you understand where they're coming from and you can understand how they can feel quite vulnerable. (S5, F2)

The development of professionalism in the clinical environment has already been presented in Figure 17 as a creative tension field created by interactions between the teaching content, emotions of the learner, social interaction with the environment and the significant influence of patients. The specific episodes and interactions described by the students contributed to development of professionalism by allowing the students to empathise.

The inclusion of the perspectives of students, patients and teachers in this study has allowed a holistic view of how professionalism develops. The second conceptual model in Figure 18 shows the role of empathy in the relationships between them.

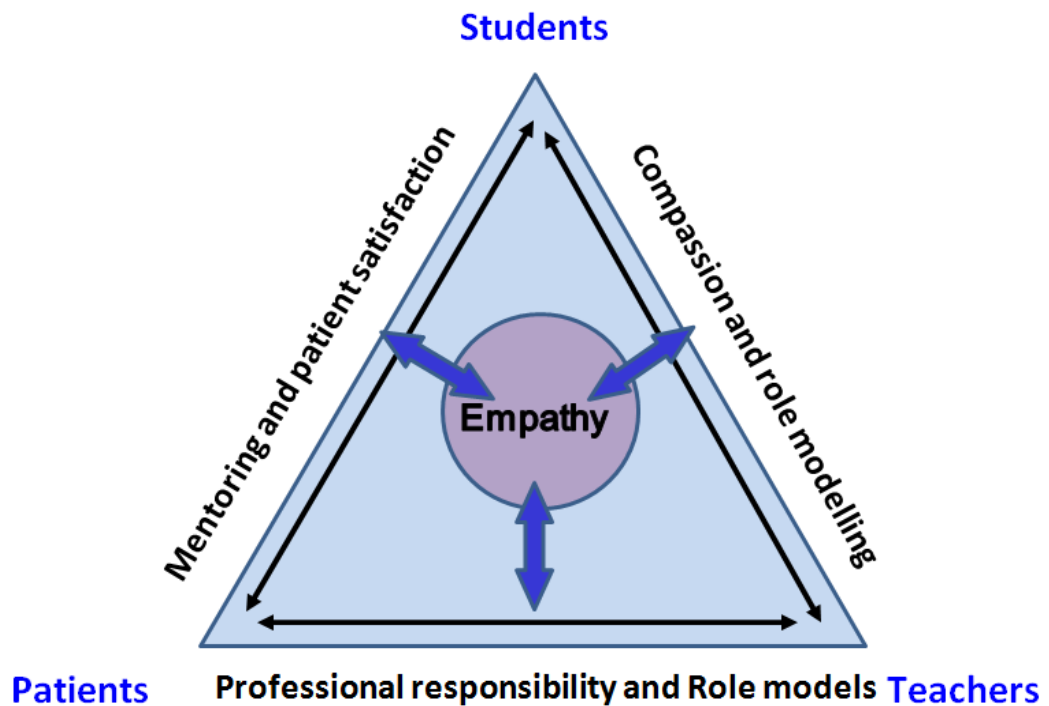


Figure 18 The empathetic relationships between students, patients and teachers

The three scenarios and the student narratives have described the opportunities in the clinical environment for students to empathise. This allowed the students to consider the feelings of others. This is reflected in their emotional reactions to their observations and was identified by them as contributing to development of their professionalism. Thus the development of empathy is positioned at the centre of the triangle in the second conceptual model as illustrated in Figure 18.

Responsibility for patient care motivates students to be compassionate and caring and in turn, patients want students to succeed and reciprocate by giving them active encouragement and support (Section 7.8.1). This empathetic mentoring relationship enhances the students' professional practice and increases patient satisfaction.

Students valued clinical teachers who were empathetic and they were recognised as important role models for demonstration of professionalism. Teachers have vicarious responsibility for the students delivering care to patients. However, it must be noted that students also described occasions when teachers' behaviours did not contribute positively to the development of their professionalism (Section 7.3).

The dynamic relationships are effective because the students, patients and teachers are interdependent. Students respond to empathy shown to them by their patients and teachers and in turn develop their own empathetic responses. Empathy has been demonstrated as the fundamental component in the inter-relationships between students, patients and teachers and can be considered as the foundation for the development of professionalism in dental education.

The concepts arising from the development of these two theoretical conceptual models will be used in support of the development of three key propositions in the following chapter (Section 8.1, 8.2 and 8.3).

Chapter 8

Discussion

8. Discussion

This chapter will discuss firstly how the five research questions that this study set out to explore have been answered by the findings and their relationship to the wider literature, secondly the advancement of three propositions and finally an evaluation of the study.

Perceptions of professionalism

The first research question sought to develop an understanding of professionalism from the perspective of students, patients and teachers. Professionalism was identified by students as being a '*well-rounded professional*' encompassing values and behaviours (Section 5.2.7); by patients as being treated as '*a person as well as a patient*' (Section 5.3.2); and teachers perceived a dental professional as an individual who upheld '*professional values*' (Section 5.4.1). These findings have added to the wider literature on professionalism by confirming the multidimensional nature of professionalism in the context of undergraduate dental education (Van De Camp et al., 2004b, Stern, 2006a, Trathen and Gallagher, 2009)

Similarities and differences in perceptions of students, patients and teachers

The findings of chapter four (Section 5) in the investigation of similarities and differences in perceptions of students, patients and teachers in addressing the second research question found all three groups agreed that a dental professional needs to have relational skills and organisational skills. This finding has resonated with other studies (Wagner et al., 2007, Green et al., 2009) but has extended knowledge by providing an insight which reinforces the notion that nurturing trusting relationships using good communication skills is valued by students, patients and teachers. The recognition of relational skills as an important aspect of professionalism is significant as this has been linked to improved health outcomes, patient satisfaction and compliance whereas poor communication has a strong association with complaints and litigation (Waylen et al., 2015).

Exploration of perceptions from students in each academic year at different stages of learning revealed that although students from the different years shared overall perceptions of professionalism, there was a subtle change in emphasis on progression. The students' perceptions changed in emphasis from early idealism to the realities of

practice as they engaged in the real environment of the clinic. This trend is similar to the trajectory of wider literature on professionalism which has evolved from a value laden concept to incorporation of behaviour aspects and to the inclusion of context (Section 2.2.1.3).

Other longitudinal studies which have explored changes in students' professionalism concluded that there were differences in perceptions of different learner groups and this posed a challenge in teaching professionalism (Wagner et al., 2007).

Neumann and colleagues in their systematic review exploring changes in students suggest a decline in empathy on progression through medical school (Neumann et al., 2011). A recent study in Turkey exploring medical students' perceptions of professionalism at the beginning and end of their undergraduate programme found clinical practice and role models had the most influence (Kavas et al., 2015).

