

Measuring moral development in the pharmacy profession from undergraduate to established practitioner: a longitudinal study.

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Abstract

The aim of this study was to measure and evaluate the moral reasoning of undergraduate pharmacy students as they progressed through the University of Hertfordshire undergraduate pharmacy programme, and through the early years of their professional practice.

A mixed methods approach to the study utilised Rest's Defining Issues Test 2 (DIT-2) in a longitudinal design, evaluating a single cohort of future pharmacists, who commenced their four-year Master of Pharmacy (MPharm) degree programme in 2008-09, successfully registered as pharmacists after completing their pre-registration training and progressed through their early careers. The last dataset from the DIT-2 was collected in 2019. Both descriptive and inferential statistical analysis were carried out. In addition, semi-structured interviews were conducted with four pharmacists after the completion of the final DIT-2 administration, to elucidate findings from the DIT-2 and to gain insight into their experiences of moral development in professional practice.

The cohort experienced significant moral growth during the four years of their undergraduate degree, where they were exposed to an ethical education designed to engage students at the "plus one" level of moral reasoning. There was also evidence for experiential augmentation of moral development between completion of the MPharm programme and qualification as pharmacists. The participants displayed a substantial increase in moral development as they progressed through their undergraduate studies, which continued through their pre-registration year. The pharmacists who took part in the interviews shared insights into their experiences of moral education while they were studying on the MPharm programme and the extent to which they were able to utilise this training in real-world practice. It was clear from this, that consideration needs to be given to enhancements to the MPharm programme, so that it is of more value to pharmacists while in practice. The interview participants also shared their experiences of factors in practice that hinder their ability to respond to dilemmas affectively and situations that give rise to dilemmas. They discussed the personal and professional influences on decision-making and how this changed as they

progressed through their careers.

This study was unique in its longitudinal nature, evaluating a single cohort's moral development for over ten years. The identification of the retrograde step in moral development observed between Newly Qualified level and Established Practitioner level shed light on the need for interventions like peer support, continuing professional development focused on moral development and enhancement of moral education in undergraduate teaching to simulate real-world dilemmas.

Although the study offers valuable longitudinal insights, its findings must be interpreted within the limitations of the small sample size achieved in the latter phases of data collection. The reduced number of respondents, common in longitudinal cohort studies, limits the generalisability of the quantitative results and restricts opportunities for statistical inference. Nonetheless, the developmental patterns observed remain informative and were strengthened by the complementary qualitative data, which provided depth and contextual understanding of pharmacists' moral reasoning in practice.

Publications arising from this work

Refereed articles

- A1. **Kareem-Alliu, W.O.D.**, Umaru, N.E. and Gallagher, C.T. Evaluating moral decision-making in pharmacy practice: a qualitative study of pharmacists' experiences and perspectives. *Research in Social and Administrative Pharmacy*, (in preparation).
- A2. Gallagher, C.T. and **Kareem-Alliu, W.O.D.** (2023). Measuring moral development in the pharmacy profession from undergraduate to established practitioner: a decadal longitudinal study. *International Journal of Pharmacy Practice*: **31(6)**; 633-637.

Invited lectures

- L1. **Kareem-Alliu, W.O.D.** (2023). Moral development from pharmacy undergraduate to established practitioner. Pharmaceutical Care Network Europe (PCNE) Working Conference, Danish College of Pharmacy Practice, Hillerød, Denmark; 8 February.
- L2. **Kareem-Alliu, W.O.D.** (2022). Exploring views on moral development from newly qualified pharmacist to established practitioner. FIP World Congress of Pharmacy and Pharmaceutical Sciences, FIBES Sevilla, Spain; 20 September.

Conference proceedings

- P1. **Kareem-Alliu, W.O.D.** and Gallagher, C.T. (2023). Measuring Moral Development in the Pharmacy Profession from Undergraduate to Established Practitioner: a Longitudinal Study. FIP World Congress of Pharmacy and Pharmaceutical Sciences, Brisbane Convention & Exhibition Centre, Brisbane, Australia; 26 September.

- P2. **Kareem-Alliu, W.O.D.** and Gallagher, C.T. (2022). From pharmacy student to pharmacist: exploring the journey of moral development. FIP Pharmacy Practice Research Summer Research Meeting, HU Utrecht University of Applied Sciences, Utrecht, Netherlands; 4 July
- P3. **Kareem-Alliu, W.O.D.** and Gallagher, C.T. (2019). A longitudinal study of moral development from pharmacy undergraduate to established practitioner. FIP World Congress of Pharmacy and Pharmaceutical Sciences, ADNEC, Abu Dhabi UAE, 23 September.

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Glossary of Terms

ANOVA	Analysis of Variance
CPD	Continuing Professional Development
DIT	Defining Issues Test
DIT-2	Defining Issues Test 2
EP	Established Pharmacist
FCM	Four Component Model of Morality
GPhC	General Pharmaceutical Council
HE	Higher Education
IPE	Interprofessional Education
MD	Moral development
MDT	Multidisciplinary Team
MJI	Moral Judgement Interview
MNS	Maintaining Norms Schema
NQ	Newly Qualified Pharmacist
PCS	Post-conventional Schema
PIS	Personal Interest Schema
PG	Postgraduate
RPS	Royal Pharmaceutical Society
RPSGB	Royal Pharmaceutical Society of Great Britain
SoP	School of Pharmacy
UG	Undergraduate
UH	University of Hertfordshire

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Chapter One: Introduction

The Study

Overview

The role of the pharmacist is evolving into one with increased responsibility and more patient-facing roles across all settings, including in general practice and urgent care. Recent changes to the General Pharmaceutical Council's (GPhC) Initial Education and Training for Pharmacists indicate that pharmacists will soon be expected to play a more active role in the provision of clinical care, including prescribing medicines, from their first day as registered pharmacists (GPhC, 2021a). If pharmacists are expected to make sound ethical decisions in the best interest of their patients, they must first be provided with enhanced moral reasoning abilities. Moral development refers to the enhancement of moral reasoning abilities in an individual (J R Rest & Narvaez, 1994). Moral reasoning is the cognitive process in which a person engages when making a decision.

This research sought to measure and compare the ethical reasoning of pharmacy students at the University of Hertfordshire (UH) from their first days in full time education, through until 5 years after qualification as pharmacists. The research sought to identify any differences in moral development as a function of years of professional pharmacy education and experience. This also involved interviewing participants after five years in professional practice as pharmacists, to highlight practice-based perspectives on moral development.

Before one can have a meaningful discussion on the effect of educational and in-practice interventions on a student's moral development pathway, it was first necessary to develop a general understanding of the theories that underpin moral education. In this instance, it was necessary to define ethics and morality, before moving on to the various theories of moral development, leading to a discussion of Neo-Kohlbergian moral theory, and to the ultimate destination of moral education and the measurement of its success.

Focus of the Study

The primary objective of the study was to identify any differences in moral development that occur as a result of the content and duration of pharmacy education. The study also examined the changes in moral reasoning after students have qualified as pharmacists. In addition, the study delved deeper into the moral development of participants in professional practice, with the goal of gaining insight into practice-based perspectives on moral development in the pharmacy profession. As the primary researcher, I was directly responsible for developing the aims and objectives of the study, ensuring they were aligned with identified gaps in the literature on moral reasoning in pharmacy.

By conducting this research, the study contributed to the broader understanding of moral development within the pharmacy profession and informing future educational and professional practices in the field.

Research Questions

This study addressed the following research questions.

1. To what extent has moral development been measured in pharmacy students and professionals?
2. In what way – if any – is students' moral decision-making affected by their higher education experience?
3. How can the MPharm programme be enhanced to maximise the development of moral decision-making?
4. What personal and professional experiences have an influence on moral decision making?

Theoretical Framework

Ethics

The meaning of the term ethics is, to a large extent, context-dependant. Multiple researchers have used two differing concepts regarding personal

ethics. Ethics has been described both as an analysis of principles, beliefs, and rules of conduct that guide actions (Starratt, 2004; Vaughan, 1992), and as an examination of right versus wrong, including justice and fairness in relationships (S. K. Anderson & Davies, 2000; Ciulla, 1998; Gini, 1998). It has been noted that “ethics is not a well indexed code of behavior to be consulted when in doubt, but is rather a system of thought developed over many millennia about how human beings translate their inner motivations into external actions having social consequences” (Chambers, 1981).

Morality

Similarities exist in the definitions of morality and ethics. Erwin (2000) defined morals as standards that govern human cooperation, specifically in relation to how duties, rights, and benefits were allocated. As in the second description of ethics above, morality involves the evaluation of the actions or character of individuals with respect to that which a culture or society identified as right and wrong. Such evaluation constituted moral judgment. Rich and DeVitis (1994) contended that distinguishing between right and wrong was similar to developing a system of ethical values and learning to act morally.

Role of Values and Beliefs

I identified values and beliefs as a critical area of inquiry and selected theoretical frameworks to underpin their examination in this study. Recent research highlighted that values and beliefs are central to healthcare ethics and professional practice, shaping provider behaviours, decision-making, experiences of moral distress and approaches to interprofessional collaboration. In particular, shared values are increasingly recognised as a central for effective teamwork and patient-centred care (Academy, 2025; Sturmberg & Taher, 2025) Within pharmacy, core professional values such as patient well-being, accountability, and responsibility to society underpin ethical decision-making and distinguish professional practice from personal or cultural belief systems (Krajnovic, 2023; Weiss Goitiandia, 2024).

Educational research further demonstrates that embedding values within curricula fosters ethical resilience and enhances professional identity formation (BMA, 2025)

A growing body of literature has also examined the impact of conflicting values on moral distress. Studies report that incongruence between professional standards, institutional constraints and personal beliefs contribute to emotional strain, burnout, and staff attrition across healthcare professions (Aljabery, 2024; Vinckers & Landeweert, 2025). In response, values-based approaches in healthcare emphasise the importance of balancing ethical principles such as autonomy, beneficence and justice with recognition of both patient and professional values (Sturmberg & Taher, 2025). These developments underlined the importance of explicitly recognising and reinforcing values and beliefs in the healthcare system.

For this study, the literature provided a critical foundation: pharmacy students' moral reasoning cannot be understood in isolation from the broader ethical landscape in which professional values are taught, experienced, and enacted. This framing also positioned the study within ongoing debates on how healthcare education can foster value-driven, ethically resilient practitioners.

Role of Theories and Models

Ethical theories invoke the concepts of justice, freedom, equality, rights, duties, and obligations with an overall view to maximising benefit. Scientific theories concern themselves with explaining how things are; ethical theories establish standards to explain how things should be.

When comparing ethical concepts with moral development theories, Rich and DeVitis (1994) noted similarities as they related to distinguishing right from wrong, as well as to developing a system of ethical values and acting morally. Moral development theory drew on the socialisation process whereby individuals “become inculcated with societal values and acquire appropriate social roles”. In common with ethical theories, moral

development theory emphasised maturation and growth, and the emergence of cognitive and moral abilities.

Models serve as a starting point for developing an overall plan to move individuals and institutions forward in a moral context. Additionally, models may help individuals maintain objectivity. Ethical dilemmas bring with them conflicts of interest and emotions. It is all-too-easy to be swayed in a particular decision by emotion. Models provide a framework for considering a dilemma without focusing solely on the emotional side of that dilemma. Finally, models help individuals check the reasoning process. Working through a model can help individuals establish ethical justification for a decision, or realise that there was no ethical justification for a decision or action.

Significance of the Study

A vast amount of research has addressed topics concerning moral development of healthcare students and professionals such as nurses and doctors and its potential link to education. Few studies have longitudinally addressed the moral development of pharmacy students as they progress through education then comparing this once they have qualified and are in practice, therefore a gap remained there. Therefore, findings from this study inferred where more support is required for moral development in a student's journey to qualifying and in their early career. Furthermore, the results can inform the need to support pharmacists with moral development, for example, through continuing professional development or revalidation processes.

Design of the Study

This study utilised a longitudinal mixed-methods design, using version 2 of Rest's Defining Issues Test (DIT-2) and semi-structured interviews, this is shown below in **Figure 1.1** (J R Rest, Narvaez, Thoma, & Bebau, 1999; S.

1. Introduction

J. Thoma & Dong, 2014). The DIT-2 contains moral dilemmas and standard items; the subject's task is to rate and rank the items in terms of their moral importance. The DIT-2 was completed by participants from a single cohort of students – which started the four-year Master of Pharmacy (MPharm) degree programme at the University of Hertfordshire in 2008-09 – once during each year of undergraduate study, once more following their first year of qualification as pharmacists, and again as established practitioners after five years in practice. Following the final completion of the DIT-2 participants were invited to take part in semi-structured interviews to explore further the trends from the DIT-2 test. I defined the context of the study and was responsible for securing access to participants within pharmacy education in Great Britain.

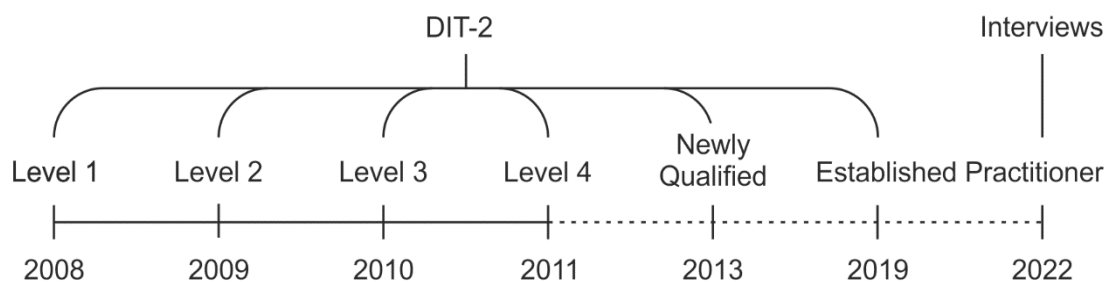


Figure 1.1: Timeline of the DIT-2 administrations and interviews during the study.

This study was conducted within the context of pharmacy education in Great Britain, with participants drawn from a UK university cohort. As such, the primary findings reflect the experiences of students educated within the British healthcare and educational systems. While the results may offer some insight to wider international contexts, particularly where pharmacy education shares similar structures and ethical frameworks, the scope of this research remains geographically limited. The interpretations presented should therefore be understood within this national context, though they may also contribute to broader discussions of moral reasoning and professional identity in healthcare education globally.

Limitations of the Study

There were several potential limitations of study which should be highlighted. The study sample comprised only pharmacy students from the University of Hertfordshire, this restricted the generalisability of the findings to pharmacists who have studied at other institutions. The study design being longitudinal meant that it was prone to attrition and loss-to-follow up over time.

Participants did not complete every administration of the DIT-2, as a result, the ability to evaluate changes year-by-year for each participant was limited. The sample size decreased each year during the study and as such limited the number of participants available for follow up interview. To reduce the impact of these limitations, I implemented several strategies including maintaining participant engagement through reminders, member-checking interview transcripts.

Other biases such as response bias and self-reporting bias could affect the results obtained. Response bias could be present during the interviews, should the participants hold preconceived notions of moral development. Self-reporting bias is also common phenomenon during interviews, where participants may give socially desirable responses rather than insights that reflect their true attitudes or experiences (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). The healthcare policies or societal norms or challenges at the time of each completion of the DIT-2 or interviews could have also influenced participants moral development over time and this would not have been captured via the study design.

A key limitation of this study was attrition across data collection points. The final administration of the questionnaire achieved just 11 participants completing it. In the qualitative phase, just 4 interviews were conducted. This substantial reduction inevitably constrained the statistical power and generalisability of the findings, and results should therefore be interpreted with this in mind. Attrition is a well-documented challenge in longitudinal and mixed-methods research but nonetheless affects the breadth of conclusions

that can be drawn.

To mitigate these risks, I implemented several strategies aligned with Lincoln and Guba (1985) framework of trustworthiness. Participant engagement was supported through reminders and consistent communication, enhancing dependability. Peer debriefing reduced the influence of individual bias, while member-checking ensured accuracy of participants' views, strengthening credibility. Reflexive journaling also supported transparency around my positionality. Despite the reduced sample, these strategies were employed to maximise rigour and trustworthiness.

Ultimately, while the final numbers limit external validity, the study provides valuable exploratory insights into moral reasoning within pharmacy education and offers a foundation for future, larger scale research.

Structure of the thesis

The thesis is set out into five further chapters. Chapter two provides a comprehensive review of the existing literature on moral development, particularly within healthcare and pharmacy. Importantly, it discusses key theoretical frameworks that underpin moral development theory. Chapter two also critiques existing research and identifies gaps in the current knowledge, Chapter three covers the methodology, where the research design is detailed, providing rationale for the mixed methods approach. The theory behind the quantitative method using the DIT-2 is discussed as well as the approach to the qualitative data collection procedures, ethical considerations and the approach to data analysis.

The results will be presented over two chapters, four and five, looking at the quantitative and qualitative results respectively. At the end of each chapter is a summary of the key results and emerging discussion points. Chapter six presents the discussion and conclusions, where the quantitative and qualitative findings are integrated to identify areas of convergence and dissonance. Within this chapter the strengths and limitations of the research

are also highlighted. This chapter will also summarise the key findings of the research, discusses how the research questions were addressed and highlights the study's contributions to moral development in pharmacy and provides recommendations for practice and future research.

Reflexivity

With any mixed-methods research, it was crucial to consider reflexivity in relation to the qualitative aspect of the study. This process ensures the researcher is conscious of and appropriately addresses any influences or biases throughout the research process. Reflexivity has become an essential part of high quality educational research (Musgrave, 2019).

Reflexivity is the process of engaging in self-reflection about ones perspective as a researcher, prompting critical analysis of the how and why of research (Jamieson, Govaart, & Pownall, 2023). Here, I will elaborate on my professional and personal background and as a result, the prospective impact this may have on the perspectives I take on this research, as well as the actions taken to mitigate the influences identified. In addition, this section will also reflect on how my position shaped the research process and outcomes of it.

My personal background and positionality

Positionality describes a researcher's perspective and worldview when carrying out research (Rowe, 2014). As a researcher with a background in pharmacy practice, my interest in researching moral development with education and the profession stemmed from academic curiosity during my undergraduate studies, then cemented by my professional experience. My joint roles as an academic and practitioner provided me with an insider perspective, which has been of an advantage in navigating and understanding the nuances of the field of pharmacy. Strengths of 'insiders'; include having knowledge of the field of practice or research and relationships (Jamieson et al., 2023), therefore maintaining neutrality does not come without its challenges. As a result of this, it is important to

acknowledge and be aware of the biases this may introduce.

My personal values and beliefs ultimately shape my practice, these have been influenced by my formal education and professional experience. I completed my pharmacy undergraduate studies at the University of Hertfordshire (UH), this is also a potential source of bias, as well as insider perspective that I must be aware of, which could inevitably influence my approach to research. During my studies, the understanding and application of ethics in practice are topics that stood out to me. With this said, I recognise the importance of maintaining and acknowledging the importance of neutrality, as well as objectivity, while noting that complete neutrality is unattainable. Establishing reflexive awareness at the outset of the research sets the tone for a more rigorous and transparent research process.

My professional background

Having worked in various capacities in the pharmacy profession from community pharmacist to academic roles, I possess first hand understanding of many of the dynamics in the field. I worked in community pharmacy prior to starting my role as an academic at the University of Hertfordshire. This experience has enhanced my ability to relate to the participants in the research study and understand their perspectives. Having said this, it also required me to be cautious and consider that my interpretations of their experiences remain grounded in the data and not influenced by my preconceived notions. Throughout the study, I engaged in continuous self-reflection and sought feedback from colleagues to maintain balance and rigour.

Mitigation of bias

A systematic approach to the collection of the data and its analysis was implemented, to ensure that findings were grounded in the data. During data collection I remained aware of my influence on the responses the participants shared. At the outset of the interviews, I ensured we would be able to have open and honest dialogue by member-checking and allowing

the participants to confirm the accuracy of the statements and interpretation drawn from them. Peer debriefing is a technique which allows a qualified researcher to review data and discuss with the primary researcher (Janesick, 2015). I was able to hold these discussions with my supervisors who were able to challenge and highlight different perspectives and assumptions or biases I may not have noticed.

Conclusion

The findings in this study were unavoidably shaped by my positionality and reflexive engagement throughout the research process. By acknowledging these influences, I was able to provide a more nuanced and credible perspective of moral development of pharmacy students and practitioners. Reflexivity is an ongoing process that enhances the integrity and credibility of qualitative research. By critically appraising my positionality, I was able to shape both the design and interpretation of the study. I undertook this reflexive process independently throughout the project, ensuring my perspectives were acknowledged and managed transparently.

Chapter Two: Review of the Literature

Introduction

This chapter critically examines the theoretical and empirical foundations underpinning the study of moral development within pharmacy and the wider healthcare professions. It examines major ethical frameworks, Neo-Kohlbergian theory, and the Defining Issues Test and evaluates existing research on moral development in healthcare students and professionals. The chapter also identifies the limited evidence available in pharmacy education establishing the rationale for the present study and addressing the first research question: to what extent has moral development been measured in pharmacy students and professionals?

Search Strategy

To ensure comprehensive coverage, the literature search aimed to identify relevant theoretical and empirical studies on moral development, ethical reasoning, and moral education within pharmacy and healthcare professions. The search was designed to contextualise the use of the Defining Issues Test (DIT/DIT-2) and related tools, as well as to explore the evolution of moral education in healthcare programmes. The review also sought to include contemporary applications of moral theories, including Kohlberg's Cognitive Moral Development, Rest's Four Component Model and Gilligan's Ethics of Care, to situate the current study within a broader educational and professional framework.

Databases and Sources

Electronic searches were conducted using multiple databases selected for their relevance to education, health and ethics: MEDLINE (EBSCO), CINAHL Plus, PsycINFO, ERIC, Scopus, Web of Science, ProQuest, and Wiley Online Library. Supplementary databases, including JSTOR, AMED (Allied and Complementary Medicine), and ScienceDirect, were also searched to capture interdisciplinary studies and historical context in moral psychology and education. Reference lists of key papers and relevant

review articles were hand-searched to identify additional sources. Grey literature was accessed through Google Scholar, Pharmacy Research UK (PRUK) reports, Center for the Study of Ethical Development (CSED), and relevant regulatory publications (e.g. GPhC, QAA).

Search Terms and Boolean Structure

Search terms were grouped into four conceptual areas reflecting the study's aims:

1. Moral dilemmas and decision-making in professional pharmacy practice

Pharmac*, medic*, nurs*, ethic*, moral*, dilemma*, decision-making, reasoning, judgement, "ethical sensitivity", "moral distress", "moral courage"

2. Teaching and learning professional ethics and decision-making

pharmac*, medic*, nurs*, teach*, learn*, pedagog*, "professional ethics", moral*, dilemma*, decision-making

3. Measurement of moral reasoning and moral development

pharmac*, medic*, nurs*, "Defining Issues Test", DIT, DIT-2, "moral reasoning", "Four Component Model", measur*, assess*, evaluate*

4. Values-based and interprofessional ethics education

"values-based practice", "interprofessional ethics", "moral education", "ethics curriculum", values transparency", "professional identity"

Boolean operators AND and OR were applied systematically (e.g., pharmac AND ethic* AND teach*) to structure the search queries. Truncation symbols (e.g., *) were used to capture plural and variant endings. Searches were replicated using controlled vocabulary (e.g., MeSH terms in MEDLINE) to increase precision.

Search Timeframe

The search covered the period January 2000 to May 2025. This start date

corresponded to the period during which pharmacy practice and education in the UK and internationally underwent significant transformation, shifting from product oriented to patient centred practice (DoH, 2000; GPhC, 2010). These developments paralleled outcome-based education reforms following the Bologna Process (1999) and introduction of the Standards for Pharmacy Education (GPhC, 2011; QAA, 2016). Moreover, validated moral reasoning instruments such as the Defining Issues Test 2 (DIT-2) (J R Rest, D. Narvaez, S J Thoma, et al., 1999) and the Professional Ethics in Pharmacy (PEP) test (Chaar, 2009) became available only after 2000, establishing a clear methodological boundary for inclusion. Foundational works by Kohlberg (1969), and (Gilligan, 1982) Gilligan (1982) were selectively retained to provide theoretical grounding but were not part of the empirical search window.

Inclusion and Exclusion Criteria

Studies were included if they:

- Addressed moral development, ethical reasoning, or moral education in healthcare or professional education contexts;
- were peer-reviewed journal articles, doctoral theses, or professional reports in English; and
- were published between 2000 and 2025.

Studies were excluded if they:

- focused solely on clinical ethics without educational relevance;
- lacked empirical data or theoretical contribution; or
- were commentary, editorial, or non-scholarly publications.

Screening and Selection

Titles and abstracts were screened for relevance, followed by a full-text review. A PRISMA-style flow diagram summarises the search process and

selection stages in Appendix 2: PRISMA 2020 flow diagram. Reference management and de-duplication were performed using EndNote X9.

Theories of Moral Development

Kitchener's Model of Ethical Decision-Making

Hierarchy

Karen Kitchener proposed in their model of ethical decision-making that the process of ethical justification is hierarchically tiered (Kitchener, 1985).

There are three increasingly general and more abstract levels of ethical reasoning to which appeals can be made, appeals can be made to a higher level if a lower, more specific level fails to provide the rationale for a decision. The three tiers are: professional rules & codes of ethics; ethical principles; and ethical theories.

Professional Rules and Codes of Ethics

A code of ethics is a set of guidelines that are designed to set out acceptable behaviours for members of a particular group, association, or profession (Brandl & Maquire, 2002; Linstrum, 2009). In addition to setting a professional standard, a code of ethics can also increase confidence in an organisation by showing outsiders that members of the organisation are committed to following basic ethical guidelines in the course of doing their work (Urofsky & Engels, 2003). A well-designed code based on meta-ethical principles can be used to facilitate ethical decision-making and to manage conflicting ethical imperatives (Kitchener, 1984). However, since there is often a penalty, or at least a consequence, for a professional who deviates from their professional code, an understanding of the underlying principles is not necessary for adherence to that code. For some researchers, a document that prescribes behaviours is not considered a code of ethics because it precludes empowerment of addressees to make the ethical decisions. Others consider prescriptive documents to be “best practice” for codes of ethics. The latter authors propose the perspective that the only

satisfactory contents for codes are clear and precise behavioural dictates that lend themselves to a supporting disciplinary function(Farrell, Cobbin, & Farrell, 2002) The Standards for Pharmacy Professionals, 2021 (GPhC, 2012, 2017) apply to all pharmacists, pharmacy professionals, including pharmacy students. As discussed above, deviation from these standards or “professional rules” can result in penalty or Fitness to Practice proceedings.

Ethical Principles

Ethical principles are typically more general and abstract than ethical codes. Principles provide a consistent vocabulary and framework within which cases can be reviewed. The advantage of ethical principles was that “they also provide a rationale for what the codes themselves include” (Kitchener, 1985). Kitchener elaborated on four specific principles, namely: autonomy; non-maleficence; beneficence; and justice. Beauchamp and Childress (2001) first identified these principles of biomedical ethics in 1979.

Autonomy allows for the right to act as a free agent. Individuals have the right to determine how to live their lives as long as their actions do not impact upon others. Respecting autonomy includes respecting freedom of thought and choice. Individuals have the ability to choose how to respond to the actions of others and to what they believe to be true or ethical.

Non-maleficence implies that professionals need to be aware of the physical and psychological harm that could occur due to actions. Doing no harm suggests the need to be sensitive to the possible negative consequences on an individual’s sense of self-worth and ability to advance professionally.

Beneficence requires actively promoting the health and well-being of others. Conflicts can occur when the necessity to do no harm is weighed against benefiting others, as in the case of living donor organ transplant, for example. Ethical dilemmas can be generated as a result of this type of quandary when benefits could be achieved for one group at the expense of another group. An additional dilemma is created when weighing benefiting

others against respecting autonomy. The principle of benefiting others cannot assume that one individual or group knows more than the individuals being benefitted. A dilemma exists when autonomy is lost due to the actions of another who was trying to benefit others.

Justice has traditionally been applied in issues of fair distribution of resources, however, the concept is much broader than this. Being just implies “fair treatment when the rights of one individual or group are balanced against another” (Kitchener, 1985). Kitchener noted that being just required three standards to be maintained, namely: impartiality; equality; and reciprocity.

Ethical Theories

Just as rules and codes can create conflict, which may require promotion to the level of ethical principles, principles can also result in conflict, which may necessitate the use of ethical theories. Robinson and Moulton (1985) contended that ethical theories were not only concerned with what was right and wrong, but with explaining the specific principles that were involved in discerning one from the other, and with generating alternative explanations where possible. They noted that ethical theories “focus on principles rather than conclusions and on reasoning rather than outcomes” (p.6).

Moral Theories During the Lifetime

Moral development occurs throughout the lifetime of individuals. Examples of the application of moral development through the lifespan exist and begin with childhood. There are five moral theories specific to childhood: Freud’s studies were related to enlightened self-interest and psycho-sexual development; Adler focused on social influences; Jung focused on the transition from internal fantasy to real world reality; Bandura emphasised social situations as the context for which behaviour is learned; and Piaget contended that both cognitive and moral development proceed hand-in-hand (Rich & DeVitis, 1994).

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Four models specific to moral development in adolescence have been identified: Havighurst was known for his focus on developmental tasks, specifically ten tasks which culminated in the acquisition of a set of values and an ethical system as a guide for behaviour; Erikson studied identity confusion and ideology; Packer examined the impact of emotions on moral development; and Hoffman found logic in the connection between empathy and its role in moral action (Rich & DeVitis, 1994).

Moral development theory has also been applied to higher education: (Jacob, 1957) studied the connection between curriculum and student values; (Chickering, 1969) was well known for his seven vectors of college student development; (Perry, 1981) contended that development progressed along a line from dualism to relativism to the evolving of commitments; and Fowler (1995) found importance in the study of faith and human development. Loevinger proposed an eight-stage theory of ego development referred to as milestones of development (Hauser, 1994). Finally, Kohlberg (1969) contended that there are six culturally universal stages of cognitive moral development.

Recent scholars continue to apply, critique and refine the major theories of moral development. Kohlberg's stage-based approach remains central in health professionals' education, with research that highlights both progression and regression in students' moral reasoning during clinical training, often as a result of conflict between formal and hidden curricula (McDonald, van den Enden, & Thoma, 2021). Rest's Four Component Model has been widely used as an educational framework, particularly in nursing, to design curricula that develop moral sensitivity judgement, motivation and action (Robichaux et al., 2022). Gilligan's ethics of care remains influential, particularly in patient-centred contexts, where empathy and contextual understanding are emphasised (Bertaud, Collins, & Ahmed, 2025; Osuntade, 2025). Collectively, these theories provide complementary perspectives for understanding and supporting moral development of healthcare studies.

Kohlbergian Moral Development Theory

Developmental Stages

Kohlberg was a leading theorist of cognitive moral development. Kohlberg's work adhered to the philosophy of Kant, especially in respect to his respect and adherence to law. Like Piaget, Kohlberg was not concerned with the moral behaviour of individuals, nor was he concerned with individuals' statements about whether an action was right or wrong. (Duska & Whelan, 1975) noted that, for Kohlberg, "it is more informative to look at the reasons a person judges an action as wrong than it is to look at the person's action or even to listen to what the person says is wrong (statement)" (p.43).

The roots of moral theories of Kohlberg and Rest stem from the moral philosophy of Kant (1785/1994) and the cognitive developmental theory of Piaget (1997/1932).

Notions of justice, fairness, universal principles, and the reign of reason over emotions were central in early moral theory. In observing children resolving issues of fairness and working out rules to govern their play, Piaget developed general stages of moral development. Before the ages of 10 or 11, children's reasoning is egocentric. Moral rules are seen as external, imposed on them by parents or authority figures: so-called heteronomous morality. Through social interaction with peers, the child experiences cognitive disequilibrium, necessary for growth and development to more advanced stages of moral thought, or autonomous morality.

Kohlberg (1969) advanced Piaget's theory by investigating moral thinking with older children by conducting extensive interviews to assess developmental stages. From this inquiry, Kohlberg identified six distinct stages of moral cognitive development. At the preconventional level (stages 1 and 2), the individual reasons about moral issues from a perspective of fear of punishment, self-interest, or greed; conventional (stages 3 and 4), the desire to please one's friends and family and to follow the rules and conventions set up by society; and in post-conventional (stages 5 and 6),

the recognition that moral rules and conventions are socially constructed and that through democratic processes, rules and laws can increasingly become more just.

Stage One: Punishment and Obedience Orientation

The punishment and obedience orientation suggested that behaviour was based on the avoidance of punishment. Duska and Whelan (1975) suggested that “the physical consequences of action determine its goodness or badness regardless of the human meaning or value of these consequences” (p.45-46). Kohlberg clarified that this stage took on an egocentric point of view, whereby the interests of others were not considered.

Stage Two: Individual Instrumental Purpose

Individuals who transition into stage two see right action as being the action that satisfied individual needs while occasionally meeting the needs of others (Rich & DeVitis, 1994). Inherent in this stage is the concept of reciprocity. Concepts of loyalty, gratitude and justice were replaced by that which provided a personal benefit or reward for the individual. Kohlberg (1981) himself stated that “the reason for doing right is to serve one’s own needs or interests in a world where one must recognize that other people have their interests, too” (p.409).

Stage Three: Relationships and Conformity

Stage three is characterised by concern about other people and feelings, loyalty and trust with partners, and motivation to follow the rules (Kohlberg, 1981). This stage may also be associated with a perspective whereby individuals earn approval by being nice.

Stage Four: Social System Maintenance

Inherent in stage four were the concepts of doing one’s duty in society, maintaining social order, and maintaining the welfare of the group (Duska & Whelan, 1975; Kohlberg, 1981; Rich & DeVitis, 1994). The switch to this

stage signified the transition from interpersonal motives to acceptance of the viewpoint of the society which defined both roles and rules. Kohlberg (1981) explained:

“What is right is fulfilling the actual duties to which one has agreed. Laws are to be upheld except in extreme cases where they conflict with other fixed social duties and rights. Right is also contributing to society, the group, or institution. The reasons for doing right are to keep the institution going as a whole, self-respect or conscience as meeting one’s defined obligations, or the consequences: ‘What if everyone did it?’ (pp. 410-411).

Stage Five: Prior Rights and Social Contract

Intrinsic to stage five is orientation to the rights and standards that have been critically reviewed and agreed upon by society. Duska and Whelan (1975) noted that “aside from what is constitutionally and democratically agreed upon, the right is a matter of personal values and opinion” (p.47). Here, there is an emphasis on the legal point of view coupled with the possibility of changing law due to social considerations, rather than a rigid maintenance of the law as characterised in stage four.

Stage Six: Universal Ethical Principle Orientation

Finally, stage six is characterised by knowledge of universal principles of justice. Individuals at this stage have reached the pinnacle of moral development and should be able to evaluate situations, and make decisions, based on the principles on which laws and social agreements are made rather than the laws themselves. This stage emphasises commitment to underlying principles as opposed to concrete law.

Stage Development

According to Kohlberg’s theory, stage development is invariant in that one must progress through the stages in order, and one cannot get to a higher stage without passing through the stage immediately preceding it”. In this light, moral development is growth which takes place according to a pre-

determined sequence. Additionally, subjects cannot comprehend moral reasoning at a stage more than one stage beyond their own. Accordingly, a person at stage three cannot comprehend stage five concepts. Subjects are cognitively attracted to reasoning at one level above their current level. According to Duska and Whelan (1975), Kohlberg had noted that “reasoning at higher stages is cognitively more adequate than reasoning at lower stages”. As such, once an individual progresses to a new stage, they are unlikely to regress to a previous stage. Movement through the stages occurs when cognitive disequilibrium is created. This quality is illustrated when “a person’s cognitive outlook is not adequate to cope with a given moral dilemma” (p.49). If there is no cognitive disequilibrium, then there is no reason to advance to a new stage of moral development.

Kohlberg’s ideas continue to be applied within psychology and moral education, and his Moral Judgement Interview (MJI) is still used to assign moral stages.

Criticism of Kohlberg and Moral Development Theory

Criticisms of moral development theory focus on a perceived neglect of motivation, emotion, or affect (Haidt, 2001; Hoffman, 2001; Jorgensen, 2007; Krebs & Denton, 2005; Sonnenschein, 2007; Tangney & Dearing, 2002; Vozzola, 2014). The perceived dichotomisation of emotion and cognition may result from the origins of Kohlberg’s theory, and domination of cognitive research during this period of time. Neither Kohlberg nor Rest intended to limit explanations of moral behaviour to cognition. Kohlberg himself stated:

“[I have] long assumed the inseparability and the parallel development of cognition and affect” (Kohlberg, 1969).

Although Kohlberg’s research and theoretical work clearly focused on moral judgement, he was also deeply influenced by Dewey (1896), who wrote of the need for a “unifying principle” to provide alternatives to dualistic views of thought and sensation. Dewey maintains that it is the accumulation of

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discrete facts creating the demand for unification that also breaks down previous lines of classification.

“The material is too great in mass and too varied in style to fit into existing pigeon-holes, and the cabinets of science break of their own dead weight.”

In an article directed to school administrators, Kohlberg (1975), stressed the importance of the “moral atmosphere of the home, the school, and the broader society”, and for “the democratic process [as a] vehicle for moral discussion”. Although he called moral judgement the most critical aspect of morality, he also placed the “universal human tendency toward empathy or role-taking” as central in cognitive developmental theory. J R Rest (1986) was unequivocal in stating that no one process can be studied in isolation, stating that:

“I take the view that there are no moral cognitions completely devoid of affect, no moral affects completely devoid of cognitions, and no moral behaviour separable from the cognitions and affects that prompt the behaviour” (p.4).

Rest instead viewed the interconnections between the four component processes, and cognition & affect, as critical to a next-generation research agenda for the Four Component Model (FCM), which he framed as a shift from “instrumentation” to the “more substantive theoretical questions of the life conditions that influence moral judgement” (p.20). However, moving from the study of verbalisations to hypothetical dilemmas into the realm of real-life moral behaviour entails a quantum leap in complexity and juggling many variables and processes simultaneously. Rest stated that emphasising morality in “real life” was critical for professional education.

Kohlberg’s theory has been criticised on several points (J R Rest, D. Narvaez, M J Bebau, & S J Thoma, 1999). Firstly, the six stages of moral development were derived from interview data from a sample of upper-class boys. Secondly, the global nature of the dilemmas presented did not capture the moral reasoning abilities embedded in context, culture, or religion.

Thirdly, the MJJ protocol scored rationale statements citing “care” reasons for moral decisions as reflective of a lower stage of development, suggesting a bias against girls and women.

In response to this criticism, Carol Gilligan (1982) conducted in-depth interviews with women, and based on this data, formulated a theory of women’s moral development. Gilligan asserted that women use care-based arguments, and not justice, in resolving moral issues. Like Kohlberg, she defined three developmental levels of moral reasoning, namely: (a) individual survival; (b) willingness to sacrifice for others; and (c) non-violence towards self and others. However, Gilligan’s claim that women and men reason differently about moral issues would also be disproved because of a methodological flaw: her sample did not include men, so no meaningful comparison could be made. In later research, Walker (2006) demonstrated that both men and women have been found to use care- and justice-based arguments.

Rest and Moral Theory

Building on Kohlberg

Like Kohlberg, Rest viewed moral judgement development as a social and cultural construct that followed at developmental progression from a narrow self-focused interpretation of moral issues, through an understanding of the broader social world and associated group-based claims on moral decisions, to a reliance on post-conventional moral principles (J R Rest, 1983; S. J. Thoma, 2006) advanced moral theory in several ways: he developed an improved method of studying adolescent and adult morality, and subsequently demonstrated that moral development can be accelerated through education and exposure to new ideas; his Four Component Model, a dynamic process model of moral behaviour, integrated cognition and affect, and provided a situation-based functional view of the necessary psychological components for morality (S J Thoma, 2007); and, through the formulation of Neo-Kohlbergian moral theory, he has addressed criticisms of

stage theory and integrates social cognition approaches (J R. Rest, D. Narvaez, M J. Bebau, & S J. Thoma, 1999). **Four-Component Model**

James Rest and colleagues proposed a model of the processes involved in the production of moral behaviour. The FCM addresses recent criticisms of Kohlberg and moral development theory by integrating moral cognition and emotion (Haidt, 2001; Krebs & Denton, 2005; You & Bebeau, 2013). The FCM articulates psychological processes of perceiving and interpreting social problems as moral (sensitivity); cognitive and affective processing about moral issues (reasoning and judgement); evaluating the importance of moral values in relation to other competing goals, needs, or drives (identity or motivation); and formulating an implementation plan, taking into account the interpersonal and social dynamics of the situation (character and competence, or moral implementation).

These four processes have most recently been redefined as: moral sensitivity; moral judgement; moral identity (or motivation); and moral implementation (Bebau, 2002).

Rather than the four components representing a four-step, linear process of predicting or explaining behaviour, the FCM represents a complex interaction of cognition, affect, and social dynamics, which form a holistic process (Bebau, Rest, & Narvaez, 1999). Either the underdevelopment of abilities or suppression of their function serves to impede moral behaviour.

Moral Sensitivity

The first component, sensitivity, is the individual's ability to perceive the moral dimensions of a problem. Clarkeburn (2002) suggested that:

“Ethical sensitivity is the first step in real-life moral decision-making. Without recogni[s]ing the ethical aspects of a situation, it is impossible to solve any moral or ethical problem, for without the initial recognition no problem exists” (p.439).

Here, interpretation is about awareness: awareness of a situation;

awareness of the moral implications; awareness of how others are impacted; awareness of reactions and feelings of others; and awareness of different courses of action (Bebau, 2002; Bebau et al., 1999; Erwin, 2000; Guthrie, 1997; Park, Kjervik, Crandell, & Oermann, 2012; Shawver & Sennetti, 2009; Walker, 2002; You, 2014). As sensitivity was described as a skill, it was implied that there was a capacity to develop this skill. Although people differ in the extent to which they are morally sensitive, Clarkeburn (2002) suggested that the skill is acquired by exposure to, and experience with, moral problems. As such, ethical sensitivity is a skill that can be cultivated and improved in order to help individuals understand the moral aspects of problems. Moral emotions of empathy, sympathy, shame, and guilt may heighten sensitivity to moral dimensions of problems. Solomon (1998) recognised the importance of ethical sensitivity when he contended that “morally sensitive leaders are the essential feature of any good organisation” (p. 87).

Moral Judgement

The second component involves the ability to provide a sound rationale for one’s decision about a moral problem (Bebau, 2002). The challenge would seem to be to prioritise moral values over personal values. Bebeau clarified that ‘deficiencies in [judgement] are apparent when personal values such as self-actualisation or protecting one’s self or organisation replace concerns for doing what is right’ (p.285), while Walker (2002) contended that different types of conflicting moral judgement might be operating at the same time. He also contended that, “having reasoned through a conflict and identified the moral course of action [it] does not necessarily imply that one feels compelled to act in this way” (p.358). Moral judgement has the longest research history of the four components, and although it is often compared to Kohlberg’s measure of moral judgement, the Moral Judgement Inventory, Rest’s operational definition of moral reasoning was derived inductively in the instrument development process (Maeda, 2009; Verrinder, Ostini, & Phillips, 2016).

Moral Identity

The third component involves identity formation and the integration of personal values with professional ones. It involves prioritizing moral values over other competing values, needs, or interests. This focus on conceptions of one's role in society and how embedded moral values within the concept of self draws heavily on the research on identity by Blasi (1984) and Kegan (1982, 1994). Self-conceptions develop from egocentric and self-focused to other-oriented, likely increasing sensitivity to moral issues as a parallel process.

There are two major components related to moral identity. The first component is strength of conviction to follow through with an identified moral decision (Bebau, 2002; Bebau et al., 1999). Bebeau contended that "if the practitioner wilts under pressure, is easily distracted or discouraged, or is weak-willed, then moral failure occurs because of a deficiency in identity and competence" (p.287).

The second component related to moral identity was related to implementation skills (Guthrie, 1997; Walker, 2002). Walker (2002) summed this component up when he indicated that "[this] component in the model entails the personality attributes and cognitive strategies involved in the implementation of actions that are consistent with the moral choice" (p.359).

Moral Implementation

Moral implementation is a critical element of professional ethical development, which involves deliberating over multiple considerations, deciding which option should be made, justifying that choice, and determining what action is morally right or wrong (Guthrie, 1997; Walker, 2002). It involves the process of implementation of the decision within the social realm, and is often described as moral character as well as moral courage (J R Rest, 1983). Moral implementation as character is a first-generation operational definition of the fourth component that focuses on

personality traits or dispositions including at character, courage, or ego-strength (J R Rest, 1986). The limitations of this approach alone are that it fails to acknowledge research that situational factors more strongly correlate with behaviour, and that situational characteristics inhibit or interact with moral traits in inconsistent ways (Mischel, 1968). In studies of moral exemplars, individuals thought of as courageous by others often do not perceive themselves as courageous, but as simply attending to the demands of the situation (Rule & Bebau, 2005). Thus, the trait or virtue approach severely limits the power to predict or explain moral behaviour and the need to acknowledge approaches from social psychology and social cognition (Lapsley & Narvaez, 2004).

Rest's conception of moral implementation, however, carried elements that acknowledged the situational contributions to shaping behaviour. Implementation involves executing and implementing a plan of action and necessitates the formulation of a sequence of concrete actions, working around impediments and unexpected difficulties, overcoming fatigue and frustration, resisting distractions and allurements, and keeping sight of the eventual goal (J R Rest, 1986). In fact, this operational definition has been the basis of an approach used within professional (dental) ethics education for over two decades (Bebau & Thoma, 1994). Self-regulation of emotions is particularly relevant to moral implementation in the health professions, where one's role involves repeated exposure to patients who are experiencing intense anxiety or physical pain; whose judgement may be impaired by substance abuse; or who may have a variety of mental or physical disorders or disabilities.

“All or None”

Several groups have contended that moral failure can result from a deficiency in any one of the four components (Guthrie, 1997; Walker, 2002). The value of the model exists in its usefulness for understanding the reasons for moral failure. Bebau et al. (1999) contended that: “The Four

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Components are proximal criteria of moral education interventions, rather than ultimate criteria: the components are psychological processes likely to register the effects of moral education, rather than long-range, multiply determined, gross effects” (p.23).

Rest’s operational definition links substantively to the development of communication and leadership capacities, managing the demands of relationships in a pluralist society, and negotiating organisational climate and politics without compromising the moral self (J R Rest, 1979). Rest and Bebeau’s approach thus becomes a “second-generation” operational definition of moral implementation – one that is increasingly relevant in a rapidly changing society. Thus, moral implementation is defined as an anticipatory step in interacting with the social world, involving intra- and interpersonal capacities. Intrapersonal capacities involve managing internal conflicts arising from imagined or actual implementation of the moral behaviour (e.g. anticipation of positive or negative sanctions or coping with out-group opposition). Interpersonal capacities intersect with the anticipated or actual reactions from others to moral ideas, which may initiate controversy or conflict. Managing interpersonal communication about moral ideas thus involves persuasion, negotiation, and conflict resolution. Although courage may be required in order to confront an oppositional actor, it may not be sufficient to negotiate a moral resolution to a conflict. Interpersonal effectiveness and organisational savvy are also necessary and the related skills and knowledge can be taught.

Despite the effectiveness of the individual in negotiating a moral agreement, the severity of opposition to a proposed moral behaviour may doom even the most ethically competent. In J R Rest (1982, 1983) view, attempting to implement an action plan may or may not result in an act that is judged to be moral. Situational factors within the social environment or the moral agent’s level of competence may block attempts at moral behaviour. Rest viewed each component as a complex interaction of cognition and affect, and rather than a sequential set of steps, the model represents a dynamic process. For

example, an individual implementing a moral behaviour may receive feedback from his or her environment that signals the decision is not viewed as the most moral option. The individual then has the choice to incorporate this feedback and engage in greater perspective taking and more nuanced reasoning, which likely results in greater moral sensitivity.

Neo-Kohlbergian Moral Theory

Bebau et al. (1999) articulated neo-Kohlbergian moral theory, which addressed criticisms of Kohlberg's and Rest's theories, while retaining central ideas of justice and the lifespan developmental perspective of morality. The distinguishing features of neo-Kohlbergian theory include:

The idea that development progresses one stage at a time, the 'hard stage' model, is replaced with one less rigid. Development proceeds as overlapping waves, with shifting distributions of moral schemas.

The acknowledgement that morality is a social phenomenon, and that dialogue and evolving conceptions of what is moral and what is not must be taken into account. In neo-Kohlbergian terms consensus and theories that propose a single universal notion of morality are replaced by the possible redefinition of an ideal society, based on processes of debate and consensus, and founded upon principles of justice (J. R. Rest, 1984).

The single construct of justice is replaced with a moral epistemology. The rationale is that justice alone does not fully address personal or private moral issues, nor does it adequately explain moral behaviour. Neo-Kohlbergian theory allows integration of other paradigms or disciplines (e.g. cultural, sociological, and religious).

The global, lifespan-timescale nature of research in moral development must be supplemented with more concrete, situation-specific levels. Intermediate concepts common to a profession or discipline (e.g. client privacy, informed consent, or conflict of interest) and specific professional codes of ethics are important areas (Bebau & Thoma, 1999).

Social cognition approaches will shift morality research from production tasks to recognition tasks, facilitating the measurement of implicit knowledge of moral concepts (J R Rest, D. Narvaez, M J Bebau, et al., 1999; Sim, Sunderland, & Hattingh, 2019).

Neo-Kohlbergian theory posits multiple approaches to the study of morality - from social and personality psychology to Aristotelian virtue ethics (Bebau et al., 1999). The rationale for this approach derives from research, which provides evidence that people can arrive at the same moral decision but through utilizing different ethical paradigms. Jonsen and Toulmin (1988), found that, in discussing cases, participants chose the same outcome on cases, but disagreed on how they had arrived at their decisions. In other words, utilitarianism, Kantianism, care, culture, religion, or justice could all be applied to a case, but the decision outcome was the same.

Schemas

Schemas can be defined as sets of expectations, hypotheses and concepts that are formed as the individual notices similarities and recurrences in experience (Rumelhart, 1980). Cognitive science makes the assumption that an individual interprets and processes experiences according to conceptual structures in the mind that have developed from and are influenced by experience (Fiske & Taylor, 1991; Piaget, 1997/1932; Rumelhart, 1980). These conceptual structures, or schemas, function as interpreters of stimuli. Although it may feel phenomenologically as if one experiences pure, raw “reality” everything perceived is actually interpreted through pre-existing mental structures (Hogarth, 2001; S.J. Thoma, 2014; Wenger & Wheatley, 1999). Indeed, no one can understand experience without such schemas. It is not only perception, but also decision-making and reasoning that are supervised by pre-existing schemas (Gigerenzer & Todd, 1999). Furthermore, the vast majority of human responses, including moral judgements, are based on schemas (Bargh & Chartrand, 1999; Park et al., 2012). Evidence is mounting for the heavy reliance on automatic,

implicit cognitive processes and schemas in human behaviour (Reber, 1993). Rumelhart (1980) describes schemas as general knowledge structures residing in long-term memory. In order to determine how the human mind understands anything, including morally relevant stimuli, we must know the form and function of schemas generally. Derry (1996) Cognitive Schema Theory (CST) outlines a hierarchy of schemas: (i) memory objects (specific small units of related characteristics); (ii) cognitive fields (activated sets of memory objects) and (c) mental models (an overall meaning structure of a particular situation or experience). According to CST, those with more complex moral judgement have a larger and better-organised set of memory objects that can be activated within multiple cognitive fields and form part of complex mental models.

Moral Schemas

Schemas operate constantly in the mind, being evoked (or “activated”) by current stimulus configurations that resemble the stimuli that created the schema in the first instance (Rock, 1997). Schemas likely operate in important ways during moral behaviour, by inter-relating different stimuli, filling in missing information, guiding attention and directing problem-solving (Darcia Narvaez & Bock, 2002). Moral schemas can be described as general knowledge structures used in social co-operation. Moral schemas are built from experience in social interaction. They are constructed automatically from the brain noticing elements in the socially relevant environment, and the cause/consequence chains that derive from particular actions. Schemas are experientially affected: the schemas of an expert are more easily activated by features of a problem than those of a novice (Sim et al., 2019).

Gilligan’s Theory of Moral Development

Carol Gilligan’s female centric theory of moral development. Gilligan (1993) took an alternative approach of study. She argued that Kohlberg’s approach was biased toward white males and did not consider the nuances of moral

development in adolescent women.

Moral Education

Background

As early as 1975, it was demonstrated that Kohlberg's theory of moral development can be applied to the practice of moral education. Blatt and Kohlberg (1975) hypothesised that if children were engaged in the discussion of morally complex ethical dilemmas and systematically exposed to moral reasoning one (Kohlbergian) stage above their own, they would be attracted to that reasoning and attempt to adopt it as their own. They found that, after a 12-week programme of systematically exposing students to moral dilemmas at a 'plus one' stage, 64% of the students studied developed one full stage in their moral reasoning. In the 'moral dilemma discussion' approach that developed out of their research, the teacher's role was to serve as a facilitator of student reasoning i.e. to assist the student in resolving issues of moral conflict and to ensure that the environment in which the discussion took place was one that contained the conditions essential to stage growth in moral reasoning.

Purpose of Moral Education

The goal of moral education is to encourage individuals to develop to the next stage of moral reasoning. Development is not merely the result of gaining more knowledge, but rather consists of a sequence of qualitative changes in the way an individual thinks. Within any stage of development, thought is organised according to the constraints of that stage (Curzer, Sattler, DuPree, & Smith-Genthos, 2014). An individual then interacts with the environment according to their basic understandings of the environment. However, a student will at some point encounter information which does not fit into their world view, forcing them to adjust that view to accommodate this new information. This process is called equilibration, and it is through equilibration that development occurs (May & Luth 2013).

The most common tool for bringing about equilibration is the “ethical dilemma”. Through discussion, students are forced to face the contradictions present in any course of action not based on principles of justice or fairness. While Kohlberg appreciated the importance and value of such moral dilemma discussions, he held from very early on that ethical education required more than individual reflection, but also needed to include experiences for students to operate as moral agents (i.e. to be the protagonists in the ethical dilemmas) (Power, Higgins, & Kohlberg, 1989).

Curricular Interventions

There is a consensus around the research stating that teaching ethics to undergraduate healthcare students is a concept that is difficult to master due to the inability to assess for “rightness” or “wrongness”. Research on healthcare curricular moral education interventions mainly originate from the United States (US) (D. A. Latif, 2009; S. J. Stratton, 2021).

Measuring Moral Development in Healthcare Education

Research on moral development in healthcare professions consistently demonstrated the importance of valid and reliable means for measuring and evaluating moral reasoning. The Defining Issues Test (DIT and DIT-2) remained the most frequently implemented quantitative tool, while other context-specific adaptations such as the Professional Ethics in Pharmacy (PEP) test, Moral Judgement Test (MJT) and Moral Sensitivity Questionnaires expanded methodologies used in assessing moral reasoning. Table 2.1 summarises the tools available to measure moral reasoning.

The use of DIT/DIT-2 in Pharmacy and Healthcare Education

The DIT and the newer revised version, the DIT-2, were grounded in Kohlberg’s theory of moral development and Rest’s Neo-Kohlbergian framework. They assess the degree to which an individual’s moral reasoning reflected post-conventional thinking rather than personal interest.

Roche, Kelliher, and O'Connor (2017) used the DIT-2 in a quasi-randomised controlled study to assess community pharmacists' moral development from a profession-specific ethics intervention. The study demonstrated statistically significant growth in moral reasoning as measured by the P-score and N2-scores, confirming the DIT-2's sensitivity to educational interventions and its relevance for evaluating curricular interventions and developmental progression.

The Professional Ethics in Pharmacy (PEP) Test

The PEP test, developed by Chaar (2009), represented one of the first validated attempts at creating a profession-specific moral reasoning assessment for pharmacists. Based conceptually on the DIT, the PEP used vignettes grounded in pharmacy practice (e.g., dispensing errors, confidentiality breaches and conflicts of interest). The PEP measured pharmacists' moral reasoning by presenting professional dilemmas followed by multiple-choice items reflecting the varying ethical reasoning levels; ranging from personal interest to principled reasoning. Cooper and colleagues validated the PEP test with community pharmacists and pharmacy students in the UK, confirming that it could effectively differentiate between groups according to experience and ethical reasoning maturity.

Later adaptations of the PEP test (R. J. Cooper, 2010; Källemark-Sporrøng, 2012) expanded its use in comparative studies, linking scores to work environment factors, professional autonomy, and organizational ethics. The PEP was positioned as a valuable discipline-specific tool, thus complementing broader instruments like the DIT-2 by using contextually specific ethical dilemmas.

More recent literature has reaffirmed its importance, with scholars recommending that pharmacy education integrate pharmacy-tailored moral assessment tools such as the PEP alongside reflective and narrative approaches to strengthen ethical competence and accountability (Gallagher, O'Neill, & McCarthy, 2023; Leelavati, 2025).