Teaching of professionalism has been made mandatory by regulatory bodies that have placed professionalism at the heart of the education agenda giving emphasis to the content and structure of teaching (GMC, 2009, GDC, 2015). A systematic review of the literature on teaching professionalism concluded that there is not as yet widespread agreement on the best method to teach professionalism, but highlighted role modelling, mentoring and the environment as having critical influences in the development of professionalism (Birden et al., 2013)

Influences on development of professionalism

The analysis of the data in addressing the third research question found that students were able to pinpoint explicit experiences and responsibility for patient care as influential on their development of professionalism. This gives an insight into specific learning content. The findings chapter (Section 6) highlighted circumstances which students identified as influential on development of professionalism. When analysed, these situations represented events when students were able to put themselves in the position of another person. This allowed them to experience the world from a different perspective and to develop empathy (sections 7.8.2. and 8.1)

Unlike the vast literature which has focused on measuring empathy (Hojat et al., 2001, Hojat et al., 2005, Chen et al., 2007) (Section 2.4.3) , this study has identified experiences which contribute to the development of empathy.

Learning experiences which allowed students to empathise in their observations and even adverse experiences when reflected upon were all identified as effective. This reinforces findings in the wider literature about the use of reflection (Branch and Paranjape, 2002) as key to the development of professionalism and adds to the understanding of how reflection could be used as a tool to develop professionalism from planned and unplanned learning experiences within dental undergraduate education. The students in this study wanted feedback from their teachers (Section 6.1.1) and to be given the opportunity to reflect (Section 6.1.1).

Feedback following assessment has been considered to be crucial for the development of professionalism (Shrank et al., 2004). The Kolb learning cycle (Section 2.4.2) provides feedback which is the basis for new action and evaluation of the consequences of that action (Kolb, 1984). Several studies promote reflection and individual feedback as the basis to the development of professionalism (Horlick et al., 2006, Wald et al., 2009). Most recently, Wald and colleagues have tried to address the call for an expanded perspective on professional identity formation. They suggest interactive reflexive writing which they suggest fosters '*reflective capacity, emotional awareness, and resiliency*'. They recommend this as a strategy to assist in bridging theory into practice in the development of professional identity (Wald et al., 2015).

Students identified responsibility for patient care as fundamental in their development (Section 6.1.1). Patients were not indifferent to students' development; on the contrary they were supportive of the individuals who cared for them to be successful in completing their course. This extended to patients mentoring students and giving informal feedback to boost confidence (Section 7.3). The findings revealed a nurturing relationship between the students and the patients they cared for. The students wanted to do their best for the patients and the patients wanted the students to achieve and supported their development. The patient support came in numerous forms from boosting confidence, reassurance and mentoring (Sections 6.5.1, 7.3, 7.8.1 and 8.2). The GDC also promote the crucial role of patients in dentistry and in the most recent set of learning outcomes, 'Preparing for practice' has made recommendations '*that meaningful patient feedback is actively sought and recorded to be used to inform student development*' (GDC, 2015).

The literature (Section 2.4.3) has accentuated how patient contact encourages empathy, motivates students to learn and promotes confidence (Howe, 2007, Goldie et al., 2007). In accordance with the medical education literature (Spencer, 2011, Towle

et al., 2010), this doctoral study has advanced the role of patients as teachers which could enhance teaching and development of professionalism in dental education.

The fourth research question revealed students' narratives of their interactions with the environment. Constructive and adverse experiences were described ranging from multitasking in administration of appointment books for patients to observation of effective management of anxious patients (Section 6.2.1).

The student participants in this doctoral study observed lapses in professionalism of teachers, members of the dental team and peers (Section 6.3.1). The impact of these observations varied according how they were managed. Such incidents could also become part of the learners continually evolving biography if managed aptly. The literature reinforces these findings (Mezirow, 1990, Brookfield, 1990, Branch, 2005, Rougas et al., 2015) (Section 2.4.3).

The students described influential interactions with their teachers (Section 7.3) and experienced the impact of the physical environment such as availability of instruments (Section 7.4). However, it was observation of their teachers as role models (Section 6.3.1) which inspired and at times confused students. Students detected that the observed behaviour of teachers was not always professional (Section 6.3.1). The findings also indicated that guided reflection of unplanned experiences and observed lapses in professionalism can have a positive impact on the development of professionalism (Section 7.3). Students in this study identified their teachers as vital role models. They understood their behaviour could have a positive or negative impact (Section 6.2.1 and 6.3.1).

Both the literature (Section 2.2.1) and this doctoral study have identified an ambiguity in defining professionalism due to the multidimensional and contextual nature of the concept (Section 5.5). When this is accompanied by the confusion in teachers perceptions of professionalism (Section 6.5.2), it causes ambiguity amongst the students.

Ginsburg and colleagues found a similar result when they observed disagreement between teachers as to what constituted professional and unprofessional behaviour. This was attributed to difficulty in translating abstract ideas and definitions into behaviours (Ginsburg et al., 2004). This seems to have had an unforeseen effect, when teachers are expected to teach and assess the concept of professionalism as the

teachers' behaviours contradicts what is expected of them (Section 6.3.3) which in turn contributes to the hidden curriculum. The literature highlights the influence of the hidden curriculum over the formal curriculum (Hafferty and Franks, 1994). The findings from this doctoral study augment the literature on positive and negative role models (Paice et al., 2002, Lempp and Seale, 2004). Teachers had insight into their shortcomings (Section 6.3.3) and expressed a need for guidance in teaching and assessment of professionalism (Section 6.3.3). Steinert and colleagues in a case study exploration concluded that their faculty development programme for professionalism had an impact on the hidden curriculum (Steinert et al., 2007).

The influences of the environment could not be overlooked. The findings of this doctoral study broadly mirror how learners develop by engaging in a community of practice (Section 2.4.3 and Section 7.7.4). Initially students are very much on the edge observing and learning and gradually as they engage in increasing clinical activity, they move towards the centre of the community. This draws parallel with the framework described by Lave and Wenger. This centred on the interactions between novices and experts, and the process by which newcomers create a professional identity (Lave and Wenger, 1991).

The final research question was addressed as the analysis of the findings revealed that the perceptions, interactions and experiences were situated in the context of the clinical environment. The students remembered their learning experiences because it had an emotional impact. These findings were comparable with the Illeris model of learning (Illeris, 2004) and provided an opportunity to adapt the model to clinical dental education (Section 7.8.1). A theoretical and multidimensional model of learning described by Illeris (Illeris, 2004) offered the basis for consideration of professionalism as it takes into account the curriculum content, the learners' psychological emotions, as well as the social environment in which learning occurs. The students' engagement in these multiple interactions generated the creative tension field which stimulated their learning.

The adapted model for learning of professionalism in undergraduate dental education (Figure 17) argues for placing patients in a focal role. The dynamics of the relational interactions suggest the role of patients in mentoring and providing constructive feedback (Section 6.5.1) is more developed than expected. They promote empathy in the students who care for them which can enhance the development of professionalism.

The interactions and exchanges between students, patients and teachers also create tensions which have the potential to create experiences which influence development of professionalism (Figure 16).

The empathetic relationship model provides a contemporary framework for professional development in undergraduate dental education (Figure 18). This gives consideration to the influence of relationships between students, patients and teachers collectively on the development of professionalism and demonstrates the advantage of taking into account three different perspectives rather than one single perspective (Section 7.8.2).