Alternative Tools and Complementary Measures

Other instruments extended the measurement of moral reasoning beyond cognitive moral reasoning to include emotional and professional dimensions. Nowak (2021) applied to Moral Judgement Test (MJT) in medical education, highlighting its importance in assessing consistency of arguments and moral competence. The MJT focused on the structure and justification of moral arguments, offering a complementary method to DIT-derived tools. Nursing studies by (Yılmaz, Akbaş, & Erten, 2025) and (Bakırlıoğlu, Yılmaz, & Kaya, 2025) validated the Moral Sensitivity Questionnaire and related scales for assessing empathy and moral awareness. Results consistently indicated that moral sensitivity could be enhanced through ethics education and experiential learning. Professional Identity and Values Scales were implemented by Nazari, Shafipour, and Heidari (2024) and Cornett, Bayer, and Kalet (2022) to demonstrate correlations between moral reasoning, professional identity formation, and value internalization among healthcare students, suggesting that ethical maturity involve both cognitive and affective integration.

Table 2.1: Summary of tools used to assess moral development in healthcare and pharmacy education

Tool & Creator	Description/Purpose	Advantages	Limitations
Moral Judgement Interview (MJ) – Lawrence Kohlberg & Anne Colby, 1987	Subjects are presented with scenarios containing moral dilemmas via a semi-structured interviews, followed by a discussion to	The interviews can provide in-depth insight into an individual's reasoning, justification	The nature of the semi-structured interviews makes them time-consuming and requires

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	assess the participants' stage of moral reasoning aligned to Kohlberg's six stage model.	and moral frame of reference. It encourages construction of personal moral meaning, offering a broader qualitative scope than self-reporting tools such as the DIT-2 (Elm & Weber, 1994).	trained interviewers, with the ability to carry out extensive coding. It would also prove challenging to implement on in a large-scale study.
Moral Competence Test (MCT) (formerly Moral Judgement Test (MJT)) (Biggs & Colesante, 2015)	Based on Kohlberg's six stages of Cognitive Moral Development. Lind stated that cognition and affect are entwined. Like DIT-2, the subject is presented with two ethical dilemmas followed by statements with multiple choice questionnaire. This measures the	Simple administration to the DIT-2. Shorter time to complete the questionnaire – uses two ethical dilemmas. It also provides the ability to measure consistent reasoning	Scoring disparities exist between absolutist and subjectivist reasoning (Ishida, 2006). It also focuses on structural consistency rather than moral content or context.

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	consistency in moral reasoning.	across moral contexts.	
Defining Issues Test (DIT/DIT-2) – (J R Rest, 1979; J R Rest, D. Narvaez, S J Thoma, et al., 1999)	Neo-Kohlbergian self-reporting tool used for assessing moral schemas (personal interest, maintaining norms and post-conventional reasoning). It presents moral dilemmas followed by multiple choice justifications.	It is highly validated and efficient for use in large studies, as well as being suitable for longitudinal and cross-profession comparison. (Roche et al., 2017; Choi et al., 2020). Sensitive to educational interventions and curriculum changes.	Lacks contextual realism relating to specific professions. It relies on self-reporting and abstract scenarios. It does not capture relational aspects of moral reasoning.
Dental Ethical Reasoning and Judgement Test (DERJT) – (Bebau & Thoma, 1999)	Seeks to address professional dilemmas which are scored in relation to judgements made by experts in the dental field.	It offers professional relevance, as well as domain-specific realism. It measures the participants'	Context (dentistry) specific. Measures the participants ability to perceive the moral dimensions of a

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		perception of moral dimensions in practice. It has not been widely	problem, as opposed to moral judgement.
Professional Ethics in Pharmacy (PEP) (Chaar, 2009)	Used to broaden the understanding ethical behaviour and moral reasoning. The test has three scenarios followed by a particular action which the subject is asked the extent to which they agree using the Likert-scale. It measures intermediate level moral reasoning and ethical behaviour.	A pharmacy specific tool available to date. Measures intermediate-level ethical concepts. It is shorter and simpler to administer. It captures profession-relevant reasoning (Chaar, 2009). The validity and reliability is comparable to the DIT-2 (M. D. Allinson, 2019).	It is not as widely implemented in research as the DIT-2 (Chaar, 2009) therefore it has reduced generalisability. No independently published research utilising the PEP, also the validation was performed by the developer, potentially introducing bias (M. D. Allinson, 2019).
Moral	This assesses moral	It is sensitive	Measures

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Sensitivity Questionnaire (MSQ) (Lutzen et al., 1994; updated versions 2010-2025)	awareness, empathy and perception of ethical issues in patient care, with a focus on emotional and cognitive responsiveness.	to evaluating educational and experiential changes in nursing (Yilmaz et al., 2025). Also effective for evaluating domains often overlooked by the DIT-2.	perception rather than moral reasoning. It does not evaluate moral decision-making outcomes.

Although instruments such as the Moral Sensitivity Questionnaire (MSQ), Professional Identity and Values Scales and the Healthcare Moral Injury Scale (HMIS) have since expanded the assessment of ethical and moral development in healthcare education, these tools were not available or widely validated during the period relevant to this study. The MSQ has more recently been utilised to measure moral awareness and empathy in nursing and allied health education (Yilmaz et al., 2025). Professional identity and values instruments assess the internalisation of ethical principles and moral self-concept (Nazari et al., 2024). The HMIS was developed in response to moral distress and ethical conflict during and after the COVID-19 pandemic (BPS, 2024). It focuses on the affective consequences of ethical tension rather than moral reasoning. These newer tools reflect a broader multidimensional understanding of moral development in healthcare; however, they fall outside the methodological scope of this research.

Theory of Moral Education

Overview

Recent research reflects a growing interest in integrating moral education longitudinally across the curriculum. For example, (Chachad, Nair, & Sinha, 2024) argued that continuous reinforcement of moral development throughout medical training to counteract the regression seen during placements. In pharmacy, (Leelavati, 2025) recommended embedding ethical decision-making and simulation-based case studies across all years, supported by institutional structures. Nursing research similarly highlighted the multimodal ethics curriculum grounded in Rest's model (Doğan, Yildiz, & Arslan, 2025; Robichaux et al., 2022). These more recent interventions illustrated the significant evolution of moral education in recent decades, adapting to diverse healthcare contexts and pedagogies.

Many years of research into moral development, especially that carried out by Ernest T Pascarella and Patrick T Terenzini (2005) support findings as to why and how the evolution of moral decision making in higher education is important. Exposure to classroom based and co-curricular experiences as well as academic-student interactions and diversity of cohorts can give rise to positive moral growth.

In 2000, Latif proffered the basis for moral development to be incorporated into pharmacy education (D. A. Latif, 2000). Latif further built on this in 2009, studying pharmacy students before the start of their PharmD classes then again three years later after the completion of their didactic requirements, it was found that there was significant growth in their moral reasoning (D. A. Latif, 2009). Curricular interventions may give rise to students' moral development, this improvement in moral development has a significant link to improved clinical decision making (D.A. Latif, 1997; Swisher, 2010).

Recent literature emphasises the diverse pedagogical methods for fostering moral reasoning, including case-based learning, simulation, online modules and interprofessional workshops (Ali, Hussain, & Jabeen, 2025; Bogossian,

Williams, & Smith, 2025; Rasesemola, Dube, & Khosa, 2025). These methods have been shown to increase ethical awareness, critical thinking, and collaboration across healthcare professions. Such approaches highlight the importance of embedding ethics longitudinally within curricula and demonstrate that moral development is best supported through multimodal iterative interventions.

Moral Education at the University of Hertfordshire

At Level 1, students were exposed to ethical dilemmas on the Interprofessional Education and Medicines and Professional Practice (MPP) modules, which were designed to engage students at the “plus one” level of moral reasoning described above. The dilemmas sought to engage students in ethical discourse using scenarios that were derived from the everyday work of practicing pharmacists. Examples are in (Appendix 3: Ethical dilemmas).

During discussions of these ethical dilemmas, students were encouraged to systematically using a structured guide, found in (Appendix 4: Structured guide to decision-making), identify the problem and gather all the facts; consider how law, rules and professional guidance (Including past experience and the advice of others); apply some form of ethical reasoning; and justify their decision as to how best to act. This led students in the direction of recognising, prioritising and ascribing values, which will affect their choice of action. This, in turn, led naturally to the generating and choosing of options.

Those issues raised by the Level 1 scenario were retained, while additional elements in this case the legal and ethical issues surrounding drugs of abuse were introduced. The ethical dilemmas within MPP at Levels 1-M allowed for a smooth upward transition through the levels of moral development as students progressed through the MPharm degree.

By far the greatest amount of ethical education was delivered during the Law Ethics and Professionalism (LEP) module during Semester A of Level

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3. The learning outcomes for the ethics portion of the module were as follows:

1. Distinguish between ethical and legal issues in pharmacy.
2. Describe basic ethical theories and principles.
3. Discuss the concepts of ethics and morality and their application to pharmacy and health care.
4. Describe the special nature of moral judgment.
5. Describe some of the legal and ethical challenges posed by modern science and practice and resulting from being a member of a multi-disciplinary health care team.
6. Discuss professional responsibility and accountability; describe the legal standard of care and discuss the rationale for expanded pharmacist duties and liabilities; discuss the role of the pharmacist as a manager of risk and outline risk management strategies.
7. Develop and apply a systematic, structured approach to ethical decision making.
8. Consider the positions of others in a rational manner.
9. Develop the interpersonal skills needed to apply ethical decisions in a sensitive and humane manner.
10. Develop a commitment to respecting the rights and promoting the welfare of those in your care.

These outcomes were supported by research into ethics education in medicine

(Farrow & Arnold, 1995), dentistry (American Association of Dental Schools, 1989), and pharmacy (Haddad et al., 1993), and closely mirrored the approach to ethical decision-making proposed by J. Wingfield and D Badcott (2007).

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Small-group teaching sessions were employed and typically began with a short lecture to impart the necessary language for discussion and evaluation, and to augment and clarify what the students have learned in their pre-workshop reading. However, all of the teaching sessions in ethics were based upon less didactic approaches, which include workshops, seminars, problem-based learning (PBL), group presentations, and reflective practice. The workshops were typically centred around case studies/scenarios, in a method described by Weinstein (1997).

The workshop booklet for this module contained eleven workshops, each of which was made up of 4-6 case studies related to a particular area of pharmacy practice. Topics covered include Consent; Confidentiality; Human Tissue Donation and Transplantation; Abortion; and Surrogacy. Using diverse areas of healthcare practice to generate case studies ensured that the 'plus one' level of moral reasoning continued to be maintained even as the students' progressed to the final stages of the MPharm programme. The workshop manual is in (Appendix 5: Workshop Manual).

To demonstrate, and critically reflect upon, the use of case studies, we used, by way of demonstration, a template for one of the eleven case study workshops, namely Healthcare Rights and Resource Allocation.

Each workshop was made up of 48 students, split into six groups of eight students each. Each group must, between its members, have completed a programme of pre-workshop reading, typically comprising 8-16 references ranging from legal cases to academic journals, from legal textbooks to newspaper articles. It was a prerequisite that at least two members from each group read each reference and make notes about them for dissemination among the other group members. The division of labour within each group was decided by its members. Peer-review was used when assessing the coursework to ensure an equitable distribution of the available marks among the students when they submitted their completed workbooks.

Allowing the students to prepare for the workshop, and to discuss their

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forming opinions among their peers, free from the influence of the facilitator, helped to prevent them from blindly accepting the opinions of their teacher.

The workshop Healthcare Rights and Resource Allocation first addressed some important definitions and opinions relevant to this field (including the distinction between positive & negative rights, whether or not a doctor has a moral duty to treat a patient, and how decisions on how best to allocate scarce resources may be reached) about which the students have completed some pre-workshop reading. Following this a case study is introduced. In this workshop, the students were presented with a description of four patients, each of whom had a claim to be treated, before being told that the resources were available to treat only one patient.

The first questions addressed are whether or not this case raises ethical issues and, if so, what makes those issues ethical. Issues raised in this case often include, but were not limited to, the following:

Who will benefit most from their treatment?

How does one decide what constitutes benefit?

What will happen to the others if one patient is treated?

Should someone's contribution to society be a factor in choosing, or does everybody have an equal intrinsic value?

Who ought to be treated?

Does anyone have a right to the treatment?

Will the decision be applicable to similar situations i.e. does changing one parameter render the decision invalid?

Not all of the above are bona fide ethical questions. The first question, for example, asked a simple rational question. The second question, however, revealed a hidden ethical sub-layer in the first, as it exposed how even the most rational questions may have an ethical component when it concerns the fate of several people. The remaining questions, with the exception of

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the last, were genuine ethical enquiries, as suggested by certain key terms, (“ought”, “right”) and by the overarching concern for others. Whenever a question contained such concerns, it can be considered to be an ethical one (McHale & Gallagher, 2003). Moral issues are unavoidable in pharmacy, and dealing with them is an essential skill for the pharmacist.

Once the ethical questions have been identified, the stakes are raised for the students: since only one patient may be treated, the decision is given over to them. Whomever the majority decide will be treated. An open poll of the class was taken at this point. The students first debated within their groups in an effort to change the minds of their group members and win the support of any undecided voters. Following another poll, individual students were allowed to address the class as advocates for their chosen candidate. Pharmacy students, like all healthcare students, must be trained to be problem-solvers, so that making decisions like those outlined above comes easily to them. An understanding of the facts surrounding a scenario, as might be relayed in a lecture, would not be sufficient. Students needed to apply the language of Bloom (1956), be able to use that knowledge to analyse the situation (analysis), generate options (synthesis), and choose the best option for the given scenario (evaluation). Since only one patient can be treated, and the majority must decide whom that is to be, the students also needed to rank, rate, and prioritise (evaluation) the patients following the debate, during which they had to construct arguments (synthesis), and argue the case of their favoured candidate (evaluation).

Conclusion

The literature review conducted for this research provided a comprehensive overview of the theoretical foundations underpinning moral development in the pharmacy profession. It highlighted the critical role of moral education in shaping moral development among pharmacy students and professionals, and the importance of continuous professional development in sustaining high standards of moral judgement throughout their career.

The studies included in the review highlighted the impact of formal education on moral development, revealing that structured training in ethical decision-making can enhance students moral reasoning abilities. The literature also indicated that moral development is an ongoing process that extends beyond formal education and is influenced by personal and professional experiences.

Theoretical frameworks and tools have been foundational in understanding how individuals progress with moral reasoning. Empirical studies in undergraduate studies courses such as medicine, nursing and dentistry have influenced research pharmacy. The literature review also shed light on the gaps that exist relating to moral development in pharmacy, examples of these include impact specific interventions, such as educational interventions in formal education and longitudinal research that follow pharmacy students on an individual level and through their careers to provide greater insights into moral development through till their careers.

Chapter Three: Research Methodology

Research Design

This research comprised of a longitudinal mixed-methods approach combining both quantitative and qualitative methodology. Implementing a mixed-methods approach enabled the use quantitative methods to establish 'what' patterns the data showed, and the qualitative research supported with establishing the 'why' and provided a deeper context. Each type of data contributed a crucial piece to the research, which would have otherwise been incomplete. The researcher must demonstrate that the research questions must be fulfilled via a mixed-methods approach (Bryman, Becker, & Sempik, 2008). The objectives can only be met by an amalgamation of sources of data that would create a comprehensive depiction of the journey of moral development from undergraduate to established practitioner, especially the deeper exploration of views held by the sample at established practitioner level.

The quantitative study employed the DIT-2 and its completion by participants in each year of study in the MPharm programme at the University of Hertfordshire, once after passing the General Pharmaceutical Council Pharmacist registration exam (as newly qualified pharmacists) and a final time five years after they qualified (as established practitioners). The description and experience of an established practitioner in this research aligns closely with the Royal Pharmaceutical Society's outline of the scope of an advanced pharmacist as described in the Core Advanced Pharmacist Curriculum (RPS, 2022).

At the time the study was designed and the data collection schedule agreed (2008-2019), the Royal Pharmaceutical Society's (RPS) Core Advanced Pharmacist Curriculum had not yet been introduced. The reference to the Core Advanced Pharmacist Curriculum (RPS, 2022) in the thesis was therefore used retrospectively as a contemporary benchmark to describe the level of responsibility and scope of practice associated with the "established practitioner" group in this study, rather than as a framework that informed

the original study design. In other words, the longitudinal data collection predated the formal articulation of the advanced practice curriculum, but later the RPS framework aligned closely with the roles and levels of practice that participants had reached by the time of the final DIT-2 administration.

The qualitative element of this research allowed a deeper exploration of the views and intellection on moral development whilst in practice, and the influence that moral education may have had. One-to-one semi-structured interviews allow opportunities for the researcher to delve deeper into specific topics which may arise and focus on elements important to the research.

The study adopted a pragmatic philosophical position, consistent with a mixed-methods design that combined quantitative and qualitative approaches. Pragmatism assumes that knowledge is both constructed and based on real-world practice, allowing researchers to select methods that best answer the research question rather than adhere to a single paradigm. Within this worldview, the study integrated the DIT-2 to quantitatively measure moral development and semi-structured interviews to explore participants' lived experiences and perceptions of professional ethics. The combination of these methods reflected a pluralist stance, recognising that moral reasoning can be both measurable through structured assessment and interpretable through individual narrative reflection (J. W. Creswell & Plano Clark, 2023; Feilzer, 2010; Morgan, 2014).

Sample

The sample in this research comprised of students who commenced the first year of the MPharm programme in 2008-09. The students were asked to complete the Defining Issues Test at the start of all four academic years of the programme. Once this cohort of students had graduated, completed their pre-registration programme and passed the registration exam, they were invited to complete the questionnaire again as newly qualified pharmacists (NQs). The final occasion for completing the questionnaire was

after five years in practice as established practitioners (EPs). In this fifth year as established practitioners, the participants were also invited to take part in a semi-structured interview.

Quantitative Methodology

Instrument: Defining Issues Test

Overview

The DIT is a device for activating moral schemas and for assessing them in terms of importance judgments. The DIT has dilemmas and standard items; the subject's task is to rate and rank the items in terms of their moral importance. When an individual reads moral dilemmas, moral schemas are activated. The actual schemas activated are, of course, limited to the extent that the person has developed them. As the subject encounters an item that both makes sense and taps into the subject's preferred schema, that item is rated and ranked as highly important. Alternatively, when the subject encounters an item that either doesn't make sense or seems simplistic and unconvincing, the item receives a low rating and is passed over for the next item. The items of the DIT balance "bottom up" processing (stating just enough of a line of argument to activate a schema) with "top down" processing (not a full line of argument so that the subject must "fill in" the meaning from schema already in the subject's head). In the DIT we are interested in knowing which schemas the subject brings to the task (are already in the subject's head). Presumably those are the schemas that structure and guide the subject's thinking in decision-making beyond the test situation.

Schemas and the DIT

The DIT is designed to capture moral schema changes that are particularly visible. Through various statistical analyses, three factors have been identified in DIT scores. These have been named the Personal Interest Schema (PIS), the Maintaining Norms Schema (MNS), and the Post-

conventional Schema (PCS). These were formerly categorised as Kohlberg's Stages 1 & 2, Stages 3 & 4 and Stages 5 & 6, respectively.

The simplest schema measured is the PIS. It does not suppose a macro-morality perspective but includes the more Stage-2-like memory objects and cognitive fields such as survival, personal advantage, and impulsive cooperation. The PIS is activated in those for whom the pertinent question is, "What's in it for me?" A pharmacist's thought process at the pre-conventional level may centre on "the chances of getting caught" or "whether or not the risk worth it" if asked by a prescriber to deviate from legal or ethical requirements for the benefit of a patient, for example.

A more developmentally advanced type of thinking begins with the MNS. Within this schema, one considers how people should co-operate generally with those who are not friends, kin, or well-known acquaintances. This schema is summarised by the question, "How do my friends and I benefit?" The pharmacist's thought process this level of moral reasoning may revolve around his perceived duty to the patient and the physician, as well as to the legality of what they are doing and the personal consequences of this.

As development progresses, the PCS begins to make more sense. The individual has accumulated experiences, including the persuasive arguments of others, which necessitate thinking about a fair society more broadly i.e. in terms of full reciprocity and equity across all groups within a society. The post-conventional level revolves around universal principles, such as the ethical principles of utilitarianism and deontology. The post-conventional pharmacist would probably reflect on such moralistic thoughts as "would my actions in this case bring more total good for society?" and "is the patient's autonomy at risk if I proceed?" before acting.

The individual is able to suggest changes to the status quo and to negate extant societal laws and structures for the sake of morality. He or she can apply moral ideals in a fully reciprocal manner in which each member of society has equivalent status. A post-conventional thinker asks, "How can I

make this better?”

Although the three DIT schemas do not cover everything of importance in moral thinking, nor do they constitute a full model of moral-decision making (J R. Rest et al., 1999), they are relevant to many issues of moral controversy.

Origin of the DIT

At its conception, the DIT was designed to assess Kohlberg's developmental sequence and contribute to the development of moral judgement theory in adolescent and adult populations. The DIT originated from the work of Kohlberg, as indicated by Walker (2002), when he noted that “the Minnesota approach to moral development initially ‘piggy-backed’ on the rising tide of Kohlberg's moral stage model” (p.353). Kohlberg's MJJ, which required extensive training for scoring, was viewed as impractical for most researchers (Colby & Kohlberg, 1987). Interested in a more efficient methodology of assessing moral reasoning, Rest (1979) developed the DIT using verbatim responses to moral dilemmas from a range of novice to expert groups, from junior high to doctoral-level philosophy students. The result was psychometrically sound and efficient means of measuring moral reasoning. Because inductive methods were used, the issues and arguments in the DIT represented a construct much broader than Kohlbergian justice reasoning and encompassed concepts of care and religion. While Kohlberg was still validating the coding scheme for the MJJ, Rest (1986) had conducted extensive validation of the DIT through hundreds of studies.

The DIT presents six short moral dilemmas followed by a series of 12 statements of justification, each representing a moral argument or schema. Participants rate the importance, rank the top four decision factors, and provide an action choice for the dilemma's protagonist. The DIT may have improved validity because it may be less vulnerable to presentation effects or social desirability bias that may occur in tasks where verbalisation or

written presentation is required. Reliability checks are included to detect “faking high” or inattention to the task through “nonsense” items – responses that sound sophisticated but are meaningless.

How It Works

As we have already stated, DIT stories and items are an efficient method for activating moral schemas. The assessment tool produces two individual scores. A P-index or P-score is identified for each individual. The P-score is identified as a “weighted average of the ranked stage five and six items summed across the six stories” (S J Thoma, 2002) (p.232). Ongoing research and concern were expressed over the fact that a focus on only stage five and six responses left out a great deal of other information. Rest and his colleagues identified an additional gauge, labelled the New Index, N2-index, or N2-score, which measures the difference in ratings between the personal interest and the post-conventional items with more weight given to the post-conventional items.

Philosophy

Although the common belief that one’s moral orientation does not change beyond childhood years prevails, research provides evidence to the contrary (J R Rest, D. Narvaez, M J Bebau, et al., 1999). Outcome studies of university students have found that increases in moral development are stronger than for other developmental domains. The effect size for moral development over four years of university (0.80) exceeds achievement in general verbal (0.56) and oral skills (0.60), or independence (0.36) (Ernest T Pascarella & Patrick T Terenzini, 2005). Higher moral judgement scores are associated with pro-social behaviours, such as community involvement and civic responsibility (J R Rest, D. Narvaez, M J Bebau, et al., 1999) (p.81). Nursing internship performances are better predicted by moral judgement than by Grade Point Average (GPA), Scholastic Aptitude Test (SAT) score, or age (Duckett & Ryden, 1994). DIT studies have found no support that moral development theory was biased against women (Walker, 2006).

3. Research Methodology

Unlike Kohlberg's MJL, which relied on participants' production data, the DIT is a tacit recognition task, allowing insight into implicit schemas which may be active (J R. Rest et al., 1999). Items elicit just enough of the line of reasoning to activate the preferred moral schema (top-down processing) but require that the participant supply additional reasoning of the schema to preference and action choices (bottom-up processing). The task of rating and ranking is akin to recall or recognition tasks of social cognition research, tapping into schemas that are preferred or predominant. While Kohlberg's research focused on younger children and adolescents, and involved production tasks, Rest's focused on tacit recognition tasks, allowing for efficient test administration, improving on validity of responses, and expanding research with university students and adults.

Schemas are internal, organisational conceptions of knowledge based in long-term memory, which allow the perceiver to receive stimuli, process them quickly, and guide decision making and action (Fiske & Taylor, 1991). Schemas can be either consciously accessible, that is to say the individual can recount or produce the line of reasoning involved with the processing of information; or they can be unconscious or implicit. Much of the research in social cognition utilizes memory and reaction time, to allow exploration of unconscious, implicit processes. Schema theory is useful in understanding implicit processes, i.e. those that may elude researchers relying on interview methods.

Using factor analysis of very large datasets of DIT data, researchers identified three underlying factors or patterns thought to represent moral schemas. The three moral schemas as defined by Neo-Kohlbergian theory are: (1) personal interests (previously Kohlberg's stages 2 and 3); (2) maintaining norms (stage 4); and (3) post-conventional (stages 5 and 6). The fact that stages 2 and 3 are combined in the personal interest schema does not indicate a theoretical difference between stages 2 and 3. Rather, this is reflective of the fact that older subjects tend to consider stages 2 or 3 together.

Criticism of the DIT

Criticisms of the DIT not only include the problems with Kohlberg's approach as discussed in Chapter 2, but also specific challenges to the test itself.

Primarily, the issue of validity of DIT research has been noted, as well as: the age of the test; its perceived lack of engagement on contemporary issues; and its limited ability to provide insights into moral development (Curzer et al., 2014; J R Rest, D. Narvaez, M J Bebau, et al., 1999) (p.59).

Given that it provides no outlet for the discussion of moral development, the final criticism of the DIT cannot be left unopposed. The DIT measures the beginnings of moral understanding, which are largely non-verbal and intuitive, in contrast to the MJT, which measures the highest level of verbal understanding (Darcia Narvaez & Bock, 2002). Although the MJT and interview techniques generally are worthwhile for measuring production competence, the DIT is better able to measure understanding at the level that drives most decisions for most people. Because the DIT taps into this implicit, foundational understanding, it is able to uncover higher levels of understanding in the lay person than can a moral judgement interview approach (Y. J. Choi, H. Han, M. Bankhead, & S. J. Thoma, 2020). It may be considered advantageous that, unlike with other measures, the DIT does not require the participant to explain verbally and argue explicitly for a line of reasoning (Herington & Weaven, 2008).

The author was also concerned that the DIT, having been created by an American research group using culturally specific vignettes (which refer to, for example, the Vietnam war and civil rights movement), might not be relevant to a (largely) non-American audience of pharmacy students. However, an analysis of twenty cross-cultural studies using the DIT indicate that the instrument has similar psychometric properties and construct validity in non-American cultures (Moon, 1986).

Validity and Reliability of the DIT

Since its inception, DIT researchers have refrained from modifying the

measure, choosing instead to make modifications to theory guided by the growing body of empirical data. Rest et al. (1999) cite the literature, consisting of over 400 published articles and many more unpublished studies, with a view to addressing the question of whether or not the DIT is a valid test for moral judgement.

In the view of Rest et al. (1999) (pp.60-61), a test of moral judgement should conform to seven criteria. Validity for the DIT has, therefore, been assessed in terms of these seven criteria. The authors contend that such a test must:

1. Differentiate groups assumed to be of greater or lesser expertise in moral reasoning. An analysis of a large composite sample from 56 independent studies shows that 30% to 50% of the variance of DIT scores is attributable to level of education in samples ranging from secondary education to PhDs (S J Thoma, 1986). Furthermore, DIT scores show discriminant validity from general intelligence and from general political attitudes. That is to say, the information in a DIT score predicts to the seven validity criteria above and beyond that accounted for by general intelligence or political attitude (S J Thoma, Narvaez, Rest, & Derryberry, 1999). Moreover, the DIT is equally valid for males and females (J R. Rest et al., 1999).
2. Show significant upward change in longitudinal study. A 10-year longitudinal study shows significant gains of both university-attenders and non-attenders from diverse walks of life (S J Thoma, 1986). A review of nine longitudinal studies, McNeel (1994) reported changes from the first to fourth year of university undergraduates with a combined sample size of 755. McNeel noted that DIT gains are one of the most dramatic longitudinal gains of any measured variable in university students.
3. Be significantly related to cognitive capacity measures, and specifically to capacity measures of moral comprehension; recall and reconstruction of post-conventional moral arguments; and Kohlberg's

measure. Such sensitivity has been demonstrated by King and Kitchner (1995) (pp.57-72), and Rest and co-workers (1999) (pp.76-80), among others.

4. Be sensitive to educational interventions designed to improve moral reasoning. A meta-analysis of 55 intervention studies reports a four-fold increase in effect size following educational interventions compared to control groups (Schlaefli, Rest, & Thoma, 1985).
5. Link to many "prosocial" behaviours and to desired professional decision-making. Critics of the DIT note that the dilemmas presented are very limited in their scope. It is, therefore, important to the instrument relates to "real-life" behaviour. One review of studies relating DIT scores to various prosocial behaviour measures reports that 32 out of 47 analyses demonstrate a statistically significant link (S. J. Thoma, Rest, & Barnett, 1986) (pp.133-175).
6. Link to political attitudes and political choices. In a review of several dozen correlates with political attitude, DIT scores typically correlate well (J R Rest, D. Narvaez, M J Bebau, et al., 1999) (pp.83-92). Issues such as abortion, religious indoctrination, and the role of women are among the most hotly debated issues of our time, and DIT scores are a major predictor to views on these issues.
7. Have adequate reliability. Estimates for 20 years Cronbach α on the DIT is in the high .70s to low .80s, depending on the index and sample (J R Rest, D. Narvaez, M J Bebau, et al., 1999) (pp.92-93).

For each of the six dilemmas within the DIT, participants were required to rate twelve associated statements on a Likert scale as being of: great importance; much importance; some importance; little importance; or no importance. They then ranked the four most important statements in descending order. After each administration the protocols were sent for scoring to the Center for Ethical Development, University of Alabama, Tuscaloosa, AL, USA.

Historically, the most important result has been the P- or principled-score (How It Works), which is defined as “the relative importance a subject gives to principled considerations in making a decision about ethical dilemmas” (Sitkin & Sutcliffe, 1991). The newer N2-index has been used by researchers for the past several years because it purports to measure not only the level of principled thinking (i.e. P-score), but also the degree to which non-principled items receive lower ratings (Cesur & Sami Topcu, 2010; J R Rest, D. Narvaez, M J Bebau, et al., 1999; S. J. Thoma, 2006). In other words, in addition to assessing the P-score (which itself considers how post-conventional items are ranked), the N2-score assesses the extent to which one distinguishes post-conventional thinking from lower level personal-interest thinking. Therefore, the N2-index is considered the more robust index. However, for the sake of completeness, this investigation utilises both the P- and N2-indices.

DIT-2 vs. DIT

The DIT-2 enhanced the DIT by making the scenarios more contemporary, as well as reducing the content and therefore time spent completing the questionnaire. Coupled with this, the DIT-2 provides separate scores for principled judgement (P score) and personal interest orientation (N2 score) offering a more nuanced assessment of moral reasoning. An example of a more contemporary scenario from the DIT-2 is in (Appendix 6: DIT-2 Dilemma Example).

Currency of the DIT-2

Although the DIT was originally developed by Rest et al. (1979), the DIT-2 revised in 1999 and updated in 2005, remained a valid and reliable instrument for assessing moral reasoning at the time of data collection and continues to be used in contemporary healthcare research (Choi, Kim, & Park, 2020; S. J. Thoma & Dong, 2014; Xiang, Cao, & Li, 2025). The dilemmas used in the DIT-2 are standardised and copyrighted, designed to elicit reasoning at multiple stages of moral development. While the exact

scenarios could not be reproduced in the context of this thesis, they reflected generic moral conflicts (e.g., social justices, authority, life-and-death decisions) applicable across time and professional contexts. Recent validation studies (Y.-J. Choi, H. Han, M. Bankhead, & S. Thoma, 2020; Roche et al., 2017) support the ongoing relevance of the DIT-2 in healthcare education, including pharmacy.

Administration of the DIT-2

The DIT-2 was administered via an online SurveyMonkey link in four consecutive academic years. Students were invited to complete the DIT-2 during a timetable scheduled session where attendance was mandatory. This research utilised a non-probability sampling design; a population survey of the students who were in attendance on the day the test was administered. The first survey was in 2008 (first year), 2009 (second year), 2010 (third year), and 2011 (fourth year). After graduation, participants were invited to complete the DIT-2 again following their GPhC registration assessment in 2014, representing the transition from student to newly registered pharmacist. A final round of DIT-2 administration took place in 2019, when participants had accumulated approximately five years of professional experience in September 2019. To encourage participation, a single GDPR-compliant reminder email was sent to non-respondents after two weeks. All communications and data handling adhered to institutional ethical guidelines and data protection regulations.

Unique anonymous identifiers were paired across survey administrations to track longitudinal change. The identifiers were created by participants using a self-generated code, using numbers only. Therefore, changes in participant details, such as surname changes, were mitigated through the use of the code rather than name-based tracking. At all stages, the research team led by the primary researcher administered the survey.

Students' email addresses were used at the point of recruitment and stored securely on a password-protected university server. Data management and

participant communication were handled by the research team within the School of Pharmacy, under institutional data governance protocols compliant with GDPR. At each stage, an information sheet and consent statement were provided electronically. Once each DIT-2 administration had been completed, the dataset was securely compiled and submitted by the principal researcher for scoring to ensure consistency, validity and longitudinal comparability.

Data Handling

Following each round of administration, the completed DIT-2 protocols were submitted individually to the Center for the Study of Ethical Development at the University of Alabama for scoring. This staggered submission process aligned with each testing year (2008, 2009, 2010, 2011, 2014 & 2019) to enable interim tracking of moral development and maintain data integrity across the cohort.

For each dataset submitted, the Center returned four files:

1. A comprehensive data file containing all raw responses and derived variables used to calculate the DIT-2 indices;
2. A smaller “scored” data file, including approximately 20 summary variables reported in the standard DIT-2 output;
3. A PDF summary report outlining descriptive statistics, reliability checks, and validity indicators for each sample; and
4. An SPSS output file, mirroring the PDF report but editable within SPSS.

The Center provided official calculations for the P-score, representing the proportion of post-conventional moral reasoning, and the N2-score, reflecting both the degree of post-conventional reasoning and the consistency of schema differentiation. All files were returned in SPSS format, facilitating further analysis by the researcher.

The researcher subsequently conducted all independent data handling and

analyses, including data cleaning, cross-year identifier verification, and descriptive and comparative statistical analyses using SPSS(v26). These analyses explored changes in moral reasoning scores over time, from undergraduate education through early professional practice.

Use of the DIT-2 data within this study

The DIT-2 data were analysed sequentially to align with the longitudinal structure of the study. Participant responses were anonymised and linked using unique identifiers to enable within-subject comparison over time. As attrition occurred across test administrations, both paired and independent comparisons were used to examine score changes between cohorts and time points. The P-score and N2-score were selected as the principal indicators of moral reasoning because they capture post-conventional reasoning and the ability to recognise moral complexity, which is central to the study's focus on ethical decision making in pharmacy. Descriptive statistics and comparative analyses were conducted in SPSS to explore progression from undergraduate to early-career practice. The DIT-2 results then informed the design and interpretation of the qualitative interviews, allowing themes of moral reasoning, professional identity, and ethical challenge to be examined in greater depth.

The DIT in Higher Education

Rationale for Use of the DIT in Higher Education

As Rest (1984) and others (Bebau, 2002; Y. J. Choi et al., 2020; Rogers, 2002; S J Thoma, 2002) attest, the domain of morality is much broader than the moral judgment component that the DIT is designed to measure. However, within the general student populous, efforts have been made to assess morality in the context of moral development. King and Mayhew (2002) discovered that many of the articles that used both the DIT and a university student sample were not designed intentionally to investigate the moral judgment of university students. Rather, many studies appeared to use students as convenience samples or as proxies for reasonably bright

young adults, but with no particular emphasis on university as an educational context. However, they also noted that many studies were intentionally designed to investigate the moral development of undergraduate students. In the latter context, the student population is an important sample frame for several reasons. Firstly, it is common for both school-leavers and mature students to enrol in university at times in their lives when they are making important life transitions, many of which have moral implications. Secondly, graduates, especially those from so-called “professional” degrees, often take positions in which they make decisions affecting the lives of others.

Longitudinal studies have been used to investigate the relationship between moral development and formal education by examining the effects of age and education on the development of moral reasoning. These studies suggest that university experiences do promote moral development; more specifically, during university students tend to decrease their preference for conventional level reasoning and increase their preference for post-conventional moral reasoning (P. M. King & Kitchener, 1995). It is common for these longitudinal studies to track the development of moral reasoning by testing students twice during their collegiate experience, at the beginning of their first year and again at the end of their final year, or by testing students at multiple times during their degree course (O'Flaherty & Gleeson, 2014; Saat, Porter, & Woodbine, 2012). Pascarella and Terenzini (2005) provide strong evidence that student participation in higher education is associated with gains in moral development, which “cannot be attributed solely to initial differences in moral reasoning, intelligence, or social status between those who attend and those who do not attend ” (p.350). We can conclude from this that formal education makes a unique contribution to moral reasoning.

Scoring the Instrument

Moral Development Indices (Schema Scores)

Overview

An index is a score by which a DIT participant is characterised. In other words, an index is the number used to represent some aspect of a participant's moral development.

Meta-analysis of a sample of over 44,000 subjects (J.R. Rest, Thoma, & Edwards, 1997) indicated that DIT items cluster around three general moral schemas: arguments that appeal to personal interests (Personal Interest), to maintaining social laws and norms (Maintaining Norms), or appeal to moral ideals and/or theoretical frameworks for resolving complex moral issues (P-score). Typically, researchers have reported scores in terms of the P-score. Recent research has shown the usefulness of each of the schema scores in creating indices that are more sensitive to developmental change than results from maturation or from educational interventions. To help the reader transition from “stage” language to “schema” language, the following descriptions are provided.

Personal Interest Schema Score

Personal Interest Schema Score represents the proportion of items selected that appeal to Stage 2 and Stage 3 considerations. Stage 2 considerations focus on the direct advantages to the actor and on the fairness of simple exchanges of favour for favour. Stage 3 considerations focus on the good or evil intentions of the parties, on the party's concern for maintaining friendships and good relationships and maintaining approval.

Maintaining Norms Schema Score

Maintaining Norms Schema Score represents the proportion of items selected that appeal to Stage 4 considerations. Stage 4 considerations focus on maintaining the existing legal system, maintaining existing roles

and formal organisational structure.

Postconventional Schema Score (P-Score)

Postconventional Schema Score represents the proportion of items selected that appeal to Stage 5 and Stage 6 considerations. Stage 5 considerations focus on organising a society by appealing to consensus-producing procedures, insisting on due process, and safeguarding minimal basic rights. Stage 6 considerations focus on organising social arrangements and relationships in terms of intuitively appealing ideals.

The P-score is calculated on the basis of ranking data (J.R. Rest, Thoma, Narvaez, & Bebau, 1997). If a participant ranks a principled item as “most important,” then this increases the P-score by 4 points (in second place, by 3 points; in third place, by 2 points; in fourth place, by 1 point). The P-score is the total number of points across the five dilemmas converted from a base of 60 points to a percentage.¹ Missing data is dealt with by adjusting the P-score on the basis of responses given (for example, if a participant leaves out the second rank on one story, the P-score is recalculated on the basis of 57 points instead of 60).

N2-Score

N2-Score is a new index that generally outperforms the P-score on six criteria for construct validity (J.R. Rest, Thoma, Narvaez, et al., 1997). The index emerged following a re-examination of data from a large study (Bebau & Thoma, 1994) that used the DIT as a pre- and post-test of the effects of an ethics curriculum for professional school students. Two effects of the educational intervention were observed: one effect was the acquisition of new thinking (as observed by statistically significant increases in P-scores); the second effect was the systematic rejection of simplistic thinking (significant decreases in Personal Interest Schema Scores). From a

¹ P-scores are in the range 0-95 (not 0-100) as not every dilemma has four possible principled items.

practical educational perspective, both kinds of progress were desirable: acquiring more sophisticated moral thinking but also gaining greater clarity about ideas that should be rejected for their simplistic or biased solutions.

The N2-index has two parts: the degree to which P items are prioritised; and the degree to which the lower stages are rated lower than the ratings of the higher stages. First, the prioritization of P items follows the procedure above for the P-score except in the handling of missing data. If a participant leaves out a rank, then in N2 no adjustment is made for that omission. Leaving out all ranks for one dilemma is adjusted by basing a total score on the other five dilemmas. If more than one dilemma is omitted, the whole protocol is invalidated, as it is assumed that there is a problem in test motivation in general, not an occasional ambiguity.

The second part of N2 is based on rating data, not ranking data. The main idea is that “discrimination” is measured in terms of the average rating given to items at Stages 2 and 3 subtracted from the average rating given to items at Stages 5 and 6 (J.R. Rest, Thoma, Narvaez, et al., 1997). Hence, the distance of Stages 2 and 3 from Stages 5 and 6 is the measure of discrimination. Average ratings are standardised by dividing this difference by the participant's standard deviation of Stages 2 + 3 + 5 + 6. Again, if rates for one dilemma are left out, then the score is adjusted, on the basis of the other five dilemmas. However, if more than eight rates for two dilemmas are missing, then the whole protocol is invalidated. If a subject's personal interest schema score is significantly higher than their post-conventional score, negative N2 scores may be observed.

The two parts of N2 are combined into one score per participant by adding the P score to the rating data weighted by three.² N2-scores are adjusted to have the same mean and standard deviation as the P-score on a

² The discrimination component is multiplied by three because this component has about $\frac{1}{3}$ the standard deviation of the P-scores; therefore weighting equalizes the two parts of the N2-index.

standardization sample collected of 1,115 participants,³ so that comparisons between P and N2 can be made easily (J.R. Rest, Thoma, & Edwards, 1997).

The N2-index uses the same ranking data from the same participants as the P-score but also uses the rating data from the protocols. Because the N2-score uses both rating and ranking data, and because it has more stringent rules for handling missing data than the P index, more protocols are invalidated for missing data in the N2-index than for the P-index. Because more protocols may be eliminated for the N2-index than for the P index, the samples may sometimes be smaller if the latter index is used exclusively.

Reliability Scores

Utilizer Score

The Utilizer Score (or U-score) represents the degree of match between items endorsed as most important and the action choice on that story. For example: If a respondent ranks in first place for the Famine story the item “Shouldn't the community's laws be upheld?”, one might reasonably expect the respondent to choose “Mustaq Singh should take the food” as an action choice. Alternatively, if the respondent ranks in first place the item “Isn't it only natural for a loving father to care so much for his family that he would steal?”, one expects the respondent to choose “Mustaq Singh should take the food” as an action choice. A high U-score represents consistency between item endorsement and action choice; a low score represents a lack of consistency.

Meaningless item check (M-score)

Items are included in each story that are lofty sounding, using complex style or verbiage, but are essentially meaningless statements. The purpose of these items is to detect respondents who are trying to fake a high score.

³ The sample consisted of approx. 250 each of junior high school, senior high school, college, and graduate students.

Because DIT-2 items are essentially fragments of a larger moral argument, respondents who don't understand the argument can't distinguish it from items that have complex verbiage but are essentially meaningless (J R Rest, D. Narvaez, M J Bebau, et al., 1999, pp. 53-54). For example, in the Reporter story a minor altercation in the past of a political candidate is considered. Question 9 asks, "Does the right of "habeas corpus" apply in this case?" Habeas corpus refers to a writ through which a prisoner can be released from unlawful detention and is irrelevant in the context of this particular story. A test subject who knows the meaning of this term should therefore rate it as being of "no importance", as should someone who does not know its meaning and is completing the questionnaire honestly, as something about which they know nothing should not affect their decision-making process. However, a subject who does not understand the term and is trying to illicit a high score may rate this question as having some degree of importance, because it sounds important.

Number of "can't decide" choices

This variable represents the decisiveness with which an individual selects action choices on the DIT-2. For each of the 5 on the DIT-2 stories, participants are asked to choose whether the protagonist should or should not act in a particular way. Respondents may also select the "can't decide" option. Computation of this variable is based on the number of times the respondent selects the "can't decide" option. Scores range from 0 (no matches) to five (all matches). Because indecision is thought to be a product of the ease with which moral information is processed, there is the expectation that indecision will co-vary with developmental phase (S J Thoma & Rest, 1999). Specifically, the transition between phases should be associated with increased indecision given the multiple and potentially conflicting interpretations associated with transition.

Other Useful Indices

Humanitarianism/Liberalism

This variable is a proxy for a humanitarian liberal perspective on moral issues. Early in the development of the DIT, researchers noticed that professionals in political science and philosophy obtained the highest P-scores. Scores were so high that Rest (1979) used this group to anchor the upper end of the measure. With subsequent studies, it became evident that these respondents not only obtained high scores on the DIT but were also consistent in their action choices (U-score). Given these clear choice patterns, a variable was created (S J Thoma, 2002) that simply counts the number of times a respondent's choice matches this high scoring group. As before, a respondent's score is in the range 0-5.

Religious orthodoxy

This variable (CANCER10) represents the sum of the rates and ranks for item 10 in the Cancer story within the DIT-2 (or item 9 in the Doctor's Dilemma in the DIT). This dilemma asks whether or not the protagonists should provide an overdose of a drug that could hasten the death of a dying woman. Item 10 evokes the notion that only [G]od can determine whether or not someone should live or die. It has been shown that the ratings and ranking of this single item correlated very strongly with summary scores on religious orthodoxy measures like Brown and Lowe's Inventory of Religious Beliefs (D. Narvaez, Getz, Thoma, & Rest, 1999). The variable is calculated by adding the rating given to item 10 with the ranking value. Since the ratings are computed on a 1-5 scale and four items are ranked per story, the top score for CANCER10 is 9 (rated "most important" and ranked 1st) and the lowest is 1 (rated "not important" and unranked).

Antisocial Score

The Antisocial Score (A-score) represents considerations that reflect an anti-establishment attitude. These considerations presuppose an understanding

of Stage 4, but fault existing authorities and "the establishment" for being hypocritical and inconsistent with its own rationale. The "antisocial" point of view is critical of the conventional social order but offers nothing positive in its place.

Criticisms of How the Instrument is Scored

Form of Criticism

Two criticisms of the P-index have predominated in discussions of the DIT (J.R. Rest, Thoma, Narvaez, et al., 1997). The first issue might be called the qualitative-quantitative issue, and the second, the problem with throwing away data.

Qualitative-Quantitative Issue

The P-index, which uses a continuous scale ranging from 0 to 95, may seem out of place in substituting a quantitative dimension for Kohlberg's qualitative distinctions. As already discussed, (Philosophy), the DIT measures the largely non-verbal and intuitive beginnings of moral understanding. Kohlberg represents development in terms of stages, that is, assessing participants' development is done in terms of their being in one stage or another (e.g. a Stage 2 participant or a Stage 4 participant). In contrast, the DIT P-score assigns a number (e.g. 33, 48) to a participant. Development is a matter of shifting distributions of stages rather than the move from one stage completely into the next. Movement is gradual and assessment needs to consider quantitative dimensions of stage use. Kohlberg's stages are qualitatively different ways of moral thinking and make qualitative distinctions in designating stage differences to different items; however, the DIT measures quantitative differences (i.e. the degree to which a type of thinking is manifest) in depicting the developmental scores of participants.

Throwing Data Away

The second problem that is associated with the P score is more serious;

namely, in computing a P score, none of the information about the lower stage items is used, nor is any of the rating data used. This will be considered further in Test Selection.

Consistency Checking

Consistency checking of the DIT is affected by comparing the rating data with the ranking data. Ordinarily, consistency between the ratings and the rankings would be anticipated. For example, if a participant ranked statement 5 as the most important of the 12 statements, it would be expected that no other statement would be rated higher than statement 5. The consistency check works by counting the number of times such expectations are violated.

As a guard against random box-ticking, a respondent's ratings are checked for consistency with the respondent's rankings. Some inconsistency is to be expected, as participants sometimes change their minds about an item after being exposed to other items. The rate-rank consistency check accounts for the bulk of purged participants.

Occasional missing data is tolerated. Using a trial and error procedure described by Rest, Narvaez, Thoma, & Bebeau (1999), the following cut-off values were derived: if a respondent leaves out more than three ratings on any of two stories, the protocol is invalidated; if the respondent leaves out more than six ranks, the protocol is also invalidated.

Respondents who pick items for style rather than for meaning are not following the instructions for completing the DIT-2. The protocols of respondents whose weighted ranks on the M-items total more than ten are invalidated.

Respondents who do not discriminate answers (i.e. those who check the same box for all items) are not responding to instructions to make discriminations. Respondents who rate eleven items the same on a story are considered as not discriminating. If a respondent fails to discriminate on

two stories or more, the protocol is invalidated.

If there are too many inconsistencies, then the questionnaire fails the consistency check. These questionnaires are purged during analysis. Here, N is used to refer to the number of questionnaires remaining once those failing the consistency check have been purged. As each index (N2, P, NM, etc.) is calculated differently, N may differ slightly between different indices using the separate sample.

Data Analysis

Statistical tests

Independent t-test

The independent-samples t-test (Gosset, 1908) determines whether two independent group means are equal in the population. The purpose of the independent-samples t-test is to determine whether the population means of the groups are different, and not just a consequence of natural sampling variation.

For an independent-samples t-test to provide a valid result, four assumptions must be met, namely: independence of observations; no outliers; normality of distribution; and homoscedasticity (homogeneity of variances).

Mann-Whitney U test

The Mann-Whitney U test (Mann & Whitney, 1947) determines whether there is a statistically significant difference between the distributions of two independent (unrelated) groups. It is the nonparametric alternative to the independent-samples t-test. The only assumption requires for a Mann-Whitney test to be able to provide a valid result is that both distributions are (approximately) the same shape.

Kruskal-Wallis H test

The Kruskal-Wallis test (Kruskal & Wallis, 1952) is the non-parametric

alternative to the one-way ANOVA and is used to determine whether there are any statistically significant differences between the distributions of three or more independent groups.

Post-hoc comparisons for Kruskal-Wallis and Friedman tests

Post hoc tests are designed for situations in which a significant omnibus test statistic has been obtained for data that consists of three or more group variables, and for which additional exploration of the differences among groups is needed. Such tests provide specific information on which of the variables are significantly different from each other.

As outlined above, SPSS implements the Friedman test as a non-parametric test of group differences for dependent samples. Conover (1999) proposes post-hoc treatments for Friedman data, which are based upon the mean rank differences of the groups. These procedures are detailed in Bortz, Lienert and Boehnke (2008, p. 275). However, SPSS does not provide these post-hoc tests to decide which groups are significantly different from each other.

Until recently, in order to examine where the differences actually occur with SPSS, separate Wilcoxon signed-rank tests (Wilcoxon, 1945) had to be carried out on each of the different combinations of the related groups. However, since v.17, SPSS has allowed pairwise comparisons to be calculated using the data as a whole, using Dunn's (1964) procedure (unlike Wilcoxon, which applies multiple iterations of two-sample comparisons using matched).

Dunn's procedure

Once it has been determined that there is at least one significant difference within the test groups, the differences in the mean ranks are computed pairwise. A standard deviation for each of these groups is then calculated, and a t statistic is calculated by dividing each difference by its standard deviation. The t statistic is then compared with the absolute value of z from

the Kruskal-Wallis or Friedman test. The null hypothesis of similarity of mean ranks is rejected if $t > z$ at a significance level of $p = 0.05$ (Pett, 1997, pp. 217-219). The results from the pairwise testing must be subjected to a Bonferroni adjustment when making multiple comparisons. The Bonferroni adjustment is very easy to calculate; simply taking the initial significance level and dividing it by the number of tests giving rise to the new significance level. If the p value is larger than the new significance level, then the result is not statistically significant.

Testing assumptions

Detecting outliers

Although boxplots are routinely used to detect outlying data points (outliers), it is important to remember that the definition of an outlier is a data point that came from a different population than the one being studied (Osborne & Overbay, 2004). The definition is not a data point that is far away from the rest of the data.

Not all outliers are illegitimate contaminants, and not all illegitimate scores show up as outliers (Barnett & Lewis, 1994). Once it has been established that an outlier is neither the result of a data entry error, or a measurement error, it is most likely to be a genuinely unusual data point. When the data points are suspected of being legitimate, some authors argue that data are more likely to be representative of the population as a whole if outliers are not removed (Orr, Sackett, & DuBois, 1991).

Where outliers are genuinely unusual data points from the same population, there are four widely-accepted options with which to deal with the data, namely: run the equivalent non-parametric test (typically Mann-Whitney U Test, in the case of t-test); modify the outlier by replacing its value with one that is less extreme; transform the dependent variable; or include the outlier in the analysis.

Removal or modification of outliers when performing t-tests has been shown

to produce a significant change in the mean differences between the two groups when the groups were equal in the population, but tended not to when there were strong group differences (Osborne & Overbay, 2004). Removal of outliers produced significant change in the t statistics primarily when there were strong group differences. In both cases the tendency was for both group differences and t statistics to become more accurate in a majority of the samples.

For the purposes of this analysis, if the data set contains outliers that have been shown not to result from researcher error, these outliers will not be removed: rather, the equivalent non-parametric test was used. This is consistent with the methodology employed when the data is not normally distributed.

Testing for normality

SPSS presents the results from two well-known tests of normality, namely the Kolmogorov-Smirnov test and the Shapiro-Wilk test. The Shapiro-Wilk test is more appropriate for small sample sizes (< 50), but can also handle sample sizes as large as 2000 (Altman, 1991; Daniel, 2004). The Shapiro-Wilk test is the preferred test of normality because of its good power properties as compared to a wide range of alternative tests (Shapiro, Wilk, & Chen, 1968). For these reasons, the Shapiro-Wilk is used throughout this study test as our numerical means of assessing normality. If the Shapiro-Wilk (W) statistic is significant ($P < 0.05$), then the hypothesis that the respective distribution is normal should be rejected.

In general, the Shapiro-Wilk test is better able to detect non-normal distributions than the Kolmogorov-Smirnov test, but cannot indicate the cause of the problem, such as skewness or kurtosis. To identify why a distribution is non-normal, one must inspect the descriptive statistics and plot the data graphically.

Where a graphical representation of normality is required, the normal Q-Q plot is presented. In this plot, the observed values of a variable are plotted

against the theoretical quantiles. A good fit of the theoretical distribution to the observed values would be indicated by this plot if the plotted values fall onto a straight line. If the data are normally distributed then the data points will be close to the diagonal line (Driscoll, Lecky, & Crosby, 2000a).

With each Q-Q plot, SPSS also generates a detrended Q-Q plot. These plots emphasize the extent of deviation from theoretical normality.

Conceptually, the detrended plot can be thought of as a rescaled Q-Q plot rotated through 45° , which emphasises the distance that each point falls above and below the now-horizontal line. If the data are normally distributed then some of data points will fall above the horizontal line, others will fall below it, and the pattern will appear random. However, non-normal distributions exhibit distinct patterns in a detrended plot; a skewed distribution typically shows a "J" or an inverted "U" shape, while a uniform distribution typically shows an "S" like pattern (Driscoll, Lecky, & Crosby, 2000b).

Testing for homogeneity of variances

Levene's Test for Equality of Variances (Levene, 1960) tests the null hypothesis that the population variances are equal (homoscedasticity). The variance of any given data set is the average of the squared deviations from the mean.

Test Selection

General

For continuous independent variables (PI, MN, P, N2), where it was determined that the assumptions of the parametric procedure were not valid, the analogous non-parametric procedure was applied in its place.

For ordinal independent variables (RO, HL, A) non-parametric procedures were applied in the first instance.

Table 3.1: Summary of parametric and their non-parametric tests equivalents (* denotes test not used but included for completeness).

Test	Parametric	Non-parametric
Correlation	Pearson*	Spearman*
Independent measures (2)	Independent t-test	Mann-Whitney U test
Independent measures (>2)	One-way ANOVA*	Kruskal-Wallis H test
Repeated measures (2)	Matched-pair t-test*	Wilcoxon signed-rank test
Repeated measures (>2)	One-way, repeated measures ANOVA*	Friedman test*
post-hoc test	Bonferroni test	Wilcoxon signed-rank tests (series)

Medians and standard deviations were calculated and compared using pairwise comparison with the Wilcoxon signed-rank test (Wilcoxon, 1945) to which the Bonferroni correction was applied (Dunn, 1961), as this methodology is very common, especially in studies evaluating the time course of an effect (Williams, Curtis, & Mullane, 2018). Attrition with loss to follow-up over time is one of the main difficulties of longitudinal research (Caruana, Roman, Hernandez-Sanchez, & P., 2015), resulting in fewer participants providing information (Altman, 1999). The issue of missing data is more pronounced when participants are requested to complete the same test on multiple occasions (Jelicic, Phelps, & Lerner, 2009). However, longitudinal research can enable the sequencing of events and follow a change – in this case in the moral development of a single cohort – over time. This methodology has the additional benefit of not throwing away all

data relating to a participant in instances where that participant has missed – for example – a single repetition in the series of six measurements (Benavoli, Corani, & Mangili, 2016; Möttönen & Oja, 1995), as would be the case if the Friedman test were employed (Friedman, 1937). Instead, only pairs including a missing data point are discarded.