Propositions

Addressing the research questions led to the development of three propositions for the development of professionalism:

- The opportunity to develop empathy is fundamental in the development of professionalism
- Patient contact is pivotal to the development of professionalism
- Teachers uncertainty and inconsistency as role models can influence the development of professionalism

These propositions can inform ways in which teaching of professionalism can be enhanced in undergraduate dental education.

8.1. Proposition 1: The opportunity to develop empathy is fundamental in the development of professionalism

Empathy has been defined by Rogers, '*as the ability to perceive the internal frame of reference of another*'; (Rogers) quoted by Nash (Nash, 2010). Healthcare educationalists have commented on the recognition of humanistic values such as respect for others and empathy as elements of professionalism (Swick, 2000, Arnold, 2002a, Beattie et al., 2012). Crandall and Marion in their commentary highlighted empathy as a cognitive attribute which can be demonstrated and enhanced through education (Crandall and Marion, 2009). In contrast, Halpern argues that empathy involves '*emotional resonance*', and that clinicians should be taught to recognise barriers to empathy (Section 2.4.3) and investigate their empathetic intuitions (Halpern, 2003).

The participants in this study discussed the significance of interactions on development of professionalism. Their accounts did not explicitly use the word empathy; however their stories illustrated empathetic emotions in their experiences. For example, (Section 7.2) when the students observed the physical and social interactions in the dental waiting room they became more aware of patients feelings and the conduct and attitudes of other students, teachers and reception staff. In their narratives, students explained how this silent observation had influenced development of professionalism. This insight was stimulating from two perspectives, firstly being able to empathise with what it must be like for a patient and secondly insight into the communication between patients, dental students, dentists and staff. The students found this to be a powerful learning experience. On the evidence available, such a learning experience has the potential to be developed further in observation of more challenging situations for senior students and qualified practitioners in specialist training in all health care fields.

As discussed in Section 2.4.3 , Nash has argued that there is a difference between recognising the circumstance of another which he describes as intellectual empathy and observations which motivate individuals to care and help which he describes as emotional empathy (Nash, 2010). The dental students in this study demonstrated a heightened perception of empathy with patients and their intention to use this to shape their own approach to professional practice. This observation task occurs early in the dental curriculum. However, the impact was deeper learning, as it was the senior students who reflected on this experience as significant. One possible reason for this deep learning could be that the task included submission of a summative narrative

focusing on an in depth analysis of their observations. Branch and Paranjape describe such reflection as an important impetus for learning (Branch and Paranjape, 2002).

It could also be argued that this experience contributes to the socialization of junior students into the professional practice of dentistry. By observing social participation, students are able to empathise and at the same time engage peripherally in this community of practice. Egan and Jaye in their exploration of work of Wenger (1998) advocate silent observation which can fulfil peripheral participation. They propose it has the potential to support but also to contradict the formal curriculum (Egan and Jaye, 2009).

Although the intention would never be to programme unfavourable experiences into learning content, it is inevitable that within a clinical environment, when social interactions occur the experiences may be negative. One such example was of a student being reprimanded by their clinical teacher in front of a patient (Section 7.3). It could be further argued that these incidents may make a positive contribution to development of professionalism of students when critically reflected on with their teachers. The pragmatic relevance of this lies in its application to the learning outcomes for dental education from the General Dental Council which states that a registrant should be able to '*undertake critical reflection in professional development of self*' (GDC, 2015 p.34).

The wider literature on empathy has focused on measuring changes in empathy levels (Hojat et al., 2004, Chen et al., 2007, Neumann et al., 2011); however there has been less discussion on how students develop empathy. This study did not set out to explore empathy or changes in empathy but the findings highlighted contexts in which there is potential for students to develop empathy (Section 7.2) but there have been challenging times when they have received lack of empathy from teachers (Section 7.3), and the students themselves link this to the development of professionalism. Jahangiri and colleagues in their exploration of dental student perceptions of effective clinical teachers found that students ranked non-cognitive attributes of caring, motivation and empathy as most important in their teachers (Jahangiri et al., 2013).

The insight provided by this qualitative analysis which is theoretically informed, offers evidence supporting the proposition that development of empathy has the potential to develop professionalism. Further research into this proposition is important when considering development of professionalism.

8.2. Proposition 2: Patient contact is pivotal to the development of professionalism

Students were asked about key experiences which had influenced their development of professionalism. The stories that emerged centred on their interactions with patients and these narratives contained rich, emotional content with different perspectives. Junior students looked forward to meeting their first patients and this was a powerful inspiration in their preclinical studies (section 6.2.1). Senior students developed in confidence with increasing responsibility for patient care (Section 6.2.1). This played a crucial part in establishing their clinical identity and was pivotal to the development of their professionalism. Students explained how early patient contact helped them to contextualise and integrate their skills and knowledge into clinical practice. The literature reinforces the rationale for early contact with patients, citing a list of advantages such as ease of transition; making students more confident in approaching patients; motivating them; raising awareness of themselves and others and strengthening of their theoretical knowledge; (Dornan and Bundy, 2004, Littlewood et al., 2005, Elnicki et al., 1999, Wenrich et al., 2013). The benefit of early patient contact has been recognised in wider health care such as nursing (Sharif and Masoumi, 2005) and midwifery (Lange and Kennedy, 2006).

The patients' narratives highlighted their helpful role in their interactions with the students who cared for them, such as a patient encouraging a student to deliver an intra-oral local anaesthetic by reassuring the student that they had confidence in the their ability (Section 6.5.1) which in turn generated greater self-assurance in the student. Patients observed positive changes as the students progressed and gave the students encouragement. Students also received support as patients empathised with them in challenging situations (Section 7.3). In these challenging situations, patients often placed students' interests before their own. In contrast, teachers' reactions would sometimes undermine the students' confidence in the presence of the patient (Section 8.3). Similarly, a medical education study showed that patients saw their role as experts in their condition and as facilitators for the students' development of appropriate professional skills and attitudes (Stacy and Spencer, 1999). This study has argued that a holistic curriculum which aims to develop professionalism should draw on the support of patients as mentors. Patient feedback should be used as part of multi-source feedback in assessing development of professionalism. However it is important to not adopt this as the only source of feedback as patient ratings are known to be high (Epstein, 2007).

8.3. Proposition 3: Teachers uncertainty and inconsistency as role models can influence the development of professionalism

During discussions about influences on the development of professionalism, the students focused on how clinical teachers acted as their role models. Their narratives described teachers who were positive role models (Section 6.3.1) and occasions when teachers were negative role models (Section 6.3.1). It was the emotional impact of these negative experiences which seemed to be retained for example being humiliated which led to a tearful outburst making the student feel embarrassed in front of the patient and having a negative effect on their confidence (Section 7.3). The impact of role models on students development is well described in the literature (Coulehan, 2005, Cruess, 2006, Goldie et al., 2007, Levenson, 2010, Birden et al., 2013). Poor role models can have detrimental effect (Hilton and Slotnick, 2005). The empirical findings from this study reinforced the notion that role models are critical in development of professionalism (Section 8.3).

Although, the teachers appreciated that they had an influential role in the development of students' professionalism, they identified their own uncertainty in understanding professionalism (Section 6.5.2) and inconsistency in addressing lapses in their own and colleagues behaviour (Section 6.5.2). This insight supports the perception that the professional and educational culture has not provided clinical teachers with clear and practical approaches to understanding professionalism and its multiple perspectives. As a result of this clinical teachers see themselves as vulnerable to colluding in creating an environment of tolerance and silence around lapses in professionalism. The literature has also identified a gap between theoretical concepts of professionalism and the ability of educators to put these concepts into practice (Steinert et al., 2005, Bryden et al., 2010).

This finding has implications for how learning occurs in such an environment. Illeris (Illeris, 2004) refers to the seminal work of Lave and Wenger and their concept of '*Community of Practice*' in understanding the impact of the environment in learning (Lave and Wenger, 1991). Role models are part of the environment within a community of practice. The dental learners start out as beginners on the periphery of the 'community of practice' and move towards becoming more experienced through observation, practice and reflection of the clinical environment around them. The students in this doctoral study described that an overall supportive, professional environment encouraged them to behave professionally (Section 6.3.1). They

described specific positive environments such as clinics managed efficiently by teachers involved in providing responsive clinical support technically, emotionally and conveying constructive feedback (Section 6.1.1 and Section 6.3.1). This affirmed the students' professional identity. The findings from this doctoral study have illustrated the role of teachers as positive role models but also the importance in recognising the confusion that arises from negative role models.

Undergraduate dental education does not provide guidance or standards for clinical teachers. The Committee of Postgraduate Dental Deans and Directors (COPDEND) who manage foundation training, for newly qualified dentists, in the UK do have guidelines for the dental trainers who are expected to '*adopt a professional approach to their educational, role modelling best practice and ensuring their own behaviour meets or exceeds professional norms and expectations*' (Bullock and Firmstone, 2008 p.8).

The teachers' narratives in this study draw attention to the need for guidance in teaching and assessment of professionalism (Section 6.5.2) and the literature review highlights the lack of consistent instruction for teachers in undergraduate dental education (Section 2.4.3).

8.4. Evaluation of this Study

This qualitative research adds to the field of professionalism in dental education as it is a descriptive and interpretative analysis which included all the main participants, students, patients and teachers. This study has made proposals for inclusion of essential experiences in the dental curriculum and the development of a conceptual model of learning for professionalism which has given this work a theoretical underpinning. The quality of this research has been evaluated to enable the findings to be used in practice (Section 4.2.1).

Qualitative methods are different in their philosophical positions and purposes compared to quantitative methods commonly used in dental research. Alternative frameworks for establishing rigour are appropriate. This study has met the criteria of the qualitative research evaluation checklist published by NICE (Appendix 1). This checklist is based on the broadly accepted principles that characterise qualitative research and that may affect its validity (NICE, 2012). Lincoln and Guba (Appendix 2) offer alternative criteria and language for demonstrating rigour termed truth value, consistency and applicability (Lincoln and Guba, 1985). The terminology and criteria has been adapted by Noble and colleagues (Noble and Smith, 2015 p.34) and presented as a framework (Appendix 2). This framework has been used to evaluate the credibility of this doctoral study's findings. The truth value of this study emphasizes reflexivity of the researcher and rich verbatim extracts that have been presented.

Member checking (feeding back to and from the participants) was not possible due to the fact that students had qualified and patient participants had been discharged. However, the findings have been presented to the students and teachers at academic conferences internationally at The International Association of Dental Research (IADR) (Gallagher et al., 2013) and nationally at The British Society for Oral and *Dental* Research BSODR (Ranauta, 2015). Consistency has been demonstrated by a clear description. Applicability can be established by the detailed description of the research context and the participants in the study.

8.4.1. Strengths

The strengths of this study stemmed from the following facts:

- Few studies have been done that give a voice to dental students, the patients they care for and their teachers collectively. This has given a more holistic understanding to what professionalism means in dental education.
- A pilot study was undertaken to test methods, which led to the teachers participating in individual semi-structured interviews instead of focus groups.
- Each of the participant's background information has been described in detail, to allow assessment of transferability of findings.
- The researcher was gauged for her interviewing skills and facilitation of focus groups by an independent observer who was a methodological expert
- The depth of exploration meant that the emerging themes were consistent across all comparable focus groups and interviews suggesting theoretical saturation. The richness and honesty of the narratives suggests the participants felt they could discuss issues freely, including those of a personal or sensitive nature.
- The well managed facilitation of the field work allowed unforeseen findings such as the uncertainty amongst teachers to emerge.
- The researcher used peer examination, by discussion and reflection, throughout the research process and findings, with a colleague who was experienced in qualitative methods to overcome bias and presumptions (section 4.2.4).

8.4.2. Limitations

The limitations of the study could be attributed to the following facts:

- This study was conducted in one dental school in United Kingdom
- The exploration of the literature focused in the field of dental and medical education and other healthcare fields were only briefly scrutinized.
- The researcher's role as a practitioner researcher meant that the researcher was known to the study participants, possibly introducing an unconscious bias in the data collection, management and analysis of the data and this may have also affected the participants' responses. There is also the possibility that tacit knowledge could be taken for granted,
- During this study the regulatory body, The General Dental Council responsible for dental education changed the learning outcomes for dental education and the standards for dentistry.

- The volume of data meant that a broad thematic analysis was applied to the raw data and it was not possible to explore all themes due to the volume of data.

The propositions outlined in this chapter offer suggestions for further research and lead to important recommendations for enhancing the development of the curriculum in undergraduate dental education.

Chapter 9

Recommendations

And

Conclusion

9. Recommendations and Conclusion

9.1. Recommendations

The propositions have facilitated recommendations for future research and for the development of dental education.

9.1.1. Future research

The research that has been undertaken for this thesis has highlighted a number of topics on which further research would be beneficial. Areas where information is lacking were highlighted in the literature review. Whilst some of these were addressed by the research in this thesis, others remain. In particular, further work in exploring:

- How students' perceptions of professionalism develop longitudinally in the continuum of their undergraduate curriculum
- How patients as educators may enhance development of professionalism in undergraduate education
- How teachers may be empowered to enhance teaching and assessment of professionalism

9.1.2. Development of dental education

This study can make recommendations for development of dental education in four different areas; the value of a theoretical model of learning as a framework for developing a curriculum on professionalism; curriculum content which provides opportunities to develop empathy; involvement of patients in the development of professionalism in students; and how teachers' development as role models may be enhanced.

9.1.2.1. Use of a theoretical model of learning as a framework to enhance a curriculum on professionalism

This thesis has added to the theoretical underpinning within the pedagogy of professionalism, by the development of an adapted model of learning for development of professionalism in the clinical environment. The proposed model of learning can enhance the curriculum on professionalism by providing a framework. The literature

continues to concentrate on curriculum content but recommendations can be made for educators to give;

- more attention to the impact of teaching on the emotions of learners
- more attention to the impact of learners social interaction within the environment
- more attention to the role of patients

9.1.2.2. Curriculum content which provides opportunities to develop empathy

Recommendations can be made for powerful learning experiences within a curriculum on professionalism which allow students to empathise:

- The introduction of learning experiences that allows learners to empathise and generate emotions which create deep learning.
- The support for this type of learning with the provision of adequate time and framework for reflection.
- The encouragement of learners to share positive and negative emotions in a structured and confidential environment.