Qualitative Methodology

The aim of the qualitative phase of the study was to substantiate findings from the quantitative phase. This elucidated the findings relating to the observed pattern in moral development through the quantitative period of the study, particularly the regression observed in the first five years of practice.

Research Design

The qualitative phase of this research employed a phenomenological research design to enable the exploration and a deeper understanding of the lived experiences of the established practitioners who were interviewed as part of this research. Taking phenomenology as the philosophical approach for this research allowed the focus on the meaning of the experiences of the participants (Giorgi, 2009).

A phenomenological approach aligns with the research question relating to gaining a deeper understanding of the perspectives of the participants after they completed their pharmacy education to becoming established practitioners having been in the field for over five years. This provided insight of their lived experiences, thus allowing the exploration of the factors which may have led to the moral reasoning pattern after qualification as pharmacists. It is important to note that the exact pattern of moral development based on individual DIT-2 scores was not distinguished, therefore, the interview participants exact moral development journey is not known. A phenomenological approach also accommodates participants'

articulation of their perspective in their own words. Interview is the dominant method of data collection in phenomenological research, despite this, there is little guidance on how interviews should be conducted using this approach (Bevan, 2014; Groenewald, 2004; Hoffding & Martiny, 2016).

Sampling and Recruitment

Sample populations in qualitative research tend to be selected by their ability to provide rich information and context required to answer the research question at hand (Vasileiou, Barnett, Thorpe, & Young, 2018). When considering quantitative sample sizes with qualitative research sample sizes research has shown there are variations in requirements between the two, data saturation is also a key indicator that a sufficient sample size has been reached, this is discussed further below.

Vasileiou et al. (2018) carried out a systematic analysis of single interview per participant designs in health-related research to understand sample size sufficiency, and it was concluded that there was not sufficient evidence on what constitutes a sufficient sample since and in fact sample sizes were often characterised as small without justification. A more important factor to be considered is data adequacy (Levitt, Motulsky, Wertz, S.L., & Ponterotto, 2017). Evidentiary adequacy also presents the importance of adequacy in terms of the amount of evidence, variety, disconfirming evidence as well as the interpretive status of the evidence (Erickson, 1986).

The sampling strategy selected for this aspect of the study was a combination of convenience sampling and snowballing. These are purposeful sampling strategies that aim to identify and select information rich cases which are related to the phenomenon of interest (Palinkas, 2015). Convenience samples allow the researcher to collect information from participants who are easily accessible, available, and willing to participate in the study (Etikan, Musa, & Alkassin, 2016). In this case, the sample of participants who took part in the interviews were from the cohort of students who were asked to complete the DIT-2 survey. By the time the participants

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were at established practitioner level, access to the cohort became more difficult due to General Data Protection Regulations, therefore, in order to support the recruitment of more participants snowball sampling was used in addition. Snowballing is the process of identifying participants through others who know of other potential participants with similar characteristics. Convenience sampling is a form of non-probability sampling which has criticisms such as limited generalisability because the findings are largely only applicable to the group from which the sample originated (S. J. Stratton, 2021) however, it is a commonly accepted sampling method used in participant based research (Patton, 2015).

Interview participants were initially identified by a positive request to be interviewed, which was included as a question at the end of the final administration of the DIT-2. Participants who responded positively were asked to inquire with other colleagues in the same cohort, who they were still in contact with, if they would be willing to participate in the interviews. If these contacts responded positively, then they would access the study by making contact and they would be provided with the participant information sheet and given time to confirm if they wish to join the research.

The follow-up semi-structured interviews were conducted between April and May 2022, approximately three years after the final DIT-2 administration. The delay resulted from the COVID-19 pandemic, which affected the research timelines and participant availability. Additional factors included the logistical challenges of recontacting former students and aligning updated governance requirements. The extended interval also provided an opportunity to capture more mature and reflective perspectives which encompassed the participants perception of the effect of the pandemic on their moral reasoning in practice, as participants had spent several years in professional practice, thereby enriching the qualitative dimension of the study.

Data Collection

Semi-structured interviews were selected as the most appropriate qualitative method to explore pharmacists' moral reasoning, ethical experiences, and reflections in depth. This approach provided the flexibility to pursue participants' individual perspectives while maintaining consistency across interviews through the use of an interview schedule. Semi-structured interviews are well-suited for exploring personal ethical reasoning and decision-making processes, as they enable participants to articulate nuanced and context-specific experiences that may not emerge in more structured formats (Adams, 2015; Kallio, Pietilä, Johnson, & Kangasniemi, 2016).

Alternative qualitative methods, such as focus groups, were considered during the study design stage. However, these were deemed less suitable given the potentially sensitive nature of discussing moral dilemmas, which may have inhibited open and honest reflection in a group environment (Gill, Stewart, Treasure, & Chadwick, 2008). In addition, the small eligible sample size following attrition and the geographical dispersion of participants made individual interviews a more practical and ethically appropriate choice. Conducting one-to-one interviews also enabled a more confidential atmosphere, fostering trust and allowing participants to provide detailed reflections on their moral development and professional experiences since qualification.

Interview Schedule Development

The interview schedule was based around Rest's Four Component Model of morality. This model laid emphasis on exploring the participants' moral sensitivity, moral judgement, moral motivation, and moral character, particularly during the first five years of their careers as pharmacists. With respect to the interpretivism theoretical perspective, a phenomenological approach was adopted when developing the interview schedule. As a result, the structure consisted of three key domains: contextualisation,

apprehending the phenomenon and clarifying the phenomenon (Bevan, 2014).

After the composition of the interview schedule, it was checked for validity by an experienced researcher with extensive experience in qualitative research, leading to minor amendments to facilitate addition of more depth to the discussion, like asking the participants for examples of moral dilemmas they may have experienced in practice then asking further probing questions in relation to the example provided. Following this, the interview was piloted on a practicing pharmacist colleague and a colleague not in the pharmacy field, this gave rise to further minor changes in the introductory part of the schedule (Appendix 7: Interview Schedule).

Conducting Interviews

The established practitioners were interviewed between April and May 2022 at a convenient time offered by the participant. The interviews were conducted via Microsoft Teams, in a place of the participants choice where they were able to talk freely and contentedly. The interviews were commenced with an introduction of the aims of the study, as well as addressing consent and confidentiality matters. The participants were asked to read the Participant Information Sheet (Appendix 8: Participant Information Sheet) and complete the consent form prior to the interview, and this was reviewed at the start of the interview (Appendix 9: Consent Form). The interviews were audio and video recorded.

The interview schedule was followed in order to guide the discussion and cover topics as outlined in the schedule. The interviews were semi-structured, using a blend of open and closed questions, this allows for probing questions to follow up or clarification questions to expand on specific aspects of the interview (Adams, 2015). The participants were encouraged to express themselves unreservedly and were asked to expand on or clarify responses using questions which were not included in the interview schedule. Following the interview, participants were sent the 'use

of quotes' consent form via email and asked to sign electronically and return via email (Appendix 10: Use of Quotes Consent Form).

Data Analysis

Phenomenological data analysis steps as outlined by psychological phenomenologists like Moustakas and Polkinghorne are fairly consistent (J.W. Creswell & Poth, 2018; Moustakas, 1994). The process involves building on data from the initial research questions, review of the data, in this case, interview transcripts and the identifications of "significant statements", which can be sentences or quotes that described how the participants experienced the phenomenon. This process is referred to as horizontalization by Moustakas (1994), following this, these significant statements are then organised into clusters of meaning, then grouped into themes. Traditional phenomenological analysis, as described above are valuable in capturing participants lived experiences, however, this did not lend itself to the research objectives of this study (Whiting, 2001), which warranted more structured insights and themes to allow the deduction of more actionable insights for educational and professional practice interventions.

The interviews were transcribed verbatim from the recordings, taking note of any pauses and expressions. The data was then analysed using QSR International NVivo data analysis software. Qualitative content analysis was the framework implemented to analyse interview data. Content analysis can be used to systematically analyse and interpret written, verbal or visual data (Cole, 1988). The aim is to allow researchers to identify themes, trends, and patterns within the data to enhance the understanding of the data (Elo & Kyngas, 2008). This approach facilitated the exploration of the phenomenon of moral development within the pharmacy profession. This allowed an in-depth understanding of the participants' experiences, reflections, and perceptions of the moral dilemmas that they experienced during their education and professional practice.

The process of content analysis may be either inductive or deductive. The data in this research was analysed inductively. Inductive content analysis identifies meaning from the data from the 'bottom up', where codes and themes emerge from the data. As described by Elo and Kyngas (2008) there are three main phases to the analysis: preparation, organising and reporting. In the preparation phase, the unit of analysis was selected, followed by familiarisation with the data, where the researcher reads the transcript and listens to the interview recording. This is then followed by the organising phase, which commences with coding, where the transcript was read line by line to apply a code, which is a label or phrase which describes important points raised in the line. Following this, grouping took place where the codes are grouped together to create categories. This reduced the number of categories by combining similar codes, resulting in broader categories (Elo & Kyngas, 2008). This also involved removal of codes from a group to which they no longer fit or do not belong. Abstraction involved the grouping together of similar categories to create subcategories, which would then give rise to generic categories and a main category. This process was iterative and was repeated until the categories created were representative of the research findings.

Phenomenology and content analysis, though distinct in their approaches, complement one another when implemented in research, therefore a combination of the two was utilised in this research to analyse the data (Aguas, 2021). The two approaches seek to explore the underlying meaning behind qualitative data. As described above, phenomenology focuses on the individual experiences, with the aim to provide a contextual understanding of how the participants perceive and interpret the phenomena in their world. The combined approach of data collection and data analysis promotes neutrality as well as rigor with findings (Aguas, 2021). Content analysis focuses on the coding and categorisation of the data brought forth from interviews, identifying themes and patterns that emerge, thus facilitating the broader trends within the data (Chang & Wang, 2021).

For the qualitative phase, the researcher independently designed and conducted all semi-structured interviews, managed participant communications, and completed transcription, coding, and inductive content analysis using a phenomenological approach. The analysis was guided by the principles outlined by Moustakas (1994) and Elo and Kyngas (2008). Allowing themes to emerge from participants' lived experiences. NVivo software was used to manage, organise and systematically code the qualitative data, enhancing transparency, rigour, and traceability in the analytic process. This ensured consistency and continuity between the quantitative and qualitative phases while maintaining the study's mixed-methods integrity.

Ensuring Validity, Reliability, and Ethical Rigor

Ethics approval for this project was sought from the School of Pharmacy Research Ethics Committee (REC) prior to the first data set being collected: application number PHAEC/12-71. All participants were provided with detailed participant information sheets and gave informed consent before participating. Participation was entirely voluntary, and confidentiality was ensured by anonymising identifiable information in all data files and transcripts in accordance with GDPR (GDPR, 2018).

The interview schedule underwent face validation by a senior academic colleague experienced in qualitative pharmacy education research to ensure clarity, relevance, and alignment with the study objectives. Minor refinements were made to the wording and order of questions following feedback to improve flow and comprehensibility.

Triangulation between the quantitative (DIT-2) and qualitative (interview) findings enhanced the overall validity of the study by enabling cross-verification of moral reasoning outcomes with participants' self-reported experiences. This integrated approach provided a more robust understanding of moral development in pharmacy practice.

Integration of Findings

The integration of qualitative and quantitative findings in this study followed an explanatory sequential design. This is demonstrated in the two phase approach where the quantitative findings from the administration of the DIT-2 require more explanation and context, therefore a qualitative phase of semi-structured interviews were carried out (Rao & Shiyanbola, 2022). Table 3.1 illustrates the data-collection in the longitudinal mixed-methods design. This is a common design used in pharmacy practice research where more context is required following quantitative research (Rao, Maurer, Meyer, Zhang, & Shiyanbola, 2020) (Johnson, Jacobson, Gazmararian, & Blake, 2010)

The qualitative phase of this study focussed on exploring the regressive step seen in the participants DIT-2 indices between newly qualified level and established practitioner level. It is important to explore this phenomenon in order to adequately provide recommendations on how to support early career pharmacists in moral development.

Table 3.2 Timeline of DIT-2 administrations, and qualitative data collection illustrating the longitudinal mixed-methods design (2008-2022).

Year	Participant Stage	Data Collection	Scoring Process	Researcher Involvement	Context
2008	Year 1 MPharm students	Initial administration of DIT-2 via SurveyMonkey	Submitted for scoring	Distributed the survey, supervised completion, and prepared anonymised files for scoring	Established baseline moral reasoning
2009	Year 2 MPharm students	Repeat DIT-2 administration	Submitted for scoring	Managed data collation and secure file transfer	Continuity maintained using unique participant identifiers
2010	Year 3 MPharm students	Third DIT-2 administration	Submitted for scoring	Ensured consistency of dataset formatting and identifiers	Supported longitudinal tracking

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2011	Year 4 MPharm students Year 1 MPharm students	Fourth administration (final undergraduate round)	Submitted for scoring	Handled anonymisation and secure upload	Marked completion of undergraduate phase
2014	Newly Qualified Pharmacists (NQ)	DIT-2 completed via email invitation	Submitted for scoring	Coordinated participant follow-up and compiled updated dataset	Captured moral reasoning at point of professional entry
2019	Established Practitioners (EP)	Final DIT-2 administration	Submitted for scoring	Coordinated participant follow-up and compiled updated dataset	Explores longitudinal moral development after practice exposure
2022	Practising Pharmacist	Semi-structured interviews	-	Conducted all interviews, transcription, and thematic analysis.	Qualitative follow-up delayed due to COVID-19 and ethics timeline

Summary

This chapter has outlined the rationale for the adoption of a mixed-methods research methodology. It described the process through which data was collected and the analysis methods selected for both quantitative and qualitative data. The chapter highlights how the methods selected will facilitate the exploration of the research questions set out. The subsequent chapter will present the quantitative data and summarise key findings from the results.

Chapter Four: Quantitative Results

Descriptive statistics

Level 1

Sample

There were 146 students undertaking Level 1 of the Master of Pharmacy degree programme in the 2008-'09 academic year, of which 144 were new entrants and two were retaking the year because of previous failures. Only first-time entrants were invited to participate. 128 students (89%) took part in the survey. Three were parsed due to non-completion or failing the consistency checks. 125 (87%) of students at Level 1 completed the questionnaire.

N2 score

The N2 score for the sample was normally distributed ($W = 0.977$, $n = 125$; $p = 0.033$). The sample was stratified by age, sex, religious affiliation and education level.

Two outliers were observed in the data for males ($n = 47$), as assessed by inspection of a boxplot for values greater than 1.5 box-lengths from the edge of the box. No outliers were present in female data ($n = 78$). N2 scores were not normally distributed, for either males ($p = 0.019$) or females ($p = 0.040$), as assessed by Shapiro-Wilk's test. Consequently, the Mann-Whitney U test was employed. N2 score was not statistically significantly different between males (Median = 20.96) and females (Median = 22.45), $U = 2000$, $z = 0.851$, $p = 0.395$.

Two outliers, one each for those identifying their religious affiliation as Hindu, and those asserting "no preference or none" were observed. N2 scores were normally distributed for all religious subgroups except Muslims ($p = 0.015$), as assessed by Shapiro-Wilk's test. Again, a non-parametric (Kruskal-Wallis) test was employed. N2 score was not statistically significantly different between any religious group, $\chi^2(6) = 3.444$, $p = 0.751$.

Median N2 scores are given in **Table 4.1**.

Table 4.1: Median N2 scores by religious affiliation at Level 1.

Religious affiliation	n	Median N2 score
None, no preference	5	34.1853
Christian	26	23.4797
Muslim	43	20.2746
Hindu	27	22.0585
Sikh	15	20.9586
Other	3	11.1633
Prefer not to say	6	25.6435
Total	125	22.0585

There were no outliers any educational groups. Only one respondent was in possession of a Master's degree: however, N2 scores were normally distributed only for the further education group ($p = 0.030$), as assessed by Shapiro-Wilk's test. As before, the Kruskal-Wallis test was applied. N2 score was not statistically significantly different between groups with different educational backgrounds, $\chi^2(4) = 4.365$, $p = 0.359$. Median N2 scores are given in **Table 4.2**.

Table 4.2: Median N2 scores by educational attainment at Level 1.

Educational Level	n	Median N2 score
High school or equivalent	28	18.4361
Further education college or equivalent	83	20.9586
Bachelor's degree	10	27.0033
Master's degree	1	27.1603
Other	3	26.6666
Total	125	22.0585

Of 125 participants, 28 were educated to high school level or equivalent, 83 had attended a college of further education, ten held a Bachelor's degree, and one held a Master's degree. No student has previously completed a doctoral qualification, and three identified their highest educational level as "other"

The age strata differ significantly in size, from a single respondent who is under 18 years of age to 110 in the 18-25 age range, so the Kruskal-Wallis test was applied. There were seven participants in each of the 26-30 and 31-40 age ranges. N2 score was not statistically significantly different between age groups, $\chi^2(3) = 4.286$, $p = 0.232$. Median N2 scores are given in **Table 4.3**.

Table 4.3: Median N2 scores by educational attainment at Level 1.

Age	n	Median N2 score
Under 18	1	6.6334
18-25	110	21.1033
26-30	7	22.2269
31-40	7	27.1603
Total	125	22.0585

P score

P score was normally distributed only for the 18-25-year-old group ($n = 111$; $p = 0.006$), the group whose level of prior educational attainment was further education ($n = 83$; $p = 0.008$), and two of the religious groups, namely Muslims ($n = 44$; $p = 0.022$) and those expressing none or no-preference ($n = 5$; $p = 0.005$), as assessed by Shapiro-Wilk's test. P score was not statistically significantly different between males and females ($U = 2097$; $z = 1.215$; $p = 0.224$), different educational groups, ($\chi^2(4) = 2.029$; $p = 0.719$), or

different religious groups ($\chi^2(6) = 5.770$; $p = 0.449$). Neither was there any difference between different age groups, ($\chi^2(3) = 2.005$; $p = 0.571$). Indeed, the median P score for each age group was 22, with the exception of the under-18 group which had a single member, who scored 8. The median P score for the cohort was also 22.

Maintaining Norms

Maintaining Norms was normally distributed only for the group describing its religious affiliation as “other” ($n = 8$; $p = 0.001$), as assessed by Shapiro-Wilk's test. Maintaining Norms was not affected by age ($\chi^2(3) = 0.887$; $p = 0.829$), religion ($\chi^2(6) = 4.269$; $p = 0.640$), education ($\chi^2(4) = 2.208$; $p = 0.698$), or sex ($U = 2015$; $z = 0.801$; $p = 0.423$).

Personal Interest

Personal Interest was normally distributed only for the group describing its religious affiliation as Hindu ($n = 27$; $p = 0.017$). The score was not significantly different between males and females ($U = 1,794$; $z = -0.318$; $p = 0.750$), age ($\chi^2(3) = 3.523$; $p = 0.318$), level of education ($\chi^2(4) = 3.771$; $p = 0.438$), or religious beliefs ($\chi^2(6) = 2.349$; $p = 0.885$).

4. Quantitative Results

Table 4.4: Median P scores, Maintaining Norms and Personal Interest measures at Level 1.

Group	n	P score	MN	PI
Male	47	20	32	36
Female	78	24	36	32
Under 18	1	8	40	44
18-25	110	22	34	34
26-30	7	22	44	28
31-40	7	22	36	28
High school or equivalent	28	21	39	32
Further education college or equivalent	83	22	34	34
Bachelor's degree	10	29	45	25
Master's degree	1	22	30	30
Other education	3	23	30	44
No religious preference	5	30	32	42
Christian	26	25	38	30
Muslim	43	20	38	34
Hindu	27	22	30	30
Sikh	15	20	32	38
Other religion	3	14	46	32
Prefer not to say (religion)	6	28	33	35
Total	125	22	34	32

4. Quantitative Results

Table 4.5: Summary of Schema Indices at Level 1. Normally distributed indices highlighted in grey.

Variable	n	Mean	SD	Median	95% Confidence Intervals	Minimum and Maximum	Range
N2	125	22.7	11.9	22.1	20.61 to 24.81	0.65 to 55.36	54.7
P	125	23.1	13	22	20.81 to 25.41	0 to 64	64
MN	125	36.1	13.4	34	33.75 to 38.48	8 to 70	62
PI	125	33.3	12.1	32	31.18 to 35.44	6 to 60	54

Religious Orthodoxy

Religious orthodoxy score was normally distributed for both males ($n = 47$; $p < 0.001$) and females ($n = 79$; $p < 0.001$). No outliers were observed. There was homogeneity of variances for males and females, as assessed by Levene's Test for Equality of Variances ($p = 0.434$). An independent-samples t-test was therefore run to determine if there were differences between males and females. RO score was higher in female students ($M = 5.15$, $SD = 2.80$) than in male students ($M = 4.72$, $SD = 2.58$). Female score was 0.43, 95% CI [-0.54 to 1.40] higher than male score. There was no statistically significant difference in mean RO score between males and females, $t(124) = 0.873$, $p = 0.384$.

There was no statistically significant difference between different age groups, ($\chi^2(3) = 2.787$; $p = 0.426$), or different educational backgrounds ($\chi^2(4) = 6.004$; $p = 0.199$). However, there was a significant difference between the different religious groups ($\chi^2(6) = 17.895$; $p = 0.006$). (Appendix 1.1 & Appendix 1.2)

Humanitarian/Liberalism

HL score was normally distributed for both males ($n = 47$; $p < 0.001$; $M =$

1.45 $\pm$ 0.17) and females ($n = 79$; $p < 0.001$; $M = 1.49 \pm 0.14$)): however, a number of outliers were observed in each group. This was also true of age categories. The distribution of HL score was the same across categories of gender ($U = 1884$; $z = 0.141$; $p = 0.888$), age ($\chi^2(3) = 4.750$; $p = 0.191$), and religion ($\chi^2(6) = 3.374$; $p = 0.761$). However, there was a significant difference on HL score across categories of education ($\chi^2(4) = 12.379$; $p = 0.015$). HL score significantly higher in students whose highest level of education was further education college compared to those who had attended high school or equivalent ($p = 0.021$).

Anti-social score

A-score was normally distributed across all groups, with the exception of the 31-40-year old age demographic ($n = 7$; $p = 0.097$). Outliers were observed in several categories. Males did score higher than females, but the difference in median values was not significant ($\chi^2(3) = 4.750$; $p = 0.191$). The distribution of A-score was unaffected by age ($\chi^2(3) = 3.804$; $p = 0.283$), education ($\chi^2(4) = 4.676$; $p = 0.322$), or religion ($\chi^2(6) = 2.188$; $p = 0.902$).

Reliability Indices

Reliability indices (U , M , $NumCD$) were not subject to between-group comparisons. Global descriptive statistics, which were within accepted norms (Bebau & Thoma, 2003), are recorded in Appendix 1.3.

Level 2

Sample

131 students (91%) progressed from Level 1 to Level 2 of the programme in 2009-'10. They were joined by thirteen students from earlier cohorts who were repeating the year. Again, these repeating students did not participate in the study. 112 students (85%) took part in the survey. Two were parsed due to non-completion or failing the consistency checks. 110 (84%) of students at Level 2 completed the questionnaire.

4. Quantitative Results

Identical calculations to those completed on the Level 1 data were performed at Level 2. Results are presented in tabular form in the subsequent sections.

Moral Development Indices

The assumption of normality was tested as before, and outliers were parsed: however, given that all but one demographic group at Level 1 failed to meet one or both of the necessary assumptions, the decision was taken to complete all further between-group comparisons using non-parametric testing method; Wilcoxon signed-rank test.

Table 4.6: Summary of schema indices at Level 2. Normally distributed indices highlighted in grey.

Variable	n	Mean	SD	Median	95% Confidence Intervals	Minimum and Maximum	Range
N2	109	26.1	13.4	24.4	23.57 to 28.68	-2.00 to 66.42	68.4
P	110	27.3	13.8	24.0	24.56 to 29.82	2 to 68	66.0
MN	110	35.0	12.2	34.0	32.81 to 37.46	4 to 70	66.0
PI	110	29.9	11.7	30.0	27.71 to 32.18	6 to 62	56.0

Table 4.7: Median schema indices at Level 2 sorted by gender.

Gender		Score			
		N2*	P	MN	PI
Male (n = 39*/40)	Median	23.44	23	30	34
	Range	47.74	42	50	48
Female (70)	Median	26.15	26	36	26
	Range	68.42	66	58	48
Total (109*/110)	Median	24.38	24	34	30
	Range	68.42	66	66	56

4. Quantitative Results

Results of median schema indices at Level 2 were also analysed similar to data in Level 1, they were sorted by age (Appendix 1.4), education level (Appendix 1.5) and religion (Appendix 1.6)

N2, P and MN scores were unaffected by gender, age, previous education or religion (**Table 4.8**). In contrast to Level 1, PI was significantly higher in males. PI was not significantly different between any other groups.

Table 4.8: Results of between-group testing carried out on Level 2 schema scores using (a) Mann-Whitney U test; and (b) Kruskal-Wallis test.

Significant results highlighted in grey.

(a)

Factor		U	z	p
Gender	N2	1614	1.192	0.233
	P	1670	1.396	0.163
	MN	1731	1.77	0.077
	PI	945.5	-3.008	0.003

(b)

Factor		χ^2	df	p
Age	N2	0.486	2	0.784
	P	1.066		0.587
	MN	1.978		0.372
	PI	0.052		0.974
Education	N2	0.629	4	0.960
	P	3.129		0.536
	MN	3.215		0.522
	PI	2.307		0.680
Religion	N2	3.455	6	0.750
	P	4.115		0.661
	MN	9.800		0.133
	PI	5.000		0.544

Proxy Indices

Proxy indices were treated as ordinal data.

HL score was unaffected by gender, age, religion or education (Appendix 1.11). A-score was significantly higher in the 31-40 age group (Median = 4) compared to the 18-25 (Median = 1) and 26-30 (Median = 0) groups (Appendix 1.8, Appendix 1.11).

RO score was significantly higher in females (Median = 6) than males (Median = 4) (Appendix 1.9, Appendix 1.11), and there was a significant difference between the different religious groups ($\chi^2(6) = 13.303$; $p = 0.038$). Pairwise comparisons were performed using Dunn's (1964) procedure with a Bonferroni correction for multiple comparisons. RO score was significantly higher in Muslims (Median = 6.5) compared to both Sikhs (Median = 4.5; $p = 0.036$) and those who preferred not to disclose their religious affiliation (Median = 3; $p = 0.005$).

Reliability Indices

Reliability indices were not subject to between-group comparisons. Global descriptive statistics, which were within accepted norms (Bebau & Thoma, 2003), are recorded in (Appendix 1.12).

Level 3

Sample

122 students (93%) progressed from Level 2 to Level 3 of the programme in 2010-'11. Nine additional students re-enrolled but did not participate in the study. 105 students (86%) took part in the survey. Nine were parsed due to non-completion or failing the consistency checks. 94 (83%) of students at Level 3 completed the questionnaire. Summary of schema indices at Level 3 included in Appendix 1.13.

Moral Development Indices

Table 4.9: Median schema indices at Level 3 sorted by gender.

Gender		Score			
		N2	P	MN	PI
Male (n = 32)	Median	23.38	24	34	34
	Range	45.74	40	52	44
Female (62)	Median	29.79	30	38	24
	Range	51.97	66	64	70
Total (94)	Median	26.80	26	36	28
	Range	53.76	66	64	70

N2, P and MN scores were unaffected by gender, age, previous education or religion (Appendix 1.17). As at Level 2, PI was significantly higher in males (Median = 34) than in females (Median = 24) ($p = 0.003$). PI was not significantly different between any other groups.

Proxy Indices

HL score was unaffected by age, or education (Appendix 1.22). It was, however, significantly higher in atheists/agnostics (Median = 3) than in any of the other declared religious groups ($\chi^2(6) = 14.238$; $p = 0.027$) (Appendix 1.21, Appendix 1.22). Additionally, males (Median = 2) scored significantly higher than females (Median = 1) (Appendix 1.19).

As at Level 2, RO score was significantly higher in females (Median = 6) than males (Median = 4) (Appendix 1.18; Appendix 1.22), and there was a significant difference between the different religious groups ($\chi^2(6) = 17.318$; $p = 0.008$). Pairwise comparisons were again performed. RO score was significantly higher in Muslims (Median = 9) compared to Sikhs (Median = 4; $p = 0.031$), nonbelievers (Median = 1.5; $p = 0.004$) and those who preferred not to disclose their religious affiliation (Median = 3; $p = 0.005$).

Reliability Indices

Reliability indices are recorded in Appendix 1.23.

Level 4**Sample**

116 students (95%) progressed from Level 3 to Level 4 of the programme in 2011-'12. A further twelve students were re-enrolled from earlier cohorts.

112 students (97%) took part in the survey. Twenty were parsed due to non-completion or failing the consistency checks. 92 (79%) of students at Level 4 completed the questionnaire.

Moral Development Indices

Table 4.10: Summary of schema indices at Level 4.

Variable	n	Mean	SD	Median	95% Confidence Intervals	Minimum and Maximum	Range
N2	93	27.39	12.65	26.62	24.79 to 30.00	0.23 to 63.26	63.03
P	93	28.13	12.22	28	25.61 to 30.65	4 to 60	56
MN	93	34.80	12.51	34	32.21 to 37.37	10 to 78	68
PI	93	30.52	12.57	30	27.93 to 33.10	4 to 58	54

4. Quantitative Results

Table 4.11: Median proxy indices at Level 4 sorted by gender.

Gender		Score			
		N2	P	MN	PI
Male (n = 34)	Median	26.56	28	34	35
	Range	41.20	34	42	44
Female (59)	Median	27.07	28	34	30
	Range	60.76	56	68	44
Total (93)	Median	26.62	28	34	30
	Range	63.03	56	68	54

Reflecting what was observed at Levels 2 and 3; N2, P and MN scores were unaffected by gender, age, previous education or religion (**Appendix 1.27**). Also, as at Levels 2 and 3, PI was significantly higher in males (Median = 35) than in females (Median = 30)($p = 0.043$). PI was not significantly different between any other groups.

Proxy Indices

Mirroring almost exactly the results from Level 3, HL score was unaffected by age, or education (**Appendix 1.29** and **Appendix 1.30**). It was, however, significantly higher in atheists/agnostics (Median = 3) than in any of the other declared religious groups ($\chi^2(6) = 13.398$; $p = 0.037$) (**Appendix 1.26**). Additionally, males scored significantly higher than females (**Appendix 1.28**).

In common with Levels 2 and 3, RO score was significantly higher in females (Median = 5) than males (Median = 4), and there was a significant difference between the different religious groups ($\chi^2(6) = 17.318$; $p = 0.008$). Pairwise comparisons were again performed. RO score was significantly higher in nonbelievers (Median = 1) compared Muslims (Median = 6; $p = 0.004$), Christians (Median = 5; $p = 0.042$) and those who preferred not to disclose their religious affiliation compared to (Median = 6; $p = 0.049$). Sikhs (Median = 4) and Hindus (Median = 3) also had higher median RO scores;

4. Quantitative Results

though the difference was shown not to be statistically significant,

Reliability Indices

Reliability indices are recorded in **Appendix 1.33**.

Newly Qualified

Sample

123 students (95%) successfully completed the forth year of the MPharm programme in 2012.43 students (35%) took part in the survey. No raw data were parsed due to non-completion or failing the consistency checks. It is not known how many students passed the Registration exam, therefore a percentage is not given.

Moral Development Indices

Table 4.12: Summary of schema indices at Newly Qualified Level. Normally distributed indices highlighted in grey.

Variable	n	Mean	SD	Median	95% Confidence Intervals	Minimum and Maximum	Range
N2	43	41.91	12.32	40.53	38.12 to 45.70	24.82 to 67.59	42.77
P	43	38.37	12.18	40	34.62 to 42.12	14.58 to 65	50.42
MN	43	37.94	9.62	36.67	34.53 to 40.46	21.67 to 63.33	41.66
PI	43	17.58	9.91	18.33	14.53 to 20.63	0 to 33.33	33.33

4. Quantitative Results

Table 4.13: Median proxy indices at Newly Qualified Level sorted by gender.

Gender		Score			
		N2	P	MN	PI
Male (n = 19)	Median	46.07	41.67	35	18.33
	Range	38	48.33	29.44	31.67
Female (24)	Median	35.56	34.17	38.12	17.50
	Range	34.98	43.75	41.66	33.33
Total (43)	Median	40.53	40	36.67	18.33
	Range	42.77	52.42	41.66	33.33

Table 4.14: Median proxy indices at Newly Qualified Level sorted by age.

Age		Score			
		N2	P	MN	PI
18-25 (n = 39)	Median	39.84	40	36.67	18.33
	Range	42.77	50.42	41.66	33.33
26-30 (3)	Median	50.52	48.33	28.33	21.67
	Range	30.21	26.67	16.67	21.67
31-40 (1)	Median	46.09	36.67	45	16.67
	Range	46.09	36.67	45	16.67
Total (43)	Median	40.53	40	36.67	18.33
	Range	42.77	50.42	41.66	33.33

4. Quantitative Results

Table 4.15: Median proxy indices at Newly Qualified Level sorted by education.

Educational Level		Score			
		N2	P	MN	PI
High school or equivalent (n = 15)	Median	35.53	40	33.33	21.67
	Range	34.35	43.75	35.52	33.33
Further education college or equivalent (22)	Median	42.32	40	36.67	16.67
	Range	41.31	40	41.66	33.33
Bachelor's degree (4)	Median	49.25	45.83	40.84	15.84
	Range	29.80	21.67	16.67	20
Master's degree (1)	Median	27.11	20	36.67	30
	Range				
Other (1)	Median	26.17	26.67	55	15
	Range				
Total (43)	Median	40.53	40	36.67	18.33
	Range	42.77	50.42	41.66	33.33

4. Quantitative Results

Table 4.16: Median proxy indices at Newly Qualified Level sorted by religion.

Religion		Score			
		N2	P	MN	PI
None, no preference (n = 3)	Median	30	30	41.67	14.58
	Range	25.01	28.75	7.09	23.34
Christian (12)	Median	47.75	40.84	35	17.50
	Range	31.46	30.26	20	33.33
Muslim (13)	Median	33.62	33.33	35	20
	Range	33	30.88	40.52	28.34
Hindu (9)	Median	35.53	28.33	40	21.67
	Range	42.73	48.33	33.33	31.67
Sikh (4)	Median	46.37	47.17	32.50	10.86
	Range	16.07	18.33	23.33	10
Prefer not to say (2)	Median	44.28	42.50	33.36	17.5
	Range	7.50	5	13.33	5
Total (43)	Median	40.53	40	36.67	18.33
	Range	42.77	50.42	41.66	33.33

4. Quantitative Results

Table 4.17: Results of between-group testing carried out on NQ Level schema scores using (a) Mann-Whitney U test; and (b) Kruskal-Wallis test. Significant results highlighted in grey.

(a)

Factor		U	z	p
Gender	N2	173	-1.345	0.179
	P	180	-1.175	0.240
	MN	212	-0.392	0.695
	PI	190	-0.931	0.352

(b)

Factor		χ^2	df	p
Age	N2	0.569	2	0.753
	P	0.432		0.806
	MN	2.106		0.349
	PI	0.497		0.780
Education	N2	5.506	4	0.239
	P	4.660		0.324
	MN	3.072		0.546
	PI	3.025		0.554
Religion	N2	4.566	4	0.335
	P	5.667		0.225
	MN	3.574		0.467
	PI	2.494		0.646

Proxy Indices

Proxy indices are recorded in **Appendix 1.34** to **Appendix 1.38**.

Reliability Indices

Reliability indices are recorded in **Appendix 1.39**.

Established Practitioner**Sample**

The same group of 123 students who successfully completed the MPharm programme in 2012, were invited to complete the final administration of the DIT-2 in 2019. 11 students (9%) took part in the survey. No raw data were parsed due to non-completion or failing the consistency checks.

Moral Development Indices

Table 4.18: Summary of schema indices at Established Practitioner Level.

Variable	n	Mean	SD	Median	95% Confidence Intervals	Minimum and Maximum	Range
N2	11	29.95	12.37	28.25	21.58 to 39.15	10.52 to 45.44	35.03
P	11	30.36	13.08	34	23.88 to 41.21	10 to 50	40
MN	11	32	11.10	33	24.54 to 39.46	14 to 56	32
PI	11	32.55	12.90	34	21.64 to 38.26	14 to 52	38

4. Quantitative Results

Table 4.19: Median proxy indices at Established Practitioner Level sorted by gender.

Gender		Score			
		N2	P	MN	PI
Male (n = 5)	Median	27.17	34	24	40
	Range	35.03	36	22	30
Female (6)	Median	35.04	33	33	29
	Range	31.93	32	32	34
Total (11)	Median	28.52	34	33	34
	Range	35.03	40	32	38

Table 4.20: Median proxy indices at Established Practitioner Level sorted by age.

Age		Score			
		N2	P	MN	PI
18-25 (n = 10)	Median	30.14	34	33	29
	Range	35.03	38	32	34
26-30 (1)	Median	22.24	10	20	52
	Range				
Total (11)	Median	28.25	34	33	34
	Range	35.03	40	32	38

4. Quantitative Results

Table 4.21: Median proxy indices at Established Practitioner Level sorted by educational level.

Educational Level		Score			
		N2	P	MN	PI
High school or equivalent (n =2)	Median	34.82	39	29	28
	Range	21.46	14	10	12
Further education college or equivalent (6)	Median	27.71	29	37	30
	Range	33.40	38	32	38
Bachelor's degree (1)	Median	32.03	34	22	40
	Range				
Master's degree (1)	Median	41.82	34	46	14
	Range				
Other (1)	Median	22.24	10	20	52
	Range				
Total (11)	Median	28.52	34	33	34
	Range	35.03	40	32	38

4. Quantitative Results

Table 4.22: Median proxy indices at Established Practitioner Level sorted by religion.

Religion		Score			
		N2	P	MN	PI
None, no preference (n = 3)	Median	27.17	34	32	34
	Range	7.94	8	12	18
Christian (1)	Median	22.24	10	20	52
	Range				
Muslim (4)	Median	35.04	29	38	30
	Range	31.93	32	32	34
Sikh (2)	Median	25.04	29	33	34
	Range	35.03	34	18	24
Prefer not to say (1)	Median	41.88	34	42	20
	Range				
Total (11)	Median	28.52	34	33	34
	Range	35.03	40	32	38

4. Quantitative Results

Table 4.23: Results of between-group testing carried out on EP Level schema scores using (a) Mann-Whitney U test; and (b) Kruskal-Wallis test.

(a)

Factor		U	z	p
Gender	N2	12	-0.548	0.584
	P	14	-0.184	0.854
	MN	8.5	-1.192	0.233
	PI	10	-0.915	0.360

(b)

Factor		χ^2	df	p
Age	N2	0.917	1	0.338
	P	0.413		0.521
	MN	0.917		0.338
	PI	1.320		0.251
Education	N2	3.606	4	0.462
	P	1.757		0.780
	MN	2.933		0.569
	PI	4.950		0.292
Religion	N2	2.261	4	0.688
	P	1.337		0.855
	MN	2.261		0.688
	PI	2.261		0.688

Proxy Indices

Proxy indices are recorded in **Appendix 1.40** to **Appendix 1.44**.

Reliability Indices

Reliability indices are recorded in **Appendix 1.45**.

Considerations of Statistical Significance and Reliability

It is acknowledged that the final dataset at the Established Practitioner level

($n=11$) limits the statistical power of inferential analyses. Given the small sample, observed trends should be interpreted with caution, as wide confidence intervals indicate reduced precision, and apparent differences may be attributable to chance rather than true population effects.

Nonetheless, the directional patterns align with earlier phases, suggesting that while the magnitude of change cannot be generalised, the trend provides meaningful insight into long-term moral reasoning trajectories.

Progression

The first data set was collected in 2008, when the cohort were in their first year of the MPharm programme. There were 146 students registered on the programme in 2008-09, of which 125 (86%) completed the questionnaire. The response rate progressively decreased for each subsequent distribution as the students progressed through their degree. Nevertheless, the response rate remained high while the students remained in formal education.

After graduation, however, participation rates declined markedly. Of the 130 participants who agreed to be contacted following graduation, 30% responded to the follow-up questionnaire conducted one year after qualification, and 8% responded to the final administration five years later.

Medians and standard deviations were calculated and compared using pairwise comparison with the Wilcoxon signed-rank test (Wilcoxon, 1945) to which the Bonferroni correction was applied (Dunn, 1961) as this methodology is very common, especially in studies evaluating the time course of an effect (Williams et al., 2018).

N2 score

Global

The Wilcoxon signed-rank test was run to determine if there were

differences in N2 score during the MPharm degree and twice once the participants were in professional practice. 3 participants completed the questionnaire in full on all six occasions, however, using the Wilcoxon signed-rank test to determine if there are statistically significant differences between the groups at various levels.

A series of 15 Wilcoxon tests were run between all levels within the groups. These tests revealed statistical differences between six of the comparisons (**Table 4.24**). There were statistical significances seen between Level 1 (Mdn = 22.07) and Level 3 (Mdn = 26.80)($p = 0.0025$), Level 4 (Mdn = 26.62)($p = 0.011$), and NQ (Mdn = 40.53)($p = 0.000$). There were also statistically significant differences between Level 2 (Mdn = 24.38) and NQ (Mdn = 40.53)($p = 0.000$), Level 3 and NQ ($p = 0.000$), and Level 4 and NQ ($p = 0.000$). These observations are summarised in **Table 4.24**.

Comparisons were performed with a Bonferroni correction for multiple comparisons.

4. Quantitative Results

Table 4.24: Multiple comparison data for N2 score at each of Levels 1 to EP of the study.

Level	Level	n	Sig	Bonferroni
1	2	105	0.058	0.874
1	3	84	0.002	0.025
1	4	73	0.001	0.011
1	5	35	0.000	0.000
1	6	7	0.499	7.484
2	3	82	0.149	2.228
2	4	69	0.115	1.727
2	5	32	0.000	0.000
2	6	6	0.173	2.594
3	4	72	0.427	6.407
3	5	36	0.000	0.000
3	6	6	0.249	3.733
4	5	43	0.000	0.000
4	6	11	0.424	6.354
5	6	5	0.686	10.287

4. Quantitative Results

N2 score did increase from Levels 1 to 2, and from 2 to 3, but the increase was not statistically significant. Neither was the slight drop in scores from Level 3 to Level 4. There was a large increase between Level 4 and NQ ($p = 0.000$). There was a large drop between NQ and EP Levels (**Figure 4.1**). The results of the stepwise stepdown are summarised in **Figure 4.2**.

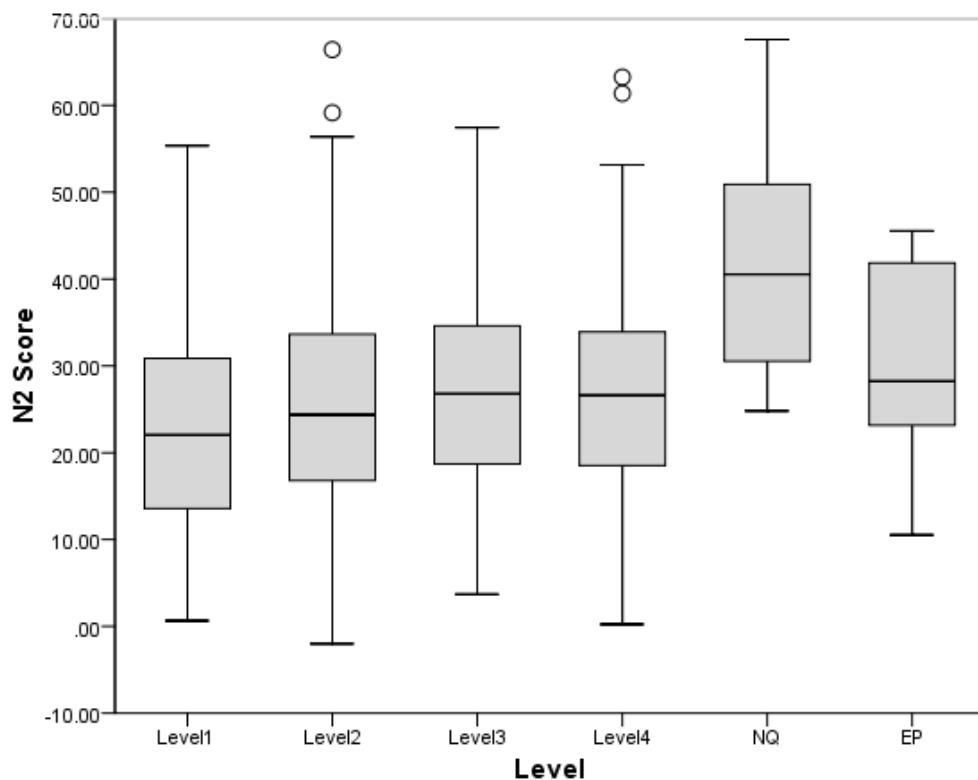


Figure 4.1: Boxplot of N2 scores at each level during the study.

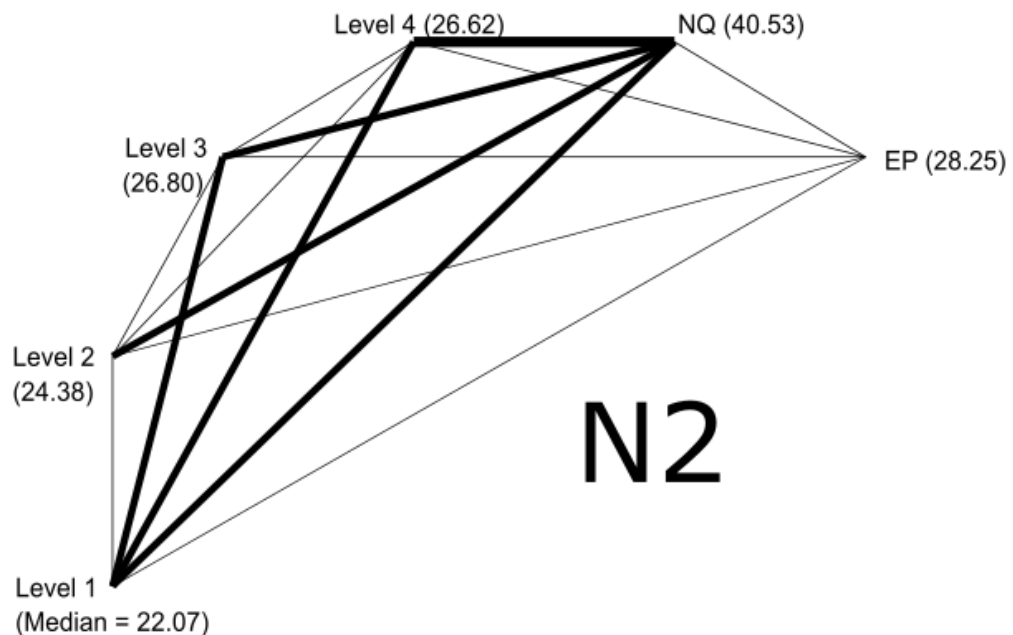


Figure 4.2: Results of the N2 global stepwise stepdown. Bold lines represent a statistically significant difference.

Gender

Across all administrations of the questionnaire, the number of female participants was higher than the number of males. The first data set included responses from 47 male and 78 female participants.

N2 score increased in male students from Level 1 (Mdn = 21.11) to Level 2 (Mdn = 23.45), and (following a slight drop between Levels 2 & 3) again from Level 3 (Mdn = 23.26) to Level 4 (Mdn = 26.56), however, the differences were not statistically significant. There was a statistical difference when comparing scores after formal studies were completed (**Table 4.25**). There were statistically significant differences between Level 1 and NQ ($p = 0.015$), Level 2 and NQ ($p = 0.015$), Level 3 and NQ ($p = 0.030$) then also between Level 4 and NQ ($p = 0.000$). There was also a large decrease in the N2 score after NQ at EP Level.

4. Quantitative Results

Table 4.25: Multiple comparison data for N2 score for male participants at each level.

Level	Level	N	Sig	Bonferroni
1	2	38	0.357	5.355
1	3	26	0.032	0.480
1	4	23	0.121	1.815
1	5	14	0.001	0.015
1	6	4	0.465	6.975
2	3	27	0.486	7.290
2	4	24	0.241	3.615
2	5	14	0.001	0.015
2	6	3	0.285	4.275
3	4	24	0.391	5.865
3	5	13	0.002	0.030
3	6	3	0.285	4.275
4	5	19	0.000	0.000
4	6	5	0.686	10.290
5	6	2	0.655	9.825

Within the group of females that took part in the study, the N2 scores followed a similar incremental pattern. With statistically significant differences between the same levels but also in addition between Level 1 and Level 4 ($p = 0.045$) as shown in **Table 4.26**. However, there was only an extremely small decrease in N2 in the female group between Level NQ (35.56) and EP (35.04).

Generally, throughout the duration of the study, the female group had a higher N2 all points during their undergraduate studies, and also had larger increments between years, though not statistically significant. However, at NQ Level, the male group (46.07) had a higher N2 than the females (35.56).

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Following this, a much larger decline in the male N2 at EP, while the female group stayed similar. The results of the stepwise stepdown are summarised in **Figure 4.3**

Table 4.26: Multiple comparison data for N2 score for female participants at each level.

Level	Level	n	Sig	Bonferroni
1	2	67	0.099	1.485
1	3	58	0.016	0.240
1	4	50	0.003	0.045
1	5	21	0.000	0.000
1	6	3	0.109	1.635
2	3	55	0.224	3.360
2	4	45	0.247	3.705
2	5	18	0.002	0.030
2	6	3	0.285	4.275
3	4	48	0.754	11.310
3	5	23	0.001	0.015
3	6	3	0.593	8.895
4	5	24	0.000	0.000
4	6	6	0.600	9.000
5	6	3	1.000	15.000



Age

N2 scores increased significantly for students who were in the 18-25 age range on the day the first data set was collected ($n = 110$) as they progressed through the programme. Analysis revealed statistically significant differences in N2 score between Level 1 (Mdn = 21.25) and Level 3 (Mdn = 26.61) ($p = 0.015$), and from Level 1 to Level 4 (Mdn = 26.62) ($p = 0.000$) (**Table 4.27**). There were statistically significant differences between Level 1 and NQ (Mdn = 39.46) ($p = 0.000$), Level 2 and NQ ($p = 0.000$), Level 3 and NQ ($p = 0.0$) then also between Level 4 and NQ ($p = 0.000$). There was also a large decrease in the N2 score after NQ at EP Level. The results of the stepwise stepdown are shown in **Figure 4.4**.

Table 4.27: Multiple comparison data for N2 score for participants aged 18-25 years at each level.

Level	Level	n	Sig	Bonferroni
1	2	95	0.039	0.585
1	3	74	0.001	0.015
1	4	63	0.000	0.000
1	5	32	0.000	0.000
1	6	7	0.499	7.485
2	3	73	0.103	1.545
2	4	60	0.084	1.260
2	5	30	0.000	0.000
2	6	6	0.173	2.595
3	4	62	0.408	6.120
3	5	33	0.000	0.000
3	6	6	0.249	3.735
4	5	40	0.000	0.000
4	6	11	0.424	6.360
5	6	5	0.686	10.290

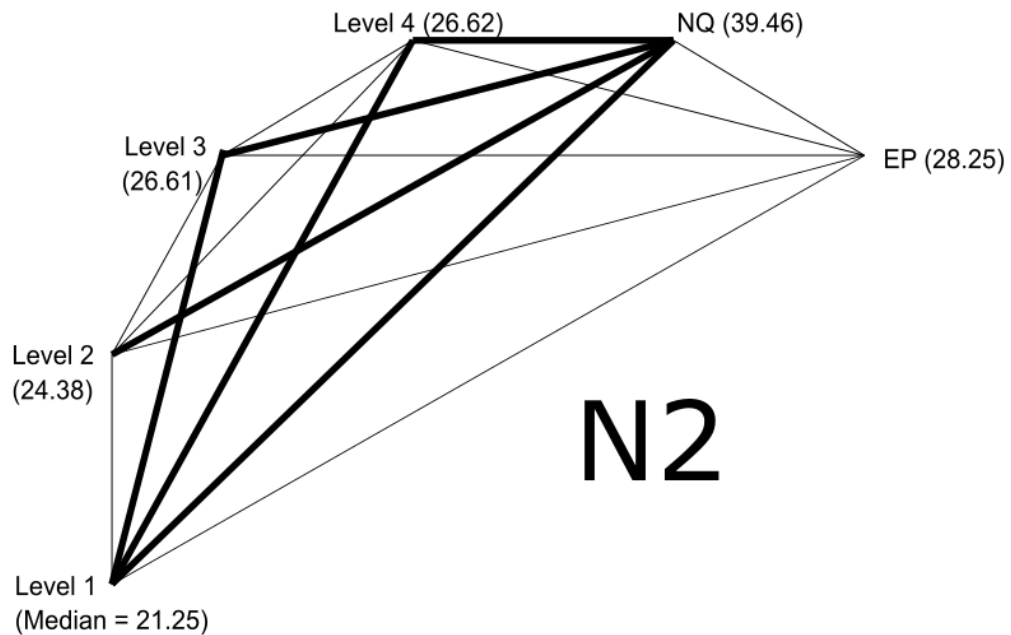


Figure 4.4: Results of the N2 18-25 years stepwise stepdown. Bold lines represent a statistically significant difference.

N2 scores with participants aged 26-30 years increased through the study period, though without any statistically significant differences. Similar to other groups, there was a large decrease in N2 at NQ (Mdn = 50.52) and EP (Mdn = 22.24).

In the 31-40 age range, N2 scores decreased from Level 1 (Mdn = 27.16) to Level 2 (Mdn = 19.82), increasing again in Level 3 (Mdn = 24.285), before dropping at Level 4 (Mdn = 15.23). Again, these differences were not statistically significant.

No students who were under 18 or over 40 at first data collection completed the DIT-2 on all four occasions, so were excluded from the analysis.

Religion

N2 scores for those students expressing no religious preference (n = 5) varied from Level 1 (Mdn = 34.19) to Level 2 (Mdn = 29.48), to Level 3 (Mdn

= 46.39), to Level 4 (Mdn = 25.20), to NQ (Mdn = 30.00) and EP (Mdn = 27.17) but the differences were not statistically significant between any of the levels.

Similarly, variation was observed in students identifying themselves as Christian, Muslim, Hindu, Sikh, and in those preferring not to reveal their religious affiliation during the MPharm programme. However, there was a slight difference observed in that the Muslim and Christian students showed a statistically significant difference between Levels 4 and NQ. For Christian students at Level 4 (Mdn = 29.10) and NQ (Mdn = 47.75) ($p = 0.030$) and Muslim students at Level 4 (Mdn = 23.97) and NQ (Mdn = 33.62) ($p = 0.015$). The results of the stepwise stepdown are shown in **Figure 4.5**. No Jewish student, nor any student expressing a religious belief other than those listed directly above, completed the test on all four occasions, and so could not be included in the Wilcoxon analysis. Although, in general, N2 score were higher for all groups expressing a religious preference at the end of the intervention, it was not significant for any individual group.