9.1.2.3. Patient involvement in the development of professionalism

Patients are characteristically viewed as passive recipients of care however the patients who participated in this study showed insight and willingness to support students learning.

- Patients should be more involved in giving feedback to students and mentoring students and their
- Patients should be included in curriculum development on professionalism

9.1.2.4. Teachers' development as role models

The teachers were described as role models by students. Though the teachers also recognised this responsibility and its impact on the development of professionalism, they demonstrated confusion in what they knew and what they demonstrated.

There is a need for teachers:

- to reflect constructively on the confusion and vulnerability of being role models in the clinical environment
- to engage in training in managing adverse experiences in the clinical environment and supporting students in reflection
- to undertake training in recognition of the role of empathy in the student development of professionalism

9.2. Conclusion

The overall conclusion is that professionalism is multidimensional in the context of undergraduate dental education. Students, patients and teachers shared perceptions but also had individual perspectives defined by their biographies. Students' perceptions of professionalism changed, influenced by teaching content, their emotional experiences and the environment. Their increasing exposure to the community of clinical practice and increasing responsibility for patient care were contributory to this change in emphasis and professional growth.

Patients described their mentoring relationships with students which nurtured the students' development as clinicians. Teachers understood their position as role models but wanted clarity of norms and expectations from the profession. In seeking to understand how the identified influences impacted on the development of professionalism, the Illeris model of learning proved to be a useful approach to interpret the results. The adapted model of learning for development of professionalism identified a creative tension field of learning in the interactions between the teaching content, emotions of the learner, the environment and in the relational interactions with patients. The development of empathy as a result of empathetic caring relationships between students, patients and teachers is very important in the development of professionalism.

The transformation of a student practitioner into a professional safe beginner is multifactorial. A conceptual patient centred model of learning and consideration to the development of empathy offers a useful direction for mechanisms to support advancement of the development of professionalism within the dental curriculum.

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Appendices

Appendix 1 Summary table of the NICE qualitative research evaluation checklist

(<http://publications.nice.org.uk/the-guidelines-manual-appendices-bi-pmg6b/appendix-h-methodology-checklist-qualitative-studies>)

Section	Question	Answer	Comments
1	Is a qualitative approach appropriate?	<i>Appropriate</i>	This study was about views of professionalism of students, patients and teachers in the context of undergraduate dental education.
2	Study design	<i>Defensible</i>	This study used purposive sampling. The sample and sampling method has been described including any limitations.
3	Data collection	<i>Appropriate</i>	The method of interviews was deemed the most appropriate for finding out about views of professionalism and its development. Focus groups and one to one interviews were recorded and transcribed.
4	Validity	<i>Clear</i>	Reflexive position of the researcher discussed; the context was clearly described; the participants have been described;
5	Analysis	<i>Rich</i>	Data was in-depth, detailed to provide an insight into the research participants' experience. Data was coded separately by the researcher and a colleague and then the coding checked for consistency. Results positive and negative were quoted; Referenced extracts from the raw data are presented;
6	Ethics	<i>Yes</i>	Study was approved by an ethics committee; researcher is a teacher involved in teaching professionalism; a reflective diary was kept and the researcher debriefed an experienced colleague to assist in uncovering assumptions and biases

Appendix 2 Lincoln and Guba's terminology and criteria used to evaluate the credibility of qualitative research findings

Quantitative research: terminology	Qualitative research: Alternative terminology	Application to this doctoral study
Validity The precision in which the findings accurately reflect the data	Truth value Recognises that multiple realities exist; the researchers outline personal experiences and viewpoints that may have resulted in methodological bias; clearly and accurately presents participants' perspectives	Reflexivity and reflection on own perspective considered <ul style="list-style-type: none"> • Reflective diary kept • Peer debriefing to assist the researcher to uncover assumptions and biases Representativeness of findings in relation to phenomena <ul style="list-style-type: none"> • The students and patients felt they could share their experiences in depth. • Teachers felt they could discuss their uncertainties • The audio recordings of all the discussion were transcribed which allowed for repeated revisiting of the data to check emerging themes and remain true to participants accounts of perceptions and development of professionalism • Use of rich verbatim extracts from students, patients and teachers assists the reader to make judgments about whether the themes are true to participants' accounts. • Member checking was not possible as students left the institution and patients were also discharged. However. findings were presented to students and teachers at conferences where participants were invited to question and comment on the findings and themes.
Reliability The consistency of the analytical procedures, including accounting for personal and research method biases that may have influenced the findings	Consistency Relates to the 'trustworthiness' by which the methods have been undertaken and is dependent on the researchers maintaining a 'decision-trail'; that is the researchers decisions are clear and transparent.	Achieving audibility <ul style="list-style-type: none"> • Clear description of the entire research process • A research diary was kept which documented challenges and issues in maintaining consistency between the aims, design and methods • Emerging themes discussed with supervisors and a colleague who had qualitative and professionalism education expertise in an open process where assumptions and biases could be challenged and agreement reached.
Generalisability The transferability of the findings to other settings and applicability in other contexts	Applicability Consideration is given to whether findings can be applied to other contexts, settings or groups	Application of findings to other contexts <ul style="list-style-type: none"> • Rich detail of context, the undergraduate dental education setting, including the participants facilitates the evaluation of study conclusions and transferability to other undergraduate education institutions.

Appendix 3 Pilot study findings and concept map

The six main themes emerging were patient relationships, communication skills, character values, knowledge and technical skills, teamwork and experience. The patients placed importance on the theme of 'going beyond the call of duty', which was included within the concept of having values.

Concept Map arising from the focus groups

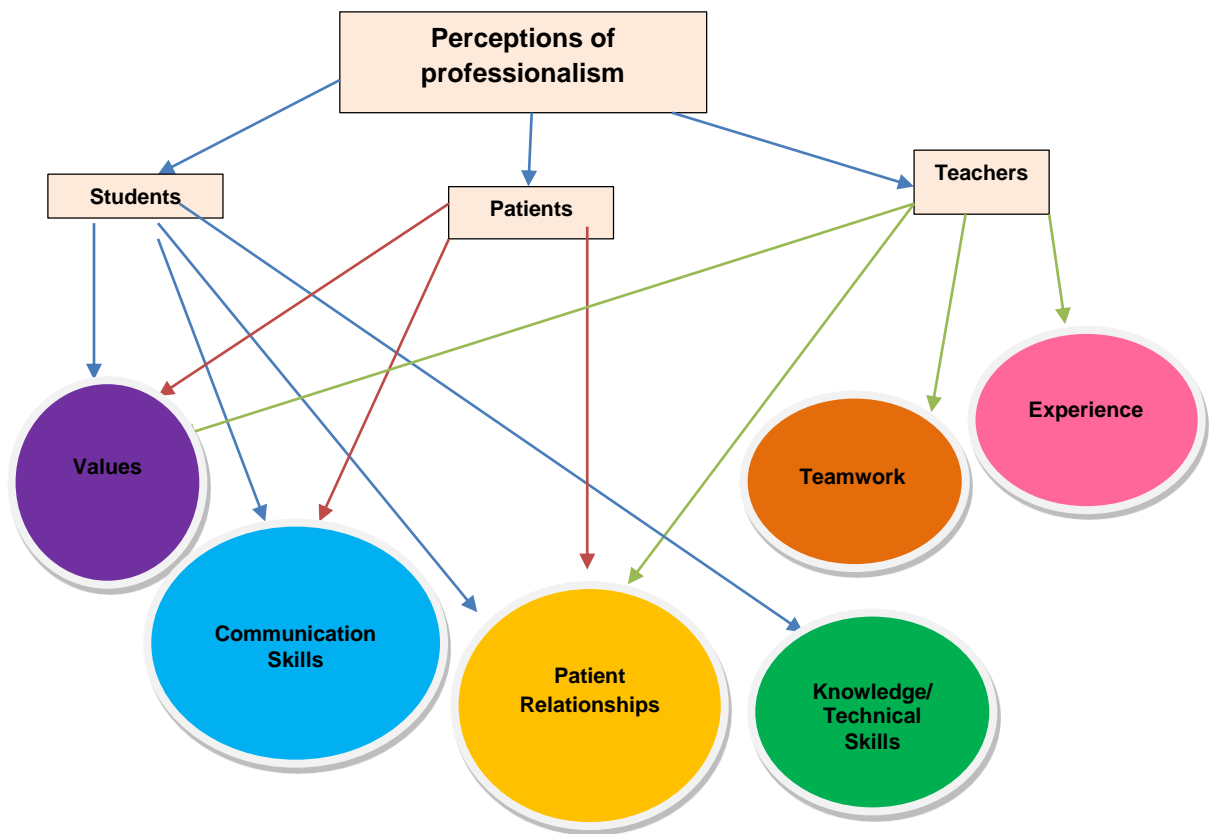
The themes were integrated into a visual concept map. This map helped to illustrate the commonality and differences between the three groups.

The map consists of a rectangle representing each group and coloured circular shapes as themes. The connections are straight lines, which demonstrate how the different themes interconnect to show the concept of professionalism was perceived by each of the three groups.

The students were influenced mainly by the knowledge and technical skills theme as they felt that *'knowing your subject area well enough before you actually start treatment is important'* (PiS3). The students were also aware that they were entering a profession where their personal life will be guided by the same rules as their professional life. They also highlighted the fact that for some students, caring for patients might be the first time they are involved in social interactions with the community, *'this is the first time you're being exposed to the public in a real sense'* (PiS5).

The patient group discussed the relationship between the dentist and the patient. Patients talked about being *'put at ease'* (PiP3), clinicians talking to patients and explaining treatment before doing the procedure. They also spoke of some common courtesy, like being offered a chair, reassurance during the treatment and demonstration of empathy when the dental student acknowledges *'the discomfort'* (PiP8), during treatment. Patients also appreciated, *'the dentist is concentrating solely on you'* (PiP8) as they felt the clinician was not distracted and this gave the patient confidence in the clinicians ability.

The teachers group emphasised the value of experience to develop their professional attributes. There was discussion about the stress of external pressures and the need to create a calm environment despite these stresses. The teachers discussed the ability to carry on treating patients despite finding it difficult to retain their professional composure at all times. They identified that teamwork played a supportive role in creating a positive atmosphere. They recognised challenges in managing a team. There was also a feeling of empowerment in the being a team leader and a role model to the undergraduate students.



Concept map showing perceptions of professionalism of students, patients and teachers in the pilot study

Appendix 4 Sample matrix for each group of participants

Sample matrix for student participants

<i>Student entry</i>	<i>Male</i>	<i>Female</i>
<i>School Leavers</i>	1	1
<i>Previous degree</i>	1	1
<i>DCP</i>	1	1

Sample matrix for patient participants

<i>Patient</i>	<i>Male</i>	<i>Female</i>
	1	1

Sample matrix for teacher participants

<i>Teacher</i>	<i>Male</i>	<i>Female</i>
<i>Younger (30-45)</i>	1	1
<i>Older (46-60)</i>	1	1

Appendix 5 Pilot study Information sheet for participants



Research studies A scoping study to explore teaching and assessment of professionalism in dentistry.

Queen Mary Research Ethics Committee Ref:

We would like to invite you to be part of this important research project, if you would like to. You should only agree to take part if you want to; it is entirely up to you. If you choose not to take part there won't be any disadvantages for you and you will hear no more about it. Choosing not to take part will not affect your access to treatment or services in any way.

Please read the following information carefully before you decide to take part; this will tell you why the research is being done and what you will be asked to do if you take part. Please ask if there is anything that is not clear or if you would like more information. If you decide to take part you will be asked to sign the attached form to say that you agree. You are still free to withdraw at any time and without giving a reason. This study is part of a larger proposed study to understand professionalism in dentistry and to develop a suitable teaching package to enhance the students' knowledge and professional behaviour which in turn will provide better safe patient care at all times. There have been many changes to the regulation of healthcare professionals including for the dental team. Public expectations have also risen due to public dissatisfaction with the performance of the medical (dental) profession. The GDC's Education Committee has recently recommended that '*professionalism as it is envisaged by the Council is placed at the heart of the educational agenda*'. We believe in order to do this properly, there needs to be an understanding of what professionalism actually entails or indeed means. Hence, we wish to explore professionalism with you and to understand what it means for you either as a dental team member or trainee or as a patient.

Our study will involve you attending one of four Focus groups of up to a maximum of eight persons comprising dental undergraduates, dental clinical academics, other members of the dental team and patients. You will be asked to come to the Dental Institute to participate in the Focus groups. The groups will be conducted separately in order to ascertain your understanding of professionalism and associated beliefs as related to dentistry.

This work will provide a base definition from which further exploratory work will be carried out to produce suitable teaching packages for the dental team which will be compatible with current GDC ethos.

It is up to you to decide whether or not to take part. If you do decide to take part you will be given this information sheet to keep and be asked to sign a consent form.

Amitha Ranauta
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Professor Elizabeth Davenport
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Appendix 6 Main study Information sheet for participants



Information sheet

Research studies

Professionalisation of dental undergraduates as they progress through the Dental Curriculum

Queen Mary Research Ethics Committee Ref:

We would like to invite you to be part of this important research project, if you would like to. You should only agree to take part if you want to; it is entirely up to you. If you choose not to take part there won't be any disadvantages for you and you will hear no more about it. Choosing not to take part will not affect your access to treatment or services in any way.

Please read the following information carefully before you decide to take part; this will tell you why the research is being done and what you will be asked to do if you take part. Please ask if there is anything that is not clear or if you would like more information.

If you decide to take part you will be asked to sign the attached form to say that you agree. You are still free to withdraw at any time and without giving a reason.