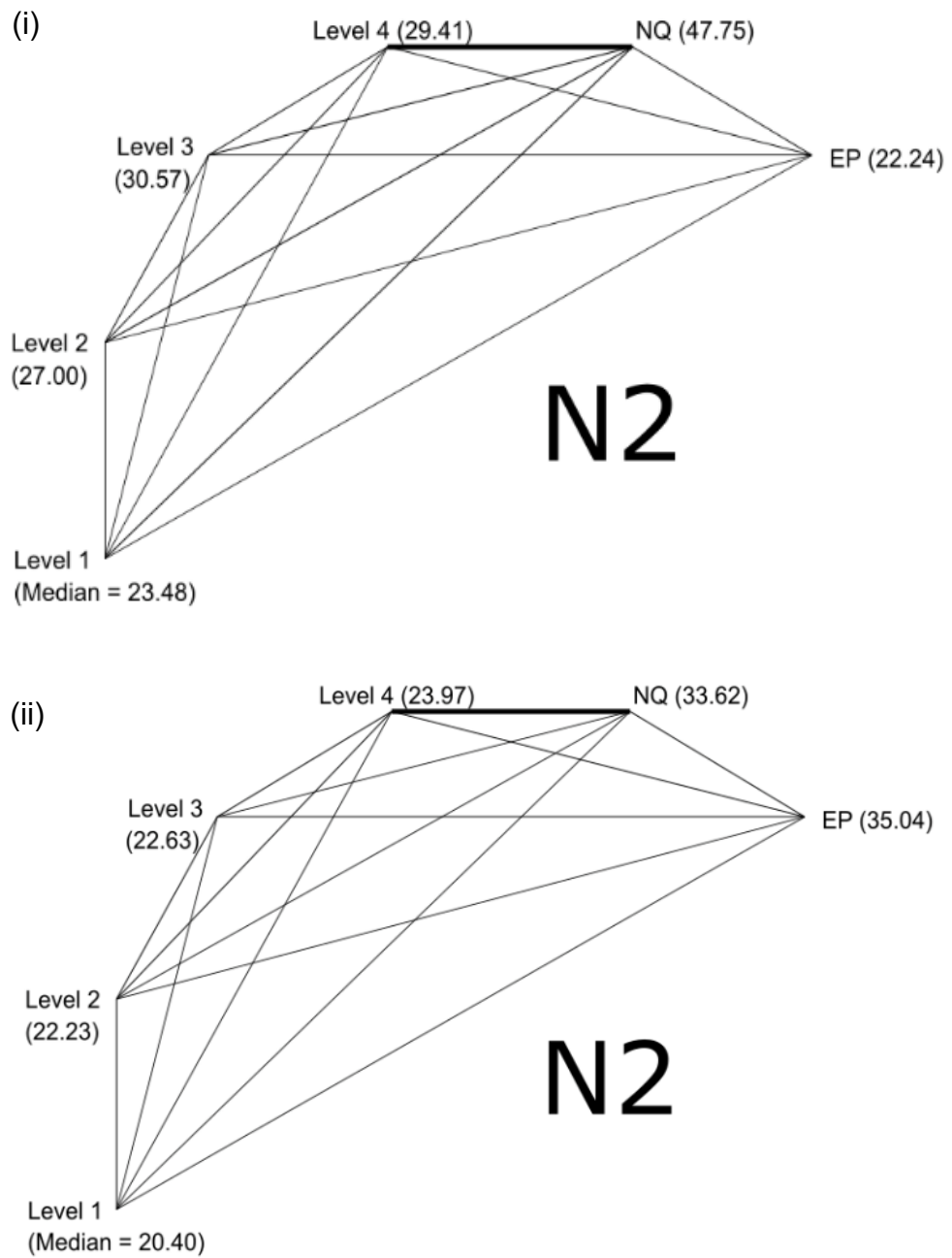


Figure 4.5: Results of the N2 stepwise stepdown for (i) Christian and (ii) Muslim participants. Bold lines represent a statistically significant difference

Education

Those students whose highest level of previous educational attainment was at, or equivalent to, high school did not demonstrate a statistically significant increase in N2 score across the duration of their degree, although the N2 score progressively increased. However, there was a statistically significant increase in N2 between Level 4 (Mdn = 27.78) and NQ (Mdn = 35.53) ($p = 0.015$). The results of the stepwise stepdown are shown in **Figure 4.6**.

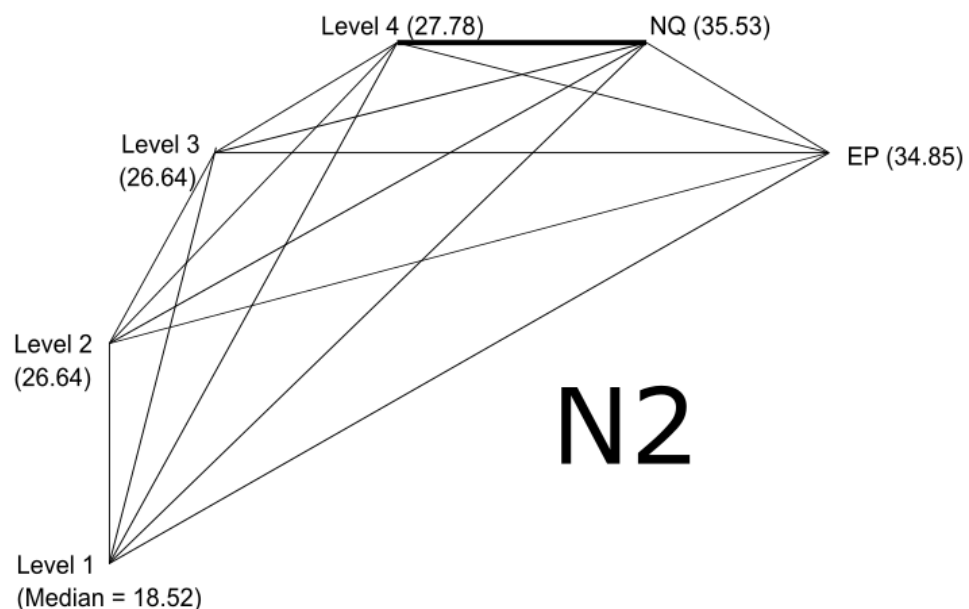


Figure 4.6: Results of the N2 high school or equivalent stepwise stepdown. Bold lines represent a statistically significant difference.

N2 scores for those who had already completed a course of further education increased from Level 1 (Median = 20.96) to Level 2 (Median = 24.30), to Level 3 (Median = 26.80); but dropped slightly at Level 4 (Median = 25.22) but the differences were not statistically significant. However, there were statistically significant differences seen between Level 1 and NQ (Mdn = 42.32) ($p = 0.000$), Level 2 and NQ ($p = 0.015$), Level 3 and NQ ($p = 0.00$) and Level 4 and NQ ($p = 0.000$). The results of the stepwise stepdown are

summarised in **Figure 7**.

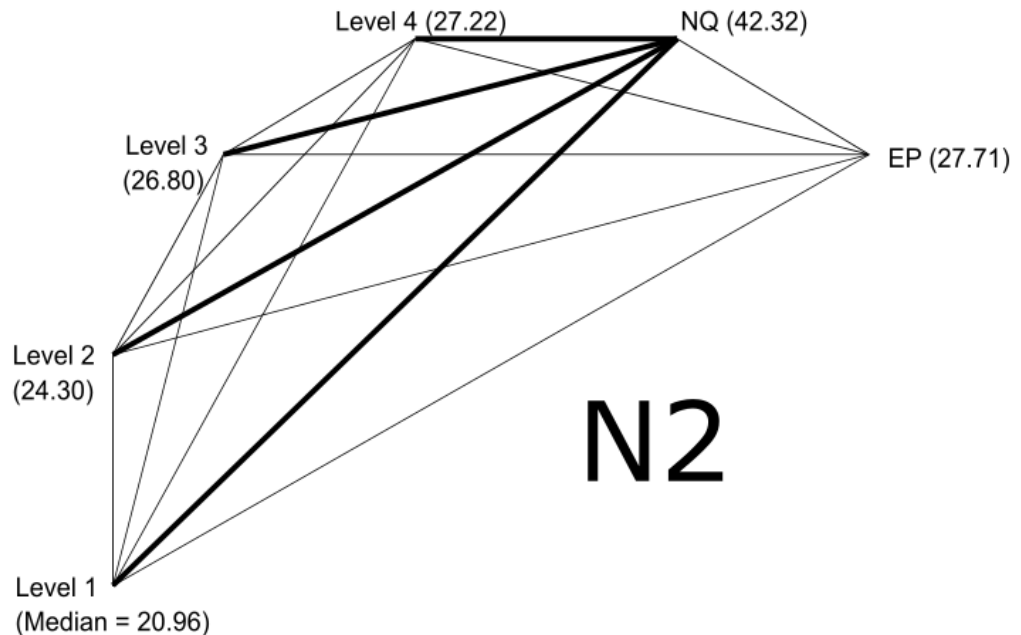


Figure 7: Results of the N2 further education college or equivalent or equivalent stepwise stepdown. Bold lines represent a statistically significant difference.

A similar pattern was observed for students who held Bachelor's degrees, however with no significant differences. Students-with-non-standard-qualifications' N2 scores increased from Level 1 (Mdn = 26.67), to Level 2 (Mdn= 29.70), then decreased to Level 3 (Mdn= 14.04), and increased again at Level 4 (Mdn = 23.89), then at NQ (Mdn = 26.17) then decreased at EP (Mdn = 22.24).

There were insufficient students holding either Master's or doctoral qualification to be included in the calculation.

P score

Global

As expected, given that N2 score is essentially a re-index P score, a similar pattern is observed across-the-board for P scores. Globally, the pattern is almost identical. There was a general increase in P score as the participants progressed through their degree. There were statistical significances seen between Level 1 (Mdn = 22.00) and Level 4 (Mdn = 28.00) ($p = 0.015$), and NQ (Mdn = 40.00) ($p = 0.000$). There were also statically significant differences between Level 2 (Mdn = 24.00) and NQ ($p = 0.000$), Level 3 and NQ ($p = 0.030$), and Level 4 and NQ ($p = 0.000$). These observations are summarised in **Appendix 1.46**.

P score increased from Levels 1 (Mdn = 22.00) to 2 (Mdn = 24.00), and from 2 to 3 (Mdn = 26.00), from Level 3 to 4 (Mdn = 28.00), and Level 4 to NQ (Mdn = 40.00), this was a statistically significant difference ($p = 0.000$). There was a decrease between NQ and EP (Mdn = 34.00), this was not statistically significant (**Figure 4.2**).

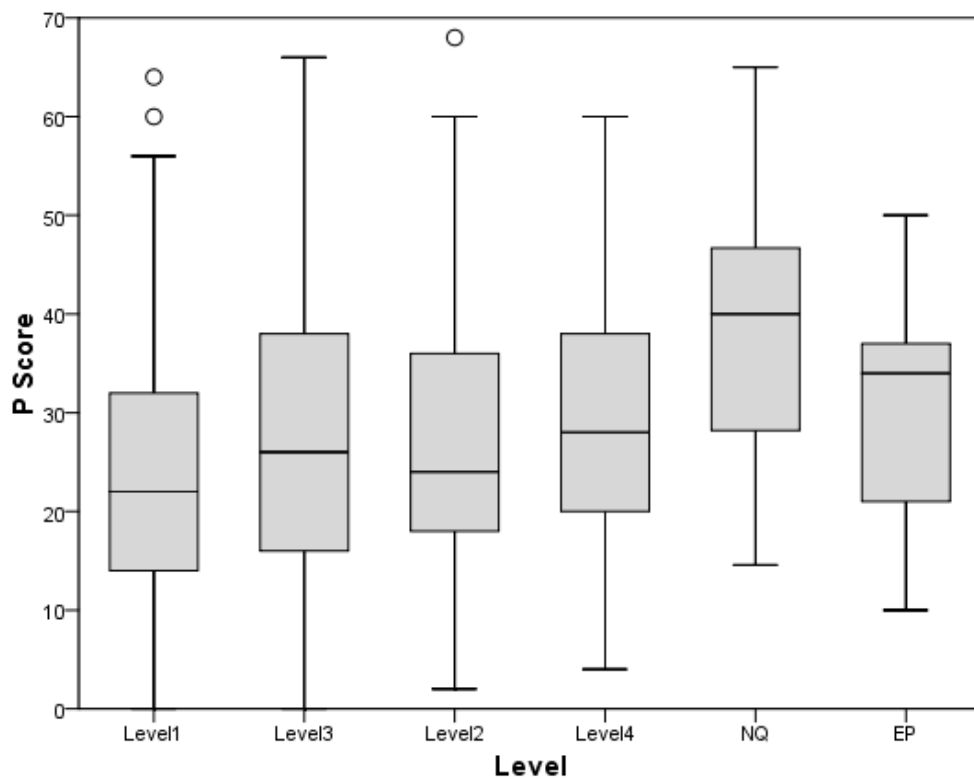


Figure 4.8: Boxplot of P scores at each level during the study.

Gender

P score increased sequentially in male participants from Level 1 (Mdn = 20.00) through Levels 2 (Mdn = 23.00), 3 (Mdn = 24.00), and 4 (Mdn = 28.00) but these were not statistically significant. After completing their studies, the P score continued to increase at NQ (Mdn = 41.67), this increase was statistically significant ($p = 0.015$). There was a decrease after this at EP (Mdn = 34.00), this decrease is not statistically significant. There were also statistically significant differences between Level 1 and NQ ($p = 0.045$) Level 2 and NQ ($p = 0.015$).

A similar pattern was seen in the female participants with fewer significant differences. There was a general sequential increase from Level 1 (Mdn = 24.00) through Level 2 (Mdn = 26.00), 3 (Mdn = 30.00), there was a slight decrease at Level 4 (Mdn = 28.00) with an increase at NQ (Mdn = 34.17), this was a statistically significant increase ($p = 0.030$) then another slight

decrease at EP (Mdn = 33.00).

Similar to the N2 score, for the duration of the study, the female group had a higher P score during their undergraduate studies, except at Level 4 where it was the same. However, at NQ Level, the male group (41.67) had a higher P score than the females (34.16). Following this, a decline in both groups at EP, where the male P score (34.00) was higher than that of the females (33.00).

Age

P-scores increased sequentially but not significantly in the 18-25 age range through the study. Median values increased from 22 at Level 1, through 25 at Level 2, 26 at Level 3, and 28 at Level 4, then increasing significantly at NQ (Mdn = 40.00) ($p = 0.000$). There were also statistically significant differences between Level 1 and 4 ($p = 0.015$), and NQ ($p = 0.000$), Level 2 and 5 ($p = 0.015$), Level 3 and NQ ($p = 0.090$).

Religion

Results for P scores among religious subgroups followed an identical pattern to those for N2 scores, however, there were no significant differences between any levels or any subgroups.

Education

There was no significant change in P score for students in any of the education categories: high school or equivalent, or bachelor's degree. However, there were significant differences in those students who had further education college or equivalent. There was a significant difference between Level 1 (Mdn = 22.00) and NQ (40.00) ($p = 0.030$) then Level 4 (27.00) and NQ (40.00) ($p = 0.000$).

Maintaining Norms

Global

MN scores were not statistically different between any of the Levels. Median

4. Quantitative Results

values were identical for Levels 1, 2, and 4 (Mdn = 34.00). There was a slight, but insignificant increase at Level 3 (Mdn = 36.00), NQ (Mdn = 36.67) and reducing at EP (Mdn = 32.00).

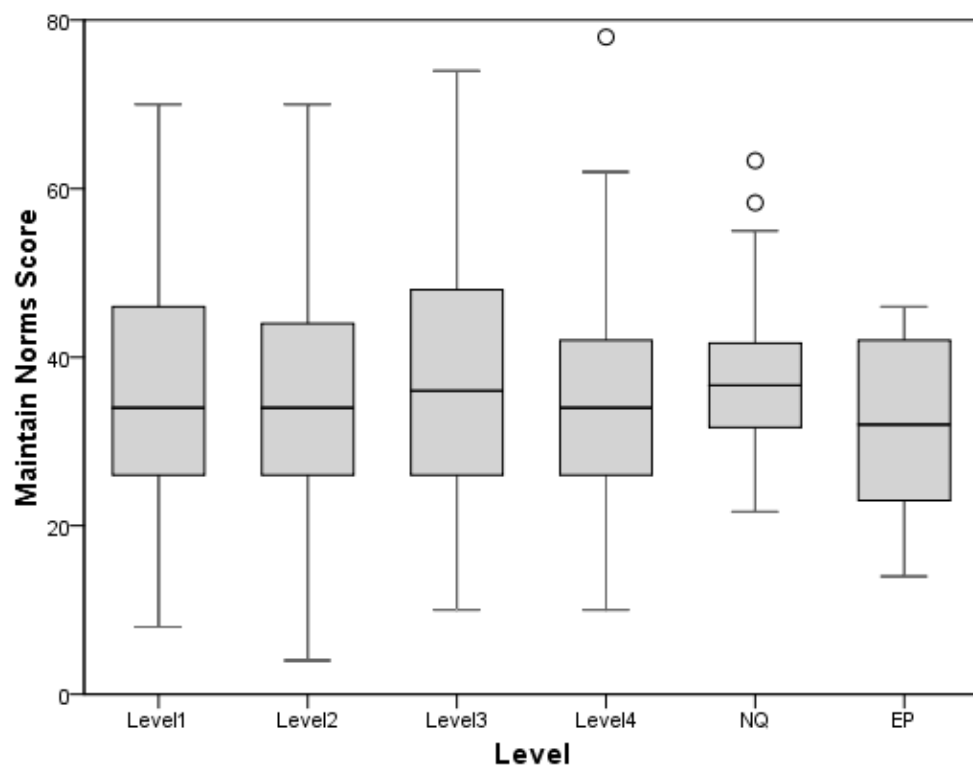


Figure 4.9: Boxplot of MN scores at each level during the study.

Gender

There was no significant change in MN score for either males or females through the study (**Appendix 1.47**).

Age

There was no significant change in MN score for participants in any of the age categories: 18-25 or 26-30 (**Appendix 1.48**).

Education

There was no significant change in MN score for students in any of the education categories: high school or equivalent, further education, or

bachelor's degree (**Appendix 1.49**)

Personal Interest

Global

There was significant variation in PI among the cohort as they progressed through the MPharm programme. The downward trend between Levels 1 (Mdn = 32), 2 (Mdn = 30) and 3 (Mdn = 28) was reflected by a significant difference between levels 1 and 3 ($p = 0.019$). The slight increase between levels 3 and 4 (Mdn = 30) was not statistically significant. There was a large decrease at NQ (Mdn = 18.33) which was statistically significant ($p = 0.000$). There were also statistically significant differences between Level 1 and NQ ($p = 0.000$) and Level 3 and NQ ($p = 0.000$). The results of the stepwise stepdown are shown in **Figure 4.10**.

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Table 4.28: Multiple comparison data for PI score at each of Level of the study.

Level	Level	n	Sig	Bonferroni
1	2	107	0.009	0.142
1	3	85	0.001	0.019
1	4	74	0.007	0.105
1	5	36	0.000	0.000
1	6	7	0.397	5.955
2	3	83	0.120	1.800
2	4	70	0.692	10.380
2	5	6	1.000	15.000
2	6	6	1.000	15.000
3	4	72	0.647	9.705
3	5	36	0.000	0.000
3	6	6	0.750	11.250
4	5	43	0.000	0.000
4	6	11	0.621	9.315
5	6	5	0.138	2.070

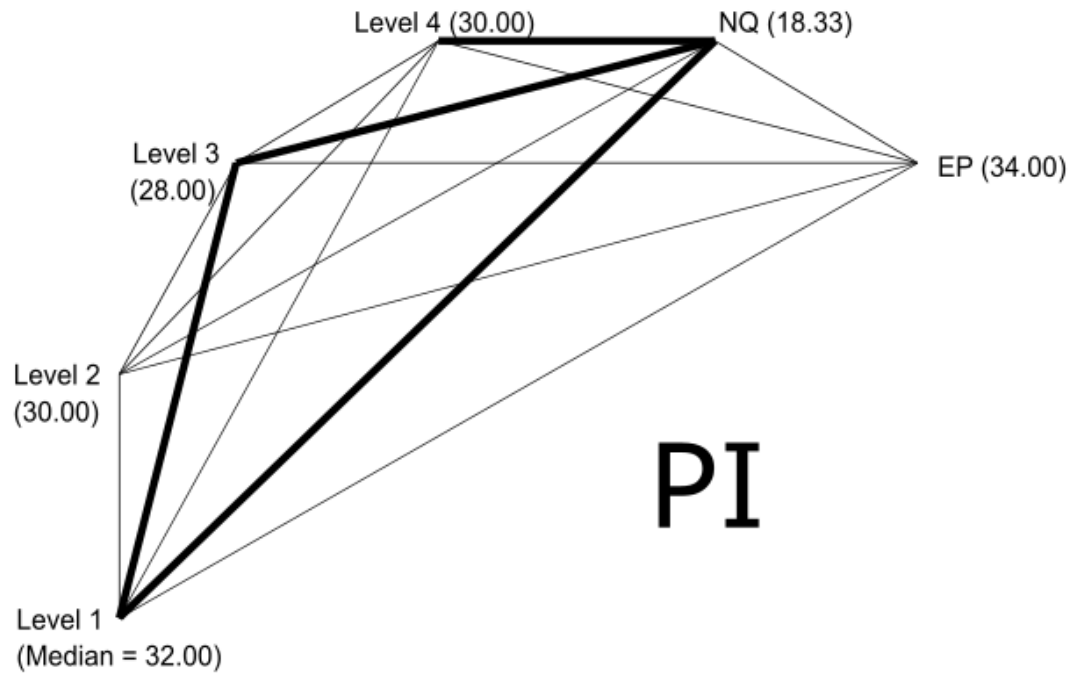


Figure 4.10: Results of the PI global stepwise stepdown. Bold lines represent a statistically significant difference.

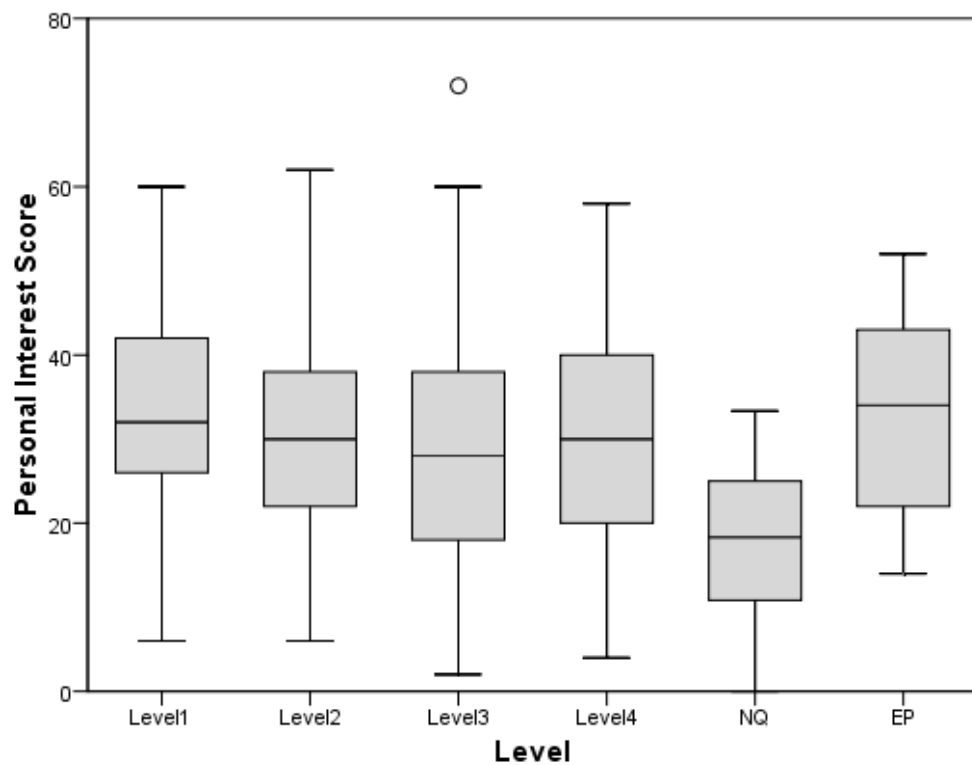


Figure 4.11: Boxplot of PI scores at each level during the study.

Gender

In male students, PI score varied from Level 1 (Mdn = 35.00), to Level 2 (Mdn = 34.00), to Level 3 (Median = 36.00), to Level 4 (Mdn = 35.00), to a large statistically significant difference at NQ (Mdn = 18.33) ($p = 0.000$). This was followed by a large but not statistically significant increase at EP (Mdn = 40.00). There were also significant differences between Level 2 and 5 ($p = 0.015$) and Level 3 and 5 ($p = 0.015$). In female students, conversely, there was statistically a significantly differences during their undergraduate studies. PI score was significantly different between Level 1 (Mdn = 32.00) and Level 3 (Mdn = 24.00) ($p = 0.015$) and between Level 1 (Median = 32.00) and Level 2 (Mdn = 26)($p = 0.015$). There was a decrease at NQ (Mdn = 17.50) with a slight increase at EP (Mdn = 29.00). There were statistically significant differences between Level 1 and NQ ($p = 0.000$) and Level 2 and NQ ($p = 0.015$). The results of the stepwise stepdown are shown in **Figure 4.12**.

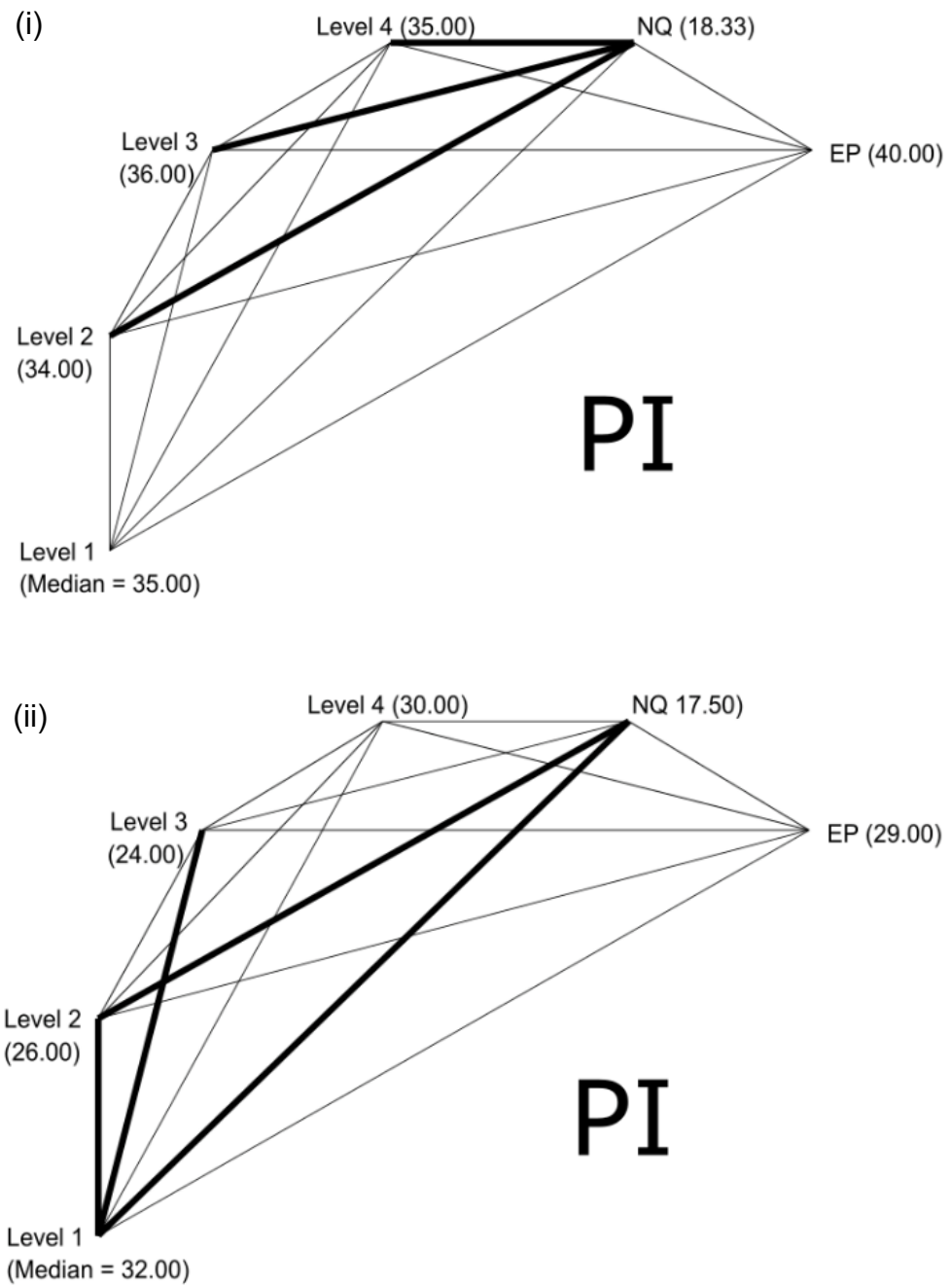


Figure 4.12: Results of the PI stepwise stepdown for (i) males and (ii) females. Bold lines represent a statistically significant difference.

Age

PI score varied significantly across the degree programme for students in the 18-25 category (Appendix 1.50). Analysis revealed a statistically significant increase in personal interest between Level 1 (Mdn = 34.00) and Level 3 (Mdn = 28.00) ($p = 0.045$). The median value at Level 2 was 30.00 and Level 4, 32.00. The PI score at NQ reduced (Mdn = 18.33), there was also a statistically significant difference seen between Level 4 and NQ ($p = 0.000$). There were also statistically significant differences between Level 1 and NQ ($p = 0.000$), and EP ($p = 0.000$). Differences between Level 2 and NQ were statistically significant ($p = 0.000$) and Level 3 and NQ ($p = 0.000$). The results of the stepwise stepdown are shown in **Figure 4.13**. There was no significant change in PI value in the 26-30 years category. (Appendix 1.50)

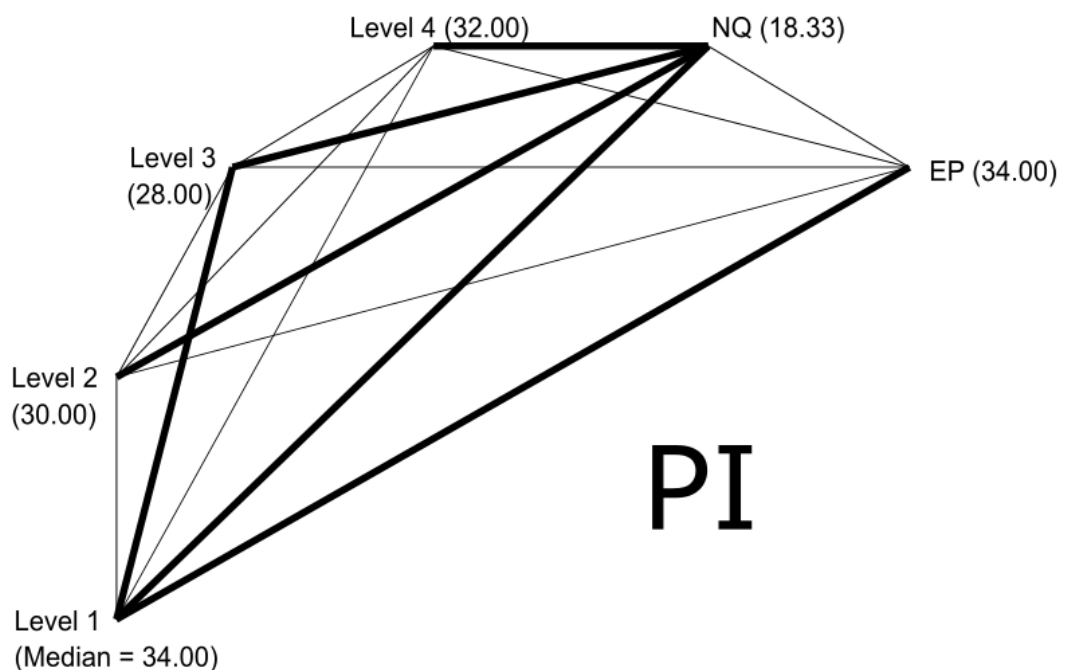


Figure 4.13: Results of the PI 18-25 years stepwise stepdown. Bold lines represent a statistically significant difference.

Religion

Those students identifying themselves as Atheist, Christian, Hindu, Sikh, and those choosing not to disclose their religious beliefs showed no significant variation in PI score over the duration of the study. In contrast, for Muslim students there was a marked difference in PI between Level 4 (Mdn = 36.00) and NQ (Median = 20.00) ($p = 0.030$).

Education

Students with high school qualifications, Bachelor's degrees, or non-standard qualifications, showed no significant variation in PI score over the duration of the study. Those with qualifications from further education institutes, there was a marked difference in PI between Level 1 (Mdn = 34.00) and NQ (Mdn = 16.67) ($p = 0.030$), and between Level 2 and NQ ($p = 0.015$), Level 3 and NQ ($p = 0.045$) and Level 4 and NQ ($p = 0.015$). The results of the stepwise stepdown are shown in **Figure 4.14**

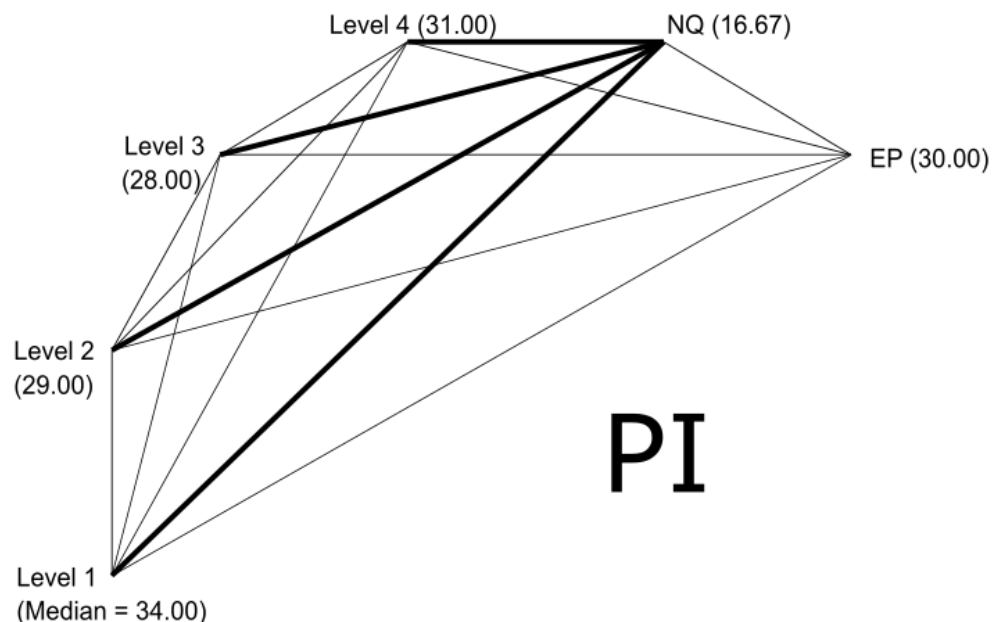


Figure 4.14: Results of the PI further education college or equivalent or equivalent stepwise stepdown. Bold lines represent a statistically significant difference.

Synopsis of Results

The cohort experienced significant moral growth during the four years of their undergraduate degree, where they were exposed to an ethical education designed to engage students at the “plus one” level of moral reasoning. There is also evidence for work-based augmentation of moral development between graduation from university and qualification as pharmacists.

The research offers a quantitative perspective of the moral development that teaching ethics to pharmacy students has. Due to the longitudinal nature of this study, with participants being followed over a prolonged time period, the response rate was negatively affected towards the latter years of the research, therefore the small sample size limits this study’s generalisability. Table 4.29 summarises the median N2 and P-score values for each administration over the whole study period. Both indices show progressive moral development through the degree, a marked increase following qualification, and a regression trend after five years in practice.

Table 4.29: Summary of P and N2-Scores

Stage	Year	n	Median P-score	Median N2-score
Level 1	2008	125	22	22.06
Level 2	2009	110	24	24.38
Level 3	2010	94	26	26.80
Level 4	2011	92	28	26.62
Newly Qualified	2014	43	40	40.53
Established Practitioner	2019	11	34	28.25

N2 score

The N2 scores indicate that the cohort experienced significant moral growth during the four years of their undergraduate Master of Pharmacy degree. Throughout this program of study, these students were exposed to an ethical education designed to engage students at the “plus one” level of moral reasoning described above. Additional layers of complexity were added as the students progressed through the program. While it cannot be concluded that progression through the pharmacy curriculum caused the increase in moral reasoning ability, it is interesting to note that the greatest increase in N2-score occurred between Level 2 and Level 3, during which most of the teaching in normative ethics was delivered.

Maintaining norms

MN is an intermediary score, and it was not expected that there would be a significant difference between the levels. Indeed, MN scores remained effectively unchanged throughout the study. In explaining this, it is useful to understand the way that moral development is represented through the indices. For simplicity, we can first consider morality as a binary discriminator, which considers people to be either selfish or selfless. In a binary system there is a single degree of freedom: participants may only move from one group to the other. If we test 100 participants and 50 are selfish and the remaining 50 selfless, the split is clear within the group at baseline. If the same test is applied a year later and 90 participants are selfless then there must be 10 selfish people remaining, and the group has shown a net development. Conversely, if 10 are selfless then 90 must be selfish, then there is a net reversion among the group.

If we then introduce an intermediate state, creating a three-state system – selfish, intermediate, and selfless (or PI, MN, and N2) – there are now two degrees of freedom. Participants may now move between selfish and intermediate, and between intermediate and selfless, or they may jump two steps between selfish and selfless. If baseline testing identifies 30 selfish, 40 intermediate, and 30 selfless participants, and follow-up testing

detects 10 selfish, 40 intermediate, and 50 selfless subjects, this could be due to 20 moving from selfish to intermediate and 20 moving from intermediate to selfless, or 20 moving directly from selfish to selfless (i.e. bypassing the intermediate state) while 20 remain at the intermediate level, or some combination of these two processes.

In each of these scenarios, there has been the same net development in the group without any observed change in the intermediary score. In a three-state system, a significant change may be observed in the categories in the extremities with little change in the intermediate group.

Personal interest

PI score, in contrast to N2, fell as the study progressed, bottoming out at NQ before the cohort demonstrated a marked reversion following four years of independent practice. This supports the findings that as the participants move away from Stage 1 & 2 moral reasoning as they mature and progress through education (Fino, Basheti, Saini, Moles, & Chaar, 2021).

At Level 2, the Personal Interest (PI) score was significantly higher in males, with the Median being 34 compared to females 26. This indicated, that during this year, males had a higher affinity for Stage 2 and 3 reasoning in decision-making in comparison to their female counterparts in the study. This could be influenced by a factors such as gender-specific socialisation or experiential backgrounds, with this said, this finding supports prior research in relation to the differences in reason between genders (J R Rest, 1986). This significant difference was also the case at Levels 3 and 4. Generally, throughout the duration of the study, the female group had a higher N2 all points during their undergraduate studies, and had larger increments between years, though not statistically significant. An understanding of these nuances in reasoning between males and females, is important in addressing any discrepancies in moral reasoning and development, as well as ensuring that educational interventions are tailored to foster balanced moral development between all students.

Global

The MN score is maintained at a similar level across the study period. As the PI score reduces, there is a corresponding increase in N2 score. This could involve either or both of the mechanisms described above. In any case, there is a net moral development of the cohort between Level 1 and NQ. However, after NQ there is a marked – but not significant – regression in the cohort's moral reasoning, demonstrated by an increased affinity for the PI schema at the expense of both MN and N2.

The magnitude of the increase in N2 scores and the decrease in PI scores, respectively, between Level 4 and NQ, suggests that participants ascended two levels to post-conventional reasoning between obtaining their degrees and becoming fully independent practitioners. During the five years between the NQ and EP measurements, the opposite seems to be apparent, with many participants reverting back to personal interests. The trend in the data makes apparent the effect of formal education on moral development as seen in literature, as well as the positively robust influence of work-based learning on moral development (M. D. Allinson, 2019): however, after five years, this positive effect is not sustained.

In summary, these results show that there is a general increase in moral development as the participants progress through the MPharm programme followed by a more marked one at the newly qualified level. The retrograde step in moral development between NQ and EP levels needs further investigation through qualitative methods in order to substantiate these findings and attempt to make recommendations.

Summary

This section presented a detailed analysis of the quantitative data collected using the DIT-2. The focus was on measuring the moral development of pharmacy students throughout their education into their professional practice. The key findings collectively indicate that both educational and early professional experiences play crucial roles in moral development of

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pharmacy students. However, there was a regression in moral reasoning seen after newly qualified level, a phenomenon which the subsequent chapter will expand on via the qualitative phase of the research.

Chapter Five: Qualitative Results

Introduction

This chapter presents the qualitative findings derived from semi-structured interviews conducted between April and May 2022. The purpose of this phase was to explore in depth how participants' moral reasoning and ethical perspectives evolved during the transition from student to practicing pharmacist. Four participants, all of whom had previously completed at least one round of the DIT-2, were invited to share their experiences and reflections on ethical practice.

This chapter focuses exclusively on the presentation of results, organised by major themes. Analytical interpretation and connections with the wider literature are reserved for the following chapter.

Participant Recruitment and Characteristics

All 123 Established Practitioners who were invited to complete the final administration of the DIT-2, were asked at the end of the DIT-2, if they would be willing to take part in a follow up interview. Five participants replied positively, however one later withdrew due to time constraints. Although snowball sampling was used, no additional participants were recruited through this method.

In total, four semi-structured interviews were conducted between April and May 2022, each lasting between 38 – 60 minutes. The follow-up interviews were conducted approximately three years after the final DIT-2 administration. All interviews were contacted by the primary researcher. The delay was primarily due to practical constraints compounded by the COVID-19 pandemic.

Participants were invited via email correspondence from the researcher's official University of Hertfordshire email address, the same contact used during the DIT-2 phase, ensuring consistency and authenticity. This helped mitigate the potential limitation of participants being contacted by an unfamiliar individual. All communication and data management processes

were GDPR-compliant and conducted under the University's ethics approval. Participants provided renewed informed consent before taking part.

Participants demographics

Of the four interviewees, two were hospital based, one in general practice and one in online pharmacy provision. All four interviewees were male, all aged 31-40 years. Three of the interviewees identified as Black/African one identified as White. Three identified as Christian, while one reported no religious affiliation. All spoke English as their first language.

Each participant had been qualified for at least five years and had completed at least one round of the DIT-2 during their undergraduate training. All participants had completed Independent Prescriber (IP) qualifications.

Data Analysis Approach

Phenomenological and content-analytic approaches complement one another in qualitative research. However, for this study the primary analytic framework was inductive qualitative content analysis, as this method allowed for systematic identification of meaningful categories and patterns aligned with the study's objectives (Elo & Kyngas, 2008). This approach supported an exploration of participants' reflections on moral reasoning and their experiences of practice-based ethical dilemmas, helping to generate structured insights relevant to pharmacy education and professional development.

All interviews were recorded on Microsoft Teams and automatically transcribed using the platform's in-built transcription function. Transcripts are recorded in Appendix 11: Interview Transcripts. To ensure accuracy, the researcher reviewed each transcript alongside the original audio recording, correcting errors, clarifying incomplete sections, and retaining key speech features (e.g., pauses, hesitations) where relevant. This verification step

strengthened the dependability and credibility of the dataset prior to coding.

The data were managed using QSR NVivo. Following Elo and Kyngas (2008) inductive content analysis framework, analysis proceeded through three phases:

Preparation

The unit of analysis was defined as each complete interview transcript. The researcher immersed themselves in the data through repeated reading and re-listening to audio recordings, enabling familiarisation with participants' experiences and contexts.

Organising

A line-by-line open-coding process was undertaken, allowing labels to be assigned to meaningful statements, phrases, or reflections. Codes were then compared, grouped, and refined to identify preliminary categories. Similar codes were merged to reduce redundancy, while codes that no longer fit emerging patterns were removed or reclassified. Through abstraction, related categories were progressively integrated into broader subcategories and overarching categories.

Reporting

The final analytic structure consisted of higher-order categories that captured the central elements of participants' experiences. These categories informed the presentation of the findings, ensuring clear alignment between raw data, coded extracts, and the emerging conceptual interpretation. The analytic process was iterative and continued until the categories adequately represented the dataset.

This combined phenomenological–content analytic approach preserved the richness of participants' lived experiences while providing the structure necessary to derive meaningful insights relevant to the study's aims.

Summary of themes

There were three key themes that emerged from the interview data:

1. Supporting the development of the future pharmacist
2. Progression into professional practice
3. Moral development in professional practice

These key themes and their subthemes and codes are presented in **Table 5.1.**

Table 5.1: Summary of themes that emerged from interview data.

Theme	Subtheme	Code(s)
Supporting the Development of the future pharmacist	Continuous learning after qualification	Career Development
	Emerging pharmacy roles	- Prescribing - COVID-19. - Clinical and non-clinical roles
	Support systems for pharmacists	- Support for early career pharmacists - Peer support - Shared experiences - Professional Isolation
Progression into professional practice	Professional development in practice	- Managerial - Interprofessional working - Leadership
	Acquiring and utilising learned core values for decision-making	- Decision making in the interest of patients. - Reasoning against others or majority
	Role of a Pharmacist	- Perception of Pharmacists Role - Perceived lack of Recognition for Pharmacists.
Moral Development in Professional Practice	Ethical awareness of the participants	- Moral development in higher education - Further moral development training after undergraduate education - Changes in Moral Reasoning
	Factors impacting dealing with dilemmas effectively	- Confidence - Experience - Quality of Care - Professional values - Personal values & beliefs - Reduced time in decision making - Regulatory body role
	Professional ethical dilemmas in pharmacy practice	- Target Driven work - Burnout & work life balance - Monotonous work and demotivation - Stress and workload - Enhanced pharmacist work scope

Theme One: Supporting the development of the future pharmacist

The first theme that emerged from the interview data 'Supporting the development of the future pharmacist' captures the participants perspectives on the evolving landscape of healthcare, which necessitates that pharmacists continually develop their knowledge, skills and ethical acumen to meet the demands of the profession. Addressing this theme is critical for ensuring that pharmacists are well-equipped to provide high-quality care, navigate emerging roles in the profession and maintain their well-being amidst the challenges of modern practice. This theme addresses the fourth research question:

- What personal and professional experiences have an influence on moral decision making?

The three key subthemes which emerged from this main theme were:

1. Continuous learning after qualifying
2. Emerging pharmacy roles
3. Support systems for pharmacists

Table 5.2 explores the key themes and their subthemes.

Table 5.2: Summary of Supporting the development of the future pharmacist theme.

Theme	Subtheme	Code(s)
Supporting the Development of the future pharmacist	Continuous learning after qualifying	Career Development The majority of participants went on to gain further qualifications after registering as a pharmacist, to either explore personal interests or to progress their careers. It also explores the settings that the participants have been working in during their career.
		Prescribing The participants note a significant change in the profession's expectations, with a current emphasis on independent pharmacist prescribers.
	Emerging pharmacy roles	COVID-19 The pandemic presented an acceleration of development in certain aspects of pharmacy. Participants also discussed the increased responsibilities during this time.
		Clinical and non-clinical roles The participants reflected on the evolution of the pharmacy profession, highlighting the emergence of new roles.
	Support systems for pharmacists	Support for early career pharmacists Based on their experience as newly qualified pharmacists, the participants discussed the need for further support for early career pharmacists, particularly with the additional responsibility that future newly qualified pharmacists will experience.
		Peer support Participants highlighted the need for support from peers during their professional practice, for example to support with decision making.
		Shared experiences Some participants mentioned the potential benefit of being able to learn from the experiences or dilemmas of more experienced pharmacists or their peers. They also mentioned the need for cultivating a medium to support this.
		Professional Isolation The isolation experienced by pharmacists in settings such as community and certain roles or times as a hospital pharmacist.

Continuous learning after qualification

Career development

Overall, all participants stated remaining in one setting from when they qualified but undertook further qualifications within role. However, capturing and understanding the participants career development since they qualified will provide insight into how to ensure support and interventions are well placed, and the nuances to be considered in each setting.

“ I've pretty much been in hospital pharmacy since qualifying.” (EP01)

“I spent the majority of my time as a pharmacy manager from being qualified up until December last year.” (EP02)

“Mainly community based...” (EP03)

However, despite this, the participants discussed their additional qualifications.

“I'm a qualified aesthetician so I can do fillers and Botox as well.” (EP02)

The above quote showed the keenness to continue to develop their professional skills and widen the scope of their role.

“I'm actually on one now as well my PCN and travel vaccination was certificates and stuff like that...” (EP04)

“I have completed my Diploma. So that's the General Pharmacy Practice Diploma.” (EP01)

There is also a strong sense from the participants that there has been a need for them to continue to acquire new skills and qualifications in order to stay abreast of developments within the field.

“... there's definitely been a change in that definitely been a push for us to upskill ourselves...” (EP01)

However, there is no reference to where this perception of a push is coming from. EP02 offered a differing opinion on the need to upskill, stating

“...there's no test of competency, and there's, if you think about it as a pharmacist, there's no real reason to upskill...”

The above quote seemingly indicates that upskilling in the perspective of this participant, is also necessitated by external motivators as opposed to being driven from within oneself or a desire for self-improvement.

Emerging pharmacy roles

Prescribing

All participants discussed independent prescribing as an additional qualification they have undertaken since qualifying as pharmacists. They shared views on the significant change in prescribing roles since they were studying to become pharmacists.

“...when I first qualified, uh, I heard. I'd heard of supplementary prescribers and they were few and far in between.” (EP01)

There was also the perception from EP03, as a graduate, that prescribing was an expectation that was more aligned to a more senior pharmacist.

“... when I graduated prescribing seemed like a thing that only very senior pharmacists and very advanced pharmacists got involved with.” (EP03)

He further went on to relate this to the readiness that he felt that newly qualified pharmacists may need to have to be confident prescribers on the day they qualify.

“...thinking back to when I wrote my first prescription. I don't think. I probably wouldn't have had the emotional or emotional surety or pharmacy experience to be able to have done that the day I graduated [qualified].”(EP03)

This related to the level of preparation that the participants felt would need to be given to undergraduate pharmacy students to prepare them to be competent prescribers from day one on the register. The quote below also refers to the need for further support in formal education to equip newly qualified pharmacists to make sound moral decisions.

“...coming in the next couple of years is prescribing ready from undergraduate? Which I think is a huge change for the profession and one that I don't think. I don't think we're necessarily ready for as

a group.” (EP03)

“...the undergraduate study to encompass a lot more hands on training so that people can be prescribers So hopefully they'll be able to experience that, those dilemmas.” (EP04)

There are also references to the wider scope that incorporating prescribing into the undergraduate pharmacy programme presents.

“with the look to incorporate independent prescribing into the degree where you would be more of a clinician and you would have a wider scope.” (EP02)

The participants also related the importance on sound moral decision making as a prescriber and the significance of preparation for this.

“I think now prescribing's becoming more of an early career qualification than there is more need to do some moral support for pharmacists.” (EP03)

The responsibility also increases with being a prescriber, which the participants also highlight, thus relating this to the ability to make sound decisions, and the change in responsibility from ‘adviser’ to ‘decision maker’.

“Whereas the prescribing course turns you into the decision maker and at the end of the day, once you've signed the prescription, then it's on you. And so I think. I think that whole process of going from the

advisor to the decision maker, in one aspect of the clinical sphere that affects everything else you do.” (EP03)

The differences in types of dilemmas that may also arise as a result of being a prescriber are also discussed.

“I think those things play a part when it comes to the ethics of things I used to prescribe for someone who, you know. Are you going to make a sound judgment? Are you to prescribe for yourself, I think the GPhC frowns upon that, those type of things. So I think those moral ethical dilemmas play a part when you are practitioner.” (EP04)

With this in mind, it is important to take a look at the curriculum and ascertain whether the training relating to moral decision making and ethical dilemmas have been updated to encompass scenarios that pharmacists may face as prescribers to prepare them better by building schemas with how to deal with situations when they arise, in order to ensure the best outcome for the patient.

COVID-19

The Coronavirus pandemic which started late 2019 placed a profound and unprecedented burden on healthcare worldwide, and more locally, the National Health Service (NHS) in the UK. This added pressure by large numbers of sick patients and undoubtedly put additional pressure on pharmacists, especially community pharmacists who would become the frontline healthcare professionals as the UK went into lockdown and General Practices closed their doors to patients nationally. This push of GPs to have online consultations with patients led to community pharmacists being the main face-to-face contact available (Bhamra, Parmar, & Heinrich, 2021).

“...it changed the way all healthcare professionals worked. I think it's streamlined it to a certain extent, made things quicker. And speed up a lot of, I guess, technological developments to make for seamless service. So, I think it's had a positive impact. I think going forward we should be better as a profession and across the profession as a result of it.” (EP02)

From the above quote, some of the changes that came about as a result of the pandemic are highlighted. This quote relays the positive changes that were made and the expediting of certain processes or updates that were very much needed to improve ways of working. The Summary Care Record (SCR) trial began in 2014, however during the pandemic reliance on the SCR as the main way to access patients records in community pharmacy led to the call for a need for enhanced access to the SCR and additional information (Pires, 2022). The quote below is a further example of the level of streamlining of processes which was expedited due to the pandemic.

“... one of the one of the big things for us was summary care record access. So when I when I started as a pharmacist to get drug history, we quite often have to phone up the GP surgeries and get things faxed across and some of that care is a bit more seamless.” (EP03)

With respect to how the COVID-19 pandemic brought about new roles that pharmacists became involved in, the quote below from EP04 brings forth an example of where pharmacists duties extended beyond their day to day prior to the pandemic.

“...our level of input within the you know, the COVID-19 vaccination

program is, is another example whereby you have pharmacists working within clinics; diluting, administering the vaccine. Uh, you also had pharmacists overseeing that project also an aspect of it.” (EP01)

While it is certainly a positive in many ways that pharmacists were able to apply their skillset in many more areas to support with patient care. This, however, would have indeed brought about an increased pressure and many more scenarios where pharmacists would have needed to make decisions in complex environments. Moral distress was at a high during the pandemic, giving rise to more complex moral dilemmas across healthcare (Borges, Barnes, Farnsworth, Drescher, & Walser, 2020)

“At Nightingale Hospital, you know, you had pharmacists who are working on the intensive care units to provide that, that level of care that was required to save patients.” (EP01)

Clinical and non-clinical roles

The settings in which pharmacists can take up roles is now diversifying. Which gives rise to new situations and new dilemmas which pharmacist will need to deal with. As a result, pharmacists will need to develop robust decision-making skills, both clinical and non-clinical in order to make decisions in the best interest of their patients or end users.

“I think the scope of, uhh pharmacy practice has changed. Uh, I think when I qualified. It was very much that, you know, there were, there were pharmacists who going into 3 industries either. Hospital, community or the Pharmaceutical industry itself. Whereas now, you've got pharmacists in GP surgeries. You've got pharmacists

working within ICS's. You've got pharmacists working within the MHRA. And, and various other places.” (EP01)

This diversifying of scope is certainly reflected as a welcome development by some of the participants, as shown in the quote below from EP01, however, it is important to understand how education and training of pharmacists is diversifying at a similar pace in order to support these emerging roles (C. Anderson & Sharma, 2020).

“Again, it's getting involved in things like PGDs. Uh, you know, national advice and so on national guidelines you have pharmacists involved in that as well. So the scope and what pharmacist can do has definitely changed since qualifying.” (EP01)

Participants described increasing workloads as new clinical and public health responsibilities were added to existing dispensing duties, often without additional resources.

“So there's a push to get pharmacists doing more...” (EP01)

“...I mean pharmacy starts to become more service driven than ever... where you're trying to wear so many hats... that belt tightening is resulting in people doing a lot more for a lot less.” (EP02)

Where there are now more varied roles available for pharmacists to work in, participant EP04 commented on the movement of pharmacists between settings.

“... I think the exodus of pharmacists from community pharmacy into general practice...” (EP04)

The pandemic also marked a staff shortage, especially in community pharmacy, therefore increasing the workload for those available (M. Allinson, Obeid, & Cornes, 2022).

Support systems for pharmacists

Support for early career pharmacists

Like previous points raised, relating to the readiness of the pharmacy profession to be able to support newly qualified prescribing pharmacists, the participants emphasised the importance of supporting early career pharmacists in general, but especially with moral decision making, based on their experiences. One participant reflected on the role of professional guidance in helping early career pharmacists gain confidence in applying their moral and ethical values in practice:

“...there is an importance in helping pharmacists, especially early career pharmacists, in being confident and being able to make decisions that require them to, you know, take into consideration their moral values and the Code of Ethics.” (EP01)

The support also raises the need for guidance as an early career pharmacist. EP02 refers to this in the quote below as

“When you're new, you need someone to show you the ropes.”

(EP02)

The areas where support is required was not limited to support with decision making, but also with the ways to handle the rigour of being a pharmacist (McQuade et al., 2020).

“...the key thing that we need to teach those coming through how to work smarter, how to rest, how to take breaks and that it's not simply going home and sleeping.” (EP02)

Peer Support

The participants all mentioned the benefits of being able to receive support from peers. This support was particular to moral decision making and being able to share the thought process and being able to learn from decisions made by others in similar situations. They made mention of the need for ‘networks’ or ‘forums’ to be able to connect to colleagues.

“Perhaps like a maybe a network or forum where people have posted you know how they've dealt with similar situations and just being aware of what other colleagues are doing.” (EP01)

They also described the ways in which peer support was of value in the decision-making process earlier in their careers.

“I probably would have called every pharmacist because I guess I was fresh out of uni[versity] so I still had those contacts and then asked them what they would have done in that situation.” (EP02)

This also highlights the change in the way that decisions were made as Newly Qualified pharmacists and as Established Practitioners. The peer support is not only highlighted as a need as an early career pharmacist but throughout the career of a pharmacist.

“It's needed across the board. It's needed from ground up all the way to those who've been practicing for 30 years.” (EP02)

EP02 goes further to refer to additional benefits of peer support in the decision-making process.

“When you're when you're couple years in, you need to solve. You need someone to kind of keep you honest and accountable.” (EP02)

The reference in this quote to ‘being kept honest’ relates to the different factors at play when a pharmacist decides in practice.

EP03 also highlighted the factors that were amiss early in their careers while making decisions.

“...certainly I wouldn't have had the organisational support network.” (EP03)

This reflects the absence of peer support within the organisations or settings that they work. EP03 is a hospital-based pharmacist, which begs the question whether more can be done to connect pharmacists within hospitals or trusts in order to build these support networks, which are much needed.

In community and general practice settings, Integrated Care Systems (ICSs), should bring these support networks closer, and provide additional support between practitioners.

The methods through which this support could have been rendered in the early stages of their career and the informal structures through which pharmacist have peer support now.

“We didn't have the WhatsApp group because it wasn't. It wasn't such a thing ten years ago...” (EP03)

The benefits of peer support as opposed to support from professional bodies or indemnity bodies is highlighted in the quote below.