This study is being undertaken to understand how professionalism develops in dentistry and to develop a suitable teaching package to enhance the undergraduate students' professional knowledge and behaviour which in turn will result in safe and professional patient care at all times.

There have been many changes to the regulation of healthcare professionals including for the dental team. Public expectations have also risen due to public dissatisfaction with the performance of the medical and dental profession. The General Dental Council's Education Committee <http://www.gdc-uk.org> has recommended that '*professionalism as it is envisaged by the Council is placed at the heart of the educational agenda*'. We believe in order to do this properly, there needs to be an understanding of what professionalism actually entails or indeed means, as well as how undergraduates acquire their professionalism.

Hence, we wish to explore professionalism with you and understand what it means for you either as a dental team member or trainee or as a patient.

Our study will involve you attending either a Focus groups of up to a maximum of eight persons comprising separately dental undergraduates and patients or one to one structured interview. You will be invited to come to the Dental Institute to participate in the Focus groups (as a dental undergraduate or patient of the dental institute) or a one to one interview as dental teacher. The groups will be conducted separately in order to ascertain your knowledge of professionalism and associated beliefs as related to dentistry. The one to one interview will allow exploration of the same topic but in a less restricted and confidential environment. This work will provide a base definition from which further exploratory work will be carried out to explore exactly when and how does the professionalism of undergraduates develops. This in turn will help us to understand how to teach and assess professionalism in line with the current General Dental Council ethos.

It is up to you to decide whether or not to take part. If you do decide to take part you will be given this information sheet to keep and be asked to sign a consent form.

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Professor Elizabeth Davenport
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Appendix 7 Pilot Study consent form for participants



Consent form

Please complete this form after you have read the Information Sheet and/or listened to an explanation about the research.

Title of Study: A scoping study to explore teaching and assessment of professionalism in dentistry.

Queen Mary Research Ethics Committee Ref: _____

Thank you for considering taking part in this research. The person organizing the research must explain the project to you before you agree to take part.

If you have any questions arising from the Information Sheet or explanation already given to you, please ask the researcher before you decide whether to join in. You will be given a copy of this Consent Form to keep and refer to at any time.

I understand that if I decide at any other time during the research that I no longer wish to participate in this project, I can notify the researchers involved and be withdrawn from it immediately.

I consent to the processing of my personal information for the purposes of this research study. I understand that such information will be treated as strictly confidential and handled in accordance with the provisions of the Data Protection Act 1998.

Participant's Statement:

I _____ agree that the research project named above has been explained to me to my satisfaction and I agree to take part in the study. I have read both the notes written above and the Information Sheet about the project, and understand what the research study involves.

Signed:

Date:

Investigator's Statement:

I _____ (Amitha Ranauta) confirm that I have carefully explained the nature, demands and any foreseeable risks (where applicable) of the proposed research to the volunteer

Signed:

Date:

Appendix 8 Main study consent form for participants



Consent form

Please complete this form after you have read the Information Sheet and/or listened to an explanation about the research.

Title of Study: Professionalisation of dental undergraduates as they progress through the Dental Curriculum Queen Mary Research Ethics Committee Ref:

- Thank you for considering taking part in this research. The person organizing the research must explain the project to you before you agree to take part.
- If you have any questions arising from the Information Sheet or explanation already given to you, please ask the researcher before you decide whether to join in. You will be given a copy of this Consent Form to keep and refer to at any time.
- I understand that if I decide at any other time during the research that I no longer wish to participate in this project, I can notify the researchers involved and be withdrawn from it immediately.
- I consent to the processing of my personal information for the purposes of this research study. I understand that such information will be treated as strictly confidential and handled in accordance with the provisions of the Data Protection Act 1998.

Participant's Statement:

I _____ agree that the research project named above has been explained to me to my satisfaction and I agree to take part in the study. I have read both the notes written above and the Information Sheet about the project, and understand what the research study involves.

Signed:

Date:

Investigator's Statement:

I _____ confirm that I have carefully explained the nature, demands and any foreseeable risks (where applicable) of the proposed research to the volunteer

Appendix 9 Cards used in the additional activity as a result of the pilot study

**Communication
Skills**

**Knowledge &
Technical Skills**

**Patient
Relationships**


























Values

Your Ideas











Appendix 10 Pilot study scanned example grid from data management software
 'Framework' for student focus group

Pilot Focus Group Student <i>At your best</i>	3.1 - put patient first	3.2 - caring Stu 8(5th yr female student)- Caring personality example of after care even though finished 5th yr almost. <input type="checkbox"/>	3.3 - good communication Stu 6- When communicating well with patients, interaction is going well. Stu3- Good communication ensures you understand each other Stu 7- Good communication is an example when at their best. <input type="checkbox"/>
3.4 - relaxed and prepared	3.5 - passionate	Stu 5- When passionate, they are at their best, because it brings out their natural good qualities. Stu 4- passionate therefore makes you better at what you do. <input type="checkbox"/>	Stu 1- At my best when prepared and feel relaxed about the treatment Stu 7- preparation for example for interviews allows you to be relaxed <input type="checkbox"/>




























Appendix 11 Sample of Nodes created on N-Vivo 9.2 for the emerging theme of experience in all five student year

Type	Name	Memo Link	Sources
	1 Experience		
		building on experience	
		going to university- new situations	
		experience and confidence	
		practical experience not learning from a book	
	2 experience		
		first time interaction with patients	
		past work experience	
		exposure to new situations	
	3 Experience		
		coping with challenges treating young patients	
		coping with challenges of team work	
		people	
			patients
			other students
			teachers
			Positive attitude.
			Negative attitude.
		physical	
			equipment availability
			teacher availability
	4 Experience		
		learning from experience	
			good experiences
			Instilling confidence
			bad experiences
			Poor teacher conduct
		consistent discipline	
	5 Experience		
		value of early teaching becoming apparent	
			application to real situations
		less reliant on teachers	
		feeling more like a dentist	

Appendix 12 Sample of Nodes created on N-Vivo 9.2 for patient views of development of professionalism

	Name		Sources
	Being prepared everything in order		
	Communication skills		
	influence of environment and uniform		
	influence of teachers		
	Mistakes		
	notice change in students		
		continuum of growth	
		increasing competence and confidence with experience	
		maturing patient relationships	
		 	communication skills
			rapport
		maturing relationship with teachers	

Appendix 13 Sample of Nodes created on N-Vivo 9.2 for three teacher's views on influences on development of professionalism

Case Node T5	
	Appearance
	developing confidence
	developing maturity and change
	responsibility leads to change
	role model
	teachers professionalism
Case Node T6	
	developing self reliance (outreach)
	difficulty in assessing professionalism
	gaining confidence
	handling uncertainty
	learning from different teachers
	patient and publics interests
	potential to learn from experiences
	reason for doing dentistry
	self discipline
	subtle learning
	teachers professionalism
Case Node T7	
	case based discussion with peers
	continuum
	creating an air of expectation
	development from critical feedback
	environment and organisation
	financial expectations
	knowing and doing what is right
	outreach
	role of environment and teamwork
	Teachers professionalism

Appendix 14 Extract from student 5th year transcript when asked about influences on development of professionalism

		Exploratory Coding
S5:	Regarding communication skills I feel like we were taught in second year about the effects of our communications skills and we had places where we were split into our separate groups and we had role plays between each other and that really helped me just to learn like, I know it sounds silly but even just like the basics of dentistry, just to talk to the patient, patient, you know the dentist's tone of voice, voice control, the patient level, how to be confident, your attitude with patients and how to deal with difficult patients and although that was my basic foundation of learning of communication skills and patient relationship through my dental undergraduate studies that I developed and found that experiences with patients just helped me learn even more how to relate to patients and how to manage them.	<p>Communication skills –learning how to talk to patients</p> <p>Learning how to manage relationships with patients</p> <p>Increasing responsibility for patient care improved patient relationships</p>
MOD:	So were there some key episodes that you can think of?	
S5:	Yeah I remember one episodes in the outreach centre in [unclear 16.02] where I had a parent and I was actually assigned to see another patient, but my patient hadn't turned up and sometimes they have booked like the actual patients and this patient had turned up but the student to see that patient hadn't turned up after lunch so then like literally within two minutes one nurse is like okay your patient hasn't turned up you need to go and see this other patient. So I was sitting there trying to read the notes and that took me a good 10 minutes because obviously I was on time for my patient but had I known I was going to see another patient I would have had time to prepare for that and then the parent came in and he was very angry with me, and he was shouting at me and he was saying we've been waiting for such a long time and I kind of felt like this is unfair like I didn't know I was going to see you, I haven't had time to prepare to see you, but I'm still here and I'm willing to help you and all I did was apologise for a good 10 minutes but he was still shouting at me and then when I saw his child and I was, I acted as professionally as I could do, I was patient with the child I helped him with his problem, then the parent realised that he was a bit out of order and kind of apologised to me and that kind of helped me and I think that helped improve my management of patients and their parents when they're angry and aggressive with you and so that really helped professionalism.	<p>Example of managing an angry parent of a child patient successfully</p> <p>Apologised to patient and then patient calmed down=professional behaviour</p>

Appendix 15 Extract from patient transcript when asked about observations on how students who cared for them changed

		Exploratory Coding
P5:	This whole thing is they're helping me, I should help them. How can they help me if I don't help them back? It's give and take, surely.	Mutual relationship; helping each other
P1:	My observations, their competence, they are more competent in what they do after a period of time. And that's delightful, it's absolutely delightful. You can remember them when they were, like P5, when they were very nervous, first started. And then six months later, nine months later, you've seen this transition and it's beautiful. It's just lovely.	Increasing competence Change in confidence
P5:	It's very true. Every student I've had, I've been fortunate enough to have such a nice relationship with them. Every one of them have either sent me a card or they've text me or they've telephoned me to say that they've passed	Relationship with students
P6:	That's great, isn't it?	
P5:	Two of those students, one came the top that's ever been, I think, as a student. And he was actually going away, he was taking a gap year to go around the world. And he took the time at the airport to ring me to let me know that he'd had his results. I thought that was wonderful. And the other student, who also, I believe, did extremely well, I think he actually works here now. And I see him on a regular basis. I don't even recognise him, he's grown his beard. But he knows me. And he comes flying up, oh, big bear hug. I think it's wonderful.	Growing up, maturity

Appendix 16 Extract from teacher transcript when asked about observations of influences on students professionalism

<p>T11: Oh well I think with respect to teaching or students becoming more professional, they need role models and I think if they see a role model who or a leader or a teacher whatever, who is not appropriate dressed or not taking things seriously then there's a potential for them to do the same, so I think role model in the tutor is really important, probably the most important way of teaching.</p>	<p>Exploratory Coding</p> <p>teachers as role models</p> <p>Copy role models Important for teaching professionalism</p>
<p>INT: Yes and can you think of an example specifically when either you've seen this happen or you've experienced it yourself between the students and a teacher situation?</p>	
<p>T11: I think I've seen it happen negatively, I've seen some tutors or teachers who are extremely relaxed, extremely friendly with their students, almost a little bit too matie [chuckling] and then the students feel that's the way to behave and then suddenly they're told not, and they find that they don't know the ground rules because there's not that professionalism in the tutor so they become more relaxed, so I think I've seen it happen in a negative way, I can't really think of examples in a positive way, I think if someone's already good, you don't notice them getting better.</p>	<p>behaviour of teachers; boundary not clear in relationship</p> <p>Students confused</p> <p>unprofessional behaviour more noticeable</p>
<p>INT: No that's true I guess, do you think the students have ever verbalised to you the importance of having a good role model and this might be, you wouldn't need to name things, or name people as such but would you say that there has?</p>	
<p>T11: Yes, definitely, students have complained in the past about tutors not being on time, tutors not being there, disappearing off clinic and then coming back again and also I think now the students are aware of standards of it, and if a tutor is not teaching the same standard as someone else is teaching, they will actually complain about it or notice it or be aware of it, so I think that yes.</p>	<p>Role modelling inappropriate behaviour</p>

Appendix 17 Pilot study ethics approval



Queen Mary, University of London
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Queen Mary Research Ethics Committee
Hazel Covill
Research Ethics Administrator
Tel: +44 (0) 20 7882 2207
Email: h.covill@qmul.ac.uk

c/o Professor E. Davenport
Institute of Dentistry
Turner Street
Whitechapel
London E1 2AD

7th April 2010

To Whom It May Concern:

Re: QMREC2010/23 – Scoping study to explore professionalism in Dentistry

The above study was approved by The Queen Mary Research Ethics Committee Sub-Board C on the 31st March 2010.

This approval is valid for a period of two years, (if the study is not started before this date then the applicant will have to reapply to the Committee).

Yours faithfully

A handwritten signature in dark ink, appearing to read "E. Hall", written over a faint horizontal line.

Ms Elizabeth Hall – QMREC Chair.

Patron: Her Majesty the Queen
Incorporated by Royal Charter as Queen Mary
and Westfield College, University of London

Appendix 18 Main Study ethics approval



Queen Mary, University of London
Room W117
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Queen Mary Research Ethics Committee
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Research Ethics Administrator
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c/o Professor Elizabeth Davenport
Institute of Dentistry
Turner Street
Whitechapel
London E1 2AD

19th April 2012

To Whom It May Concern:

Re: QMREC2011/93 – A qualitative study to explore the professionalism of undergraduate students as they progress through the curriculum, as perceived by the students themselves and their patients and teachers.

The above study was conditionally approved by The Queen Mary Research Ethics Committee (Sub-Board A) on the 12th October 2011; full approval was ratified by Chair's Action on the 18th April 2012.

This approval is valid for a period of two years, (if the study is not started before this date then the applicant will have to reapply to the Committee).

Yours faithfully

A handwritten signature in black ink, appearing to read "E. Hall", written over a faint horizontal line.

Ms Elizabeth Hall – QMREC Chair.

Patron: Her Majesty the Queen
Incorporated by Royal Charter as Queen Mary
and Westfield College, University of London