“I think having a having a cohort of peers that are receptive to the conversations about that sort of thing. Because that's there's a couple of peers that if you ask them a question, you'll get a yes or no answer, not a, not a shades of grey. And that's not helpful, especially if you're trying to figure out what the right answer is.” (EP03)

This also speaks to the ways in which the pharmacists would benefit from support with decision making. The reference to ‘shades of grey’ also refers to style through which decision-making support is rendered through alternative.

Shared Experiences

Following from the above, the participants also highlighted the need to learn from other colleagues and the role this plays in their decision making. In relating this to previous subthemes that highlight the benefits in gaining

support from peers in decision-making, this subtheme also highlights the importance shared experiences can play in supporting them to make robust decisions.

“Even if you work for a big multiple, you don't have other pharmacists to lean on and share your experiences with to help you through.”
(EP02)

Reference is made here to the fact that being able to share experience can serve as assistance in being able to make decisions. EP02 then goes on to add the following.

“I would have acted differently I think, if I had someone close by, in terms of another pharmacist to consult with. That what I helped and it would have made a big difference.” (EP02)

This supports the hypothesis that there is a change in the way that pharmacists make their decisions over time, thus potentially altering the outcome that would be brought about.

A similar opinion is also held by EP01, speaking to the benefit of being able to learn from other pharmacists who may be faced with the same or similar decisions.

“I guess that might help you know to come to a decision if you know that you know you have colleagues have been faced with this situation and you know they have to adhere to the same Code of Ethics you do and these are the steps that they took, this was the outcome of the situation, I guess that would breed more confidence

when making similar decisions.” (EP01)

The reference here to the Code of Ethics, speaks to the benefits of sharing the decision-making process and considering factors to consider, which maybe similar or different to other pharmacist colleagues.

‘...at some point in the undergraduate study, after all the theories bashed into us if we are able to use them then then you can make those decisions and speak to colleagues, friends. All the practitioners to help you manoeuvre and meander around those situations.”
(EP04)

Again, this highlights the potential benefits of creating a medium for being able to share and learn from other colleagues, and the benefits to be had. As pharmacists progress through their careers and enter more senior roles those opportunities for shared experiences decrease either due to workload, proximity to other pharmacists or time constraints, therefore creating purposeful opportunities for this to take place would be beneficial throughout a pharmacist’s career and potentially prevent regression in moral decision-making.

The existing evidence relating to teaching ethics and moral education has shown that shared experiences and group learning is an effective way of building schemas which can be called upon when making decisions.

“When you want to talk morality and ethics, the best way to learn is to debate it. Could that way you get opinions, you get to argue and you get to hammer home and you get to define principles.” (EP02)

Professional isolation

Prior research refers to the professional isolation of pharmacists, however, this is not only a phenomenon that is existent in community pharmacy (R. Cooper, 2007). Working in isolation as pharmacist restricts a pharmacist's ability to experience those shared experiences thus learning from and implementing them.

EP03, a hospital pharmacist echoed these concerns;

“You are there in the pharmacy at three in the morning and someone asks you something and you've got no idea what you're doing. But certainly the first few times I was asked to do something that I wasn't sure if it was right...” (EP03)

This isolation also contributes to a feeling whereby pharmacists do not feel supported, not only for decision-making but also for moral support.

“Another thing is pharmacist being on an island. I think what happens in our profession a lot is that we don't have people to lean on. (EP02)

This professional isolation is also reported to increase as pharmacists progress through their careers, thus making it more difficult to have those shared experiences or discussion relating to ethical decision-making which would cultivate a discourse through which pharmacists can develop and mature their reasoning.

“I was still in contact with my pre-reg tutor, also, I would have asked him. But I think what happens is with the further removed are from qualifying, those relationship (are) suspended, especially when you

start working or elsewhere, they kind of fizzle out and then you don't really have that support network.” (EP02)

Summary

This theme analysed the elements needed to foster growth and development of future pharmacists. Acknowledging the dynamic nature of the healthcare system, the discussion with the participants highlighted the multifaceted approach needed to ensure that pharmacists remain supported, and competent through their careers.

The interview data also emphasised the importance of implementing a holistic approach to the support provided as part of an intervention or recommendation. By integrating continuous learning, adaptation to the emerging role and providing strengthened support systems, pharmacists can be better prepared for the demands of the role.

Theme Two: Progression into Professional Practice

This theme, 'Progression into professional practice', captures participants perceived preparedness to transition from formal education to professional practice. The participants reflected on the teaching on the core value and principles during their studies as well as less the formal ways they developed ways to make sound moral decisions when in practice. This theme addresses the third and fourth research questions:

- How can the MPharm programme be enhanced to maximise the development of moral decision-making?
- What personal and professional experiences have an influence on moral decision making?

Three subthemes emerged in relation to the participants progressing from formal education to pharmacy practice:

1. Professional development in practice
2. Acquiring and utilising learned core values for decision-making
3. Role of a Pharmacist

Table 5.3 summarises theme two and the related subthemes and their impact on the participants moral reasoning as they transitioned to professional practice.

Table 5.3: Summary of progression into professional practice theme.

Theme	Subtheme	Code(s)
Progression into professional practice	Professional development in practice This encompasses aspects of the participants development and capabilities to continuously deliver high-quality patient care	Managerial This relates to the participants experience of management within role, mainly described as been unexpected or largely unprepared for.
		Interprofessional working This reflects on the collaboration and communication between the participants and other healthcare professionals, highlighting the influence this has on moral decision-making.
		Leadership The participants describe the leadership responsibilities they have experienced during their professional practice and how this has evolved over time, in terms of decision-making and working with more junior staff.
	Acquiring and utilising learned core values for decision-making This summarises the participants process of internalising and applying the values and principles of decision-making learnt during their formal education and training.	Decision making in the interest of patients During formal education the participants learned to make decisions in the best interest of patients, here participants described how this influenced their decision making in practice.
		Reasoning against others or majority This explores the participants experience with critically evaluating and challenging prevailing opinions when the opinions are in conflict with their core values.
	Role of the Pharmacist The perceptions and challenges that the participants face relating to professional identity and recognition within the healthcare system and the patients served.	Perception of pharmacist's role The participants shared their perceptions on the role of a pharmacist once they qualified and how this differed to the reality they experienced.
		Perceived lack of recognition for pharmacists This captures the challenges that the participants faced in garnering recognition and appreciation for their contributions to patient care.

Professional development in practice

Managerial

The extent to which pharmacy students are prepared for the managerial aspect of their role as a pharmacist has been highlighted by all participants as an area, they felt unprepared for. Management encompasses not only people management, but also management of the commercial aspects and running of pharmacy premises. Participants reflected on both aspects of management in relation to their experience.

“...managerial side of things, that's not, that's something which isn't talked about very much while training or isn't talked very much about on the course... I wasn't aware of the managerial leadership skills that are required in order to be a pharmacist as well” (EP01)

During the time which the participants were on the MPharm programme at the University of Hertfordshire, they would have completed a module titled “Business Management”. The learning outcomes of this module focused on the commercial aspects of pharmacy practice, but also the management and leadership aspects of working as a pharmacist. Despite this, the participants still reported being unaware of the extent to which management would play a part in their day-to-day role. This module is no longer part of the programme and with the thoughts shared on this, considering the method through which students are prepared for the reality of management in practice should be considered. This is particularly important considering this responsibility can impact the way which decisions are made by practitioners.

The expectation of managerial responsibilities of the role can also contribute to stress experienced by pharmacists.

“...some stressful situations with some area managers when I was a store manager.” (EP04)

EP01 also reported that the people management aspect of the role is a part that they enjoyed the least.

“The least... least I enjoy is managing people” (EP01)

People management in pharmacy can involve the management of dispensers, technicians, medicine counter assistants and possibly other pharmacist colleagues. This can be particularly challenging for an early careers pharmacist with no formal training or preparation in relation to management. The participants who spent most of their early experience in community reported being exposed to the people management aspect early on in their careers, however, the participants who were mainly in a hospital setting reported this exposure slightly later in their professional practice. This could be related to the nature of the hospital setting in that there are limited opportunities for trainees to experience leadership and management roles in their early careers due to the hierarchy in the hospital setting. Often times, the responsibilities that management brings can be in conflict with other issues, thus bringing about moral dilemmas. Inadequate preparation for these scenarios can affect the decisions made and thus the quality of care experienced by the patient.

Management was also not limited to people management, but also other aspects as quoted below.

“...managerial roles there, did some care homes management, travel clinic management...” (EP04)

Interprofessional working

Pharmacists being the expert in medicines within a multidisciplinary team (MDT) can lead to many situations where pharmacists may contribute to decisions made by a multidisciplinary care team. Preparing pharmacy students adequately in interprofessional working and how to navigate decision making in these circumstances can lead to better outcomes.

“...support your Nursing colleagues, Occupational Therapists, colleagues in managing patients... and supporting our medical colleagues as well... being part of the multidisciplinary team to make a decision about treatment and then seeing them get better” (EP01)

This interprofessional working is experienced in many settings including Primary Care Networks.

“... physiotherapists, pharmacists, paramedics or working mental health work, is all working together, almost like a mini clinic in PCN's... PCN's are just a collaborative working partnership between different general practice teams as well.” (EP04)

An exceptional opinion from EP03 regarding the role that pharmacists play in decision making in MDTs is quoted below.

“I think to some extent, pharmacists are slightly shielded from most moral decision making and the doctors and nurses will bear the brunt of it. Simply because of they're a bit more on the frontline of deciding the treatment plans.” (EP03)

Now, considering this statement in a setting where many pharmacists are now prescribers and pharmacists will qualify as prescribers from 2026 onwards, there is scope within this statement to establish that if not now, certainly in the future, pharmacists will no longer be 'shielded' from moral decision-making.

Leadership

Many of the participants shared experiences of leadership training they had in practice since qualifying. Some reported that this supported them with their decision-making.

"I feel like the leadership course that I went on definitely influenced how I how I think about the ultimate decisions that I make that might be a bit more abstract and how they might influence people." (EP03)

The participants also shared the impact of their role as leaders and how this influences their practice.

"... influential and key when it comes to medication related issues and supporting patients and helping them to get better." (EP01)

The mention of leadership among the participants is referred to as a concept that occurs later in their careers.

Acquiring and utilising learned core values

Decision making in the interest of patients

This was a prevalent notion amongst all participants; to make decisions in the best interest of their patients. This is a concept which is taught during

the MPharm training.

“... what is the end outcome for the patient and is the decision that I make going to result in patient harm?... So if I make a decision or something happens and the results in patient harm, I must do whatever I can to mitigate it.” (EP02)

“...doing what I believe is right for the patient.” (EP03)

“... I think I prioritise the factors. So I put patient first.... Have you been able to defend the patient’s safety [as a] priority?” (EP04)

There were circumstances where participants shared instances where reasoning in this manner this left other colleagues unsatisfied with their decision, however the pharmacists are satisfied in knowing that their decision was in the best interests of the patients in question.

“And at the end of the day, one thing I've learned is sometimes, this may be unethical, and some places wherever it's for me, so long as I'll do whatever it takes to ensure that the patient gets the best treatment outcome.” (EP02)

“... the patient, you know, was taken care of, was looked after and a decision, my decision that was made was in their best interest.” (EP01)

Reasoning against others or the majority

The post-conventional stage of moral development corresponds to Levels 5 and 6 of Kohlberg's moral development theory. This represents the highest level of moral reasoning and ethical understanding. In post-conventional stage, individuals develop their own moral principles that may transcend societal rules and prevailing opinions. This stage goes beyond conventional reasoning which is characterised by adherence to normal and authority figures and lays emphasis on autonomous decision-making based on principles and values. Some of the interviews discussed scenarios where this was the case.

"I'd say on the others involved and for example, the medical team, they, they were probably quite upset, but I was offered an alternative. I don't just say no..." (EP01)

"So yeah, the medical colleagues probably upset at the time, in the initial stages, but patient in hindsight probably would grateful that somebody was able to ... umm ... stand up to the team and make a decision in their best interest." (EP01)

The participants also shared how these decisions also had a positive influence on the decision making of other colleagues around them.

"I would say pharmacy colleagues as well, where we're grateful that they had someone who was willing or able to take a stand against something that they thought wasn't right, and it probably gave them confidence to be able to approach the same situation or similar situations in the same manner." (EP01)

As mentioned above, in relation to the post-conventional reasoning among the participants, EP02 quote below demonstrates this.

“And sometimes you may have to bend a few rules and sometimes even break a few rules, but then I think I've seen it from watching other pharmacist practice.” (EP02)

Again, an example where participants have made decisions in a dilemma which focused on the patient but resulted in the need to make a decision which was not in line with others.

“But certainly there's been times where we've given out medicines without probably inappropriate prescription because it was the right thing to do for the patient. And I'm not saying we didn't have any authorization to do so, but it probably wasn't strictly legal.” (EP03)

Role of the pharmacist

Perception of the pharmacist's role

The participants expressed that the picture of a pharmacist's role which they possessed during their years of study did not match the role itself once they were in professional practice.

The quotes below highlight the thoughts from the participants which reflected these misconceptions surrounding the role.

“...it appeared that pharmacist and played like a... a back office role and weren't necessarily in the frontline. I don't think that was just true about the profession.” (EP01)

Within other subthemes such as leadership (see Leadership) and the unexpected managerial element (see Managerial) of the role which many of the participants did not anticipate.

“...why a lot pharmacists don't feel valued and why a lot of people have left community” (EP02)

This was highlighted when discussing the aspects of the role that the participants find challenging. Thus, contributing to wider challenges like resourcing issues and dissatisfaction within role.

Furthermore, the participant recalled experiences where the role of a pharmacist being misunderstood by patients can also present a barrier in being able to provide the best care or make the most informed decisions.

“So you've got to fight that barrier with them saying ohh, “do you know what, I've really spoken to my GP about this. Why am I speaking to you?” Do you understand? And then once you pass that first barrier, then it's like looking at, you know, is it really valuable?” (EP02)

Perceived lack of recognition for pharmacists

The participants discussed their experiences of lack of recognition in their role as a pharmacist. This lack of recognition is described to come from issues of reimbursement from the NHS as well as a lack of acknowledgement for the increased responsibility in the sector. They also highlighted issues with remuneration that pharmacists experience across the sector.

5. Qualitative Results

In discussing the widening scope and additional responsibilities that pharmacists are facing, participants shared concerns that even when there are successes in doing this, appropriate recognition is not awarded.

“...how difficult it is to get rewarded appropriately if you were to manage your pharmacy...” (EP02)

The need for adequate remuneration for pharmacists, as well as for reimbursement of services within pharmacy.

“...I think pay plays a part. I think people need to be reimbursed, depending on their skills and I think and I can see that reimbursement from the NHS well to the Community pharmacy contractors still are crying that they're not really well reimbursed for their dispensing.” (EP04)

The challenges with the NHS reimbursement present wider issues where pharmacies potentially need to increase the number of other services they provide in order to be able to maintain the level of revenue coming into the pharmacy to stay open. Having said that, after the pandemic, perhaps driven the shortage of pharmacists, the rates and pay within pharmacy increased.

“I'll say in general practice or the clinical pharmacist roles, yeah the pay, the pay is definitely a lot better than a lot of people envisaged 2, 3, 4, 5 years ago and even in in Community pharmacy, I have seen rates go up as locums and if you see the C&D reviews on pay or C&D survey on pay, you can see a gradual increase” (EP04)

Summary

This theme encapsulated participants perceived preparedness for the transition from formal education to professional practice. Participants reflected on the teaching they received during their undergraduate pharmacy studies. They highlighted the aspects of this teaching that they were able to recall and utilise in professional practice, these insights offer a perspective on areas that can be enhanced when teaching ethics and decision-making, as per research question three. The participants also discussed personal and professional influences and the effect they had on their decision making in practice.

By analysing the data obtained from this theme and its subthemes, light is shed on the important elements that support the transition from education to practice. It focuses on the need for the MPharm programme to integrate practical experiences with training on decision-making which will prepare students for the complexity of decision-making in practice as they face real world dilemmas. The discussion with the participants and findings suggest that enhancing the MPharm curriculum with real-world scenarios and ethical discourse could better equip students for their future roles as pharmacists.

Theme Three: Moral Development in Professional Practice

With moral development being a cornerstone of ethical practice in healthcare (Hanna, Gillen, & Hall, 2017), pharmacists require support on their journey as healthcare professionals because they need to navigate complex ethical dilemmas (Roche, 2015). This process results in individuals constantly refining their moral reasoning in order to uphold standards in their day-to-day practice and provide the best care to patients. Similar to Theme two, this theme addresses the third and fourth research questions:

- How can the MPharm programme be enhanced to maximise the development of moral decision-making?
- What personal and professional experiences have an influence on moral decision making?

From this theme, 'Moral development in professional practice', three key subthemes emerged (**Table 5.4**), each offering insights into the varying aspects of moral development and its implication on decision-making.

1. Ethical awareness of the participants
2. Factors impacting dealing with dilemmas effectively
3. Professional ethical dilemmas in pharmacy practice

Table 5.4: Summary of Moral Development in Professional Practice theme.

Theme	Subtheme	Code(s)
Moral Development in Professional Practice	Ethical awareness of the participants The participants were given definitions of ethics and moral decision making during the interview and asked to discuss their experiences in relation to this.	Moral development in higher education This relates to the recollection of the participants of the teaching they received on moral development during their formal education.
		Further moral development training after undergraduate education Some participants underwent further moral development training after they had qualified. This highlights any training experience in professional practice.
		Changes in Moral Reasoning This explores any changes in moral reasoning that the participants experienced from the start of their careers until they were interviewed.
	Factors impacting dealing with dilemmas effectively This subtheme highlights the factors and the influence they have on decision making.	Confidence This considers the influence of participants' perception of their self-assurance, it's change over time and its influence on decision making.
		Experience This reflects the participants exposure to various scenarios throughout their career. Experience can provide valuable insight into effective strategies which can be used in managing dilemmas.
		Quality of Care Pharmacists tend to prioritise patient safety and wellbeing when navigating dilemmas. Decisions made to address a dilemma tends to be guided by the desire to bring about the best outcome for the patient.
		Professional values The 9 professional standards outlined by the GPhC tend to form the guiding factors that pharmacists consider in response to dilemmas. Participants attempt to align decisions with these standards in order to uphold professional integrity.
		Reduced time in decision making Time constraints affect pharmacists' ability to thoroughly ponder on dilemmas.
		Regulatory body role The participants perception of the role that the regulatory body plays in relation to decision making is captured here. This is important as regulatory bodies play a significant role in shaping the practice environment and setting standards for professional conduct and ethical behaviour.
		Personal values & beliefs These refer to the deeply held values and ideals that guides the decision-making process in individuals.

5. Qualitative Results

		They refer to the perspectives that the individuals have of the world.
	Professional ethical dilemmas in pharmacy practice The participants discussed various challenges that they encounter in their professional roles that give rise to ethical dilemmas.	Target driven work Participants highlight the pressure to meet performance targets or goals within role. These targets can create dilemmas where pharmacists balance the need to achieve set objectives but also prioritise patient safety.
		Burnout and work life balance Participants shared challenging experience of balancing personal and professional role commitment.
		Monotonous work and demotivation Monotonous or repetitive tasks in pharmacy can give rise to feelings of boredom, disengagement, or professional dissatisfaction among pharmacists. This can bring about a feeling of a lack of professional growth which can affect decision making where pharmacists seek fulfilment and meaning in the work that they do.
		Business Facing The business-related aspects of pharmacy can often come into conflict with professional ethics and patient centred care. Participants shared experience of a higher prevalence of this in community pharmacy settings.
		Stress and workload Stressful situations like staff shortages, high workload and time pressures can influence decision making while participants report needing to balance quality of care in relation to these factors which increase stress.
		Enhanced pharmacist work scope The expanding scope of pharmacy practice and the evolving landscape in pharmacy introduce new responsibilities, and challenges for pharmacists. Participants share how these changes have affected their ability to make decisions.

Ethical awareness of the participants

Moral development in higher education

All participants were able to recall the teaching of ethics and moral development during their undergraduate studies. The module covered scenarios which may bring about ethical dilemmas and how to apply the GPhC standards and ethical principles during moral reasoning.

“I think we completed a module in 3rd year. And I remember. As part of the module. We were given scenarios, I believe, it was to discuss as a class or to do some work on, my memory is a bit vague, but I definitely do remember having scenarios and then having to use the GPhC Code of Ethics to kind of way up the options and then suggest a decision based on those Code of Ethics and what we would do in practice as a pharmacist.” (EP01)

“... it's the the module that I completed which kind of drummed home its value and its importance when making decisions which require you to take into consideration moral and ethical values.” (EP01)

However, not all of them perceived all the teaching method or content as helpful in helping them navigate decision-making in practice.

“I just don't recall them being relevant to everyday practice. I think a lot of stuff we did was worst case scenario. And I think in practice you get loads of mini, mini ethical dilemmas.” (EP02)

In relation to the above quote, understanding whether the participant felt prepared to handle less complex scenarios would have been useful insight.

“I think the lecture is probably valuable in terms of getting you started on the right principles, but until your till you're in a weird situation. Then it's hard to hard to apply it.” (EP03)

They also refer to the relative simplicity of the ethical dilemmas they were presented with during teaching, in comparison to the complexity of the dilemmas they face in real life scenarios.

“They seem so clear cut at university and then you go out into the real world and they don't apply.” (EP03)

They also refer to the perceived theoretical nature of the scenarios making them difficult to relate to.

“There aren't many from undergraduate study, we did exactly what you said we had these definitions splattered and we had to remember them for probably law and ethics. And but in reality, it was just quite theoretical.” (EP04)

The participants were able to recall some specific examples of the ethical dilemmas from their studies.

“...something as simple as an emergency supply. That's a moral dilemma, because in essence, you don't have to do it, if the surgery's open or it's like someone coming in for a salbutamol inhaler and they're not out of breath. That's one thing I do remember from being at uni.” (EP02)

They also brought about suggestions on what may have helped them more based on their experience in professional practice.

“... I think that's one thing we probably could do better at uni is learning how to problem solve. I don't think OSCEs do it justice. I don't think they can teach you that composure you need to solve a problem in practice. There's got to be other ways.” (EP02)

“These are the things that we should really be getting taught. That's how to prioritize. And how to understand what is actually an important issue? Something that's urgent, something that can wait and just decipher and sort it that that way.” (EP02)

Some of the recommendations made by the participants are very closely aligned to the way that Rest recommends that moral education should be taught (J R Rest, 1986).

“But maybe just get the get the students to create scenarios themselves. And so, because remember, every student is different, so they will create something that's very different and they could learn from each other, cause the beauty of uni is you have so many different backgrounds and to get them all together, to think of different ethical dilemmas. And you have such a difference of opinion. I think it would have been better if it was a debate. When you want to talk morality and ethics, the best way to learn is to debate it. Could that way you get opinions, you get to argue and you get to hammer home and you get to define principles.” (EP02)

The participants also shared thoughts on the perceived preparation of the newly qualified pharmacists they worked with who appeared well prepared for decision-making in comparison to how prepared they were.

“...I think maybe the training is a little better in terms of pharmacy school. Cause some of the newly qualifieds I've come across seem to be a bit more clued up. But then it's it could be just a small sample size I've seen in terms of how they deal with moral dilemmas.” (EP02)

Further moral development training after undergraduate study

The participants discussed the opportunities for further training in moral development. While others mentioned that they have not experienced further learning since their undergraduate education.

“I don't think, I don't think the Code of Ethics has been spoken much about since I've qualified” (EP01)

The settings where this may have come up are also mentioned, for example during pre-registration training or preparation for the registration exam.

“I can't remember if it was in preparation for the exam or whether it was just something that we were discussing as part of the training. But I think that's the only occasion where we have to take into consideration ethical values or morals when making a decision.” (EP01)

There were reported to be some activities geared towards supporting with moral decision making during pre-registration training.

“...there were some moral development sort of activities by using theory based and those psychological models and everything... They

do help. It makes you really think about cause some of these models are well thought of.” (EP04)

Changes in moral reasoning

The quantitative DIT-2 results indicated a regression in the N2 scores between NQ and EP levels, so it was of interest to understand the participants perceptions of any changes in their moral decision-making during this period.

One area of difference reported, were the factors that may be considered during the decision-making process.

“Now I tend to just look at the facts, take away any emotions or you know, the fact that I may be dealing with somebody who senior or anything like that. I just tend to look at the facts. I've taken to consideration Code of Ethics, my personal morals and beliefs and make a decision based on that” (EP01)

This is an example which highlights that fewer factors are prioritised and considered later on in their career. The following quote from EP02, highlights the regression to pre-conventional morality where the individuals focus on Stages 1 and 2 where the emphasis is on avoiding punishment and favour obedience to authority figures as well as basing decisions on self interest and how the outcome may satisfy themselves.

“Myself, speaking candidly. What does this mean to me? Like, what is the outcome? Is this going to get me in serious trouble? Is it not? Would I be suspended?” (EP02)

In the quote below, EP03 makes reference to laying more emphasis on the

patient rather than conforming to specific rules, aligned with post-conventional morality.

“I feel like I'm probably a bit more considering of the human in front of me versus the Protocol or the guideline these days, and certainly I'm a bit more willing to go and do something and non standard if it's the right thing for the patient versus just going with whatever's first line.” (EP03)

However, this participant continued on to describe how their decision-making had changed over time.

“As a junior pharmacist, I think you tend to weigh quite heavily on a lot of decisions which end up being fairly, meaningless... I think I probably spend more time thinking about more complex things these days.” (EP03)

In the quote below, is an example of where the factors that are considered and prioritised when making a decision have changed over time.

“I think initially I sometimes I just put law above everything or I'll put, I don't know the powers that be above the manager says we shouldn't do this and that's it... but now I know you're the professional, you're the practitioner you make this decision and if you're called into question are you be able to defend the alternately have you able to defend the patient safety priority?” (EP04)

Some mentioned that there had been no change in the way they went about

responding to specific dilemmas over time.

“I don't think there's been well in the initial years of when I qualified, I think I probably just used to take on board what the doctors and were saying or what they had said.” (EP01)

Factors impacting dealing with dilemmas effectively

Confidence

The participants highlighted the importance that confidence in their professional practice played in their decision-making, and also how their levels of confidence changed over time. In the quote below, the participant expands on how their confidence grew over time.

“Whereas later on down the line when you build up your confidence as a pharmacist, you know you're able to stand your ground and for me that probably took a year or two for that to happen. So that would have changed my decision making, you know, from my early years” (EP01)

Also, being a newly qualified pharmacist also brings about its own challenges with anxieties of being new to the role which would give rise to nuances in decision-making.

“I think for you know what? Yeah, I think when I first qualified, it would probably been different. I probably would have been. I would have been a little more apprehensive.” (EP02)

Coupled with this, many other external considerations can also take

precedence in the absence of confidence. The interview with EP02, he highlighted how lower confidence as a newly qualified pharmacist mean that there was a higher level of consideration for what others opinions may be.

“... what the dispenser was thinking? What the pharmacist before did? And what I've heard I should do. You know, and then I'll be second guessing myself in terms of, you know, what's going to happen next.” (EP02)

Generally the interviewers shared that having an increased level of confidence affects decision-making.

“Sometimes I rarely need to seek or consult others for their opinions. And that's partly to do with, you know, just being a bit more confident and having that experience, but also partly to do with not having the time to, you know go back and forth and dwell on such issues and that actually things need to be dealt with quite quickly.” (EP01)

Involving less people in the decision-making process is described as a change that takes place, but also the participant also refers to the amount of time being available to do that as a contribution factor.

Along with this, the increased time in practice also contributes to an increased level of confidence in decision-making.

“I feel like over time I've got a bit more confident in just making the decision.” (EP03)

Experience

The participants described confidence as closely linked with experience. In line with this, an increase in experience facilitates the decision-making process. Professional experience plays a large role in the way that the participants dealt with dilemmas.

“With experience, you'd be able to make decisions that you it took you probably an hour to make in probably 5 minutes now or maybe 30 minutes.” (EP04)

The above quote also highlights how EP04 spends less time pondering on dilemmas, with experience. This could be a factor potentially having an impact on the regression in N2 score between NQ and EP levels.

Applying the Dreyfus model of skill acquisition defines how progression from novice to expert as a pharmacist can impact decision-making in moral dilemmas. As individuals develop confidence through experience and practice, this can be related to experience in moral decision-making.

With this in mind, at the novice stage, the individual may lack experience and rely on rules, guidelines or other external factors to guide decision-making. Moral dilemmas may be approached with a simplistic view of right or wrong, therefore are guided by this to make moral decisions. As individuals progress through to expert stage in decision-making, it is assumed a mastery level has been achieved. At this point, individuals have a firm understanding of ethics, and the ability to draw on a wealth of experience to navigate challenging moral dilemmas. At the expert stage, individuals are able to navigate complex dilemmas and make nuanced and principled decisions.

Another perspective that the participants shared related to having accrued experience over time, resulting in similar types of dilemmas arising over

time.

“I think because there are there, I don't think there's an, there's not an infinite number of situations you're going to come across in pharmacy when your pharmacist long enough” (EP02)

Quality of Care

Delivering the best quality of care to patients is a key outcome for pharmacists, however this often comes into conflict with other factors which gives rise to dilemmas. A common example in community pharmacy are the services provided in pharmacy and the need to balance these with other non-patient facing duties.

“You might do your services, but even services are done aren't done to a high standard. Cause I mean if you were to do like a service which is being phased out now, like MURs, if you were to do it properly, then you would need half an hour, if you, but then to do that and have a store to take care of.” (EP02)

The aim to always give patients the best care is a factor that impacts the decision-making process for the participants.

“...you might be given a better quality of care to people with more like how do you get your items up. But when you get your items up, you're rushed off your feet. So then, that quality of care that your patients (get) is compromised, so it's trying to strike a balance.” (EP02)

Professional values

The participants all discussed the impact that their professional values had in dealing with moral dilemmas and their day-to-day practice. Many of these values were very closely aligned to the GPhC Standards for Pharmacy Professionals. Not all are referred to in this section as a few are aligned to other subthemes.

Being able to practice in relation to these Standards is something that is very important to the pharmacists interviewed and is a point of satisfaction when they achieve this. Patient or person-centred care is a subtheme previously discussed however this professional value along with effective communication to bring about positive outcomes in the patients care is a key factor.

The Code of Ethics (G. P. C. GPhC, 2012) is a text guide that many of the participants consider strongly to enable them to make moral decisions that align with professional values.

“Strongest influences I would say, uh The Pharmacy Code of Ethics.”
(EP01)

Professional judgement and behaviour are also important in relation to moral decision-making.

This participant goes further in considering his professional behaviour in moral decision-making, making reference to the ‘sustainability’ or the equity in decision making, in reference to making the same decisions in future in the same circumstances.

“Well, now when I think of moral decisions that I make, it's the implication of setting precedent. If I do make this decision for this

case, and my willing to do this make the same decision every time, this comes up again. And then if it's not, if I'm not, then let's rethink how we're going to do this. Is this sustainable going forward?" (EP02)

Personal values and beliefs

Ethical values and belief systems serve as guides when deciding what action to take in difficult situations. With pharmacists being from a range of backgrounds and varying life experiences which shape values, and which play a large role in decision-making, it was important to understand the extent to which participants decisions are influenced by this.

"my personal morals and beliefs and make a decision based on that... for me that that place is a greater importance on upholding my moral values and my integrity when doing things." (EP01)

"it's external source. You know, the way I've been brought up. Life experiences." (EP02)

EP01 goes on to describe the importance of their personal values in relation to remuneration.

"personally I think my moral values are of more importance than getting paid. Although I do want to get paid. But yeah my integrity and my moral values are really important so I'm likely to take those things more serious when making decisions." (EP01)

Below, EP02 describes some personal motivations in decision making. The questions shared as part of the reasoning process align closely with the Personal Interest schema, which indicates pre-conventional level reasoning

which prioritises less principled reasoning.

“Myself, speaking candidly. What does this mean to me? Like, what is the outcome? Is this going to get me in serious trouble? Is it not? Would I be suspended? What do you get?” (EP02)

Reduced time in decision making

The participants shared that as established practitioners, they spent less time pondering before coming to a decision, two main factors that were described as having an impact on this. The quote below refers to the time available to make the decision being limited due to the volume of work.

“...not having the time to, you know go back and forth and dwell on such issues and that actually things need to be dealt with quite quickly. So that you know you can move through the workload and do all the tasks at hand. (EP01)

A similar sentiment is shared below by EP02 also.

“...it all boils down to getting to know the patient and taking them on a case by case basis. The problem is, where is the time?”
(EP02)

The second factor is that the participants felt that based on experience, they did not require to spend as much time pondering on dilemmas.

“Before, it would probably take me. Probably take me maybe a

minimum of an hour and probably require me to speak to some senior colleagues. Whereas now, you know, I can make such decisions, you know, within 5 minutes.” (EP01)

The quote below directly highlights the difference in decision-making process compared to being newly qualified.

“As a junior pharmacist, I think you tend to weigh quite heavily on a lot of decisions which end up being fairly, meaningless. And then you skip over the ones which probably should have a bit more weight to them, so I think. I think I probably spend more time thinking about more complex things these days.” (EP03)

Regulatory body role

Regulatory bodies often have an impact on the decision-making around moral dilemmas in a punitive context. While it would be a positive for pharmacists to perceive regulatory bodies as more of a guide, i.e. the carrot, when making decisions, they are perceived as the stick, where they are recognised for corrective measures rather than support.

“If they find out I've done this. OK, am I going to, you know, get struck off” (EP02)

“I think if GPhC inspection or anyone asks you and you're able to defend that you actually broke the law by was for the patient and you know, it's safe to do that even though it's unlicensed.” (EP04)

“I think our culture, as pharmacists our governing body doesn't help. I think they breed this culture of wanting to hide, hide things away and they don't.” (EP02)

There is also a perceived lack of clarity and inconsistency in the way regulatory bodies handle cases. This ambiguity

“...the GPhC hands out different sentences or bans or punishments for any vary from person to person.” (EP02)

The participants also expressed a desire for guidance and support to be available from regulatory bodies

“This is the organization that's going to punish us if you do something wrong. Yet, they can't give us a definitive answer on something like that.” (EP02)

Professional ethical dilemmas in pharmacy practice

Target driven work

Performance targets and goals set by employers can create situations where pharmacists need to decide between meeting these and prioritising patient care. The participant who spent the most of his career in community pharmacy had the most experiences to share on the impact of targets in creating moral dilemmas.

“...when you're working for any business, it's all about the items you bring in and it's not about the quality of care that you're giving the

patient.” (EP02)

The quote above exemplifies how there is often a trade-off between quality of care and responsibilities and targets that a pharmacist must achieve day-to-day.

“it's the fact is still target driven. I think the patient becomes a number” (EP02)

Due to the nature of community pharmacy being business-driven, these dilemmas can occur often.

“I mean services, I mean pharmacy starts to become more service driven than ever but even with the NMS it's the same way where you do that initial point of contacts but you're only doing it because you know you have to” (EP02)

Another challenge with the nature of community pharmacy is the current economical state where there are growing pressures on community pharmacy with new services such as the Contraception Service and extension of the Pharmacy First scheme. Along with drug shortages since the pandemic, staff shortages and changes to drug reimbursement making it challenging for pharmacists to prioritise patient care.

“...make sure you achieve targets but it's almost impossible because you don't have the resources to do it because, you know, store managers or pharmacy owners will say there's not the resources aren't there or the NHS isn't paying. (EP02)

There are also internal challenges where pharmacy managers or area managers set targets for which, pharmacists feel they may be reprimanded should they not be met.

“... it's getting harder and harder to achieve those outcomes...”(EP02)

In situations like this, looking at a moral dilemma brought about by these conflicting issues, can invoke reasoning at Kohlberg's Stage 1 of moral development, where pharmacists are forced to make choices to avoid reprimand.

“It's almost impossible, because then you fall behind and then you get in trouble for that cause you may not meet targets.” (EP02)

Burnout and work-life balance

When pharmacist's workload has an adverse effect of their personal life outside of work, this can lead to stress and situations where pharmacists may need to make decisions that focus on preserving self. Burnout is common among pharmacists and is linked to suboptimal patient care. Participants called out the lack of preparation they receive during formal training to help them navigate balancing their personal and work lives.

“not having experience in being able to juggle work commitments and family life commitments, I think that was a challenge as well.” (EP01)

“You know that work life balance is completely out of whack cause

you look at it as pharmacists” (EP02)

This can lead to the pharmacists feeling the need to hasten work so that they are able to complete tasks in a timely manner.

“if you have you done this, make sure you get it done and so that it became purely commercial.” (EP04)

The quote above makes reference to EP04’s experience of having to make decisions in a way that is primarily related to the commercial outcomes rather than prioritising what would bring about a more positive patient outcome. When a pharmacist is unable to make decisions in accordance with their moral or professional beliefs as a result of constraints in the professional environments, they are said to be experiencing moral distress. Excessive workload, target pressures, and burnout are key contributing factors to moral distress, as they create ethical tension between professional duty and organisational expectations. Recent research highlights that burnout among pharmacist and other healthcare professionals is often linked to value conflicts, limited autonomy, and emotional fatigue resulting from repeated ethical compromise (Dyar, Stone, & Miller, 2022; Lamiani, Argentero, & Barello, 2023; Vinckers, Smith, & de Vries, 2025).

“...burnout is the biggest thing. I don't think. I don't think we're taught how to rest.” (EP02)

As discussed within previous themes, pharmacists continue to learn and develop skills to progress through their careers. However, this growth can

often come with its own challenges on the individual.

“...having to work on call, weekends on a rotational basis and so on. Managing that with doing the diploma and trying to have a social life. That was a very big challenge for me. And in the end are pretty much just had to kind of sacrifice my own personal life and personal things in order to, you know, complete my diploma and to be able to commit to the role that I was working in.” (EP01)

Monotonous work and demotivation

Moral distress can manifest as demotivation in pharmacists. There are also various aspects of the role that are repetitive and monotonous, thus challenging for pharmacists.

“...some of the little admin jobs like repeat prescription request that you have to sign off and sometimes supporting the GPs is doing a whole bulk of prescription signing at the end of the day. And they sometimes demanding and taxing, and sometimes you it feels more administrative.” (EP04)

This can become a source of dilemmas in practice.

“...in essence it's quite monotonous and target driven and as much as we'd like to think we are taking care of patients we are to an extent, but it's not, what I thought it would be.” (EP02)

Stress and Workload

Stress and heavy workload in pharmacy practice can create moral dilemmas which affect a pharmacist's decision-making process, thus compromising their ability to make sound decisions in the interests of their patients. Factors like time constraints, resource allocation and impacts on wellbeing.

"I think in terms of external factors, I think it is simply a case of just not being given the time or the staff to be able to do something and complete a task in its entirety. And I think that's something that pharmacists go through all the time. I don't think, very few pharmacists get to complete tasks in their entirety. And if they do, they get chastised for being too slow because you're meant to be able to pick up the phone, check a script, also query or like the same time.." (EP02)

Pressure to complete tasks at hand as well as attending to patient-facing responsibilities also give rise to dilemmas.

"...you can move through the workload and do all the tasks at hand."
(EP01)

The quote below from EP02 describes how stress in practice can potentially bring about moral dilemmas that result in pharmacists making inappropriate decisions that not only affect patients but potentially their careers.

"I think if you were to look at errors made or dispensing incidents or things that go wrong or pharmacists do stupid stuff like stealing hundreds of pounds worth of stuff. You could put it down to like stress

or burnout or just not having that clarity.” (EP02)

There is also a perception of a general acceptance that pharmacists work with a persistently high workload with minimal breaks to balance this (Lazarus & Folkman, 1984).

“...you can do a 9 to 8 shift and no one will blink an eye. And you're on your feet and they'll say you have a 20 minute lunch. Like that's in anywhere else in the working world. They'll be like that makes no sense.” (EP02)

Staff constraints give rise to increased stress levels as there is less support available to manage the tasks required in role.

“...what gave rise to the mistake is the is the usual. It's, you know, being busy being short staffed, queue of people out the door.” (EP02)

The nature of the work within practice often means that pharmacists are faced with dilemmas which cause them to have to choose between responsibilities where they perceive one to be more important because of its patient facing nature, than other administrative or non-patient facing responsibilities.

“...community was the administrative work is always a bit of a burden because you just feel like you want to use your time for something more important.” (EP04)

Enhanced pharmacist work scope

The role of a pharmacist has expanded in scope over the course of the past decade, causing there to be more responsibility for pharmacists within their day to roles (Girvin, Sims, & Haughey, 2023). Increased work scope can give rise to amplified complexity in decision making.

“...that whole process of going from the advisor to the decision maker” (EP03)

The point EP03 raised above underpins the main changes that are anticipated as part of the role of a pharmacist, as progression towards pharmacists having more clinical involvement in patient care as prescribers comes about. As a result of the aforementioned point, supporting pharmacists with principled decision-making in dilemmas becomes more important now than ever.

Summary

This theme and the subthemes that emerged painted a picture of the experience of the participants during their professional practice. The examples that the participants shared emphasized the importance of creating a strong ethical foundation during formal education. This ethical awareness then forms the basis for how pharmacists are able to effectively navigate dilemmas in practice. A firm understanding of the factors shared by pharmacists as those that affect their ability to deal with dilemmas, can help in the tailoring of educational and professional support to enhance moral decision-making in practice. The findings from this theme provide strong recommendations for how the MPharm curriculum relating to moral development and ethical decision-making could be enhanced through the implementation of real-world scenarios, ethical discussions or simulations, to better prepare students for the complexities of the profession.

Chapter Summary

This chapter has outlined the qualitative results, demonstrating how participants interpreted and made sense of their moral development, their evolving identities, and the challenges they encountered in practice. The findings highlighted both individual and systemic influences, building on the quantitative trends observed in Chapter 4.

Together, these insights form an essential foundation for the mixed-methods integration presented in Chapter 6, where the qualitative and quantitative strands are brought together to offer a broader and more nuanced understanding of moral reasoning in pharmacy education and practice.

Chapter Six: Discussion & Conclusions

Introduction

This chapter presents the combined findings of the quantitative and qualitative phases of the study, structured to allow a clear progression from measurement to interpretation. It begins by summarising the quantitative results generated through longitudinal administration of the DIT-2, followed by an exploration of the qualitative findings that illuminate participants' lived experiences of moral reasoning and ethical decision-making in practice. The chapter then integrates these two strands, identifying areas of convergence and divergence and examining how datasets complement and challenge one another. Through this integrated analysis, the chapter draws out the unique contributions of the research and the overarching themes that emerge. The chapter concludes by outlining the implications of these findings for pharmacy education and practice, followed by recommendations for future research.

Overview of key findings

The mixed-methods approach combined both quantitative and qualitative methodologies to provide a comprehensive investigation of the research objective: measuring and evaluating moral development in the pharmacy profession from undergraduate to established practitioner. The quantitative phase involved longitudinal data collection using Rest's DIT-2 to quantify the moral reasoning of the participants at different stages of their professional development, particularly during their undergraduate education, following success in the registration assessment and after five years of professional practice. This enabled a systematic evaluation of moral development over time.

To complement the quantitative data, qualitative semi-structured interviews were conducted with participants after eight years in professional practice. Transcription and analysis of the interview transcripts (Appendix 7) provided deeper insight into participants' perspectives on moral development, offering

a nuanced understanding of how moral reasoning can change overtime in real-world practice settings. They also served as an opportunity for the participants to reflect on their experiences and challenges that shaped their decision-making, helping to illuminate the factors that influence moral reasoning in pharmacy practice.

The mixed-methods approach undertaken was important and appropriate to address the research questions for a number of reasons. In the first instance, it facilitated a comprehensive evaluation of moral development, combining quantitative measures of moral reasoning as well as the qualitative narratives of the lived experiences by the participants. This approach was unique in that it allowed for a robust understanding of moral development in pharmacy.

Second, the longitudinal design of the study, followed years later by qualitative semi-structured interviews enabled examination of change in moral reasoning over time. Data collected at multiple time points allowed patterns and shifts in moral reasoning to be identified as the cohort progressed through their academic and professional journeys. These patterns reflect group level trends rather than individual trajectories.

Finally, combining quantitative and qualitative data enhances the validity and reliability of the findings. The triangulation of data from the literature review, DIT-2 data, and interview data produced convergent insights and cross-validated findings, thus strengthening the overall robustness of the study (Abdul Hadi & Jose Closs, 2015; M. D. Allinson, 2019; Rajiah & Venkataraman, 2018).

In summary, the mixed-methods design provided a unique, nuanced, and comprehensive evaluation of moral development across key stages of pharmacy education and practice.

Key quantitative findings

Analysis of the global N2 results revealed a statistically significant difference

5. Discussion & Conclusion

in N2 scores between Level 1 (Mdn = 22.07) and Level 3 (Mdn = 26.80) ($p = 0.025$). There were increases in N2 score of 2.31 between Level 1 and Level 2, and 2.42 between Level 2 and Level 3, and a drop of 0.18 between Level 3 and Level 4, but these were not statistically significant. These preliminary results support the findings that moral education can have a positive influence on maturation of moral reasoning (D. A. Latif, 2009).

A significance in the increase in N2 score between Level 1 and Level 4 ($p = 0.011$) is a positive indication that students' moral development was significantly enhanced by the time they completed the MPharm programme (O'Flaherty & Gleeson, 2014). There was also a statistically significant difference between Level 4 (Mdn = 22.62) and NQ Level (Mdn = 40.53), supporting findings that work-based learning had a positive impact ($p = 0.000$) on moral development (Siegler, 2002). There was further evidence here for work-based augmentation in moral development with statistically significant differences between Levels 1,2,3,4 and NQ ($p = 0.000, 0.000, 0.000$ and 0.000 respectively).

However, there was a large 12.28 decrease in N2 score between NQ and EP levels, however this difference was not significant. This regression in moral reasoning is of concern, however this regression of moral reasoning in practice/clinical years is also observed in other research (Hren, Marus, & Marus, 2011).

The MN score did not change significantly throughout the quantitative phase of the research and there was no significant difference seen, however, the MN score (36.67) was at its highest at NQ Level, complimenting the general upward trend away from the personal interest schema.

The PI score was at its lowest at NQ Level (18.33). There was a general downward trend in the PI score from Level 1 to Level 3, with a slight increase at Level 4. However, in line with the drop in N2 score at EP Level described above, the PI score spiked to its highest level during the quantitative phase at the EP Level (34.00). Significant differences in the PI

score were seen between Level 1 and Level 3 ($p = 0.019$), indicating positive moral development as the cohort progressed through the programme.

Similarly, there was significant growth in moral development between Level 1 and NQ Level ($p = 0.000$), Level 3 and NQ ($p = 0.000$), as well as Level 4 and NQ Level ($p = 0.000$) – demonstrating strong increases in moral reasoning by the time of initial registration.

Key qualitative findings

Three key themes emerged from the interview data that highlighted the practice-based factors that influence decision-making after formal education.

1. Supporting the development of the future pharmacist

Participants discussed the emerging roles within pharmacy practice and the benefit of continuous learning after completing formal education in being able to carry out these roles. Within this theme, participants also shared the perceived need for additional support systems for pharmacists, particularly with moral decision-making in practice.

2. Progression into professional practice

Participants highlighted the extent to which they were able to apply the theory and core values taught in formal education related to decision making into professional practice, discussed the extent to which they felt that this prepared them to handle moral dilemmas in practice.

3. Moral development in professional practice.

This theme was particularly important in elucidating findings from the quantitative phase of the research where there was a regression in moral reasoning between the newly qualified and established practitioner levels. Subthemes like ethical awareness touched on the way that the participants perceived the way that their moral reasoning had changed since they were newly qualified pharmacists and further to this, a subtheme detailing the factors that impact the way that the

pharmacists dealt with dilemmas. These insights represent a unique contribution, offering real-world context for interpreting the quantitative findings.

Participants also described challenges such as professional isolation, performance pressures, and resource constraints, all of which influenced moral reasoning and ethical behaviour in practice.

Interpretation and discussion of findings

Moral development during undergraduate education

Evaluating the pattern of the N2 scores throughout the study period in conjunction with the narrative from the interview data there is a clear progression in moral development during the MPharm. The general upward trend of the N2 score through formal education together with a reduction in PI scores suggested that students increasingly engaged with post-conventional forms of moral reasoning over the course of their undergraduate education. This is consistent with studies demonstrating that higher education can foster shifts away from conventional reasoning towards more principled forms of moral judgement (P. M. King & Kitchener, 1995; Ernest T Pascarella & Patrick T Terenzini, 2005).

This pattern is consistent with Rest's Four Component Model, particularly the development of moral sensitivity as the first step in moral decision-making (J R Rest, 1986; S J Thoma, 2007). During their studies, the participants were exposed to a variety of academic and experiential learning opportunities during the MPharm programme designed to support ethical awareness. During the first year of their studies, students undertook the Interprofessional Education (IPE) module, in which students are introduced to the ethical principles in healthcare ethics, which serve as the basis for ethical decision-making. These principles guide students and practitioners in navigating complex dilemmas. This module being in the first year of the programme, cultivated moral sensitivity in the students as they were

exposed to these fundamental principles and frameworks early on and served as the basis for further exploration and development of moral sensitivity throughout their education professional careers (Blatt & Kohlberg, 1975; Clarkeburn, 2002; D.A. Latif, 2009). Through this module, students engaged in case-based discussions with students from other healthcare programmes such as nursing, midwifery, and physiotherapy, facilitated by academics who would provide guidance during these discussions.

Alongside IPE, ethical dilemmas were embedded within medicines-focused teaching and placements. Students attended placements from first year onwards, creating opportunities to apply ethical principles in real-world settings. Interview participants recalled that exposure to authentic dilemmas and structured ethical discussions helped them begin to move beyond rule-based reasoning and to consider the broader implications of their decisions for patients and colleagues. This aligns with the literature which suggests that structured ethics teaching and dilemma discussion at a “plus one” level can promote progression towards higher stages of moral reasoning (Blatt & Kohlberg, 1975; Power et al., 1989).

Overall, the quantitative results and qualitative accounts together indicate that the undergraduate curriculum did more than simply transmit knowledge of ethical codes; it supported the gradual development of more sophisticated moral schemas and laid the foundations for later professional decision-making.

Moral development during transition to practice

The transition for student to newly qualified pharmacist represented a critical point in the moral development trajectory. Quantitatively, this was reflected in the peak N2 score at NQ level (Mdn = 40.53), which was significantly higher than at any undergraduate level, and a PI score at its lowest point in the study (18.33). This score suggests that, at the point of registration, participants were reasoning predominantly at a post-conventional level, with relatively limited reliance on personal interest considerations. Similar peaks

at the end of formal education or early practice have been observed in other healthcare programmes using DIT-based measures (D.A. Latif, 2009; O'Flaherty & Gleeson, 2014).

The interview data provided important context for this pattern. Participants described their early years in practice as a period during which they consciously applied the core values emphasised during their undergraduate training—particularly patient safety and patient-centred care—when faced with moral dilemmas. They reported spending longer reflecting on decisions, carefully weighing patient needs against legal, organisational and professional consideration. These points raised mapped to the second theme, progression into professional practice, which emerged from the interviews. This also aligns to Stages 5 and 6 Kohlberg's Development Stages, where decisions are made based on the assessment on the greater good and protection of individual rights and freedom and the recognition that any conflicting values and interests need to be balanced in order to maintain justice.

Participants referred to scenarios where they have had to make decisions against other healthcare professionals that they may be working with, for example doctors. This demonstrates the participants moral courage, which is described as the ability to stand by ones ethical beliefs in the face of adversity, opposition or risk (Osswald, Frey, & Streicher, 2011). Individuals who demonstrate moral courage tend to be making decisions at the post-conventional level of reasoning. This also formed part of the acquiring and utilising taught core values subtheme that emerged from theme two. These schemas represent the highest level of moral reasoning according to Kohlberg's theory and demonstrate a sophisticated understanding of moral principles with a strong commitment to ethical values and principles which is not only seen through the quantitative results of the DIT-2, but also the qualitative findings from the interview data. This interpretation is supported by the wider literature, which indicates that placements and practice-based learning enhance moral reasoning and ethical competence (Siegler, 2002;

T. P. Stratton, 2020).

These findings are particularly relevant in light of the recent changes to the Standards for the Initial Education and Training of Pharmacists (GPhC, 2021b), which require pharmacist to provide more active clinical care, including prescribing, from their first day on the register. The alignment of ethical teaching with clinical placements, now facilitated by the inclusion of pharmacy within the NHS clinical tariff (DHSC, 2023), is likely to be increasingly important for supporting moral development in future cohorts (Girvin et al., 2023; T. P. Stratton, 2020). In this study, the NQ peak appears to reflect the combined effect of structured undergraduate ethics education and intensive experiential learning during pre-registration.

Moral reasoning in established practice

The DIT-2 results showed that there was a regression in moral reasoning at EP Level. The PI score was at its highest point in the study at EP Level (34.00), while the N2 score fell but not with statistical significance. The combination of these two changes indicated a regression in moral reasoning. This pattern of regression in moral reasoning in professional practice in comparison to levels during formal education is also seen in research by M. D. Allinson (2019), where P scores of participants who were measured using the Professional Ethics in Pharmacy (PEP) test were highest in the fourth year of their undergraduate studies, then dropped as pre-registration trainees and increased slightly as early career pharmacists.

The significance of the PI score being at its highest, in comparison to the MN and N2 scores, shows that participants had an affinity for the personal interest schema which is associated with Stages 2 and 3 of Kohlberg's theory of moral development. These stages are characterised by reasoning focused on individual needs or desires, and decisions are made based mainly on what is personally beneficial or desirable. At Stage 3, decisions are influenced by the expectation that wrong behaviour is punishable, thus individuals seek to make decisions that avoid this outcome (Kohlberg,

1981).

The qualitative data shed light on possible reasons for the shift. Participants described a gradual reduction in the time available to reflect on dilemmas as they progressed in seniority. Increasing workload, staffing pressures, expanding service provision and additional managerial responsibilities meant that decisions often had to be made rapidly, with limited opportunity for extended ethical deliberation. While some of this increased speed reflected greater familiarity with recurring dilemmas, participants also acknowledged that time pressure sometimes forced them to focus on pragmatic solutions rather than exploring the full moral complexity of a situation. This is consistent with broader evidence on how environmental constraints shape moral action (Lazarus & Folkman, 1984; Magola, Willis, & Schafheutle, 2018).

Participants explicitly discussed practicing in a more defensive manner as established practitioners. They reported heightened awareness of the regulatory environment and described the GPhC as being experienced primarily as a punitive body. As a result, they often considered the possible consequences of complaints or disciplinary action when making decisions, seeking to avoid personal risk or professional sanction. This orientation is consistent with Kohlberg's Stage 3, where behaviour is shaped by the desire to avoid punishment or negative judgement rather than internalised moral principles (Kohlberg, 1981).

Participants shared their experiences of professional isolation in the latter years of their practice, particularly in community settings. They shared their thoughts on benefitting from peer support or being able to learn from other pharmacists' experiences when it comes to moral dilemmas faced in practice. Other healthcare professions such as nursing and medicine have support structures in place to support with moral dilemmas in the early career years (Clark-Grill, 2016; Lillemoen & Pedersen, 2012). More concerning, this is not an experience that is unique to this research as other studies have also called for a need to support pharmacists at this level

(M. D. Allinson, 2019; Magola et al., 2018). The absence of such support made it harder to sustain principled reasoning in the face of complex and emotionally demanding decisions and has been linked in the literature to increased **moral distress (Astbury & Gallagher, 2020; Astbury, Gallagher, & O'Neill, 2015).**

In addition, interviewees reported that the business-facing aspects of community pharmacy created dilemmas in which financial and organizational targets could come into tension with optimal patient care. They highlighted performance targets, service pressures and resource constraints as key contributors to ethical tension, particularly in the context of an expanding service portfolio that now includes initiatives such as Pharmacy First, vaccinations services and extended clinical roles (C. Anderson & Sharma, 2020; Joshi, 2024; Pires, 2022). These findings align with the RPS Workforce Wellbeing Roundtable Summary 2024 (RPS, 2024), which reported high levels of workplace pressure, burnout risk and inadequate staffing in pharmacy.

Together, these conditions contributed to stress and moral distress, particularly when pharmacists felt unable to practise in accordance with their professional values due to workload, staffing shortages or conflicting targets (Astbury & Gallagher, 2020; Lazarus & Folkman, 1984). Against this backdrop, the commitment, but as a response to cultural and organizational pressures that push pharmacists towards more self-protective and expedient forms of reasoning.

Influence of values, beliefs and professional identity

Across all stages of the study, values, beliefs and professional identity emerged as central influences on moral development. The qualitative themes – supporting the development of the future pharmacist, progression into professional practice, and moral development in professional practice – collectively showed how participants' core values interacted with changing roles and contexts (Latif 2009, Stratton 2020).

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Participants consistently framed their decisions in strongly patient-centred terms. They described the patient as being “at the forefront” or their thinking and emphasised their responsibility to act in the patient’s best interests, even when this meant challenging colleagues, questioning established practices or resisting commercial pressures. This commitment reflects the values embedded in the GPhC Standards for Pharmacy Professionals (GPhC, 2017) and indicates that at the level of values, participants continued to endorse principled, post-conventional norms.

At the same time, the data suggested that the translation of values into practice became more complex over time. As participants progressed into more senior roles, they were required not only to make clinical decisions but also to manage teams, meet performance targets and balance competing expectations from employer, prescribers and patients. Three of the interviewees described a disjunction between the idealised role of the pharmacist they envisaged as students and the realities of the frontline practice, including feelings of undervaluation and a lack of recognition within the wider healthcare system. These tensions appeared to strain professional identity and, in some cases, contributed to frustration and disengagement, echoing findings from other studies of pharmacy workforce stress and role conflict (Augustine et al., 2018; Magola et al., 2018).

Continuous learning and professional development were perceived as crucial in maintaining both competence and moral confidence. Participants described pursuing additional qualifications and seeking opportunities to expand their skills, particularly in clinical and prescribing domains, which corresponds to the wider emphasis on CPD and revalidation in pharmacy (Clark-Grill, 2016; Mantzourani, Desselle, & Lucas, 2022; Micallef & Kayyali, 2019). However, they also reported that formal moral development training did not continue after their undergraduate studies.

The interviews highlighted a perceived need for stronger support systems to sustain moral development in practice. Participants identified potential value

in mentorship programmes, peer support networks and pharmacist-focused employee assistance schemes that would enable shared reflection on dilemmas and provide emotional and professional support, echoing models used in other health professions (Borges et al., 2020; M. B. Cooper et al., 2024). They also recognized the risk of moral distress and burnout when such support was absent, particularly under high workload and isolated roles (Astbury & Gallagher, 2020; R. P. S. RPS, 2024).

Overall, the findings suggest that while values and ethical commitments remained strong, the ability to consistently enact these values was constrained by organizational context and limited structures for ongoing moral development. Professional identity, shaped by both educational experiences and workplace realities, played a mediating role in the process. Where identity as a patient-centred, accountable professional was supported by the environment, principled reasoning could be maintained; where it was undermined by pressure, isolation or conflicting priorities, regression towards more defensive and personal interest-oriented reasoning became more likely. This underscores the need not only for robust ethics education during the MPharm, but also for explicit structured and ongoing attention to moral reasoning, reflection and support in post-registration practice, so that pharmacists are able to sustain the values and ethical standards expected of them within increasingly complex and demanding roles.

Reflections, Recommendations and Implications

This study offers an important contribution to understanding how moral reasoning develops across the continuum of pharmacy education, the transition to practice, and early professional experience. Conducting a longitudinal mixed-methods study over more than a decade inevitably presented challenges, yet it also enabled a nuanced examination of how pharmacists' moral reasoning evolves within shifting educational, organisational and regulatory contexts.

Reflections on the study

Sustaining participant engagement across multiple rounds of data collection proved difficult, resulting in a small final quantitative sample. Although this limits opportunities for statistical inference and produced wide confidence intervals influenced by chance variation, the dataset nonetheless provides valuable insight into developmental patterns over time. The qualitative interviews strengthened this by offering rich accounts of how pharmacists interpreted ethical challenges during both education and early practice. These reflections highlighted the influence of workplace culture, organisational pressures and professional identity formation on moral decision-making. Collectively, the findings illustrate the complexity of studying moral development in a profession undergoing rapid expansion in scope and responsibility.

Implications for students and early-career pharmacists

The findings suggest that pharmacy students would benefit from earlier and more sustained exposure to authentic moral dilemmas. Although ethical principles were covered during the MPharm, participants reported feeling underprepared for the value conflicts, workload pressures and practical constraints they encountered in real practice. Integrating ethics more explicitly into clinical and prescribing-focused learning, may strengthen moral development prior to graduation. For early-career pharmacists, structured supervision, opportunities for reflective practice and access to supportive colleagues appear essential in consolidating moral confidence and navigating autonomous decision-making.

Changes in Standards for Initial Education and Training and implications for teaching ethics

It is important to recognise that the participants in this study were educated under the 2011 GPhC Standards (GPhC, 2011), whereas current MPharm programmes follow the 2021 Standards (GPhC, 2021b), which place far

greater emphasis on ethical reasoning and professional judgement. In the 2011 Standards, ethics was primarily embedded within broad professionalism outcomes such as maintaining confidentiality, working within legal frameworks, and acting in patient's best interests. While these expectations implied ethical conduct, they did not explicitly require structured moral reasoning or systematic engagement with ethical dilemmas.

By contrast, the 2021 Standards introduced several explicit learning outcomes related to ethical decision-making including:

- 16: "Apply professional judgement in all circumstances taking legal and ethical reasoning into account", including managing ethical dilemmas, uncertainty, and clinical risk.
- 20: "Act openly and honestly when things go wrong and raise concerns even when it is not easy to do so"
- 30: "Appraise the evidence base and apply clinical reasoning and professional judgement to make safe and logical decisions which minimise risk and optimise outcomes for the person"
- 36: "Apply relevant legislation and ethical decision-making related to prescribing, including remote prescribing" (GPhC, 2021b).

These changes reflect the increasing complexity of pharmacists' roles, particularly the requirement for all pharmacist to qualify as prescribers, and reinforce the need for ethics and moral reasoning to be taught in a more intentional, visible, and longitudinal manner. Embedding structured ethical decision-making, case-based discussion, and reflective practice throughout the programme aligns with these contemporary regulatory expectations and addresses gaps identified by participants in this study.

In order to ensure that the ethics teaching that is being embedded across the programme will be successful in enhancing moral development, the module leads will require support from academics or researchers with experience in ethics teaching or training. Modules should include topics

covering ethical theories, biomedical ethics and how these are applied in practice and the way in which it can enhance their professional practice and patient care.

It is also important to consider the style of content delivery. Research discussed as part of the literature review in chapter two has shown that case-based learning as well as sessions where students can engage in discourse relating to real-world ethical dilemmas. There is much knowledge to be gained from discussing real-world scenarios and discussing the decisions made in relation to the alternative outcomes. Participants who took part in interviews also, discussed added benefit of students engaging in sessions which would allow them to write their own scenarios and discuss them with peers in session. This style of session would be beneficial in the latter stage of the programme when students have been exposed to varying examples in placements and taught sessions (Magola, Willis, & Schafheutle, 2022).

Module based teaching

In order to enhance the development of principled decision-making skills in pharmacy students, the primary recommendation is to integrate moral and ethical training throughout the MPharm programme (T. P. Stratton, 2020). This will primarily involve embedding ethical decision-making training in all years and aspects of the programme (May & Luth 2013). This teaching should be explicit in that, students should be made aware of the fact that the subject matter is designed to increase their ethical awareness and sensitize them to the components involved in moral decision-making, for example, in relation to the Four Component Model (S J Thoma, 2007) as discussed in previous chapters.

Experiential learning enhancement

This could also offer the opportunity to include prescribing-based moral dilemmas, which would be important for students to be exposed to in light of them qualifying as prescribers once they successfully qualify as

pharmacists. The data from this study has shown that there was a marked and statistically significant growth in the N2 score between students graduating and successfully completing their pre-registration year, this supports the benefits that experiential learning can have on moral development.

Implementing simulation-based learning activities where students are provided with the opportunity to engage in moral dilemmas through simulation and role-playing exercises. These can be included as part of existing simulation sessions, workshops or objective structured clinical examinations (OSCEs). This will offer the opportunity for students to get feedback from peers as well as academics, while they navigate ethical challenges in a controlled environment.

Implications for the pharmacy profession

As the scope of pharmacy practice expands, particularly with the transition toward pharmacist independent prescribing, the ethical demands placed on practitioners are increasing. Participants described situations in which workload, time pressures and limited organisational support created tensions between professional values and what they were able to enact in practice. Such conditions risk moral distress and highlight the need for practice environments that acknowledge the ethical complexity of modern pharmacy. Consistent engagement with current regulatory standards, particularly the GPhC Standards for Pharmacy Professionals (GPhC, 2017), also appears necessary, given evidence of variable awareness.

Strengthening moral agency therefore required organisational cultures that encourage ethical reflection, provide clear guidance and promote open discussion of moral concerns.

Ethics based pharmacist training from providers

There are many training providers for pharmacists that provide CPD courses and

materials, for example, Centre for Pharmacy Postgraduate Education (CPPE), Pharmacy Network or Chemist and Druggis. Although many of these providers do provide some law and ethics-based case studies for pharmacists to engage in, introducing courses or activities that specifically aim to enhance pharmacists' moral development would be beneficial to pharmacists in enhancing their ethical awareness and also supporting with the yearly GPhC revalidation process (Clark-Grill, 2016). Encouraging lifelong learning focused on ethics and moral reasoning could potentially avoid the regression in moral reasoning seen after pharmacists have been in practice for a number of years, an increased number of meaningful CPD activities focused on this would support this greatly.

Ethics-based reflective practice

The Preparing for Professional Practice (PPP) module is a current component of the MPharm programme and was not part of the curriculum in 2008 when the original cohort in this study began their training. Over time, the module has evolved to incorporate structured reflective activities that align with contemporary expectations for professional development and GPhC revalidation requirements. Unlike earlier approaches to ethics education – often delivered as standalone session or embedded implicitly within other modules – the current PPP structure provides a more consistent and scaffolded opportunity for students to engage with ethical aspects of practice across all four years of the programme.

Building on this foundation, the introduction of ethics-based reflective activities would allow students to explore their personal beliefs, experiences, and decision-making processes in a more explicit and systematic way. This could take the form of structured reflective exercises or journal entries focused on ethical dilemmas encountered during taught sessions or placement experiences. Embedding these tasks longitudinally throughout the programme mirrors the reflective processes required of practising pharmacists during GPhC annual revalidation, supporting early socialisation

into reflective ethical practice (P. M. King & Kitchener, 1995).

As part of existing experiential learning, students already complete placement booklets containing compulsory (core) and optional (desirable) activities. For example, first year students may engage in discussions about ethical dilemmas observed in practice as a desirable activity, while peer discussions in tutor groups form core reflective tasks. Strengthening the approach could:

- Reclassifying the discussion of ethical dilemmas with a supervising pharmacist as a core activity across all placement years.
- Introducing structured debrief sessions following placements, where students collectively reflect on ethical dilemmas they encounter and how pharmacists resolved them, aligning with established debriefing frameworks (Janesick, 2015).
- Ensuring that ethical reflection is explicitly linked to relevant learning outcomes and the GPhC Standards for Initial Education and Training.

These enhancements would create a clearer developmental trajectory for ethical reasoning, ensure greater consistency across practice settings, and provide students with repeated opportunities to contextualise ethical theory within authentic practice environments.

Implications beyond pharmacy

Although pharmacy was the focus for this study, the findings have broader relevance for medicine, nursing and allied health professions, where practitioners face similar tensions between ethical ideals and real-world constraints. The alignment of results with wider literature underscores the potential value of interprofessional ethics education and shared approaches to supporting moral development during early career stages.

Methodologically, this study demonstrates the value of combining longitudinal quantitative measures with qualitative inquiry, offering an adaptable framework for other health professions.

Recommendations for future research

The study reinforces the importance of longitudinal approaches to understanding moral development. Replicating this methodology across other Schools of Pharmacy in Great Britain would enhance generalisability and provide comparative insight into institutional influences on moral development. Further research exploring setting-specific challenges particularly the differences between community, hospital and general practice setting would support tailored approaches to educational and workplace strategies.

ore granular tracking of post qualification development is also warranted. This study included only two DIT-2 completions during professional practice; annual measurements during the early career period could provide a clearer picture of the developmental trajectory between registration and established practice. Assigning anonymous unique identifiers would allow individual-level tracking over time, although attrition remains a known challenge in longitudinal research. Finally, ongoing evaluation of the contemporary relevance of tools such as the DIT-2 and PRP is needed, alongside exploration of integrated measures that capture cognitive, emotional and contextual dimensions of moral decision-making.

Strengths and limitations of the study

One of the main strengths of the study was the design, being longitudinal in nature allowed for the analysis of moral development and observation of the changes over an extended period. By following participants from the start of their undergraduate studies, through their first five years of professional practice, the study is unique, and captures the dynamic nature of moral development. It also provided valuable insights into the difference between how educational and professional learning experiences shape how pharmacists deal with moral dilemmas. This comprehensive longitudinal design allowed for a unique and nuanced perspective of moral development in pharmacy practice.

This study also leveraged well-established theoretical frameworks such as Kohlberg's Theory of Moral Development and Rest's Defining Issues Test 2 (DIT-2), which have established use in adolescent and healthcare-based populations of study participants, similar to this research. These frameworks provided robust tools for the measurement of moral development and also ensure that the study's findings are grounded in recognised psychological frameworks and theories.

A further strength was the mixed-methods approach, in utilising the DIT-2 scores and semi-structured interviews, both quantitative and qualitative data to establish a stronger understanding of moral development. The DIT-2 scores provided measurable changes in moral development, that could be substantiated by the narrative provided from the qualitative data, offering a deeper understanding into the personal and professional factors that influence moral decision-making. The qualitative data from the semi-structured interviews was an added strength of this study, which allowed in-depth exploration of the participants' experiences in the early years of their practice and how this relates to their perspectives on moral development.

However, several limitations should be noted. The most significant relates to its generalisability. The study followed a single cohort of students from one School of Pharmacy (University of Hertfordshire). Although all Schools of Pharmacy in Great Britain follow the same Standards for the Initial Education and Training of Pharmacists (GPhC, 2021b), there is nuance in the way that each SoP delivers their programme, thus these slight variations in approaches which may yield different results.

The second major limitation to this research was the attrition over time. This was expected due to the longitudinal study design, this is a common challenge, as individuals drop out of the study over time. This gives rise to a reduced sample size, that could potentially introduce bias if the results of those who leave the study differ significantly from those who remain.

The methods of capturing data in this study, using the DIT-2 and semi-

structured interviews introduce the potential for self-reporting bias, as participants share desirable responses rather than candid responses which may skew the results.

A further limitation relates to the qualitative component of the study. Although the interviews generated rich and meaningful insights, the number of participants was limited, at four. This restricted the breadth of perspectives captured and may have limited restricted the diversity of experience represented across different sectors of practice. As a result, the qualitative findings should be interpreted with caution, recognising that they reflect depth rather than breadth. The limited interview sample also constrained the extent to which in turn may have reduced the robustness of some thematic interpretations.

Recruitment for the qualitative phase posed several challenges. Participants were drawn from cohort that had already experienced attrition throughout the longitudinal study, and many were no longer in regular contact with the University. This made follow-up more challenging. Reflecting on this, alternative or additional recruitment strategies, such as staged reminders, the use of multiple communication channels, or engagement through professional networks and social media, this may have increased participation. Future research of this nature may also benefit from offering more flexible interview formats (e.g., asynchronous written responses or audio submissions) to accommodate practitioners' schedules. All interview participants were male, the recruitment method could have also contributed to challenges reaching females or scheduling or format of the interviews.

These limitations must also be contextualised within the study design. Longitudinal cohort research inherently faces issues of attrition, restricted sampling pools, and challenges in retaining engagement over extended periods. The qualitative component, although limited in size, nonetheless provided valuable interpretive depth by illuminating how pharmacists navigate moral dilemmas, how their reasoning evolves, and how workplace

contexts shape their decisions. The study's purpose was not to generalise across the entire profession but to explore moral development over time with a single, well-defined cohort. In this sense, the interview data, though limited, contributed meaningfully to triangulation by contextualising and enriching the quantitative findings.

Finally, the limited scope of interventions included in the literature review, which did not investigate specific interventions that significantly impact moral development in education. In the event, that these were included as part of the research, more specific and actionable insights that can be used to inform curriculum enhancement or support in practice.

Addressing the research questions

This study explored four research questions through a longitudinal mixed-methods design, integrating quantitative measurement of moral reasoning with qualitative exploration of pharmacists' lived experiences. The first research question – To what extent has moral development been measured in pharmacy students and professionals? – was addressed through a comprehensive narrative review in Chapter 2. This review, in summary, identified that although substantial work exists in other health professions, research in pharmacy remains comparatively limited, fragmented, and predominantly cross-sectional. Very few studies have examined moral development across the full educational and early-career trajectory. This highlighted a clear gap that justified the longitudinal design adopted in the present study.

The second research question – In what way, if any, is students' moral decision making affected by their higher education experience? – was explored through the quantitative phase. The DIT-2 was administered annually across the four years of the MPharm, and twice post-graduation. Analysis of the N2 scores demonstrated that students generally experienced positive moral development during their degree, with a statistically significant improvement between Level 1 and Level 4. Although the changes

between individual years were not always statistically significant, the overall trajectory indicated growth in moral schema development during higher education. These findings suggest that the MPharm curriculum plays a meaningful role in shaping moral development, even if the development is not strictly linear.

The third research question – How can the MPharm programme be enhanced to maximise the development of moral decision-making? – was addressed through integration of the quantitative findings with the qualitative data. Trends in DIT-2 scores identified stages of the programme where moral development appeared most pronounced, while interviewees provided insight into the pedagogical experiences, they found ethically formative, such as clinical placements, problem-based learning, and exposure to real dilemmas. Combining these findings enables the development of evidence-based recommendations for strengthening moral education, including earlier introduction of complex scenarios, increased opportunities for reflective dialogue, and clearer alignment between ethical principles and clinical decision-making.

The fourth research question – What personal and professional experiences influence moral decision-making? – was addressed through the qualitative phase. Semi-structured interviews revealed how workplace culture, professional pressures, interprofessional relationships, organisational constraints, and personal values shaped participants' moral decision-making in practice. Themes illustrating moral distress, workload pressures, confidence, responsibility, and professional identity underscored the powerful role of context. These findings demonstrate that moral reasoning is not solely an individual cognitive process but is influenced by the conditions and cultures in which pharmacists work.

Together, these elements demonstrate how the study systematically addressed each research question through an integrated mixed-methods design that captured both measurable developmental trends and lived

realities that underpin them.

Conclusion

The longitudinal mixed-methods study examined the moral development of pharmacy students across their undergraduate education into professional practice. The combination of repeated DIT-2 administration and in-depth qualitative interviews provided a holistic understanding of how moral reasoning evolves at key points in a pharmacist's educational and professional trajectory. The quantitative findings demonstrated overall growth in moral reasoning during the MPharm, while the qualitative findings revealed how this development is shaped, and at times constrained, by the realities of modern pharmacy practice.

Collectively, the findings show that moral development is influenced not only by curriculum design but also by experiential learning, organizational culture, and the ethical pressures of clinical environments. The transition from student to practicing pharmacist emerged as a period of particular vulnerability, during which professional identity, confidence, and ethical resilience are still forming. The study also highlighted systemic factors that can either enable or hinder ethical practice, including workload pressures, access to support, and the degree to which pharmacists feel able to act in accordance with their professional values.

By drawing together insights from both methodological strands, this research contributes new evidence to a field where longitudinal work remains scarce. It highlights the importance of cultivating moral reasoning throughout the educational continuum, embedding ethics more prominently within clinical teaching, and supporting early-career pharmacists as they navigate increasingly complex professional approaches to deepen understanding of moral development, offering a framework that can be adapted by researchers across health professions.

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Appendices

Appendix 1: Quantitative Results

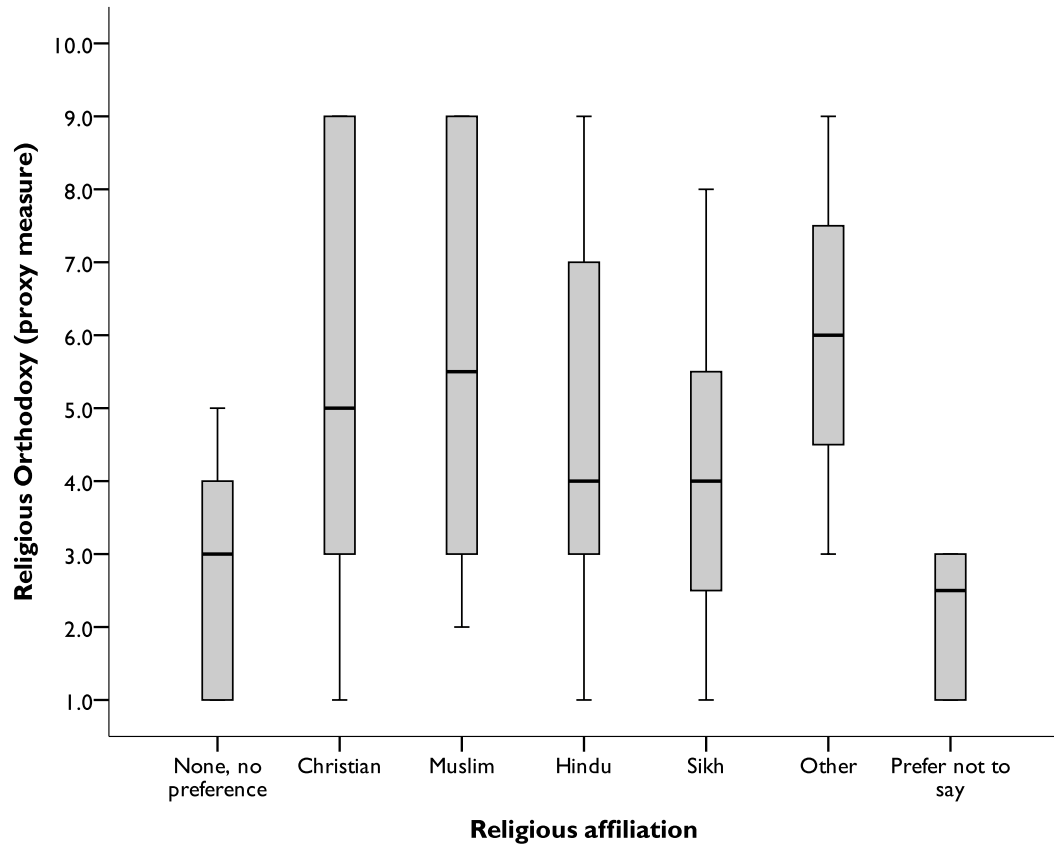
Appendix 1.1

Median religious orthodoxy scores by religious affiliation at Level 1.

Religious affiliation	n	Median religious orthodoxy score
None, no preference	5	3.0
Christian	26	5.0
Muslim	44	5.5
Hindu	27	4.0
Sikh	15	4.0
Other	3	6.0
Prefer not to say	6	2.5
Total	126	4.0

Appendix 1.2

Boxplot of religious orthodoxy scores for different religious groups at Level 1.



Appendix 1.3

Reliability indices for Level 1 dataset.

Variable	N	Mean	SD	Median
U	126	0.51	1.94	0.13
M	126	1.95	2.41	1
NumCD	126	1.41	1.31	1

Appendix 1.4

Median schema indices at Level 2 sorted by age

Age		Score			
		N2*	P	MN	PI
18-25 (n = 98)	Median	24.87	26	33	29
	Range	68.42	64	66	54
26-30 (6*/7)	Median	24.16	22	48	30
	Range	38.96	32	31	38
31-40 (5)	Median	19.82	22	36	32
	Range	21.44	30	34	36
Total (109*/110)	Median	24.38	24	34	30
	Range	68.42	66	66	56

Appendix 1.5

Median schema indices at Level 2 sorted by educational level

Educational Level		Score			
		N2*	P	MN	PI
High school or equivalent (n = 20)	Median	26.24	23	34	30
	Range	57.73	50	48	38
Further education college or equivalent (75)	Median	24.22	26	34	28
	Range	59.25	56	54	56
Bachelor's degree (8*/9)	Median	24.67	22	44	28
	Range	23.90	30	36	32
Master's degree (1)	Median	17.48	2	44	42
	Range				
Other (5)	Median	28.70	34	30	32
	Range	68.02	60	16	36
Total (109*/110)	Median	24.38	24	34	30
	Range	68.42	66	66	56

Appendix 1.6

Median schema indices at Level 2 sorted by religion.

Religion		Score			
		N2*	P	MN	PI
None, no preference (n = 4)	Median	29.48	26	24	31
	Range	68.42	56	16	46
Christian (24*/25)	Median	26.99	32	32	30
	Range	46.07	48	56	42
Muslim (34)	Median	22.23	23	37	28
	Range	57.99	52	40	56
Hindu (26)	Median	23.87	24	31	32
	Range	41.64	54	36	38
Sikh (12)	Median	20.91	20	39	33
	Range	56.86	54	54	44
Other (3)	Median	24.01	24	32	20
	Range	33.82	28	12	8
Prefer not to say (6)	Median	25.89	30	43	28
	Range	38.02	38	32	30
Total (109*/110)	Median	24.38	24	34	30
	Range	68.42	66	66	56

Appendix 1.7

Median proxy indices at Level 2 sorted by religion.

Religion		Score		
		RO	HL	A
None, no preference (n = 4)	Median	3	2	2
	Range	2	2	7
Christian (25)	Median	5	1	1
	Range	8	5	9
Muslim (34)	Median	6.5	1	3
	Range	8	4	10
Hindu (26)	Median	5	2	2
	Range	8	3	6
Sikh (12)	Median	4.5	1	
	Range	8	2	4
Other (3)	Median	4	2	2
	Range	6	1	7
Prefer not to say (6)	Median	3.5	2	2
	Range	8	2	4
Total (110)	Median	5	1	1
	Range	8	5	10

Appendix 1.8

Median proxy indices at Level 2 sorted by age.

Age		Score		
		RO	HL	A
18-25 (n = 98)	Median	5	1	1
	Range	8	5	10
26-30 (7)	Median	6	1	0
	Range	7	2	3
31-40 (5)	Median	5	1	4
	Range	4	3	6
Total (110)	Median	5	1	1
	Range	8	5	10

Appendix 1.9

Median proxy indices at Level 2 sorted by gender.

Gender		Score		
		RO	HL	A
Male (n = 40)	Median	4	2	1
	Range	8	5	10
Female (70)	Median	6	1	2
	Range	8	4	9
Total (110)	Median	5	1	1
	Range	8	5	10

Appendix 1.10

Median proxy indices at Level 2 sorted by education.

Educational Level		Score		
		RO	HL	A
High school or equivalent (n = 20)	Median	4.5	1	3
	Range	8	5	7
Further education college or equivalent (75)	Median	5	1	1
	Range	8	4	10
Bachelor's degree (9)	Median	7	1	0
	Range	6	2	8
Master's degree (1)	Median	4	1	5
	Range			
Other (5)	Median	3	1	3
	Range	4	3	4
Total (110)	Median	5	1	1
	Range	8	5	10

Appendix 1.11

Results of between-group testing carried out on Level 2 proxy scores

(a) Mann-Whitney U test; and (b) Kruskal-Wallis test. Significant results highlighted in grey.

(a)

Factor		U	z	p
Gender	RO	1799	2.499	0.012
	HL	1195	-1.338	0.181
	A	1473	0.474	0.636

(b)

Factor		χ^2	df	p
Age	RO	2.178	2	0.336
	HL	2.64		0.267
	A	6.569		0.037
Education	RO	6.481	4	0.166
	HL	0.849		0.932
	A	3.461		0.484
Religion	RO	13.303	6	0.038
	HL	5.114		0.529
	A	6.488		0.371

Appendix 1.12

Reliability indices for Level 2 dataset

Variable	N	Mean	SD	Median
U	105	0.11	0.16	0.07
M	110	1.81	2.18	1
NumCD	110	2.00	1.24	2

Appendix 1.13

Summary of schema indices at Level 3

Variable	N	Mean	SD	Median	95% Confidence Intervals	Minimum and Maximum	Range
N2	94	27.9	12.4	26.80	25.31 to 30.41	3.69 to 57.45	53.76
P	94	27.9	13.7	26	25.11 to 30.72	0 to 66	66
MN	94	37.1	14.0	36	34.23 to 39.95	10 to 74	64
PI	94	28.7	13.7	28	25.88 to 31.47	2 to 72	70

Appendix 1.14

Median schema indices at Level 3 sorted by age

Age		Score			
		N2	P	MN	PI
18-25 (n = 81)	Median	26.56	26	36	28
	Range	53.76	66	62	66
26-30 (8)	Median	32.75	35	36	26
	Range	37.29	34	26	42
31-40 (5)	Median	32.07	30	48	10
	Range	26.24	30	38	38
Total (94)	Median	26.80	26	36	28
	Range	53.76	66	64	70

Appendix 1.15

Median schema indices at Level 3 sorted by education

Educational Level		Score			
		N2	P	MN	PI
High school or equivalent (n = 23)	Median	26.94	26	32	30
	Range	48.52	48	48	46
Further education college or equivalent (59)	Median	26.66	26	38	26
	Range	50.67	66	62	64
Bachelor's degree (10)	Median	30.64	31	37	28
	Range	30.19	32	60	42
Master's degree (1)	Median	14.04	26	26	48
	Range				
Other (1)	Median	20.59	28	26	44
	Range				
Total (94)	Median	26.80	26	36	28
	Range	53.76	66	64	70

Appendix 1.16

Median schema indices at Level 3 sorted by religion

Religion		Score			
		N2	P	MN	PI
None, no preference (n = 4)	Median	38.16	41	18	34
	Range	16.31	16	2	16
Christian (18)	Median	30.51	30	40	21
	Range	41.59	44	56	46
Muslim (25)	Median	21.66	22	38	28
	Range	52.86	60	62	64
Hindu (21)	Median	24.87	22	38	30
	Range	39.32	50	48	40
Sikh (10)	Median	28.18	27	41	26
	Range	44.45	52	46	26
Other (2)	Median	30.38	29	37	30
	Range	2.36	6	2	12
Prefer not to say (14)	Median	28.53	31	31	26
	Range	47.40	50	34	54
Total (94)	Median	26.80	26	36	28
	Range	53.76	66	64	70

Appendix 1.17

Results of between-group testing carried out on Level 3 schema scores

(a) Mann-Whitney U test; and (b) Kruskal-Wallis test. Significant results highlighted in grey.

(a)

Factor		U	z	p
Gender	N2	1163	1.364	0.172
	P	1162	1.358	0.174
	MN	1150	1.263	0.207
	PI	618.5	-2.986	0.003

(b)

Factor		χ^2	df	p
Age	N2	0.104	2	0.949
	P	1.122		0.571
	MN	3.589		0.166
	PI	3.681		0.159
Education	N2	2.143	4	0.709
	P	0.116		0.998
	MN	3.583		0.465
	PI	4.317		0.365
Religion	N2	7.443	6	0.282
	P	8.448		0.207
	MN	11.252		0.081
	PI	3.611		0.729

Appendix 1.18

Median proxy indices at Level 3 sorted by gender

Gender		Score		
		RO	HL	A
Male (n = 32)	Median	4	2	1
	Range	9	4	8
Female (62)	Median	6	1	1
	Range	9	4	8
Total (94)	Median	5	1	1
	Range	9	4	8

Appendix 1.19

Median proxy indices at Level 3 sorted by age

Age		Score		
		RO	HL	A
18-25 (n = 81)	Median	5	1	1
	Range	9	4	8
26-30 (8)	Median	5	1	0
	Range	9	3	8
31-40 (5)	Median	5	1	3
	Range	9	3	3
Total (94)	Median	5	1	1
	Range	9	4	8

Appendix 1.20

Median proxy indices at Level 3 sorted by education

Educational Level		Score		
		RO	HL	A
High school or equivalent (n = 23)	Median	4	1	2
	Range	9	4	7
Further education college or equivalent (59)	Median	6	1	1
	Range	9	3	8
Bachelor's degree (10)	Median	5	1	0
	Range	9	3	8
Master's degree (1)	Median	4	2	0
	Range	4	2	0
Other (1)	Median	2	1	0
	Range	2	1	0
Total (94)	Median	5	1	1
	Range	9	4	8

Appendix 1.21

Median proxy indices at Level 3 sorted by religion

Religion		Score		
		RO	HL	A
None, no preference (n = 4)	Median	1.5	3	3
	Range	7	4	4
Christian (18)	Median	6	2	0
	Range	9	3	6
Muslim (25)	Median	9	1	2
	Range	9	3	8
Hindu (21)	Median	5	1	1
	Range	9	4	6
Sikh (10)	Median	4	1	0
	Range	9	2	4
Other (2)	Median	4	2	0
	Range	5	2	0
Prefer not to say (14)	Median	4	1	2
	Range	9	3	8
Total (94)	Median	5	1	1
	Range	9	4	8

Appendix 1.22

Results of between-group testing carried out on Level 3 proxy scores

(a) Mann-Whitney U test; and (b) Kruskal-Wallis test. Significant results highlighted in grey.

(a)

Factor		U	z	p
Gender	RO	1375	3.114	0.002
	HL	691	-2.516	0.012
	A	1040	0.405	0.686

(b)

Factor		χ^2	df	p
Age	RO	0.728	2	0.695
	HL	0.402		0.818
	A	0.923		0.630
Education	RO	6.637	4	0.156
	HL	2.364		0.669
	A	3.363		0.499
Religion	RO	17.318	6	0.008
	HL	14.238		0.027
	A	8.161		0.227

Appendix 1.23

Reliability indices for Level 3 dataset

Variable	N	Mean	SD	Median
U	91	0.14	0.13	0.13
M	94	1.57	1.94	1
NumCD	94	1.43	1.25	1

Appendix 1.24

Median proxy indices at Level 4 sorted by age

Age		Score			
		N2	P	MN	PI
18-25 (n = 80)	Median	26.84	28	33	33
	Range	63.03	56	68	52
26-30 (8)	Median	37.13	36	40	20
	Range	33.12	30	52	48
31-40 (5)	Median	15.72	24	42	20
	Range	19.27	30	24	40
Total (93)	Median	26.62	28	34	30
	Range	63.03	56	68	54

Appendix 1.25

Median proxy indices at Level 4 sorted by education

Educational Level		Score			
		N2	P	MN	PI
High school or equivalent (n = 17)	Median	25.89	24	30	38
	Range	43.29	34	40	38
Further education college or equivalent (48)	Median	25.36	28	35	31
	Range	58.88	56	68	52
Bachelor's degree (21)	Median	30.33	34	36	22
	Range	54.41	52	52	48
Master's degree (5)	Median	28.01	24	26	36
	Range	20.05	28	24	28
Other (1)	Median	11.06	6	42	34
	Range				
Total (92)	Median	26.84	28	34	30
	Range	63.03	56	68	54

Appendix 1.26

Median proxy indices at Level 4 sorted by religion

Religion		Score			
		N2	P	MN	PI
None, no preference (n = 4)	Median	28.26	29	31	31
	Range	10.13	20	38	18
Christian (21)	Median	28.77	28	38	26
	Range	44.29	46	66	48
Muslim (34)	Median	23.26	23	34	35
	Range	58.88	56	40	40
Hindu (17)	Median	24.01	28	28	36
	Range	53.86	52	40	34
Sikh (9)	Median	29.77	28	38	28
	Range	49.04	46	16	38
Other (3)	Median	27.36	28	28	26
	Range	17.02	16	20	20
Prefer not to say (5)	Median	33.91	30	28	32
	Range	36.15	28	52	54
Total (93)	Median	26.62	28	34	30
	Range	63.03	56	68	54

Appendix 1.27

Results of between-group testing carried out on Level 4 schema scores

(a) Mann-Whitney U test; and (b) Kruskal-Wallis test. Significant results highlighted in grey.

(a)

Factor		U	z	p
Gender	N2	1185	1.452	0.147
	P	1132	1.031	0.302
	MN	1031	0.22	0.826
	PI	749.5	-2.025	0.043

(b)

Factor		χ^2	df	p
Age	N2	4.441	2	0.109
	P	3.568		0.168
	MN	5.631		0.060
	PI	2.799		0.247
Education	N2	4.415	4	0.353
	P	6.615		0.158
	MN	2.538		0.638
	PI	6.83		0.145
Religion	N2	4.228	6	0.646
	P	2.294		0.891
	MN	10.910		0.091
	PI	5.358		0.499

Appendix 1.28

Median proxy indices at Level 4 sorted by gender

Gender		Score		
		RO	HL	A
Male (n = 34)	Median	4	1	1
	Range	8	5	7
Female (59)	Median	5	1	1
	Range	8	3	8
Total (93)	Median	5	1	1
	Range	8	5	8

Appendix 1.29

Median proxy indices at Level 4 sorted by age

Age		Score		
		RO	HL	A
18-25 (n = 80)	Median	4	1	1
	Range	8	5	8
26-30 (8)	Median	5	1	0
	Range	8	3	2
31-40 (5)	Median	6	1	1
	Range	6	3	2
Total (93)	Median	5	1	1
	Range	8	5	8

Appendix 1.30

Median proxy indices at Level 4 sorted by education

Educational Level		Score		
		RO	HL	A
High school or equivalent (n = 17)	Median	4	1	1
	Range	8	2	6
Further education college or equivalent (48)	Median	5.5	1	0
	Range	8	5	7
Bachelor's degree (21)	Median	5	2	1
	Range	8	3	8
Master's degree (5)	Median	2	0	2
	Range	3	2	3
Other (1)	Median	3	2	0
	Range	0	0	0
Total (92)	Median	4.5	1	1
	Range	8	5	8

Appendix 1.31

Median proxy indices at Level 4 sorted by religion

Religion		Score		
		RO	HL	A
None, no preference (n = 4)	Median	1	3	0
	Range	0	2	2
Christian (21)	Median	5	2	
	Range	8	5	5
Muslim (34)	Median	6	1	2
	Range	8	3	7
Hindu (17)	Median	3	1	1
	Range	8	2	8
Sikh (9)	Median	4	1	0
	Range	6	1	2
Other (3)	Median	2	2	1
	Range	3	2	2
Prefer not to say (5)	Median	6	0	2
	Range	7	1	5
Total (93)	Median	5	1	1
	Range	8	5	8

Appendix 1.32

Results of between-group testing carried out on Level 4 proxy scores

(a) Mann-Whitney U test; and (b) Kruskal-Wallis test. Significant results highlighted in grey.

(a)

Factor		U	z	p
Gender	RO	1259	2.06	0.039
	HL	891	-0.938	0.348
	A	969	-0.288	0.773

(b)

Factor		χ^2	df	p
Age	RO	1.04	2	0.594
	HL	0.078		0.962
	A	3.625		0.163
Education	RO	8.529	4	0.074
	HL	8.525		0.074
	A	1.936		0.748
Religion	RO	21.842	6	0.001
	HL	13.398		0.037
	A	11.252		0.081

Appendix 1.33

Reliability indices for Level 4 dataset

Variable	N	Mean	SD	Median
U	91	0.13	0.13	0.10
M	93	1.76	2.40	0
NumCD	93	1.37	1.31	1

Appendix 1.34

Median proxy indices at NQ Level sorted by gender

Gender		Score		
		RO	HL	A
Male (n = 19)	Median	3	2	0
	Range	8	4	4
Female (24)	Median	4	2	1.2
	Range	8	5	9
Total (43)	Median	3	2	1
	Range	8	6	9

Appendix 1.35

Median proxy indices at NQ Level sorted by age

Age		Score		
		RO	HL	A
18-25 (n = 39)	Median	3	2	1
	Range	8	6	9
26-30 (3)	Median	4	3	1
	Range	2	3	4
31-40 (1)	Median	1	4	1
	Range	0	0	0
Total (43)	Median	3	2	1
	Range	8	6	9

Appendix 1.36

Median proxy indices at NQ Level sorted by education

Educational Level		Score		
		RO	HL	A
High school or equivalent (n = 15)	Median	3	2	1
	Range	7	3	6
Further education college or equivalent (22)	Median	3	2	1
	Range	8	6	9
Bachelor's degree (4)	Median	3.5	2.5	0.5
	Range	8	3	2
Master's degree (1)	Median	9	3	2
	Range	0	0	0
Other (5)	Median	1	1	1
	Range	0	0	0
Total (43)	Median	3	2	1
	Range	8	6	9

Appendix 1.37

Median proxy indices at NQ Level sorted by religion

Religion		Score		
		RO	HL	A
None, no preference (n = 3)	Median	9	2	0
	Range	8	1	6
Christian (12)	Median	3	2	5
	Range	8	3	3
Muslim (13)	Median	5	3	2
	Range	8	3	3
Hindu (9)	Median	4	2	0
	Range	7	2	4
Sikh (4)	Median	1	3	2.5
	Range	1	5	8
Prefer not to say (2)	Median	1	2	1.5
	Range	0	4	3
Total (43)	Median	3	2	1
	Range	8	6	9

Appendix 1.38

Results of between-group testing carried out on NQ Level proxy scores

(a) Mann-Whitney U test; and (b) Kruskal-Wallis test.

(a)

Factor		U	z	p
Gender	RO	159.5	-1.702	0.089
	HL	219.5	-0.217	0.828
	A	181.5	-1.181	0.238

(b)

Factor		χ^2	df	p
Age	RO	1.987	2	0.370
	HL	2.709		0.258
	A	0.028		0.986
Education	RO	5.317	4	0.256
	HL	0.956		0.916
	A	1.555		0.817
Religion	RO	9.194	5	0.102
	HL	2.758		0.737
	A	9.582		0.088

Appendix 1.39

Reliability indices for NQ Level dataset

Variable	N	Mean	SD	Median
U	43	0.37	1.51	0.15
M	43	2.14	2.13	1
NumCD	43	0.93	0.83	1

Appendix 1.40

Median proxy indices at EP Level sorted by gender

Gender		Score		
		RO	HL	A
Male (n = 5)	Median	1	3	2
	Range	3	2	4
Female (6)	Median	3.5	1.5	0
	Range	7	1	2
Total (11)	Median	3	2	0
	Range	8	2	4

Appendix 1.41

Median proxy indices at EP Level sorted by age

Age		Score		
		RO	HL	A
18-25 (n = 10)	Median	2.5	2	0
	Range	8	2	4
26-30 (1)	Median	4	1	4
	Range	0	0	0
Total (11)	Median	3	2	0
	Range	8	2	4

Appendix 1.42

Median proxy indices at EP Level sorted by education

Educational Level		Score		
		RO	HL	A
High school or equivalent (n = 2)	Median	5	1	2
	Range	8	0	4
Further education college or equivalent (6)	Median	3	2	0
	Range	4	2	2
Bachelor's degree (1)	Median	1	3	2
	Range	0	0	0
Master's degree (1)	Median	2	2	2
	Range	0	0	0
Other (1)	Median	4	1	4
	Range	0	0	0
Total (11)	Median	3	2	0
	Range	8	2	4

Appendix 1.43

Median proxy indices at EP Level sorted by religion

Religion		Score		
		RO	HL	A
None, no preference (n = 3)	Median	1	3	0
	Range	8	2	2
Christian (1)	Median	4	4	4
	Range	0	0	0
Muslim (4)	Median	2.5	1.5	1
	Range	3	1	2
Sikh (2)	Median	2	2	2
	Range	2	2	4
Prefer not to say (1)	Median	4	2	0
	Range	0	0	0
Total (11)	Median	3	2	0
	Range	8	2	4

Appendix 1.44

Results of between-group testing carried out on EP Level proxy scores

(a) Mann-Whitney U test; and (b) Kruskal-Wallis test.

(a)

Factor		U	z	p
Gender	RO	6	-1.670	0.126
	HL	9	-1.173	0.329
	A	9	-1.211	0.329

(b)

Factor		χ^2	df	p
Age	RO	1.925	1	0.165
	HL	0.413		0.521
	A	1.320		0.251
Education	RO	3.077	4	0.545
	HL	4.278		0.370
	A	5.622		0.229
Religion	RO	4.878	4	0.300
	HL	5.118		0.275
	A	2.261		0.688

Appendix 1.45

Reliability indices for EP Level dataset.

Variable	N	Mean	SD	Median
U	11	1.88	4.01	0.10
M	11	1.27	1.74	0.00
NumCD	11	1.18	1.08	0.10

Appendix 1.46

Multiple comparison data for P score at each of Level of the study

Level	Level	N	Sig	Bonferroni
1	2	107	0.019	0.285
1	3	85	0.010	0.150
1	4	74	0.001	0.015
1	5	36	0.000	0.000
1	6	7	1.000	15.000
2	3	83	0.699	10.485
2	4	70	0.261	3.915
2	5	33	0.000	0.000
2	6	6	0.244	3.660
3	4	72	0.431	6.465
3	5	36	0.002	0.030
3	6	6	0.027	0.405
4	5	43	0.000	0.000
4	6	11	0.644	9.660
5	6	5	0.225	3.375

Appendix 1.47

Median MN score values at each level during the study, stratified by gender

	Level 1	Level 2	Level 3	Level 4	NQ	EP
Male	32.00	30.00	34.00	34.00	35.00	24.00
Female	36.00	36.00	38.00	34.00	38.13	38.00
Global	34.00	34.00	36.00	34.00	36.67	32.00

Appendix 1.48

Median MN score values at each level during the study, stratified by age

	Level 1	Level 2	Level 3	Level 4	NQ	EP
18-25	34.00	33.00	36.00	32.00	36.67	32.00
26-30	44.00	48.00	48.00	42.00	28.33	20.00
31-40	36.00	36.00	46.00	41.00	n/a	n/a

Appendix 1.49

Median MN score values at each level during the study, stratified by education

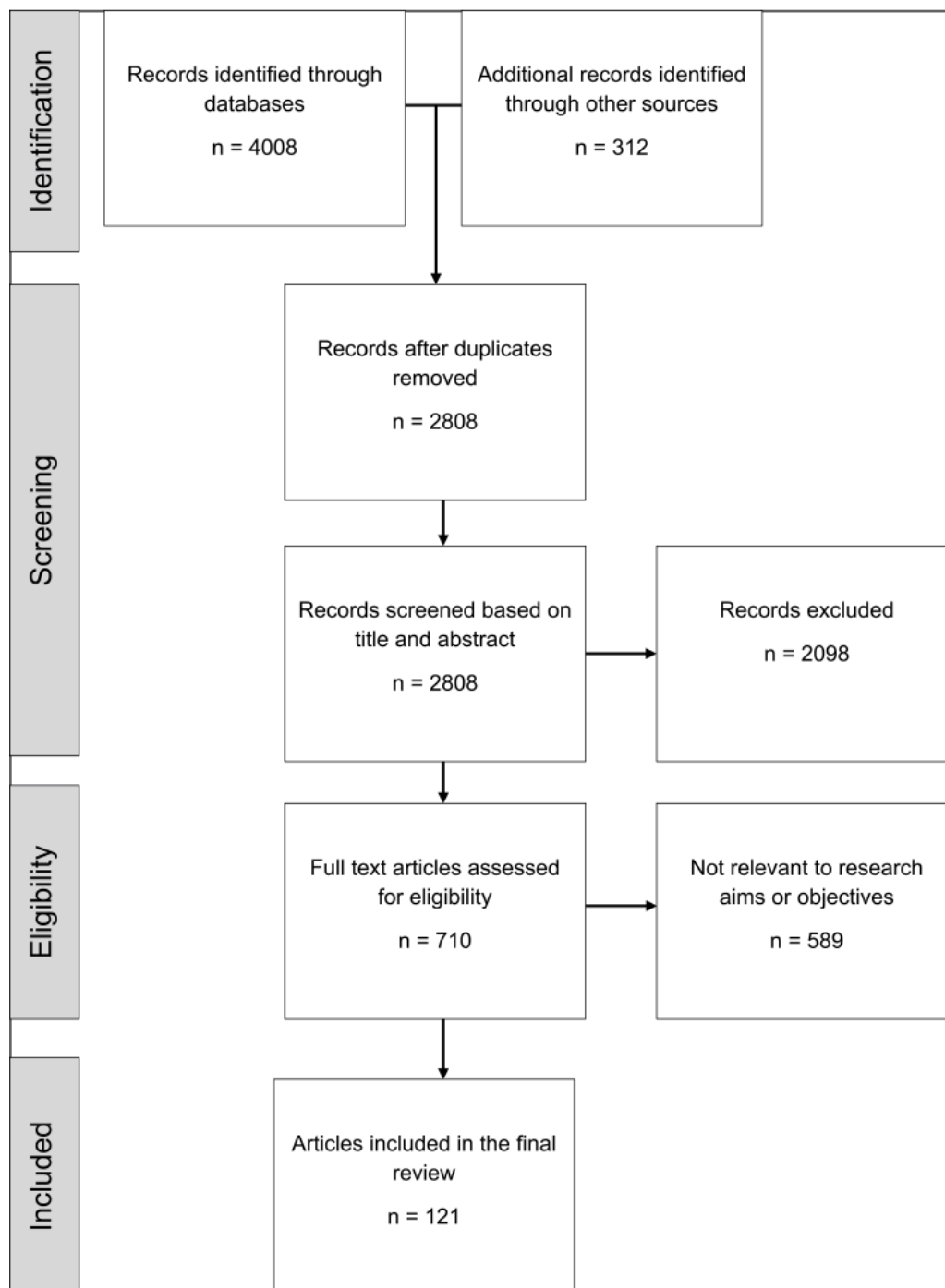
	Level 1	Level 2	Level 3	Level 4	NQ	EP
High School	40.00	34.00	32.00	30.00	33.33	29.00
Further Education	34.00	34.00	37.00	34.00	36.66	37.00
Bachelor's degree	45.00	44.00	42.00	41.00	40.84	22.00
Other	30.00	31.00	26.00	54.00	55.00	20.00

Appendix 1.50

Median PI score values at each level during the study, stratified by age

	Level 1	Level 2	Level 3	Level 4	NQ	EP
18-25	34.00	30.00	28.00	32.00	18.33	34.00
26-30	28.00	30.00	28.00	22.00	21.67	52.00
31-40	28.00	32.00	18.00	37.00	n/a	n/a

Appendix 2: PRISMA 2020 flow diagram



Appendix 3: Ethical dilemmas

Ethical Dilemmas

1. Mrs Singh

How would you deal with the following situation?

Mrs Singh calls at your pharmacy to ask if you could check her teenage son's computer record and tell her what medicines he received last month. She informs you that, in the absence of his regular GP, her son saw a locum doctor. Now her son has run out of the new medication, and the GP has no record of what was prescribed. Her son is not with her today and he has already missed two doses of the new treatment.

Use a structured approach to generate options to reconcile this situation.

2. Sally

Sally calls into a pharmacy late on a Saturday afternoon and asks if she could be supplied with emergency hormonal contraception. The pharmacist, David, believes that EHC is a form of abortion and will not supply it or even recommend where else to obtain it. David does not want to offend Sally and simply says he doesn't have any. Sally appears to be upset and asks where else she can obtain EHC.

Use a structured approach to consider whether David's actions were ethically justified, outline and what could/should have been done in this situation.

Appendix 4: Structured guide to decision-making

Systematic, Structured Decision-Making

Most people make decisions at great speed and with little reflection. Experienced pharmacists often don't recognise the processes they use when making difficult choices. By slowing down the process, and breaking it up into stages and steps, it is possible to analyse how decisions were reached. An analysis of what you did, and why you did it, can prove helpful the next time you are presented with a difficult decision to make.

Wingfield and Badcott (2007) have set out in detail a methodology for ethical decision making, based on a four-stage approach:

1. Gather relevant facts
2. Prioritise and ascribe values
3. Generate options
4. Choose an option

Stage 1: Gather relevant facts

During this stage, you should seek to address the facts of the case by asking relevant questions:

What criminal/civil law applies here?

What NHS law applies?

What guidance does the Code of Ethics provide?

What professional knowledge that I have applies?

Whom else can I ask for help?

Stage 2: Prioritise and ascribe values

When you have gathered all the information, you will find that some facts are more important than others. Try to consider the individual parties involved. Good pharmacy practice requires that you balance the disparate interests of all concerned parties and justify the reasoning for your eventual decision. This will move you onto the next stage automatically.

Stage 3: Generate options

Ask yourself:

“What COULD I do in this situation?”

Stage 4: Choose an option

Now the question you must ask yourself becomes:

“What SHOULD I do in this situation?”

(Remember that you may have to justify your decision.)

Finally, once the decision has been made, and any consequences realised, reflect on your actions so as to develop your decision-making skills, professional judgement, and practice experience.

Appendix 5: Workshop Manual



Law, Ethics and Professionalism
Code: 3PHA0007

WORKSHOP MANUAL 2009-10

Module Co-ordinator: Dr Cathal Gallagher (CG) c.t.gallagher@herts.ac.uk
Module Team: Dr Richard O'Neill (RON) r.c.oneill@herts.ac.uk
Mr William Rial (WR)
Prof. Soraya Dhillon (SD)

Student Name:

Introduction

Workshop Programme

<i>Week</i>	<i>Date</i>	<i>Group 1</i>	<i>Group 2</i>	<i>Group 3</i>
2	06.10.09	1. Professional Self-Regulation 09:00-11:00 (1F381)	1. Professional Self-Regulation 14:00-16:00 (F392)	1. Professional Self-Regulation 16:00-18:00 (F392)
3	13.10.09	2. Malpractice Liability 14:00-16:00 (F392)	2. Malpractice Liability 16:00-18:00 (F392)	2. Malpractice Liability 09:00-11:00 (1F381)
4	20.10.09	3. Healthcare Ethics 16:00-18:00 (F392)	3. Healthcare Ethics 09:00-11:00 (1F381)	3. Healthcare Ethics 14:00-16:00 (F392)
5	27.10.09	4. Healthcare Rights and Resource Allocation 09:00-11:00 (1F381)	4. Healthcare Rights and Resource Allocation 14:00-16:00 (F392)	4. Healthcare Rights and Resource Allocation 16:00-18:00 (F392)
6	03.11.09	5. Health Information and Confidentiality 14:00-16:00 (F392)	5. Health Information and Confidentiality 16:00-18:00 (F392)	5. Health Information and Confidentiality 09:00-11:00 (1F381)
7	10.11.09	6. Consent 16:00-18:00 (F392)	6. Consent 09:00-11:00 (1F381)	6. Consent 14:00-16:00 (F392)
8	17.11.09			7. Human Tissue Donation and Transplantation 09:00-11:00 (1F381)
8	17.11.09			8. Beginning/Ending of Life Issues 16:00-18:00 (F392)
9	24.11.09	7. Human Tissue Donation and Transplantation 09:00-		
9	24.11.09	8. Beginning/Ending of Life Issues 16:00-18:00 (F392)		
10	01.12.09		7. Human Tissue Donation and Transplantation 09:00-11:00 (1F381)	
10	01.12.09		8. Beginning/Ending of Life Issues 16:00-18:00 (F392)	
11	08.12.09	9. Genetics 09:00-11:00 (1F381)	9. Genetics 14:00-16:00 (F392)	9. Genetics 16:00-18:00 (F392)
12	15.12.09	10. Responsibility and Accountability 14:00-16:00 (F392)	10. Responsibility and Accountability 16:00-18:00 (F392)	10. Responsibility and Accountability 09:00-11:00 (1F381)
16	13.01.09	Professional Responsibility Symposium (All Students) 14:00-18:00 (TBC)		

Introduction

Attendance Record

<i>No</i>	<i>Title</i>	<i>Tutor Signature/Stamp</i>	<i>Date</i>
1	Professional Self-Regulation		
2	Malpractice Liability		
3	Healthcare Ethics		
4	Healthcare Rights and Resource Allocation		
5	Health Information and Confidentiality		
6	Consent		
7	Human Tissue Donation and Transplantation		
8	Beginning/Ending of Life Issues		
9	Genetics		
10	Responsibility and Accountability		
	Professional Responsibility Symposium		

Introduction

Preparation for Workshops

It is essential to prepare for all classes and to be prepared to contribute to them. Consult the workshop booklet before each session, and bring it with you to the class. **Compulsory pre-reading has been allocated for each workshop, and is listed in the workbook.** Workshops are compulsory and attendance will be recorded. Your record of attendance will be taken into account at the Board of Examiners when deciding your grade. A brief reflection on each workshop should be included in your Professional Development Portfolio (Section A). You are required to record your workshop sessions in this workbook, which will be assessed periodically.

Performance in Workshops

Participation and performance in workshops will be evaluated, and feedback provided. If you miss a class, it is your responsibility to contact the module co-ordinator immediately via e-mail. You **MUST** use the appropriate electronic absence form, giving the reason for your lack of attendance. If you have a legitimate reason for missing the session, the module co-ordinator may be able to arrange your attendance at a subsequent session, or ask you to complete an alternative task. Failure to inform the module co-ordinator and/or submit the allocated task will result in a deduction of 5% from your coursework mark.

Coursework marks

Essay – 10%

Workbook (including group work presentation) – 10%

Professional Development Portfolio – 5%

Introduction

Essay Assignment

Essay length: Maximum 2000 words (excluding references and appendices). 200 words leeway over the 2000 word limit is the maximum acceptable. Essays that exceed the maximum will be awarded zero marks. Essays under 2000 words will not be penalised, but students are strongly advised that the quality of the work may be compromised if the word count falls below 1600.

Essays must be presented in Times New Roman, 12 point, double spaced.

Essay title:

Principle 3 of the RPSGB's Code of Ethics requires that pharmacists do not disclose confidential information without consent except in "exceptional circumstances". Describe and justify the range of circumstances which you believe would fit that criterion.

Please hand in to the CP Snow Office by **Thursday 17 December 2009**.

Essays **MUST** be accompanied by a Cover Sheet.

Teaching and Learning Exercise

Students, in their groups, will prepare notes and teaching materials (PowerPoint slides, handouts etc.) for a relevant topic based on the group workshops. Lecture notes should not exceed 2 sides of A4 and there should be no more than 20 slides.

Groups will also prepare a lesson plan using the following headings:

- **Learning Aims**
- **Learning Outcomes**
 - At the end of the session the students will be able to:
- **Pre-Course Reading**
- **Resources**
- **Plan for 40 minute Lecture**

Teaching & Learning Exercise title:

The concept of *consent* in the context of pharmacy

Please hand slides, handouts and lesson plans, together with the completed workbook, in to the CP Snow Office by **Thursday 14 January 2010**.

This **MUST** be accompanied by a Cover Sheet

Workshop 1:

Professional Self-Regulation

1. Professional Self-Regulation

Outline

This workshop provides an introduction to the concept of professionalism, including self-regulation, which has long been held as a defining characteristic of a profession. It will provide an overview of the philosophical elements of professionalism and accountability. Students are expected to prepare by reading each of the articles from the reading list **PRIOR** to the session. The workshop will take the form of a short lecturette, followed by a group discussion based around the set questions (again, to be completed before the session), and concluding with an extended forum surrounding the evolution of self-regulation in the healthcare professions in recent years.

By the end of this workshop, the student should have a broad understanding of the concept of professionalism and its defining characteristics. Additionally, students will be aware of accountability within the profession of pharmacy. This will include the nature of accountability, to whom the pharmacist is accountable, and how a pharmacist held to account should be dealt with.

Reading for the Session

Professionalism for Pharmacists. *Pharmaceutical Journal* 276:169-170 (11 February 2006)
http://www.pjonline.com/pdf/agenda/pj_20060211_professionalism.pdf

Professionalism and Accountability. In *Pharmacy Ethics and Decision Making*. Joy Wingfield and David Badcott, Pharmaceutical Press

A crisis of professional self-regulation – the example of the solicitors' profession (2005). Mark Davies, Cardiff Centre for Ethics, Law and Society
<http://www.ccels.cf.ac.uk/archives/publications/2005/daviespaper.pdf>

The regulation of the non-medical healthcare professions. Department of Health, 14 July 2006. (Chapters 1-5, 7)
http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_4137239

Code of Ethics for Pharmacists and Pharmacy Technicians, RPSGB
<http://www.rpsgb.org/pdfs/coeppt.pdf>

1. Professional Self-Regulation

Distinguish between a profession and a trade or occupation.



List five (traditional) characteristics of professionalism.



Suggest which, if any, of these characteristics should be discarded or altered in the light of changing public expectation of healthcare. Make suggestions for additional qualities of a professional not expressed in traditional definitions.



1. Professional Self-Regulation

"Self-regulation is one of the typically cited traits of professionalism". Why do you think that this is the case?



Identify the three alternative models for regulation in the legal profession proposed by Sir David Clementini in December 2004. Which of these models do you consider offers the best way forward for professional regulation?



To whom should pharmacists be professionally accountable?



1. Professional Self-Regulation

For Inclusion in Professional Development Portfolio (Section A)

To be completed **AFTER** the workshop

The Declaration of Geneva was adopted by the General Assembly of the World Medical Association at Geneva in 1948 and amended in 1968, 1984, 1994, 2005 and 2006. It is a declaration of physicians' dedication to the humanitarian goals of medicine. The Declaration of Geneva was intended as a revision of the Oath of Hippocrates, which could be comprehended and acknowledged by contemporary physicians.

The current text of the Declaration, taken by many doctors, is as follows:

At the time of being admitted as a member of the medical profession:

- I solemnly pledge to consecrate my life to the service of humanity;
- I will give to my teachers the respect and gratitude that is their due;
- I will practice my profession with conscience and dignity;
- The health of my patient will be my first consideration;
- I will respect the secrets that are confided in me, even after the patient has died;
- I will maintain by all the means in my power, the honour and the noble traditions of the medical profession;
- My colleagues will be my sisters and brothers;
- I will not permit considerations of age, disease or disability, creed, ethnic origin, gender, nationality, political affiliation, race, sexual orientation, social standing or any other factor to intervene between my duty and my patient;
- I will maintain the utmost respect for human life;
- I will not use my medical knowledge to violate human rights and civil liberties, even under threat;
- I make these promises solemnly, freely and upon my honour.

Formulate a *Pharmacist's Oath*, which you feel reflects the duties and responsibilities of the pharmacist.

Workshop 2:

Malpractice Liability

2. Malpractice Liability

Outline

In this session, students will examine the basic elements of the law of negligence: the notion of duty of care, who owes it and to whom it is owed. Features to be examined will include legal tests for duty, and the legal rules used to determine the difficult question as to whether treatment of a patient amounted to negligent treatment. Also of interest is the legal determination of the appropriate standard of care, and how the courts determine the factual question of whether the defendant has breached that standard on the facts of the case. The causal relationship between any breach of duty and the damage suffered by the claimant will also be examined.

Reading for the Session

The chapter(s) on the basic elements in negligence; duty of care, breach of duty and causation in any medical law and ethics textbook

Medicines, Ethics & Practice. A Guide for Pharmacists & Pharmacy Technicians. RPSGB

Can I be sued? Pharmaceutical Journal 273:574 (16 October 2004)

http://www.pjonline.com/pdf/conferences/pj_20041016_bpc.pdf

Boots pharmacist and trainee cleared of baby's manslaughter, but fined for dispensing a defective medicine. Pharmaceutical Journal 264:390-392 (11 March 2000)

<http://www.pjonline.com/Editorial/20000311/news/babymanslaughter.html>

Cases suitable for non-referral to the investigating committee, RPSGB

<http://www.rpsgb.org.uk/protectingthepublic/investigatingcommittee/>

Cases

Barnett v Chelsea and Kensington Hospital Management Committee

[1968] 1 All ER 1068

Bolam v Friern Hospital Management Committee

[1957] 1 WLR 582

Bolitho v City and Hackney HA

[1997] 4 All ER 771

<http://www.publications.parliament.uk/pa/ld199798/ldjudgmt/jd971113/boli01.htm>

Donoghue v Stevenson

[1932] AC 56

Horton v Evans and Lloyds Pharmacy Limited

[2006] EWHC 2808 (QB)

<http://www.bailii.org/ew/cases/EWHC/QB/2006/2808.html>

Prendergast v Sam (1988) The Times 24 March 1988

2. Malpractice Liability

Further Reading

NHS indemnity arrangements for handling clinical negligence claims against NHS staff.

Department of Health, HSG (96)48

http://www.dh.gov.uk/en/PublicationsAndStatistics/LettersAndCirculars/HealthServiceGuidelines/DH_4018270

Making Amends - Clinical Negligence Reform. Department of Health

http://www.dh.gov.uk/en/Consultations/Closedconsultations/DH_4072363

2. Malpractice Liability

What might be the reasons for the current rise in negligence claims in medicine and healthcare?



What are the functions of negligence law?



Who should be ultimately responsible to the patient for his/her medical treatment; the individual (doctor, nurse, pharmacist, etc.) or the hospital?



2. Malpractice Liability

In what situations does a pharmacist owe a patient a duty of care? Does a pharmacist have a duty to keep up to date? Can a single dispensing error amount to misconduct?



What standard of care does the law require?



Why is proving causation (the causal link between the breach of duty and harm) often the hardest hurdle for a claimant?



2. Malpractice Liability

For Inclusion in Professional Development Portfolio (Section A)

To be completed AFTER the workshop

As a newly qualified practitioner are you expected to reach the same standard as a more experienced, senior member of staff?

Workshop 3:

Healthcare Ethics

3. Healthcare Ethics

Outline

Ethical, legal and moral issues pervade modern healthcare practice. In this session, students will examine the nature of philosophy and ethics. They will look at the meaning and significance of key ethical concepts and outline important types of ethical theory, and consider their relevance to medical/healthcare and professional ethics.

Additionally, they will also look at the various approaches to resolving moral issues and provide a conceptual framework useful for ethical analysis of common, everyday issues in the health professions.

By the end of this session, students will be able to: understand the difference between the basic philosophical approaches to healthcare ethics; and apply these different approaches in a systematic manner to real life ethical dilemmas.

Reading for the Session

The chapter(s) on medical ethics in any medical law and ethics textbook

Medicines, Ethics & Practice. A Guide for Pharmacists & Pharmacy Technicians. RPSGB

Further Reading

Bulletin of Medical Ethics

<http://www.bullmedeth.info/>

Journal of Medical Ethics

<http://jme.bmj.com/>

British Medical Association

<http://www.bma.org.uk>

The Ethox Centre

<http://www.ethox.org.uk/>

General Medical Council

<http://www.gmc-uk.org>

Internet Encyclopedia of Philosophy:

<http://www.utm.edu/research/iep>

Beauchamp, TL and Childress, JF. Principles of Biomedical Ethics, 5th Edition, Oxford University Press

The Value of Life: Introduction to Medical Ethics. John Harris, Routledge

3. Healthcare Ethics

What are the similarities and differences between law and ethics?



What are values, morals and ethics?



What are the key ideas and limitations of (a) the deontological ethical theory; (b) the consequentialist ethical theory?



3. Healthcare Ethics

What are the key concepts embodied in the RPSGB Code of Ethics?



Describe at least 4 character traits or virtues that are emphasised in the RPSGB Code of Ethics.



How can you identify a moral issue?



3. Healthcare Ethics

For Inclusion in Professional Development Portfolio (Section A)

To be completed AFTER the workshop

Describe two situations that may arise in your future professional career that illustrate the ethical dimension of your conduct as a health care professional.

Workshop 4:

Healthcare Rights and Resource Allocation

4. Healthcare Rights and Resource Allocation

Outline

In this workshop, students will identify rights and associated duties as they apply to healthcare. Students are expected to prepare by reading each of the articles/papers from the reading list prior to the session.

By the end of this workshop, students will be able to distinguish between positive and negative rights; understand the extent to which the European Convention on Human Rights affects access to healthcare; understand the structure and functions of NICE, and be familiar with the tools used in its work; and understand better the position of liberal individualism within a communal endeavour such as the NHS.

Reading for the Session

Must Doctors Help Their Patients? *In* The Value of Life: Introduction to Medical Ethics. John Harris, Routledge, pp. 48-63

The European Convention on Human Rights

www.echr.coe.int/nr/rdonlyres/d5cc24a7-dc13-4318-b457-5c9014916d7a/0/englishanglais.pdf

The Human Rights Act 1998, Schedule 1 (The Articles)

<http://www.opsi.gov.uk/acts/acts1998/19980042.htm>

What is a QALY?

<http://www.evidence-based-medicine.co.uk/ebmfiles/WhatisaQALY.pdf>

Implementing QALYs

<http://www.evidence-based-medicine.co.uk/ebmfiles/ImplementQALYs.pdf>

Cases

R. (on the application of Rogers) v Swindon NHS Primary Care Trust, Court of Appeal (civil Division), 12 April 2006
[2006] 1 WLR 2649

Osman v UK (European Court of Human Rights) 28 October 1998
(2000) 29 EHRR 245

Further Reading

The Value of Life: Introduction to Medical Ethics. John Harris, Routledge

4. Healthcare Rights and Resource Allocation

Distinguish between positive and negative rights. Which of these two forms of rights do you consider prevails in our healthcare system?



Does a doctor have a duty to treat a patient? If so, from what right does this duty stem?



Does the European Convention on Human Rights (incorporated into UK law by the Human Rights Act 1998) provide a right to medical treatment? Consider specifically Arts. 2 & 8 and *Osman v UK*.



4. Healthcare Rights and Resource Allocation

What is a QALY? How are QALYs calculated? List 3 problems with the QALY.



What is NICE? What are its functions?



Within a PCT, budgetary constraints mean you must decide between providing drug A to two patients, X and Y, in the early-stages of a chronic disease, or providing drug B as a preventative measure to all 2000 “at-risk” patients in your locality. Which do you choose and what factors will influence your decision?



4. Healthcare Rights and Resource Allocation

For Inclusion in Professional Development Portfolio (Section A)

To be completed AFTER the workshop

What do you consider to be your rights in regard to healthcare and the NHS? Has this been affected in any way by the discussions on resource allocation or conflicting rights?

Workshop 5:

Health Information and Confidentiality

5. Health Information and Confidentiality

Outline

In this session students will consider the legal basis of the duty of confidentiality, the ethical framework of confidentiality, the exceptions to the duties of confidentiality and professional guidelines. They will also address the issue of confidentiality in the context of pharmacy, children and other special groups and circumstances.

The aims of this workshop are: to explore the meaning of confidentiality within a healthcare context; to discuss the implications of confidentiality for healthcare professionals; and to explore the implications for breach of confidentiality.

At the end of this session students should be able to: understand and apply the arguments for medical confidentiality; understand and apply the possible grounds for overriding confidentiality; and understand important aspects of documentation that affect confidentiality.

Reading for the Session

The chapter(s) on basic elements of confidentiality in any medical law textbook

Medicines, Ethics & Practice. A Guide for Pharmacists & Pharmacy Technicians. RPSGB

How the new NHS code on confidentiality affects all pharmacists. Pharmaceutical Journal 272:416-417 (3 April 2004)
http://www.pjonline.com/pdf/agenda/pj_20040403_newnhscode.pdf

Guidance on NHS code on confidentiality. Pharmaceutical Journal 275:557-558 (29 October 2005)
http://www.pjonline.com/pdf/society/pj_20051029_nhscode.pdf

Cases

Campbell v MGN Ltd
[2004] UKHL 22

Gillick v West Norfolk and Wisbech Area Health Authority
[1986] AC 112

W v Egdell
[1990] 2 All ER 648

R v Department of Health ex parte Source Informatics
[1999] 49 BMLR 41

Venables v News Group Newspapers Ltd
[2001] 1 All ER 908

5. Health Information and Confidentiality

Further Reading

Confidentiality: NHS Code of Practice. Department of Health

http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_4069253

Confidentiality. British Medical Association

<http://www.bma.org.uk/ap.nsf/content/Hubethicsconfidentiality>

Other Relevant Legislation

Data Protection Act 1998

Human Rights Act 1998

The Access to Health Records Act 1990

The Access to Medical Reports Act 1988

5. Health Information and Confidentiality

What is confidentiality and why is it important?

A large, solid gray rectangular area intended for the user to provide a written response to the question about confidentiality.

What is the ethical basis for maintaining confidences?

A large, solid gray rectangular area intended for the user to provide a written response to the question about the ethical basis for maintaining confidences.

5. Health Information and Confidentiality

How is confidentiality legally defined?



If a patient considers that a healthcare professional has wrongly breached confidentiality, in what ways can they pursue their grievance?



What information would be patient identifiable within a pharmacy?



5. Health Information and Confidentiality

Pharmacy Case Studies

To be completed DURING the workshop

A mother asks for information on what medicines her 5-year-old child has taken in the last 12 months. Could you give this information? If the child was 13 is the situation the same?



An elderly lady comes in for a cough medicine for her husband, who is a regular customer of yours. She can't remember what medicines he takes. Can you sell her a medicine?



A policeman suspects one of your methadone patients of a crime, and wants to know if he came in to collect his instalment yesterday. Can you give him this information?



5. Health Information and Confidentiality

A medical rep asks whether or you are dispensing his product as he wants to assess how successful his last meeting with the local GPs was. Can you disclose this information?



In what other ways might confidentiality be breached within a pharmacy setting?



5. Health Information and Confidentiality

For Inclusion in Professional Development Portfolio (Section A)

To be completed **AFTER** the workshop

Do you think that confidentiality should be breached in the following situations:

- a) A colleague confides that he has a 'drink problem'
- b) A 3 yr old patient has several bruises you think (but are not sure) are caused by her stepfather
- c) An anxious mother is seeking the identification of some tablets she has found in her teenage daughter's bedroom

Give reasons for your answer in each case.

Can taking a medical history be considered a breach of confidentiality?

Workshop 6:

Consent

6. Consent

Outline

Respect for a person's autonomy and the right to consent or refuse treatment are accepted as central values in health care.

Every human being of adult years and sound mind has a right to determine what shall be done with his own body

Justice Cardozo in *Schloendorff v Society of New York Hospital* (1914)

In this session, students will discuss the meaning and scope of consent. They will consider the philosophical basis and the key legal principles relating to consent, and discuss the complex area of consent in those under 18 years, together with the approaches to making decisions about the healthcare of incompetent patients

Reading for the Session

The chapter(s) on the consent in any medical law and ethics textbook

Medicines, Ethics & Practice. A Guide for Pharmacists & Pharmacy Technicians. RPSGB

Professional Standards and Guidance for Patient Consent. RPSGB

<http://www.rpsgb.org/pdfs/coepsgpatconsent.pdf>

GMC Seeking patient's consent: the ethical considerations

<http://www.gmc-uk.org/guidance/current/library/consent.asp>

Reference Guide to Consent for Examination or Treatment (2001). Department of Health

http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_4006757

Consent (Overview). Department of Health

<http://www.dh.gov.uk/en/Policyandguidance/Healthandsocialcaretopics/Consent/index.htm>

Consent (Key Documents). Department of Health

<http://www.dh.gov.uk/en/Policyandguidance/Healthandsocialcaretopics/Consent/Consentgeneralinformation/index.htm>

The Family Law Reform Act 1969, section 13

Mental Capacity Act 2005, sections 2-8 (Preliminary)

Cases

Re C (Refusal of medical treatment)

[1994] 1 All ER 819

6. Consent

Re T (Adult: refusal of treatment)
[1992] 4 All ER 649

Sidaway v Bethlem Royal Hospital Governors
[1985] 1 BMLR 132

Pearce v United Bristol Healthcare NHS Trust
[1999] 48 BMLR 118

Re B (Adult: refusal of treatment)
(2002) 2 AER 449

6. Consent

What does the RPSGB Code of Ethics say about respecting patients' autonomy/consent?



What are the three principal criteria for legally valid consent?



What problems can a healthcare professional face if they do not get a valid consent?



6. Consent

Who can give consent?



To be competent, what must an individual be able to show with regard to the information provided?



What approaches are there to providing 'enough' information?



6. Consent

For Inclusion in Professional Development Portfolio (Section A)

To be completed AFTER the workshop

Is covert medication ever ethically justifiable?

Workshop 7:

***Human Tissue Donation and
Transplantation***

7. Human Tissue Donation and Transplantation

Outline

This workshop will provide an overview of some of the legal and ethical implications of organ donation.

By the end of this workshop, the student should have a broad understanding of the ethics associated with; living donor transplantation (LDT); cadaveric organ transplantation (CDT); organ shortage; trafficking; and forms of consent.

Reading for the Session

Renal failure — how drugs can damage the kidney, C Ashley. *Hospital Pharmacist* 2004; **1148**; 48-53

http://www.pjonline.com/pdf/hp/200402/hp_200402_kidney.pdf

Postnote, October 2004, Number 231: Organ transplants. Parliamentary Office of Science and Technology

<http://www.parliament.uk/documents/upload/POSTpn231.pdf>

The Human Tissue Act 2004, sections 13-15 (The Human Tissue Authority), 32 (Trafficking), 33 & 34 (Transplants)

<http://www.opsi.gov.uk/acts/acts2004/20040030.htm>

Organ Donation. The Human Tissue Authority

http://www.hta.gov.uk/transplantation/organ_donation.cfm

The Universal Determination of Death Act (USA)

http://people.bu.edu/wildman/WeirdWildWeb/courses/thth/projects/thth_projects_2003_lewis/udda.pdf

Is presumed consent the answer to organ shortage? *BMJ* 2007; **334**; 1088-89.

Ethical and Legal Issues in Non-Heart-Beating Organ Donation. M.A. Bos. *Transplantation Proceedings* 2005; **37**; 574-576.

A definition of human death should not be related to organ transplants, C. Machado. *Journal of Medical Ethics* 2003; **29**; 201-202.

GMC Guidelines: Transplantation of organs from live donors.

http://www.gmc-uk.org/guidance/current/library/transplantation_live_donors.asp

Further Reading

Raining the Dead: Organ Transplants, Ethics and Society. Ronald Munson. Oxford University Press: Oxford, 2002.

7. Human Tissue Donation and Transplantation

Why are the kidneys more susceptible than other organs to drug-induced failure?



Outline the mechanism of drug-induced glomerulonephritis. List five drugs that can precipitate this condition.



What is the effect of s.32 of the Human Tissue Act 2004?



What are (a) paired and (b) pooled donation, as defined by the Human Tissue Authority?



Is it ever legally or ethically acceptable to sell a kidney? Give 5 reasons for your decision.



7. Human Tissue Donation and Transplantation

In the UK at present, there is no legal definition of death. Based on your knowledge of ethical issues involved, compose three possible definitions for death giving specific consideration to the requirements of cadaveric organ donation.

A fundamental problem with cadaveric organ donation is ensuring that a viable organ is available when a patient is ready to receive it. What may be done to maintain the viability of a donor organ, and to what degree, if any, is this acceptable? (Consider the doctrine of double effect when answering this question.)

Should lifestyle be a factor in considering who is eligible to be placed on a waiting list for organ transplant? (Is a nurse, who has contracted hepatitis in the course of her work more entitled to a new liver than a lifetime alcoholic with end-stage liver failure?)

7. Human Tissue Donation and Transplantation

For Inclusion in Professional Development Portfolio (Section A)

To be completed AFTER the workshop

Outline how your perception of the ethical issues surrounding organ transplant has changed over the course of this workshop. Were issues raised that you yourself had not considered? Did any of the issues affect your personal stance on the subject?

Workshop 8:

Beginning/Ending of Life Issues

8. Beginning/Ending of Life Issues

Outline

This workshop will provide an overview of some of the legal and ethical implications surrounding the beginning and ending of life. This will include contraception and abortion

Additionally, students will examine some of the legal and ethical issues associated with end of life. Some of the moral and legal principles that guide decision-making, and some of the arguments for and against euthanasia, will be considered. The pharmacist's role in palliative care will also be discussed.

By the end of this workshop, the student should have a broad understanding of the legal and ethical issues surrounding; the supply of information on contraception and abortion to the under-16s; supply by pharmacists of emergency hormonal contraception (morning after pill); abortion; euthanasia; and palliative care.

Reading for the Session

The chapter(s) on end of life, and consent in any medical law and ethics textbook

Practice Guidance on the Supply of Emergency Hormonal Contraception as a Pharmacy Medicine. RPSGB, September 2004.

<http://www.rpsgb.org/pdfs/ehcguid.pdf>

Updated Advice on EHC. RPSGB, 18 December 2006.

<http://www.rpsgb.org/pdfs/pr061218.pdf>

Publication of Revised Guidance for Health Professionals on the Provision of Contraceptive Services for Under 16s. Department of Health, 2004.

http://www.dh.gov.uk/en/Publicationsandstatistics/Pressreleases/DH_4086804

The Abortion Act 1967, section 1 (Medical termination of pregnancy)

<http://www.statutelaw.gov.uk/content.aspx?LegType=All+Primary&PageNumber=62&NavFrom=2&parentActiveTextDocId=1181037&ActiveTextDocId=1181037&filesize=36155>

Dickman, A (2007) *Pain in palliative care: a review*. Pharmaceutical Journal 278:679-682 (9 June 2007)

http://www.pjonline.com/pdf/cpd/pj_20070609_palliativecare01.pdf

Dickman, A (2007) *Opioid analgesics in palliative care*. Pharmaceutical Journal 278:745-748 (23 June 2007)

http://www.pjonline.com/pdf/cpd/pj_20070623_palliativecare02.pdf

Meek, C (2006) *Pharmacy involvement where assisted suicide and euthanasia are permitted*. Pharmaceutical Journal 277:614-615 (18 November 2006)

http://www.pjonline.com/pdf/articles/pj_20061118_euthanasia.pdf

8. Beginning/Ending of Life Issues

Meek, C (2006) *Pharmacy and assisted suicide: what can be learnt from experience abroad?* Pharmaceutical Journal 276:639-640 (25 November 2006)
http://www.pjonline.com/pdf/articles/pj_20061125_assistedsuicide.pdf

Wingfield, J and O'Neill, RC (2006) *What are the legal and ethical issues surrounding the ending of life?* Pharmaceutical Journal 276:134-135 (4 February 2006)
http://www.pjonline.com/pdf/agenda/pj_20060204_endingoflife.pdf

UK Clinical Ethics Network - End of Life Issues
<http://www.ethics-network.org.uk/Ethics/eendlife.htm>

Human Rights Act 1998, Article 2

Further Reading

Text, Cases & Materials on Medical Law. Stauch, Wheat & Tingle, Routledge-Cavendish, 3rd edition, pp. 404-418

Medical Law. Kennedy & Grubb, Butterworths, 3rd edition, pp. 1315-1349

Palliative care pharmacists network (PCPN)
<http://www.helpthehospices.org.uk/NPA/pharmacists/index.asp>

MeReC Briefing No. 22 2002/2003 Palliative Care: The use of strong opioids in palliative care
http://www.npc.co.uk/MeReC_Briefings/2002/briefing_no_22.pdf

Gold Standards Framework programme (England)
<http://www.goldstandardsframework.nhs.uk>

NICE guidelines: Supportive and palliative care
<http://www.nice.org.uk>

National Council for Palliative Care
<http://www.ncpc.org.uk>

HelpThe Hospices
<http://www.helpthehospices.org.uk>

Association of Children's Hospices
<http://www.childhospice.org.uk>

8. Beginning/Ending of Life Issues

What is the legal position in the UK regarding the provision of confidential advice about (a) contraception and (b) abortion to under-16s?

What is the position of the RPSGB regarding pharmacists who choose not to supply emergency hormonal contraception on moral or religious grounds?

Read and analyse ss.1(a)-(c) of the Abortion Act 1967. Provide three options for the beginning of pregnancy and indicate what effect your choice has on the relative position of the “twenty-fourth week” in each case.

8. Beginning/Ending of Life Issues

What is euthanasia? What types of euthanasia are usually recognised?

A large, solid grey rectangular box intended for the user to provide an answer to the question about euthanasia.

What is the 'slippery slope argument' objection to euthanasia?

A large, solid grey rectangular box intended for the user to provide an answer to the question about the slippery slope argument.

What is a pharmacist's role in palliative care?

A large, solid grey rectangular box intended for the user to provide an answer to the question about a pharmacist's role in palliative care.

8. Beginning/Ending of Life Issues

For Inclusion in Professional Development Portfolio (Section A)

To be completed AFTER the workshop

Identify three different opinions on the subject of EHC provision by pharmacists voiced during today's discussions. Outline whether you think each of these positions is compatible with the RPSGB's standards of professional performance.

Workshop 9:

Genetics

9. Genetics

Outline

In this session, students will examine some of the legal and ethical issues that have arisen as a result of the post-genomic developments in genetics and medicine.

As a result of completion of the Human Genome Project (HGP), we have: better characterisation of disease at the molecular level; genetic testing for diagnosis of inherited disease; therapeutic advances; and new approaches to drug design and therapeutics. Genetic knowledge, genetic diagnosis and treatment and genetic manipulation have raised important legal & ethical implications. How a person's genetic make-up influences their response to drugs, and the potential ability to customise drug therapies will also be discussed.

Reading for the Session

The chapter(s) on genetics (genetic disease; genetic engineering, genetic information, etc.) in any medical law and ethics textbook

Burton, H and Shuttleworth, A (2003) *Genetics education for pharmacists*. Pharmaceutical Journal 270:84-85
http://www.pjonline.com/pdf/agenda/pj_20030118_genetics.pdf

Brice, P and Sanderson, S (2005) *Genetics, health and medicine*. Pharmaceutical Journal 277:53-56 (8 July 2005)
http://www.pjonline.com/pdf/cpd/pj_20060708_genetics.pdf

Brice, P and Sanderson, S (2005) *Uses for genetics in pharmacy*. Pharmaceutical Journal 277:109-112 (22 July 2005)
http://www.pjonline.com/pdf/cpd/pj_20060722_genetics02.pdf

Brice, P and Sanderson, S (2006) *Pharmacogenetics: what are the ethical and economic implications?* Pharmaceutical Journal 277:113-114 (22 July 2006)
http://www.pjonline.com/pdf/articles/pj_20060722_pharmacogenetics.pdf

Pharmacogenetics Meeting Report (2006) Pharmaceutical Journal 278:739-740 (22 July 2006)
http://www.pjonline.com/pdf/forum/pj_20070623_ngedc.pdf

Cases & Legislation

Human Fertilisation and Embryology (Research Purposes) Regulations 2001

Human Reproductive Cloning Act 2001

R (On the Application of Quintavalle) v Secretary of State for Health
 [2003] UKHL 13

Further Reading

BMA Confidentiality
<http://www.bma.org.uk/ap.nsf/Content/Hubethicsconfidentiality>

9. Genetics

BMA Consent

<http://www.bma.org.uk/ap.nsf/Content/Hubethicsconsentandcapacity>

GMC Confidentiality: Protecting and Providing Information 2004

<http://www.gmc-uk.org/guidance/current/library/confidentiality.asp>

GMC Seeking patients' consent: The ethical considerations 1998

<http://www.gmc-uk.org/guidance/current/library/consent.asp>

DoH Genetics: Information about genetics, embryology and assisted conception in the NHS.

http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_4006538

Our Inheritance, Our Future: Realising the potential of genetics in the NHS (Department of Health) June 2003

<http://www.dh.gov.uk/assetRoot/04/01/92/39/04019239.pdf>

Core principles in Genetics for all Health-Care Professionals (National Coalition for Health Professional Education in Genetics) June 2004

<http://www.nchpeg.org/core/coreprinciples.pdf>

Pharmacogenetics: Ethical Issues Introduction (Nuffield Council on Bioethics)

<http://www.nuffieldbioethics.org/go/ourwork/pharmacogenetics/introduction>

Pharmacogenetics ethical issues. (Nuffield Council on Bioethics) 2003.

<http://www.nuffieldbioethics.org/go/ourwork/pharmacogenetics/introduction>

The ethics of patenting DNA. (Nuffield Council on Bioethics) 2002

<http://www.nuffieldbioethics.org/go/ourwork/patentingdna/introduction>

BMA Population screening and genetic testing: A briefing on current programmes and technologies 2005

<http://www.bma.org.uk/ap.nsf/Content/Populationscreeninggeneticstesting>

Human Genetics Commission HGC: <http://www.hgc.gov.uk/Client/index.asp?ContentId=1>

Gene Therapy Advisory Committee (GTAC):

http://genome.wellcome.ac.uk/doc_wtd021011.html

The Information Commissioner's Office

<http://www.ico.gov.uk/>

9. Genetics

UNESCO Universal Declaration on the Human Genome and Human Rights 1997

[http://portal.unesco.org/shs/en/ev.php-](http://portal.unesco.org/shs/en/ev.php-URL_ID=1881&URL_DO=DO_TOPIC&URL_SECTION=201.html)

[URL_ID=1881&URL_DO=DO_TOPIC&URL_SECTION=201.html](http://portal.unesco.org/shs/en/ev.php-URL_ID=1881&URL_DO=DO_TOPIC&URL_SECTION=201.html)

UNESCO International Declaration on Human Genetic Data 2003

[http://portal.unesco.org/en/ev.php-](http://portal.unesco.org/en/ev.php-URL_ID=17720&URL_DO=DO_TOPIC&URL_SECTION=201.html)

[URL_ID=17720&URL_DO=DO_TOPIC&URL_SECTION=201.html](http://portal.unesco.org/en/ev.php-URL_ID=17720&URL_DO=DO_TOPIC&URL_SECTION=201.html)

Council of Europe Convention on Human Rights and Biomedicine

<http://conventions.coe.int/treaty/en/treaties/html/164.htm>

Other Relevant Legislation

Disability Discrimination Act 1995

Human Fertilisation and Embryology Act 1990, 2008

Human Rights Act 1998

Human Tissue Act 2004

Medicines for Human Use (Clinical Trials) Regulations 2004/1031

9. Genetics

What ethical, legal and social issues does genetic testing raise?



Who might argue a right to access to genetic information about a particular patient?



What is the role and functions of the Human Fertilisation and Embryology Authority?



9. Genetics

What is human cloning?



Are all forms of human cloning prohibited by UK legislation?



How do genes affect our response to medicines?



9. Genetics

For Inclusion in Professional Development Portfolio (Section A)

To be completed AFTER the workshop

Should enhancement that improves an individual's capabilities other than for the purpose of preventing or treating a disease or condition be allowed?

Workshop 10:

Responsibility & Accountability

10. Responsibility & Accountability

Outline

On 7 February 2007, the Pharmacists and Pharmacy Technicians Order 2007 received royal assent. On 30 March 2007, the new fitness to practise provisions of that Order, together with new fitness to practise rules, came into force.

All allegations referred to the RPSGB before 30 March 2007 will be dealt with in accordance with the relevant provisions of the Royal Pharmaceutical Society of Great Britain (Infringements Committee) Rules 2005, the regulations governing the procedures of the Statutory Committee (SI 1978 No.20), and the Pharmacy Act 1954. These are commonly referred to as the *Old Rules*. Any allegation that has not been referred to the Society by 30 March 2007, and all new allegations notified to the Society after that date, will be considered under the Society's new fitness to practise machinery, in accordance with the relevant provisions of the Order and the Royal Pharmaceutical Society of Great Britain (Fitness to Practise and Disqualification etc.) Rules 2007.

To date, a relatively small number of cases have been referred for consideration under the new Fitness to Practice Rules. Those that have been considered comprise mostly of applications for restoration to the Register of Pharmaceutical Chemists. As such, all cases dealt with in this workshop will deal with cases dealt with under the Old Rules.

During this workshop, students will take the role of the Statutory Committee and consider allegations of professional misconduct brought against pharmacists by the council of the RPSGB.

Reading for the Session

Statutory Committee: Indicative Sanctions Guidance. RPSGB
<http://www.rpsgb.org.uk/pdfs/statcomindicsancguid.pdf>

Code of Conduct: Statutory Committees. RPSGB
<http://www.rpsgb.org.uk/pdfs/ftpcommitteescodeconduct.pdf>

The Pharmaceutical Society (Statutory Committee) Order of 1978
<http://www.rpsgb.org.uk/pdfs/statcomreg.pdf>

Medicines, Ethics & Practice. A Guide for Pharmacists & Pharmacy Technicians. RPSGB

10. Responsibility & Accountability

Whom may be answerable to the Statutory Committee of the RPSGB against an allegation of misconduct?

A large rectangular area that has been redacted, appearing as a solid grey block.

What evidence may be heard by the Statutory Committee?

A large rectangular area that has been redacted, appearing as a solid grey block.

What sanctions are available to the Statutory Committee of the RPSGB for use against a registered pharmacist under the Old Rules?

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10. Responsibility & Accountability

Statutory Committee Cases

To be completed **DURING** the workshop

The following are actual allegations of professional misconduct brought before the Statutory Committee of the RPSGB in the last five years. In your workshop groups, you will take the role of the Statutory Committee in considering these allegations. Only the allegations have been provided. Should you require any additional information, including mitigating or extenuating circumstances, you may, through your nominated chairman, request it.

Conviction: Drink Driving

On 16 August 2002 at Gloucester Magistrates' Court, following a plea of guilty, Mr B was convicted of having on 2 August 2002 driven a car with 59 micrograms of alcohol in 100 millilitres of breath. This was contrary to s.5(1)(A) of the Road Traffic Act 1988. In respect of that conviction he was fined £400, disqualified from driving for 15 months and had his driving licence endorsed. The disqualification to which he was subjected was to be reduced by three months on the successful completion of a rehabilitation course by 16 June 2003.

Your decision

RPSGB's decision

Conviction: Possession of Class B Drugs

On 12 July 2000, shortly before he was registered as a pharmacist, Mr M had been approached by police officers while sitting in his parked car. One of the officers recognised the smell of cannabis and challenged Mr M, who produced a polythene bag containing cigarette papers and a substance that he admitted was cannabis. Mr M subsequently pleaded guilty to possession of a Class 2 drug. In respect of that conviction, he was fined £200 by the Magistrate.

Your decision

RPSGB's decision

Conviction: Theft

On 18 October 2002, at Lowestoft magistrates' court, Mr H had pleaded guilty to stealing £4,327.62 belonging to Mr H and Mr B, of H&B Pharmacy. Mr H was sentenced to a community service order for 200 hours and ordered to pay costs of £60.

Your decision

RPSGB's decision

Failure to comply with CD Regulations

The committee heard that on 22 October 2002 Mr S had dispensed 100ml of methadone mixture 1mg/ml against a document purporting to be a prescription issued by the Ripple Project, which offers medical services to drug users. But it was a forgery, and the Ripple Project did not hold details of the person named. Mr S did not know the patient or the purported prescriber, whom he had assumed to be a "Dr Ripple". He had made an entry to that effect in the methadone register.

10. Responsibility & Accountability

On the same day, Mr S had altered a CD register entry relating to the dispensing of 35ml Physeptone® mixture 1mg/ml. The alteration rendered the relevant details illegible.

Further, a prescription for methadone dispensed on that day had not been entered in the register and an instalment of methadone mixture 1mg/1ml had been made to a patient otherwise than in accordance with the prescriber's directions.

In the final instance, a patient with a prescription for three days' supply of methadone, to be dispensed on 21 October, arrived at the pharmacy too late to collect it and returned the following morning. Mr S dispensed the full three days' supply, entering it in the register as having been dispensed on 21 October. He explained that he had done this because it had been made up on 21 October, which was true. What he should have done was refuse to dispense at all for the three days and send the patient back to his doctor to secure a new prescription.

Your decision

RPSGB's decision

Dispensing Errors

Following the inquiry into a complaint by the Council of the Society against Mr M, the committee heard the allegations that he:

- a) dispensed to a patient atenolol tablets labelled as amitriptyline in response to a prescription calling for amitriptyline hydrochloride;
- b) dispensed to a patient doxazosin labelled as tolterodine in response to a prescription calling for tolterodine;
- c) dispensed to a patient ramipril capsules labelled as lisinopril tablets in response to a prescription calling for lisinopril tablets;
- d) caused or permitted atenolol tablets that had previously been dispensed to be returned to dispensary stock;
- e) caused or permitted additional medicines that had previously been dispensed to patients to be returned to dispensary stock;
- f) and caused or permitted, through a failure to appoint a superintendent pharmacist between 1 April 2000 and 4 July 2005, the company to carry on a retail pharmacy business unlawfully during that period.

Your decision

RPSGB's decision

Ethical Breach

The Council of the RPSGB alleged that, on 2 January 2004, at a pharmacy owned by him, Mr P had received a prescription calling for two 28 simvastatin tablets 40mg. Instead of supplying simvastatin Mr P supplied 56 citalopram 40mg tablets labelled as simvastatin 40mg tablets. Mr P had admitted almost immediately to the inspector that he had been on duty at the material time and was responsible for the error.

The Council further alleged that, following the dispensing error, the Society's inspector for the area attempted to contact Mr P on a number of occasions between 19 July 2004 and 14 February 2005 regarding a formal interview. After telephoning on three occasions, he sent a

10. Responsibility & Accountability

letter by special delivery on 4 October 2004 requesting an interview and asking Mr P to let him know in writing if he did not wish to be interviewed. After another unsuccessful telephone call, he sent a further letter by special delivery on 20 December 2004 asking Mr P to reply by return stating whether he was willing to be interviewed. Eventually, after a further unsuccessful telephone call on 14 February 2005, the Society received a letter from Mr P on 3 March confirming that he did not wish to be interviewed. The letter was dated 22 January 2005 but, Mr P subsequently admitted that it had not been posted before 13 February 2005. The Council alleged that this action by Mr P was contrary to Key Responsibility 3 of the Society's Code of Ethics and Standards for pharmacists.

Your decision

RPSGB's decision

10. Responsibility & Accountability

For Inclusion in Professional Development Portfolio (Section A)

To be completed **AFTER** the workshop

Reflect on the decisions you have participated in over the last twelve weeks. Do you consider yourself to be an ethical person? Do you feel more prepared to make decisions that will affect the lives of others in your professional practice?

Appendix 6: DIT-2 Dilemma Example

Story 4

Cancer

Mrs. Bennett is 62 years old, and in the last phases of colon cancer. She is in terrible pain and asks the doctor to give her more pain-killer medicine. The doctor has given her the maximum safe dose already and is reluctant to increase the dosage because it would probably hasten her death. In a clear and rational mental state, Mrs. Bennett says that she realizes this; but she wants to end her suffering even if it means ending her life. Should the doctor give her an increased dosage?

* 19. Do you favor the action of giving more medicine?

☐ Should give Mrs. Bennett an increased dosage to make her die.
 ☐ Can't decide
 ☐ Should not give her an increased dosage

* 20. Rate the following issues in terms of importance.

	Great	Much	Some	Little	No
1. Isn't the doctor obligated by the same laws as everybody else if giving an overdose would be the same as killing her?	☐	☐	☐	☐	☐
2. Wouldn't society be better off without so many laws about what doctors can and cannot do?	☐	☐	☐	☐	☐
3. If Mrs. Bennett dies, would the doctor be legally responsible for malpractice?	☐	☐	☐	☐	☐
4. Does the family of Mrs. Bennett agree that she should get more painkiller medicine?	☐	☐	☐	☐	☐
5. Is the painkiller medicine an active heliotropic drug?	☐	☐	☐	☐	☐
6. Does the state have the right to force continued existence of those who don't want to live?	☐	☐	☐	☐	☐
7. Is helping to end another's life ever a responsible act of cooperation?	☐	☐	☐	☐	☐

	Great	Much	Some	Little	No							
8. Would the doctor show more sympathy for Mrs. Bennett by giving the medicine or not?	☐	☐	☐	☐	☐							
9. Wouldn't the doctor feel guilty from giving Mrs. Bennett so much drug that she died?	☐	☐	☐	☐	☐							
10. Should only God decide when a person's life should end?	☐	☐	☐	☐	☐							
11. Shouldn't society protect everyone against being killed?	☐	☐	☐	☐	☐							
12. Where should society draw the line between protecting life and allowing someone to die if the person wants to?	☐	☐	☐	☐	☐							
* 21. Consider the 12 issues you rated above and rank which issues are the most important.												
	1	2	3	4	5	6	7	8	9	10	11	12
Most important item	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Second most important	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Third most important	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Fourth most important	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Appendix 7: Interview Schedule

Opening remarks

- Who will see the data
- Reconfirm consent

1. **Research question 4: What personal and professional experiences have an influence on moral decision making?**
2.
 - To expatiate the findings/pattern observed between NQ and EP levels
 - Perception of moral education in higher education

Contextualisation

1. Tell me about your career thus far as a pharmacist
 - a. Setting?
 - b. Changes in setting since you qualified (first 3 years) to becoming an EP around 5 years post qualifying?
 - c. Further qualifications –
 - i. both pharmacy and non pharmacy related/non academic?
 - ii. What is/was the qualification? Prescribing?
2. What do you enjoy most about your role as a pharmacist?
3. What do you least enjoy?
4. Is it different to what you expected? In what ways?
5. Describe anything that has changed/developed in the profession since you qualified as a pharmacist?
 - a. Any major themes?
6. Have you experienced any significant personal or professional life changes/challenges that you would like to share with me?
 - a. Starting a family
 - b. Moving abroad
 - c. Bereavement/Loss

Apprehending the Phenomenon – explain briefly concept of moral decision making and moral development – give definition of key terminology. Explain the difference with clinical decision making

1. Do you recall anything about moral development or ethical dilemmas from your undergraduate studies?
 - a. Teaching sessions/workshops/group work/assignments
 - b. Do you recall any other mechanism of moral development activities since you qualified?
2. In relation to the above, did this contribute to helping you with enhanced moral decision making during your pre-reg year? Did it have an influence after you qualified?
3. Could you describe one or two instances where you have experienced a moral dilemma in practice? Or an instance where you struggled/implemented professional judgement (*if they give two – talk about them one at a time explicitly)
 - a. What gave rise to this?
 - b. What did you take into consideration when making a choice on the action to take?
 - i. What elements were important to you at the time?
 - ii. How did you ascertain that this was the best decision?
 - c. What was the outcome?
 - d. What effect did the outcome have on you or others involved?
 - e. Was the decision made/action taken adequate?
 - f. Would you have acted/done something differently in alternative circumstances?
 - i. If so, what? If not, why not?
4. Is there a particular type moral dilemma that you have encountered more than once over time? (e.g. emergency supply of medicine + examples in different settings – ensure focus on professional life)
 - a. Has the way that you have dealt with that dilemma changed over time?

Clarifying the Phenomenon

1. Do you recall any changes to the way that you make professional decisions overtime? (Link to AP Q4) since you qualified (first 3 years) to becoming an EP around 5 years post qualifying
 - a. The time you spend pondering?
 - b. Change in factors you take in to account when making your decisions?

2. How frequently do you face moral judgement issues in practice?
 - a. How has this changed overtime?
 - b. How many in the last month?
3. Is there anything that would support you now as an established practitioner to support with moral decision making?
4. To what extent do you feel there is a need for support programmes or mechanisms for pharmacists in moral decision making?
5. What are the strongest influences on the way you deal with moral decision making in practice?
 - a. How do you feel like differs from other pharmacists or healthcare professionals?
6. Impact of COVID – has it affected the way that you deal with dilemmas?
 - a. How?
 - i. Time spent?
 - ii. The way that you see the world/perception?

Appendix 8: Participant Information Sheet

Study title: Moral development of pharmacy undergraduate to established practitioner – a longitudinal study

What is the purpose of the study?

The overall aim of my research is to ascertain the moral development of single cohort of pharmacy students at the University of Hertfordshire, from their commencement of the MPharm programme in 2008 and in each year of their studies, once they qualified as pharmacists and up to five years after qualification, as established practitioners. My specific objectives are:

- To undertake a retrospective review of moral development in undergraduate pharmacy students at the University of Hertfordshire.
- To explore the views of established pharmacists using interviews to identify perceived moral development gains from professional practice
- To determine potential future interventions to enhance moral development in professional pharmacy practice

Invitation

You are being invited to take part in this study, Moral development of pharmacy undergraduate to established practitioner – a longitudinal study. I, Waseeat Kareem-Alliu, am the principal investigator in this project as part of my research for a Doctorate in Pharmacy (PhD).

Before you decide whether to take part, it is important that you understand the study that is being undertaken and what your involvement will include. Please take the time to read the following information carefully and discuss it with others if you wish. Do not hesitate to ask me anything that is not clear or for any further information you would like to help you make your decision. Contact details are provided at the end of this information sheet. Please take time to consider if you wish to take part.

Why have I been invited?

You have been invited to take part in the interviews for this research as you were part of the 2008 cohort of the MPharm programme at the University of Hertfordshire. You would have therefore completed the Defining Issues Test 2 (DIT2) at various points of the study since 2008.

Do I have to take part?

It is completely up to you whether you decide to take part in this study. If you do decide to take part, you will be given this information sheet to keep and be asked to complete a consent form. Agreeing to join the study does

not mean that you must complete it. You are free to withdraw at any stage without giving a reason. A decision to withdraw at any time, or a decision not to take part at all, will not affect your professional relationship with the principal investigator.

What will happen to me if I take part?

Following your provision of written informed consent to take part in the study, a mutually convenient time will be arranged for you to be interviewed by the principal investigator on one occasion. The interview will last approximately one hour. I will ask questions on your experience on any moral dilemmas that you may recall from your undergraduate training and any examples of moral dilemmas you may have encountered in practice. I will also ask about any factors that may have influenced the way you deal with dilemmas in practice over time.

The interview will take place via video call. The discussion will be recorded, transcribed, and analysed. Following the interview, you will also be asked to review a transcript of the discussions, which took place during the interview to check for accuracy of the text transcribed. The transcript will be sent in a secure password protected document via email. You can send any comments or notification of corrections relevant to the transcript to the principal investigator via email. You will have up to two weeks to review and send back comments or notification of corrections. You will be asked to provide written consent for the use of quotes at the end of the interview. Should you agree to participate in this study, please note that the principal investigator has a professional obligation to act on any malpractice and/or unprofessional behaviors that might be disclosed during this research activity.

Are there any age or other restrictions that may prevent me from participating?

There are no restrictions that may affect your participation in this study.

What are the possible disadvantages of taking part?

There are no disadvantages in taking part in this study. You may feel that you are uncomfortable expressing your views on certain topics during the discussion. If this happens, you do not have to answer the question. It is hoped that you can express your views in the capacity within which you feel comfortable.

What are the possible benefits of taking part?

There may not be any direct benefit to you. It is hoped that by sharing your experience and perspectives on moral development, we will understand better the challenges that pharmacists face as practitioners and be able to inform on how this can be supported in practice.

How will information about me be used?

All the information that you provide will be kept confidential and secure. This

includes information provided on the consent form. Signed consent forms will be stored in a password protected file and destroyed after 12 months, after which it will be permanently deleted.

Will the data be required for use in further studies?

The data will not be used in any further studies.

How will my taking part in this study be kept confidential?

All the information that you provide will be kept confidential and secure. This includes information provided on the consent form.

The interview will be recorded, and a transcript produced. Recordings will be stored in a password protected file. Audio recordings will be transcribed into text by the principal investigator. The data collected and transcribed into text form will be stored electronically, in a password-protected environment, for 12 months, after which time it will be destroyed under secure conditions. The data will be anonymised prior to storage. Transcripts of audio recordings will not contain your personal identifiable information. This means that you will not be identified in any report that is produced about the study.

What will happen to the results of the research study?

The results of the study will be reported in a PhD Dissertation as well as publication in healthcare and education related journals and conference proceedings.

Who is funding the research?

This research is funded by the University of Hertfordshire, School of Life and Medical Sciences.

The UH protocol number is PHAEC/12-71.

Factors that might put others at risk

Please note that if, during the study, any non-medical circumstances such as unlawful activity become apparent that might or had put others at risk, the University may refer the matter to the appropriate authorities.

Who can I contact if I have any questions?

If you would like further information or would like to discuss any details personally, please get in touch with me, in writing or by email:

Waseeat Kareem-Alliu

School of Life and Medical Sciences

Department of Clinical, Pharmaceutical and Biological Sciences

University of Hertfordshire, College Lane, Hatfield, Herts AL10 9AB

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What if there is a problem?

Although we hope it is not the case, if you have any complaints or concerns about any aspect of the way you have been approached or treated during this study, please write to the University's Secretary and Registrar at the following address:

Secretary and Registrar
University of Hertfordshire
College Lane
Hatfield
Herts
AL10 9AB

Thank you very much for reading this information and considering taking part in this study.

Appendix 9: Consent Form

Study title: Moral development of pharmacy undergraduate to established practitioner – a longitudinal study

Name and Contact details of the Principal Researcher: Waseeat Kareem-Alliu. School of Life and Medical Sciences, Department of Clinical, Pharmaceutical and Biological Sciences

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E-mail: w.kareem-alliu@herts.ac.uk

Please tick box if you agree with the statement

1. I confirm that I have read and understand the Participant Information Sheet dated 22nd January 2022 for the above study. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily. ☐
2. I have been assured that I may withdraw from the study at any time without disadvantage or having to give a reason. ☐
3. In giving my consent to participate in this study, I understand that voice recording will take place and I have been informed of how this recording will be transmitted and displayed. ☐
4. I have been told how information relating to me (data obtained during the study, and data provided by me about myself) will be handled: how it will be kept secure, who will have access to it, and how it will or may be used. ☐
5. I understand that if there is any revelation of unlawful activity or any indication of non-medical circumstances that would or has put others at risk, the University may refer the matter to the appropriate authorities. ☐
6. I am aware that extracts from the interviews may be included in publications to come from this research, with the understanding that I will not be identifiable, and all quotations will remain anonymous. ☐
7. I agree to take part in the above study. ☐

Participant Name

Date

Signature

Researcher

Date

Signature

Appendix 10: Use of Quotes Consent Form

Study title: Moral development of pharmacy undergraduate to established practitioner – a longitudinal study

Name and Contact details of the Principal Researcher: Waseeat Kareem-Alliu. School of Life and Medical Sciences, Department of Clinical, Pharmaceutical and Biological Sciences
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Please tick box if you agree with the statement

1. I agree for my quotes to be used.	☐
2. I do not agree for my quotes to be used.	☐

Participant Name

Date

Signature

Researcher

Date

Signature

Appendix 11: Interview Transcripts

EP01

00:00:02.640 --> 00:00:06.030

Waseeat Kareem-Alliu

So thank you very much. I will kill my cameras. I hopefully it will make the bandwidth of the Internet better or good throughout the whole process. But as I said, thank you very much for taking part as we've done the opening remarks. My research is about moral development and understanding a pharmacists journey, more specifically from when they first qualify to now. For you as an established practitioner and I guess exploring the differences or the change in your in your journey through your career till now. Umm.

00:00:37.320 --> 00:00:46.630

Waseeat Kareem-Alliu

So I would like to first of all ask you to tell me a little about a little bit about your career so far. So your career as a pharmacist, what type of journey have you been on?

00:00:47.820 --> 00:01:17.050

EP01

OK, well I am a hospital pharmacist currently working as a deputy chief pharmacist specializing in mental health, so I work for NHS. I'm sorry, a mental health NHS Trust. I've pretty much been in hospital pharmacy since qualifying. As a pre-req, I started off working in general hospital for about 18 months. During that time, I was a resident pharmacist. Did various rotations, umm and also completed the uh, certificate, the general Pharmacy Practice Certificate. After that I went on to specialize in Mental Health and I've been practicing in mental health since then, so that's about eight years.

Yes, coming up to that's actually gone past eight years. So just over 8 years I've been specializing in mental health. I have completed my Diploma. So that's the General Pharmacy Practice Diploma. I've also completed the

Independent Prescribing course as well. So I have worked as a Non-medical Prescriber for a number of years since 2017. Uh, so yeah, that's where I am.

Now, most of my role is very much uh managerial and working at a strategic level. Overseeing the operations of within a Pharmacy department. So, my role is a necessarily very clinical at the moment, but nevertheless I have a I have had a significant number of years doing clinical work and since qualifying.

00:02:36.100 --> 00:02:42.250

Waseeat Kareem-Alliu

So how long ago would you say you stepped away from clinical work and or direct contact with patients?

00:02:44.560 --> 00:02:49.310

EP01

I'd say regular contact with patients, I stepped away, probably... I'd probably say since.....20...

2020...2019 or perhaps 2019, but in saying that I do very much enjoy direct contact with patients and therefore when people are off sick or an annual leave. I'm quite quick to volunteer to cover their wards or to visit their teams. Erm, so I do still see patients. I am on the Saturday Rota where I currently work, which requires us to serve outpatients. And while we're open, so again I do see patients then as well.

00:03:40.970 --> 00:03:46.310

Waseeat Kareem-Alliu

OK, lovely. So, I will ask you to draw on some examples and through the course of the interview.

I will try to.... Sorry, go go ahead.

00:03:47.860 --> 00:03:48.110

EP01

I also forgot to mention that I do work as a Visiting Lecturer as well, so I have had some experience and I could give you as well.

00:03:54.210 --> 00:03:54.550

Waseeat Kareem-Alliu

OK. Excellent. Thank you. Yes, I will draw on some examples, so I'll try to be specific with your whether you were patient facing or not within, I guess the examples that you draw on, I think you've answered a lot of my questions to kind of set the context. And so I guess in terms of changes in setting, not necessarily, you've been a hospital pharmacist since you qualified, is that... have I got that correct?

00:04:24.840 --> 00:04:25.710

EP01

Yeah, that's correct.

00:04:26.030 --> 00:04:39.350

Waseeat Kareem-Alliu

Excellent and you've talked about your academic qualifications and that you've attained since graduating. You're a prescriber, which is great. Do you have any other non-pharmacy related qualifications?

00:04:40.190 --> 00:04:46.130

EP01

And so I'm partly through a MBA. So a Masters in Business Administration. So I have completed 7 modules so far out of 12.

00:04:53.310 --> 00:04:53.840

Waseeat Kareem-Alliu

Excellent. Lovely. Thank you. So what do you what would you say you enjoy the most about your role as a pharmacist?

00:05:05.820 --> 00:05:06.630

EP01

I would say. I enjoy. At the moment I'd say I enjoy being able to have a.... or

being involved in the decision making process that shapes the pharmacy service that we provide to patients. I believe that if you, if you want to make a change or if you want to improve things, the easiest way to do that is at a top level or a senior level and being in that position now is satisfying. You know, when you're invited to meetings which are involved in making decisions at the early stages of any projects, any new initiatives, any improvements that need to be made and so on. So, I very much enjoy that I very much enjoy problem solving as part of my role. So when there is a goal or something that needs to be achieved, just working either on my own or working as part of a team to come up with a solution in order to achieve that goal. Ermm, I like leading projects as well, and the satisfaction that you get from accomplishing or finishing a project that's also satisfying. Ermm, I do also enjoy uh networking with people from other trusts as well... working with people within the CCG, hearing about their experiences, sharing experiences and just coming together really to try and shape the NHS for the future from a pharmacy...Umm aspect. But not only that, you're also supporting the other areas within the NHS as well so that we can give back a holistic service. So you know you may support your Nursing colleagues, Occupational Therapists, colleagues in managing patients. They may need support in Medicines Management. They may be able to refer clients going to you who they're struggling with from medicines point of view. So just being there to support them answer many questions as well. Ermm, I think is satisfying and then also when I do get the opportunity having that direct contact with patients being able to speak to them about their medication, improve their understanding about medication and seeing them get better, for me, is just something which is you know it's a feeling which is indescribable seeing someone come into hospital, who is very unwell and being part of the multidisciplinary team to make a decision about treatment and then seeing them get better and, for me, I think I think that's... that's very satisfying.

00:07:56.290 --> 00:08:09.080

Waseeat Kareem-Alliu

Lovely. Thank you. And there are some bits that I will touch on in later sections of the interview, but I've made a note of those and I'll ask you to expand a bit further on. But for now, what would you say you least enjoy about your role?

00:08:10.660 --> 00:08:11.330

EP01

The least... least I enjoy is managing people, especially ermm...challenging people, I would say.

People who may not...Umm... who may not quite have. You know the, the sense of urgency as others to do the work and those who... who don't necessarily prioritize the work, but rather prioritize themselves. Especially when you're working in the in the NHS, which is all about, you know, providing care to... to people who are vulnerable to people who most need it. It is quite challenging managing people who are very much focused on their own personal needs. And therefore their decision making is influenced, you know, by the emotions and what they get out of it and so on. And that can be quite difficult. Trying to deal with those kind of people because at the end of the day you're trying to you're trying to bring about change. You're trying to provide a very good service, but when you have someone or group of people who are not bothered or who don't care, that can make your work a bit difficult.

00:09:25.720 --> 00:09:35.630

Waseeat Kareem-Alliu

Yes, completely. And I'm sure we all have those experiences as well with people who are not quite as eager as you to try and get things resolved so, thank you.

Umm, in terms of when you were, I guess training to be a pharmacist and now as a pharmacist, is it different to what you expected, so the role itself?

00:09:51.480 --> 00:09:52.710

EP01

Yes, definitely.

00:09:53.520 --> 00:09:55.270

Waseeat Kareem-Alliu

And what ways would you say it's different?

00:09:57.580 --> 00:09:58.700

EP01

I would say, I mean, when I was training to be a pharmacist, the work experience that I had. Pharmacists pretty much... but it appeared that pharmacist and played like a... a back office role, and weren't necessarily in the frontline. I don't think that was just true about the profession. I just think that was due to where I did my work placements, whereas when I did my pre-reg and after qualifying, I began to see that actually especially in hospital pharmacy. Umm, pharmacists are on the front line. They are very much, you know, influential and key when it comes to medication related issues and supporting patients and helping them to get better. And so on. Uh.

So that that changed my perspective. Umm, what else would I say it was different? Umm, the managerial side of things, that's not, that's something which isn't talked about very much while training or isn't talked very much about on the course Umm, so you know, even with community pharmacists, after they qualify, not long after they could be, you know, asked to manage their store or manage people and they're similar in hospital as well. And so yeah, I think I was. I wasn't aware of the managerial leadership skills that are required in order to be a pharmacist as well. Umm yeah, I'd say probably. Those are the two key things for me.

00:11:43.760 --> 00:11:44.880

Waseeat Kareem-Alliu

OK. Thank you. And can you describe anything that has changed or developed in the profession since you qualified as a pharmacist? So are

there any major themes that you think are different from the start of your career till now?

00:11:59.690 --> 00:12:02.950

EP01

Yes, I think the scope of, uhh pharmacy practice has changed. Uh, I think when I qualified. It was very much that, you know, there were, there were pharmacists who going into 3 industries either. Hospital, community or the Pharmaceutical industry itself. Whereas now, you've got pharmacists in GP surgeries. You've got pharmacists working within ICS's. You've got pharmacists working within the MHRA. And, and various other places. Umm, which I guess wasn't as, wasn't as common as it is now, you might have heard of a pharmacist working in the MHRA but definitely not in GP surgeries or not many pharmacists working in Primary Care Networks and so that's changed.

And then also the push for pharmacist to become non medical prescribers and independent prescribers. I think when I first qualified, uh, I heard. I'd heard of supplementary prescribers and they were few and far in between. You know there's a there's a major push, especially recently with Health Education England providing funding for pharmacists, early career pharmacist to commence, you know, the prescribing qualification. So there's a push to get pharmacists doing more. And supporting our medical colleagues as well. So I think, yeah, the scope has changed and also what pharmacists are able to offer, there's definitely been a change in that definitely been a push for us to upskill ourselves. Our, our level of input within the you know, the COVID-19 vaccination program is, is another example whereby you have pharmacists working within clinics; diluting, administering the vaccine. Uh, you also had pharmacists overseeing that project also an aspect of it. At Nightingale Hospital, you know, you had pharmacists who are working on the intensive care units to provide that, that level of care that was required to save patients. Again, it's getting involved in things like PGDs. Uh, you know, national advice and so on national

guidelines you have pharmacists involved in that as well. So the scope and what pharmacist can do has definitely changed since qualifying. Uh, a lot, I would say. Yeah.

00:15:00.900 --> 00:15:01.230

Waseeat Kareem-Alliu

Thank you. Thank you. And I guess the last question before we get more specific is, have you experienced any significant personal or professional life changes or challenges that you'd like to share with me since you've qualified? So maybe starting a family moving abroad? And anything at all.

00:15:23.720 --> 00:15:28.350

EP01

I think what was the challenge for me, a big challenge was in in the beginning of my career due to the residency program that I was on. Umm, so being a resident pharmacist at a General Hospital, having to work on call, weekends on a rotational basis and so on. Managing that with doing the diploma and trying to have a social life. That was a very big challenge for me. And in the end are pretty much just had to kind of sacrifice my own personal life and personal things in order to, you know, complete my diploma and to be able to commit to the role that I was working in. Which you know, when I look back, it was great for my development as a pharmacist, but I definitely do feel there was some key events that I missed, such as that family celebrations or just being around to support a family or friends who are going through a difficult time. Umm, that, that, that was something that I had to kind of sacrifice and give up in order to get to where I wanted to get to. And then also yes, starting the family as well. Umm balancing that with work commitments. Has been a challenge for me. I would say I started a family earlier than expected and early in my career. Umm and you know, being young and not having experience in doing that as well as not having experience in being able to juggle work commitments and family life commitments, I think that was a that was a challenge as well. That probably had a negative impact on my, on my family and again, there

were definitely some key moments that I missed and as a result of having to commit to work.

00:17:31.820 --> 00:17:33.950

Waseeat Kareem-Alliu

OK. Thank you. Thank you for sharing that. So now we're gonna go more specifically into thinking about our moral decision-making moral development. Umm, as well as clinical decision making. So I would just like to just run a few definitions by you or just describe some of the phenomenons to you and so that there's a I guess clearer understanding between the both of us when it comes to what we're talking about in that regard. So, moral decision making, we understand that when we're making any decision and whether in practice or just in life, there tends to be 2 conflicting issues and and in that in the making of that decision, we need to weigh up both sides and then comes to a decision as to what it is that we're going to do in this scenario.

00:18:27.540 --> 00:18:27.860

EP01

Yeah.

00:18:27.670 --> 00:18:46.490

Waseeat Kareem-Alliu

And you may recall ethics, ethics we describe as, I guess the systematic study of moral choices in relation to the language and values associated with them. And these are quite closely related to the four ethical principles. So autonomy, beneficence, justice and nonmaleficence. Umm and then when we talk about somebody's morality, we're describing it as the ideology or their ideology behind good or bad, right and wrong in relation to your personal behaviour standards or influencers from society and culture. And when we talk about clinical decision making, I'm sure I don't need to tell you to extensively what's involved there, but there are various elements that are involved in clinical decision making, the primary one being the outcome of

the for the patients and also with that we may need to weigh up other factors such as economical influences as well as maybe common practice within the within the area in which we're working in. So those are just a few definitions, but if you do need me to clarify anything in any of my questions, please do say so and I can. I'll be more than happy to clarify that. Umm, so my first thing is the question is, do you recall anything about moral development or ethical dilemmas from your undergraduate studies?

00:19:49.610 --> 00:19:50.540

EP01

Yes, I do.

00:19:52.040 --> 00:19:55.870

Waseeat Kareem-Alliu

Would you be able to describe what you recall from your undergraduate studies please?

00:19:57.260 --> 00:20:01.510

EP01

I remember, I think we completed a module in 3rd year. And I remember. As part of the module. We were given scenarios, I believe, it was to discuss as a class or to do some work on, my memory is a bit vague, but I definitely do remember having scenarios and then having to use the GPhC Code of Ethics to kind of way up the options and then suggest a decision based on those Code of Ethics and what we would do in practice as a pharmacist.

00:20:39.290 --> 00:20:40.570

Waseeat Kareem-Alliu

And do you, I mean, you say you vaguely remember. Do you think it has influenced your practice at all since then?

00:20:47.400 --> 00:21:05.860

EP01

Yes, definitely, because now I know that you know any decision that you make which involves your, you know, your morals and ethics and you

definitely need to adhere to the GPhC Code of Ethics. I don't think, I don't think the Code of Ethics has been spoken much about since I've qualified, it's the the module that I completed which kind of drummed home its value and its importance when making decisions which require you to take into consideration moral and ethical values.

00:21:46.480 --> 00:21:54.430

Waseeat Kareem-Alliu Thank you. So yeah, you've touched on my next question briefly is, is and it's going to be, do you recall any other mechanism of moral development activities that you've taken part in since you qualified?

EP01 Since qualifying and no, no.

00:21:56.490 --> 00:22:04.500

Waseeat Kareem-Alliu

OK, lovely. And in relation to the above, you've mentioned that it did help you with, I guess beyond University, did it help you within your pre-registration year, would you say? Did you recall those things from your third year in Pre-reg?

00:22:07.430 --> 00:22:18.120

EP01

Umm, yes and I think it was just on one occasion where we were speaking about the sale of the oral contraceptive pill. Uh. Yeah, the, sale you know if pharmacist had some reasons maybe due to religious beliefs or you know ethical values it there were reasons as to why they couldn't sell the pill or they didn't feel comfortable with selling the pill over the counter. I think that was discussed as a pre-req. I can't remember if it was in preparation for the exam or whether it was just something that we were discussing as part of

the training. But I think that's the only occasion where we have to take into consideration ethical values or or morals when making a decision.

00:23:02.650 --> 00:23:23.970

Waseeat Kareem-Alliu

OK, thank you. So now you may need a moment to think about this, but could you describe one or two instances where you have experienced a moral dilemma in practice? So since you've been qualified, can you recall an example, one or two and I'll ask you some further questions about that example. So just let...

00:23:25.710 --> 00:23:26.230

EP01

Uh... So I'd say...

00:23:36.790 --> 00:23:43.270

Waseeat Kareem-Alliu

So it or it could be an instance where you struggled or you had where you had to implement your professional judgment.

00:23:54.700 --> 00:23:55.730

EP01

Probably...a patient, the patient being medicated. It's happened a few times, but patient being prescribed medication or being medicated against their wishes. And for my my opinion, uh, perhaps they it appears that they have capacity to make that decision, but for one reason or another, the prescribing doctor feels that they don't have the capacity to make that decision and therefore has made a request for pharmacy to supply medication. I would say, but perhaps say that's one. Or probably a better, a better one, actually is being asked to supply sodium valproate to a female of childbearing age. Where the pregnancy prevention program hasn't been discussed or the relevant forms haven't been completed with the patient and but the consultant is demanding that the medication is supplied.

00:25:13.350 --> 00:25:20.340

Waseeat Kareem-Alliu

OK, so can we if we pick the second scenario and that you shared. So you said that there was an absence of all the forms that needed to be complete from the patient. Do you know what gave rise to the, I guess to not having (the prevention programme discussion)?

00:25:32.370 --> 00:25:34.950

EP01

I think it's it was down to, treatment being required urgently. And patient was quite unwell, manic and it was felt that, you know, the medical team didn't have time to sit down with the patient and go through all the information to complete the forms. And this patients went well and they just need to, they need to be treated as soon as possible and then anything else that's required can be done later on.

00:26:04.630 --> 00:26:13.650

Waseeat Kareem-Alliu

OK. And you and obviously you were I guess conflicted in this scenario. What elements were important to you at the time to uphold?

00:26:16.790 --> 00:26:24.110

EP01

I think for me, what was important was that the patient was well informed. Uh about the decision that was being taken, i.e. the decision to give her medication which could affect, you know her child if she if she were to be pregnant. Uh and being started on that medication, the patient was young. And so, you know, perhaps she may have had plans to have a family in the future. However, she, you know, was started on that medication and established on that medication. Then there would need to be some thoughts around that because obviously that could affect that could have an effect on. Umm, the child, if she were to be pregnant. So for me, I think it was important for the patient to be aware of that and to be involved in the decision making. And if it was deemed that the patient didn't have capacity

to make such a decision, then for me two things should happen. Should have happened, either a capacity assessment like a formal capacity assessment or an alternative medication should have been used in the interim until the patient had enough capacity or was in the position to, you know, to have that conversation with the medical team. So that they could at least be aware of what was happening and or the decision that was being made on their behalf.

00:27:55.490 --> 00:27:58.120

Waseeat Kareem-Alliu

OK. And what was the outcome in this scenario?

00:27:59.590 --> 00:28:05.780

EP01

In the in that cell it's happened a couple of times, but in in in those scenarios I just refuse to supply the medication.

00:28:06.820 --> 00:28:11.850

Waseeat Kareem-Alliu

OK. And what effect did this outcome have on you? What are the others involved?

00:28:13.340 --> 00:28:13.880

EP01

Umm. I'd say on the on the others involved and for example, the medical team, they, they were probably quite upset, but I was offered an alternative. I don't just say no, I'm not supplying. But I do give alternative options and so it's not like the patient went without treatment or they remained well. But I believe it that you know the patient. You know, was taken care of, was looked after and a decision, my decision that was made was in their best interest. So yeah, the medical colleagues probably upset at the time, in the initial stages, but patient in hindsight probably would grateful that somebody was able to ummm stand up to the team and make a decision in their best interest. Uhm, I would say pharmacy colleagues as well, where we're

grateful that they had someone who was willing or able to take a stand against something that they thought wasn't right, and it probably gave them confidence to be able to approach the same situation or similar situations in the same manner. By, you know, standing by their beliefs, their values or their grounds. But then offering an alternative method or an alternative treatment option.

00:29:42.460 --> 00:29:45.100

Waseeat Kareem-Alliu

Thank you. And you mentioned that. This is something that you've not encountered just once. Have you ever made a decision different to the one you made on this occasion?

00:29:56.480 --> 00:29:57.210

EP01

Umm. Probably yes, yes. Yes, but I think the situation was a bit different. So for example you have. Well, I'll give you one example where you've got patient who is in their late 50s.

00:30:18.760 --> 00:30:19.080

Waseeat Kareem-Alliu

Umm.

00:30:20.480 --> 00:30:22.740

EP01

And then you're not able to. Identify whether they're still of childbearing potential or whether you know they're they're into menopause. And you know the medical team wants to start as the sodium valproate and they want to do it as soon as possible without finding that information. So in that situation, I did, make a decision to supply the medication and that was based on, you know, probability. The likelihood of someone being of childbearing potential in their late 50s and whether they would be sexually active at that at that time of their admission or where that time in their life and the likelihood was low, and so therefore a different decision was made to supply

the medication.

00:31:21.410 --> 00:31:30.610

Waseeat Kareem-Alliu

OK, and I guess with regards to the scenario that we were talking about just with regard my final question on that is, is there anything that you would have done differently? And I guess alternative circumstances or?

00:31:38.400 --> 00:31:40.890

EP01

Ermm, in alternative circumstances.

00:31:45.740 --> 00:31:54.690

Waseeat Kareem-Alliu

Or maybe is there anything that could have changed? Any factors that perhaps could have made you change your mind on the decision?

00:31:56.430 --> 00:31:56.920

EP01

Uhhh. Probably not, I don't think. (long pause)

00:32:04.830 --> 00:32:05.310

Waseeat Kareem-Alliu

OK.

00:32:06.460 --> 00:32:06.860

EP01

No.

00:32:07.710 --> 00:32:08.120

Waseeat Kareem-Alliu

Great. Umm, so just touching one again. So is there any particular moral dilemma type that you have accounted once over time and with regards to this? Umm type of dilemma, do you think the way that you've dealt with that dilemma has changed over time, so considering maybe from when you were a newly qualified pharmacist through to now? Have you changed the way in

which you deal with any of these dilemmas?

00:32:40.530 --> 00:32:41.090

EP01

Umm. Yes, I'd say so. Are you talking about the dynamics we've discussed previously or just in general?

00:32:51.600 --> 00:32:57.010

Waseeat Kareem-Alliu

It can be both where we can treat them both separately. So the specific dilemma and then maybe generally?

00:32:58.710 --> 00:33:04.200

EP01

So the specific dilemmas that we've talked about, I don't think there's been well in the initial years of when I qualified, I think I probably just used to take on board what the doctors and were saying or what they had said. So in that situation. You know, the doctors said, yeah, I still want them to have this medication, I'm aware that, you know, they haven't been informed about the risks, but I still want them to have it because I think they need it as a junior pharmacist, though, they're just, you know, screened the prescription and arranged supply. Whereas later on down the line when you build up your confidence as a pharmacist, you know you're able to stand your ground and and for me that probably took a year or two for that to happen. So that that would have changed my decision making, you know, from my former years, my early years

And in general, I'd also pretty much say the same thing. Now I tend to just look at the facts, take away any emotions or you know, the fact that I may be dealing with somebody who senior or anything like that. I just tend to look at the facts. I've taken to consideration Code of Ethics, my personal morals and beliefs and make a decision based on that, but also offering alternatives as well so that you know the patients' needs are met and and trying to I don't want to say appease all the parties involved but just trying to make

sure that we work towards a common goal. So if that common goal is for the patient to be treated then by the by presenting options and putting options on the table, you know, you're not preventing that from happening.

00:34:49.410 --> 00:34:55.950

Waseeat Kareem-Alliu

Would you say that there's a difference in the time that you spend pondering on decisions?

00:34:56.490 --> 00:34:57.500

EP01

Yeah, absolutely. Before, it would probably take me. Probably take me maybe a minimum of an hour and probably require me to speak to some senior colleagues. Whereas now, you know, I can make such decisions, you know, within 5 minutes. Sometimes I rarely need to seek or consult others for their opinions. And that's partly to do with, you know, just being a bit more confident and having that experience, but also partly to do with not having the time to, you know go back and forth and dwell on such issues and that actually things need to be dealt with quite quickly. So that you know you can move through the workload and do all the tasks at hand.

00:35:51.100 --> 00:35:56.160

Waseeat Kareem-Alliu

Thank you. And how frequently would you say you face moral judgment issues in practice?

00:36:01.470 --> 00:36:05.120

EP01

Erm, I'd probably say that I do get maybe that one at least...Every.....one at least every month.

00:36:10.120 --> 00:36:10.540

Waseeat Kareem-Alliu

OK. And and. Has this changed over time? Have you experienced more over time or?

00:36:18.020 --> 00:36:29.410

EP01

There's definitely more because it's the more senior you get, then people bring these difficult situations to you and then kind of hand it over to you to deal with and so, uh, I do end up getting a lot of moral dilemmas and being passed on to me. And due to a lack of confidence or lack of experience most of the time I end up having to make a decision for that person or give advice.

00:36:50.970 --> 00:36:58.390

Waseeat Kareem-Alliu

Thank you. And is there anything that you would that would support you now as an established practitioner with moral decision making?

00:37:00.860 --> 00:37:02.310

EP01

Anything that would support me now? Perhaps like a maybe a network or forum where people have posted you know how they've dealt with similar situations and just being aware of what other colleagues are doing. I guess that might help you know to come to a decision if you know that you know you have colleagues have been faced with this situation and you know they have to adhere to the same Code of Ethics you do and these are the steps that they took, this was the outcome of the situation, I guess that would breed more confidence when making similar decisions.

00:37:49.790 --> 00:37:57.630

Waseeat Kareem-Alliu

And I guess based on what you said, to what extent do you feel like there is a need for support programs or mechanisms for pharmacists?

00:37:59.090 --> 00:38:24.520

EP01

Umm, I think there's a great need. I think. I think there's a great need because one of the things about being a pharmacist is you can tend to take

your work home. And by saying that, I mean, you know, you do tend to reflect and think about, you know, decisions that you've made during the day and whether that was the right decision because you know where we're taught to always, you know, reflect. Doing CPD continuous professional development. Part of that is to kind of have a reflective uh, uh frame of mind. And so if you always reflecting and questioning decisions that you've made, not knowing how other colleagues have dealt with it, not knowing the outcome from you know similar decisions, I guess that can have a negative impact, umm on your on you as a person I'd say. Whereas you know, if you if you know that actually the decision that I've made is similar to the decision that somebody else has made and the outcome for them was fine, then you know you've got a bit more confidence, you got a bit more at peace with the decision that you've made.

00:39:14.860 --> 00:39:22.990

Waseeat Kareem-Alliu

Thank you. And what are the strongest influences on the way that you deal with moral decisions in practice?

00:39:25.540 --> 00:39:28.720

EP01

Strongest influences I would say, uh The Pharmacy Code of Ethics and then also my religious beliefs, and then also my personal moral values.

00:39:43.110 --> 00:39:47.100

Waseeat Kareem-Alliu

And how do you feel like this differs from other pharmacists or healthcare professionals?

00:39:50.920 --> 00:39:51.550

EP01

I guess. not everybody has a a faith or religious belief, so that they might not take that into consideration and then, you know, there may be some people who, uh, prioritize their need to get paid over their moral values, where for

me you know, personally I think my moral values are of more importance than getting paid. Although I do want to get paid. But yeah my integrity and my moral values are really important so I'm likely to take those things more serious when making decisions.

00:40:37.180 --> 00:40:40.870

Waseeat Kareem-Alliu

Thank you and would you mind sharing what faith you are?

00:40:41.770 --> 00:40:42.400

EP01

Uh, Christian.

00:40:43.640 --> 00:40:54.020

Waseeat Kareem-Alliu

Thank you. And COVID is, I guess the elephant in the room, has COVID had any impacts on the way that you have dealt with dilemmas?

00:40:55.860 --> 00:40:56.350

EP01

As in COVID like COVID itself or?

00:40:59.670 --> 00:41:03.790

Waseeat Kareem-Alliu

The pandemic, just everything that we've been through in the last two years. Anything to do with COVID? It may be the time you spent. I guess the way you see the world.

00:41:11.820 --> 00:41:13.510

EP01

Ohh yeah yeah definitely. I would say that. COVID highlighted the importance of my role as a pharmacist and my value as a pharmacist. Uh it also, it also highlighted to me that, you know, life can be short and life can be unpredictable. You know, we all had things that were planned in 2020 and the months and years after that, but you know, COVID happened and

you know there were some things that didn't go to plan. There were, you know, friends or family members that people may have lost, so it kind of helped me to realize that actually, you know your time on Earth can be short, and therefore you know you should do everything that you're doing to the best of your ability. Whilst you're here, you never know what could happen tomorrow. And therefore, for me that that place is a greater importance on upholding my moral values and my integrity when doing things. Uh, because, I mean, just from a personal perspective, I would want to be remembered, remembered as a person and as a pharmacist who, you know, had integrity, who upheld a high standard of moral values. Uh, rather than someone who was, he was here and was just interested in getting a qualifications, accreditations or initials after my name or money or that kind of thing. So I'd say those are some of the things that that COVID brought to my attention that highlighted. Yeah. Does that answer your question?

00:43:07.760 --> 00:43:09.290

Waseeat Kareem-Alliu

Yes, it does. Thank you. Are there any other things that we've discussed throughout the interview? Anything else that you'd like to touch on? Anything you'd like to mention with regards to moral development at all? That may have spring.

00:43:22.420 --> 00:43:23.410

EP01

Anything else? No, I think I think there's, I think what you've highlighted is that there is an importance in helping pharmacists, especially early career pharmacists, in being confident and being able to make decisions that require them to, you know, take into consideration their moral values and the Code of Ethics. And so yeah, just ensuring or doing what we can to provide that support for them I think would be of great help.

00:44:02.860 --> 00:44:05.260

Waseeat Kareem-Alliu

Great. Thank you very much for your time. And I really appreciate it. I'm going stop recording now.

00:44:10.310 --> 00:44:10.690

EP01

OK.

EP02

00:00:00.000 --> 00:00:19.070

Waseeat Kareem-Alliu

So like I said, today we're going to be talking about your personal and professional experiences and how they've had an influence on your moral decision making.

00:00:01.520 --> 00:00:01.780

EP02

Mm-hmm.

No problem.

Umm.

00:00:20.670 --> 00:00:22.780

Waseeat Kareem-Alliu

Try to consider when you're answering. I guess how things may have changed since you were first qualified as a pharmacist. The reason now with you being an established practitioner and I'll also be trying to touch on your perception of moral education and higher education.

00:00:29.900 --> 00:00:30.440

EP02

Uh-huh.

OK.

Cool. We'll make sense.

00:00:43.120 --> 00:00:54.280

Waseeat Kareem-Alliu

Lovely. Thank you. So I'll first of all starts with some questions about your

career so far. So tell me about your pharmacy career, how it's progressed or changed since you first qualified.

00:00:56.160 --> 00:01:08.530

EP02

Uh, do you know what? It's only really changed in the last 6 to 12 months. I think. I just. I spent the majority of my time as a pharmacy manager from being qualified up until December last year. And then I've done. I've done locum shifts in between is just a regular pharmacist. In recent times, I've started working as a clinician/independent prescriber, and I've gone to the private sector and stepped away from working in community and with the NHS.

00:01:36.640 --> 00:01:37.050

Waseeat Kareem-Alliu

OK. And so you've there are there's been one change you say in your setting and that's been the most recent change in setting.

00:01:43.040 --> 00:01:43.390

EP02

Mm-hmm.

Umm.

00:01:46.060 --> 00:01:47.740

Waseeat Kareem-Alliu

Since you've qualified, lovely.

00:01:47.860 --> 00:01:48.260

EP02

Mm-hmm.

00:01:48.310 --> 00:01:55.340

Waseeat Kareem-Alliu

And have you done any further qualifications? Are you taking any qualifications?

00:01:54.670 --> 00:02:03.760

EP02

Yes. So I think that, yeah, the only thing I've done as of now is becoming independent prescriber. So get my PG certificate apart from that.

That nothing really stands out. I mean, you do the usual, you know, upskilling to do PGDs. But that's almost null and void from year to year because you always have to renew that. So, yeah.

00:02:19.790 --> 00:02:24.700

Waseeat Kareem-Alliu

And just to take you back just one step, So what would you describe your current setting as at the moment?

00:02:25.090 --> 00:02:37.860

EP02

So I currently work for a men's health company that prescribes solely for, well, not solely. We do hair attention, erectile dysfunction, weight loss. And we're looking to start doing mental health as well.

00:02:44.560 --> 00:02:51.740

Waseeat Kareem-Alliu

OK. And do you have any qualifications that are not related to the pharmacy or non academic qualifications?

00:02:52.000 --> 00:02:56.390

EP02

Yes. So I have a certified personal trainer is well. That's the only other qualification that I've picked up in the meantime. Ohh, actually and I'm a qualified Esthetician so I can do fillers and Botox as well.

00:03:09.660 --> 00:03:13.910

Waseeat Kareem-Alliu

Lovely. And So what would you say you enjoy most about your role as a pharmacist?

00:03:16.620 --> 00:03:17.420

EP02

(Laughs) Ohh gosh.

Uh, that's.

Difficult to say. I feel like it's...I guess if I had to pick something it'd be patient interaction. When you do get a chance to actually interact with patients and make a difference and understand it like have an influence on treatment outcomes, then that's rewarding. It's just that that's a rare occasion when you're working in community. So yeah.

00:03:46.640 --> 00:03:52.630

Waseeat Kareem-Alliu

So would you say so? You laughed when I said what do you enjoy the most? Would you say for the most part, do you enjoy your role or?

00:03:53.000 --> 00:03:58.870

EP02

Umm, looking back on it, I no, I didn't enjoy my role. I think it's one of those things where, you were taught one thing and expect pharmacy to be one thing. When you're in uni and there's very, very different when you qualify. I feel like maybe it's changing slightly now with the GP roles that are available and with the look to incorporate independent prescribing into the degree where you would be more of a clinician and you would have a wider scope. But in essence it's quite monotonous and target driven and as much as we'd like to think we are taking care of patients we are to an extent, but it's not, what I thought it would be.

00:04:43.360 --> 00:04:48.910

Waseeat Kareem-Alliu

So what did you think it would be? And I guess how would you say it's different from what you expected you've touched on?

00:04:48.010 --> 00:05:13.500

EP02

So I mean we so basically I mean when we did our course, we did stuff like, we did OSCEs where we did patient facing interactions. We did a little scenario based learning in terms of you know making sure that we found interactions, counsel patients appropriately, you know, read bloods and things like that. What I found was that a lot of that stuff we learnt, wasn't used, it was simply, it's simply a case of, I guess it's a tickbox exercise. You go in, you make sure everything labelled you, make sure everything's dispensed, you check it in and out, in terms of actually getting stuff done. You might do your services, but even services are done aren't done to a high standard. Cause I mean if you were to do like a service which is being

phased out now, like MURs, if you were to do it properly, then you would need half an hour, if you, but then to do that and have a store to take care of. It's almost impossible, because then you fall behind and then you get in trouble for that cause you may not meet targets. And it's, it's things like that, I mean services, I mean pharmacy starts to become more service driven than ever but even with the NMS it's the same way where you do that initial point of contacts but you're only doing it because you know you have to, well and truly are you ensuring that the patient gets the most out of their treatment outcomes no cause many pharmacies don't even get pharmacists to the second or third chase up. They'll get dispenser to do it and just ask questions and then send off a claim. So it's more of a... it's I'm know I'm going to sound like a bit of a cynic, but it's literally just cut and paste and hence why a lot pharmacists don't feel valued and why a lot of people have left community. So yeah.

00:06:57.070 --> 00:07:09.780

Waseeat Kareem-Alliu

So you mentioned you would only more I guess most part you would sign patients up because you have to what type of I guess influences make it mean it's such that you have to?

00:07:10.380 --> 00:07:12.070

EP02

Say that again. Sorry I didn't catch that.

00:07:11.970 --> 00:07:15.290

Waseeat Kareem-Alliu

So you mentioned like signing up, signing up patients to NMS.

00:07:15.800 --> 00:07:27.270

EP02

Ohh yeah, so I mean it's because it's one of those things where your PMR will flag it and obviously you you'd sign the patient up knowing that we have every intention to. I guess you what? I'm speaking for myself. I can't speak for colleagues. You'll sign the patient with the intention to follow up. However you know well and truly, that more (often) than not, that patient's going to follow up with the GP anyway. So you've got to fight that barrier with them saying ohh, "do you know what, I've really spoken to my GP about this. Why am I speaking to you?" Do you understand? And then once you pass that first barrier, then it's like looking at, you know, is it really valuable? So a lot of NMS sign ups are like especially in the winter time, you have a lot of salbutamol signups simply because you know when people get a chest infection, they prescribe them and then salbutamol inhaler to help them with the breathing. When that's short term use really and that follow up call is usually like "ohh I never used it anyway or I didn't need it". I can count on two hands the amount of NMS calls that I had that actually meant something to the patient and that made an improvement on treatment outcomes. Because you have to look at from the type of society we live in. People trust doctors, and if a doctor tells you to take something, more than likely you would just take it for the sake of taking it. So yeah.

00:08:44.990 --> 00:08:51.100

Waseeat Kareem-Alliu

OK. And is there anything you would highlight or something that you least enjoy about your role?

00:08:52.340 --> 00:08:56.800

EP02

Yeah, it's the fact is still target driven. I think the patient becomes a number.

Because at the end of the day, when you're working for any business, it's all about the items you bring in and it's not about the quality of care that you're giving the patient. So I mean, working for Boots, it was a case of, you know, you had your scorecards and every time it was read, they were like, "what's going on why are your items down?" not bearing in mind that, you know, you might be given a better quality of care to people with more like how do you get your items up. But when you get your items up, you're rushed off your feet. So then, that quality of care that your patients (get) is compromised, so it's trying to strike a balance. And I think even working in as a locum in community pharmacy, where I think they have a better grasp of patient care, you still find that's often at the sacrifice of other things. So I've worked in stores where people the regular guys, absolutely fantastic and everyone loves him. But then if the GPhC were to walk in. They'll probably shut the pharmacy down because it's not even so... It's just... Yeah, I think it's the whole how target driven it is, how difficult it is to get rewarded appropriately if you were to manage your pharmacy because everything's done on objective metrics instead of more qualitative ones which I understand it's hard to put value on. But as a health care professional, in essence, our of our health care professionals, like doctors and nurses, radiographers, I guess they can see the patient gets better with pharmacist. If we see a patient continually, they actually don't get better. If you think about it, it's just a treadmill. Just make sure they stay on it so we can prolong their life. So yeah.

00:10:48.390 --> 00:10:52.610

Waseeat Kareem-Alliu

Yeah. Thank you. And I guess in terms of like you mentioned the combination of things that make the role quite tricky and the things you need to balance. Have you noticed that anything has changed or developed since you first qualified to now, would you say?

00:11:09.580 --> 00:11:12.550

EP02

Umm, yeah, so I think. Ended up when it asked my first exam and would have been 2012 so the summer 2012 I can't remember what happened. I think there was a change in dispensing fee or something along those lines and I remember I was working for a company and as soon as it happened they laid people off because of the amount of money they thought... and there was a category change and they thought that they were going to lose a lot of money and this is the trend I've seen in pharmacy, anytime there's a change in service or Dispensing fees going down, people pull resources away but still expect you to see those same results and see those outcomes. And it's getting harder and harder to achieve those outcomes. And I think that's what I'm starting to see and I think this is what is causing burnout for a lot of pharmacists where you're trying to wear so many hats and make sure you achieve targets but it's almost impossible because you don't have the resources to do it because, you know, store managers or pharmacy owners will say there's not the resources aren't there or the NHS isn't paying. So I think that... and you know.... all that you know... that belt tightening is resulting in people doing a lot more for a lot less.

00:12:35.040 --> 00:12:43.920

Waseeat Kareem-Alliu

Thank you. And have you experienced any significant changes in your personal or professional life or challenges that you may have experienced that you like to share?

00:12:44.700 --> 00:13:07.000

EP02

Ohh, burnout! I've been burnt out in almost every pharmacy manager position I've had. Maybe bar one. I think one I was OK and even that was simply because it was one store, I can say that I had everything ticking over. I had to start the resources I needed to perform and I was taken care of. But every role prior, it's been burnout and the effects of that go across the board. I mean it's a family friends. You know that work life balance is completely out of whack cause you look at it as pharmacists, you can do a 9 to 8 shift and no one will blink an eye. And you're on your feet and they'll say you have a 20 minute lunch. Like that's in anywhere else in the working world. They'll be like that makes no sense. Like, how do you do it? Like, there's no reprieve. I've heard horror stories of pharmacists being pregnant, not being able to take breaks, and when they finally gone to the toilet to take a break, the dispensers put in a basket of there to check underneath the toilet door. It's like when does it stop? You understand? And I think, yeah, I think that's it. But burnout is the biggest thing. I don't think. I don't think we're taught how to rest.

As pharmacists, I think we take it as part and parcel of being the job and our role. But I think it's the key thing that we need to teach those coming through how to work smarter, how to rest, how to take breaks and that it's not simply going home and sleeping. Sometimes you need an extended period of time to refresh and come back because I think if you were to look at errors made or dispensing incidents or things that go wrong or pharmacists do stupid stuff like stealing hundreds of pounds worth of stuff. You could put it down to like stress or burnout or just not having that clarity.

Another thing is pharmacist being on an island. I think what happens in our profession a lot is that we don't have people to lean on. Even if you work for a big multiple, you don't have other pharmacists to lean on and share your experiences with to help you through. So, yeah.

00:15:06.180 --> 00:15:24.410

Waseeat Kareem-Alliu

Thank you. So I'll probably come back and touch on that. The statement you made with like pharmacist being an island, but I'll touch on that again later on in the on the interview. So now I'm going to give you a few. I'm definitions or describe a few key terms that I'm going to be using.

I'm just to, I guess, contextualizing that we have a common understanding of what I'm referring to, so I might mention something like ethics. So ethics is what we describe as a systematic study of choices or moral choices in relation to language or values associated with them. You may recall that this very closely aligned with the four ethical principles, so autonomy, beneficence, justice and non-maleficence.

00:15:29.360 --> 00:15:29.770

EP02

(Laughs) Umm. Yeah. Hmm. Yeah.

00:15:52.590 --> 00:15:57.530

Waseeat Kareem-Alliu

I might talk about morality, and this is described as the ideology behind good or bad. Or right or wrong in relation to personal behaviour or standards or influences from society and culture. And when we talk about moral development, it can be contextualized as the growth of moral decision making with the aim to increase the capacity in which we can make more mature moral decisions.

00:16:14.970 --> 00:16:15.370

EP02

Umm Umm.

00:16:21.270 --> 00:16:23.180

Waseeat Kareem-Alliu

Do you have any questions about those at all?

00:16:23.320 --> 00:16:23.870

EP02

No.

00:16:24.570 --> 00:16:33.590

Waseeat Kareem-Alliu

Cool. So do you recall anything about moral developments or ethical dilemmas from your undergraduate studies?

00:16:38.310 --> 00:16:41.720

EP02

(Laughs) Well, I no, let's keep it simple. No, I don't.

00:16:45.410 --> 00:16:53.280

Waseeat Kareem-Alliu

Lovely. And do you remember any maybe workshops, teaching sessions assignments that might have been centered around that topic?

00:16:53.660 --> 00:16:53.920

EP02

Alright, I do. I just don't recall them being relevant to everyday practice. I

think a lot of stuff we did was worst case scenario. And I think in practice you get loads of mini, mini ethical dilemmas. So yeah.

00:17:13.400 --> 00:17:20.950

Waseeat Kareem-Alliu

Lovely. And do you recall any other mechanism of moral development activities that you've taken part in since you're qualified?

00:17:22.190 --> 00:17:22.890

EP02

Umm. Only probably, like CPD's to to make sure that we hit, what's those points that you need to get paid and quality points or whatever? I can't remember what, you know, a couple years ago, they made that mandatory so.

00:17:42.040 --> 00:17:46.090

Waseeat Kareem-Alliu

Are they, would you say, self-directed but not necessary?

00:17:46.990 --> 00:17:54.370

EP02

They're not necessary because someone tells you need to do it so they can have the certificate to file away, so it's not really self directed.

00:17:55.540 --> 00:18:15.200

Waseeat Kareem-Alliu

OK, so this might be fairly obvious, but I guess in relation to the previous question, do you think any of these, so either the CPD's or what you vaguely

remember from your undergraduate studies? Did it help with any moral decision making you had to do in your pre-reg year?

00:18:16.430 --> 00:18:18.660

EP02

No it didn't.

00:18:19.320 --> 00:18:22.510

Waseeat Kareem-Alliu

And did it have an influence after you qualified?

00:18:23.000 --> 00:18:23.630

EP02

No.

00:18:24.860 --> 00:18:25.290

Waseeat Kareem-Alliu

OK.

So could you describe one or two instances where you've experienced a moral dilemma and practice and you can take a couple of moments or so to think. But you mentioned a smaller moral dilemmas that we come across as a opposed to big ones.

00:18:44.250 --> 00:18:54.330

EP02

Yeah, I mean you got smaller ones and it's, I guess it depends to you if you'll be it depends on the person, whether it's moral. So something as simple as

an emergency supply. That's a moral dilemma, because in essence, you don't have to do it, if the surgery's open or it's like someone coming in for a salbutamol inhaler and they're not out of breath. That's one thing I do remember from being at uni. They'll say. Only do it if there's an actual need. So when someone comes and asks you for a blue inhaler and they're not out of breath, technically nothing's wrong, now morally you just for you not to give it and that person has an asthma attack that's on you.

But in theory, the rule says not necessarily, don't have to do. I think one of some of the bigger ones I've had I've had. I've given someone the wrong methadone before. So where you... I switched them over by accident, so I had two bottles on those 50ml, one was 25ml. I gave the 25ml to the person I was meant to have 50ml and the other way around, right. So obviously the person that got short changed realised and I called the other one before it went out. What happened was methadone patients always talk? He told another one and he tried to so blackmail me.

Now my moral dilemma is do I come clean and then tell the higher ups was happened or do I you know, not say a thing? And you know, in essence looking back on it, I should have reported it. I didn't. What I did do was wait out. I wait and the person, I called his bluff and he didn't do anything and the person that got short changed I gave him, you know, the remainder of what he was meant to have, and he was fine. So the books balance stuff and everything, but normally I could have handled that better. I think it comes down to I should have been more upfront and honest and then reported they'll accordingly.

However, in the heat of the moment, sometimes self preservation comes in because we all human and the first thing you think of, the governing body like ours, who looks to discipline instead of rehabilitate. You're worried about

everything that's going to happen. If they find out I've done this. OK, am I going to, you know, get struck off because I was reported once for accidentally giving someone gentamicin HC instead of Gentacin for eye drops and they actually came down and did an investigation. Now that's a dispensing there. Like, where do we draw the line? So it's things like that that kind of.

I think our culture, as pharmacists our governing body doesn't help. I think they breed this culture of wanting to hide, hide things away and they don't... and that can lead to someone being in a sense. But that's one thing I'm trying to think of anything else.

00:22:13.380 --> 00:22:24.390

Waseeat Kareem-Alliu

And that example is perfect. UM, so if we if you don't mind, I'll ask a few more questions about it. So what gave rise to the mistake? Would you, would you say?

EP02

Uh-huh. I'd what gave rise to the mistake is the is the usual. It's, you know, being busy being short staffed, cue of people out the door. You want to get someone in and out.

On my side as a pharmacist and what I've learned as a result is you prepack your methadone. You do what you do your checks appropriately. And there's some workings about, root cause analysis, which is something I did learn at uni. You circle back as to how that happened and then what I learned is that making out two separate methadones at the same time in

blank bottles. If you get distracted. The labels can easily they're easily transferable, so that's why I took on board. I think in terms of external factors, I think it is simply a case of just not being given the time or the staff to be able to do something and complete a task in this entirety. And I think that's something that pharmacists go through all the time. I don't think, very few pharmacists get to complete tasks in their entirety. And if they do, they get chastised for being too slow because you're meant to be able to pick up the phone, check a script, also query or like the same time.

00:23:47.600 --> 00:23:51.560

Waseeat Kareem-Alliu

And so at the time when you were going to make the choice after the actions that you take after you'd realize what happened. What elements were important to you at the time?

00:23:57.040 --> 00:23:57.730

EP02

Yeah. Myself, speaking candidly. What does this mean to me? Like, what is the outcome? Is this going to get me in serious trouble? Is it not? Would I be suspended? What do you get? Do you understand? I think that's something we don't really cover as. In pharmacy school or in general? I think it will be good to know what leads to what? And I don't think there's an arbitrary amount anyway, because the GPhC hands out different sentences or bans or punishments for any vary from person to person. I don't think there's consistency from what I've read, and I think if we could have that or we could have some clarity around what happens when you make XY, what will you do XYZ, then it will make someone feel comfortable in terms of solving it. I think they I think it's for me argue with me and say well that's why you have your NPA. Yeah, you do. But then it's a case of I've called the NPA before for certain things and they can't give me a forward answer. They'll be

like this should be OK, but we're not sure. Do you understand? Because it's so grey.

00:25:27.990 --> 00:25:30.510

Waseeat Kareem-Alliu

So you mean more of a collegiate type?

00:25:28.290 --> 00:25:28.670

EP02

So.

Yeah.

00:25:31.260 --> 00:25:32.010

Waseeat Kareem-Alliu

And. How did you decide that the decision you made was the best one at the time?

00:25:42.390 --> 00:26:03.000

EP02

I didn't know his wrestling. I think the decision I made was to ensure that, you know, someone got what they wanted in terms of the methadone, blue script patient, making sure that he actually got his 50ml. So obviously lucky I had his number and I could call him and let him know. So he came back to me, I just didn't expect. You know someone to be so underhanded that way. I should have probably recorded it in my near-miss and then we and then it would have been learning for someone else. But I also think that is also running trend, no matter how they push it in pharmacy to record near misses and errors, we're still scared to.

Because it's almost a case of am I going to... are they going to use this against me? Because bigger companies have done to use it against their employees to get rid of them. Ohh, look, This is why you're pharmacy is so poorly run. Looking your error rate, it's things like that.

00:26:42.640 --> 00:26:52.160

Waseeat Kareem-Alliu

And I guess you were able to resolve the situation for both patients. So would you say that the decision that you made or the action that you took was adequate?

00:26:53.390 --> 00:26:55.380

EP02

It was adequate, but it doesn't mean it was right.

00:26:56.840 --> 00:27:04.230

Waseeat Kareem-Alliu

OK. And under, would you have acted or done something differently under alternative circumstances?

00:27:04.370 --> 00:27:04.910

EP02

Ohh yeah. I think if I had been told what to do or had an idea of what to do. I would have acted differently I think, if I had someone close by, in terms of another pharmacist to consult with. That what I helped and it would have made a big difference.

00:27:28.750 --> 00:27:34.860

Waseeat Kareem-Alliu

And in terms of, I guess maybe the situation that day, would anything about the day and the conditions that you are working in?.

00:27:39.080 --> 00:27:47.020

EP02

No, I think I would say that. But I say that because I don't know any different for working in the pharmacy. Those conditions are normal. Do you understand? It was my norm in terms of pharmacy, pharmacy is always busy and hectic and as we stuff to do, it's almost different when the pharmacies organized and there's adequate staffing so.

00:28:03.670 --> 00:28:13.220

Waseeat Kareem-Alliu

And with regards to this particular scenario, the way you dealt with it this time, would it have been different, perhaps when you first qualified the way you dealt with it?

00:28:22.950 --> 00:28:28.430

EP02

Yeah. I think for you know what? Yeah, I think when I first qualified, it would probably been different. I probably would have been. I would have been a little more apprehensive. I probably would have called every pharmacist because I guess I was fresh out of uni so I still had those contacts and then asked them what they would have done in that situation.

I was still in contact with my pre-reg tutor, also, I would have asked him. But I think what happens is with the further removed are from qualifying, those

relationship (are) suspended, especially when you start working or elsewhere they kind of fizzle out and then you don't really have that support network.

00:29:10.650 --> 00:29:11.180

Waseeat Kareem-Alliu

OK. And I will just ask, is there a particular type of moral dilemma that you have encountered more than once over time, so you mentioned, I guess emergency supply.

00:29:23.370 --> 00:29:31.570

EP02

Yeah. Well, emergency supplies is probably the one because it varies cause it's like I've had emergency supply requests for contraception. In essence of, you can just say to the person abstain. However, I've done that before and then that person's been has gone wild and said no, "what do you mean abstain" I mean, it's like what day or two. And yes, you may have to practice, you know, safe sex for a week after you reinitiate. But this is not an emergency. Do you understand?

00:30:00.850 --> 00:30:07.000

Waseeat Kareem-Alliu

And has the way you have dealt with that particular, I guess emergency supply, has it has it different? Has it become different as you've become a more mature pharmacist?

00:30:13.240 --> 00:30:17.560

EP02

Yeah, has. But things have changed as well. So now you have CPCS. So as

a service, that's your fail safe. If you don't want to give someone an emergency supply for something, you can say call 111 and they can get the script sent to us and people understand that and they've seen it working off now and it's going off legs that people will do that and we can get the scripts and if you call 111 and they say it's not an emergency then you kind of have an idea and people usually don't argue with that.

00:30:45.940 --> 00:30:46.760

Waseeat Kareem-Alliu

Thank you.

Uh, so next, we'll talk about whether you have...do you recall any changes?

Do you recall any changes to the way that you make professional decisions overtime?

00:31:02.540 --> 00:31:04.650

EP02

Yeah, I take less time.

00:31:05.460 --> 00:31:07.370

Waseeat Kareem-Alliu

Next time and why is that?

00:31:06.500 --> 00:31:37.010

EP02

Yeah, I think because there are there, I don't think there's an, there's not an infinite number of situations you're gonna come across in pharmacy when your pharmacist long enough. You see quite a few scenarios to the point where you know you can simply play them out in your head and then you can pick an also quite quickly or you can just pull bits from other scenarios

and come to a conclusion. So I think now would like when I do locum shifts, if a problem happens, it's just more like I'm just, I'm just relaxed, and it's like that's not really a big issue. Let's calm down. Let's consider what actually happened here happening here. Is it really a problem? Can it wait? And if there is a problem, what can we actually physically do to solve it? And? And I think that's one thing we probably could do better at uni is learning how to problem solve. I don't think OSCEs do it justice. I don't think they can teach you that composure you need to solve a problem in practice. There's got to be other ways.

00:32:13.450 --> 00:32:18.230

Waseeat Kareem-Alliu

When you say problem solve, do you mean like decision making?

00:32:18.250 --> 00:32:28.390

EP02

Yes, sorry, like decision making. So it's it's like when we get. I've been to interviews where you would they will give you a list of problems.

OK, I see what one would you call for, go for first, what would you solve first in in there in that order? These are the things that we should really be getting taught. That's how to prioritize. And how to understand what is actually an important issue? Something that's urgent, something that can wait and just decipher and sort it that that way.

00:32:52.440 --> 00:32:57.270

Waseeat Kareem-Alliu

Really. Umm. Has there been a change in factors that you take into account when making your decisions?

00:32:58.020 --> 00:33:01.260

EP02

Yeah. Now I now for me it's just the patient.

That's the biggest this the what is the end outcome for the patient and is the decision that I make going to result in patient harm?

OK. And that's the ultimate thing that I'm trying to avoid. So if I make a decision or something happens and the results in patient harm, I must do whatever I can to mitigate it.

00:33:27.360 --> 00:33:34.700

Waseeat Kareem-Alliu

OK. And before what would so I guess now it's maybe primarily one thing, what would what was different before?

00:33:35.010 --> 00:33:39.080

EP02

Ohh what the dispenser was thinking. What the pharmacist before did. And what I've heard I should do. You know, and then I'll be second guessing myself in terms of, you know, what's going to happen next. And at the end of the day, one thing I've learned is sometimes, this may be unethical, and some places wherever it's for me, so long as I'll do whatever it takes to ensure that the patient gets the best treatment outcome. And sometimes you may have to bend a few rules and sometimes even break a few rules, but then I think I've seen it from watching other pharmacist practice. Because I had a pharmacist, who once gave out methylphenidate on emergency supply. And then I was like, I like. How are you doing that? And he was like, well, in theory, we're not meant to give out anything. I mean, the

way it could, we don't write prescriptions. Everything is just so relative. It's just cause it's a CD, but I can justify that that person needed it and without it, there would have been harmed, so I gave it and I got the script back later. It's just that. And then he was like, show me where it says it's his illegal or it's strong recommendation you don't. And that's when I started to realize there's a lot of, I guess old wives tales and things that people say, old rules that aren't rules because no one has needs to find out for themselves. So yeah.

00:35:12.720 --> 00:35:18.670

Waseeat Kareem-Alliu

Thank you. And how frequently do you face moral judgment issues in practice?

00:35:20.140 --> 00:35:21.610

EP02

Now, pretty much every day. I mean but.

00:35:23.400 --> 00:35:24.200

Waseeat Kareem-Alliu

And how has this?

00:35:26.460 --> 00:35:29.590

EP02

I have the I have the luxury of having a lawyer sit across from me.

00:35:32.080 --> 00:35:34.010

Waseeat Kareem-Alliu

And how is this changed overtime?

00:35:32.450 --> 00:35:32.950

EP02

And. I think now is the case of. Well now when I think of moral decisions that I make, it's the implication of setting precedent. If I do make this decision for this case, and my willing to do this make the same decision every time, this comes up again. And then if it's not, if I'm not, then let's rethink how we're going to do this. Is this sustainable going forward? So I think when we faced last week was. We had a transgender woman who wanted to purchase tadalafil because she, her partner were quite versatile in the bedroom now in theory, on paper she's a woman, however. She was born a man. Like, do we provide, do we say no if we say no, we're open ourselves up to ethical moral dilemmas there. If you say yes, you need to standardize it, so yeah.

00:36:46.450 --> 00:36:46.840

Waseeat Kareem-Alliu

OK.

And is there anything that you would say would support you now as an established practitioner to help you with a moral decision making?

00:36:57.460 --> 00:37:00.250

EP02

Is it in general or where I currently work?

00:37:01.140 --> 00:37:03.090

Waseeat Kareem-Alliu

It can be both. We can touch on both.

00:37:03.040 --> 00:37:27.640

EP02

So what are currently work? We have a great support network. As I said, we've got a lawyer and in-house lawyer who we can literally just bounce ideas off if we have a dilemma, we have our medical director as well. He's always on hand to give us advice very rarely. Now what I ever go to an NPA or a GPhC or anyone cause it's hard to get hold of them and they never really give you a definitive answer, and they would never want, they would never want to stick their neck out, but with having a lawyer, it's they he's actually drafted answers for me or scenarios how to do a scenarios. I don't think there's much apart from. Yes, you can go to your insurance provider. But like I said before, the answers aren't very definitive. It mean it goes to goes down to a simple thing as remote prescribing. Now in essence, I don't know if that's an ethical or moral dilemma, but I've called the GPhC and asked them about it, I said, what is your stance? Cause all the other all the other bodies have said no.

The GMC has said no, you can't be done at any point, nursing bodies who said that. GPhC says depends on what your insurance says.

This is our Gold Star. This is the organization that's going to punish us if you do something wrong. Yet, they can't give us a definitive answer on something like that.

00:38:40.890 --> 00:38:43.420

Waseeat Kareem-Alliu

Thank you. And to what extent do you feel there's a need for support programs or mechanisms for pharmacists when it comes to moral decision making?

00:38:54.200 --> 00:39:00.810

EP02

It's needed across the board. It's needed from ground up all the way to those who've been practicing for 30 years.

I think it comes down to this. When you're new, you need someone to show you the ropes.

When you're when you're couple years in, you need to solve. You need someone to kind of keep you honest and accountable. When you've been doing something for 30 years. Plus, when I've seen pharmacist that way, sometimes you're stuck in your ways. And so people confuse experience for expertise. And it's not because what happens is when you find that these older pharmacists that they've done something or certain way and got by and they haven't really changed, CPD is useless. It doesn't work because what it is a tick box exercise and it just you can just submit a couple of documents every now and then.

But there's no test of competency, and there's, if you think about it as a pharmacist, there's no real reason to upskill. So long as you just say you've done this stuff, do a couple articles from C&D, you're alright. So.

00:40:03.250 --> 00:40:10.290

Waseeat Kareem-Alliu

Thank you. And what do you think of the strongest influences on your moral development in practice?

00:40:11.330 --> 00:40:16.360

EP02

I think for me it's external source. You know, the way I've been brought up.

Life experiences.

And things that happen in other scenarios like for me, I guess it's really weird. A lot of my moral dilemmas that I deal with in terms of how things are done in sport, the sporting world, cause, you know, it's very black and white. It's a meritocracy. And I try and bring that to, you know, and try many things as black and white as possible. So yeah.

00:40:44.030 --> 00:40:47.360

Waseeat Kareem-Alliu

And how do you feel like this may differ from other pharmacists or other healthcare professionals?

00:40:52.180 --> 00:40:53.770

EP02

I feel like. I feel like pharmacists in general are very risk adverse.

In fact, in fact, some running joke at the company I work for, we don't want to take any risks. I feel like we don't want to make decisions.

And a prime example is if you've ever worked a locum shift. So you've worked for them with multiple, and there's been multiple pharmacists working in the store over a week there will be certain problems that are snowballed on because no one wants to do with it. I don't think we, I think maybe the training is a little better in terms of pharmacy school. Cause some of the newly qualifieds I've come across seem to be a bit more clued up. But then it's it could be just a small sample size I've seen in terms of how they deal with moral dilemmas.

00:41:50.780 --> 00:42:05.160

Waseeat Kareem-Alliu

And finally, there's the thing about the impacts of COVID. So has COVID. I guess the pandemic over the past two years affected the way that you deal with a moral dilemmas or your moral development.

00:42:05.640 --> 00:42:15.780

EP02

Yeah, it has. I think with COVID it taught me to be a bit more lenient and a bit more understanding of people's situations. I think you.... It to also shows you that some of the rules that we had in place were pointless and the ways we worked in practice won't necessarily conducive to getting the most for patients. And I think it changed the way all healthcare professionals worked. I think it's streamlined it to a certain extent, made things quicker. And speed up a lot of, I guess, technological developments to make for seamless service. So, I think it's had a positive impact. I think going forward we should be better as a profession and across the profession as a result of it.

00:43:02.480 --> 00:43:11.020

Waseeat Kareem-Alliu

So would you say that? Umm, I guess your experiences from the pandemic. Has it changed the time you spend on thinking about or pondering on moral decisions?

00:43:13.590 --> 00:43:18.500

EP02

Yeah, I think it's what made me appreciate the individual. I think sometimes that's something that maybe I didn't do as much before and take it on a case by case basis. I think when working in pharmacy is different when you're working as an online prescriber, you can't take as individual, but when you're in a pharmacy just because one person did something to you as a

result of a decision, you made, that same decision made for someone else could have a totally different outcome. And you have to judge it based on that person.

00:43:50.580 --> 00:43:58.830

Waseeat Kareem-Alliu

And would you say that it's changed, maybe like all you've alluded to it, but would you say that it's changed the way like your perception or the way that you see the world?

00:43:59.310 --> 00:44:24.440

EP02

Yeah, it has. It has. It really has a thought like, like I said, it's you, you learn to see things on a case by case basis. You learn to see the patient is like an onion basically. There's so many layers to it. I mean, if someone angry, there's so many layers. So why they might be angry and frustrated. You can't just take him at the face value of what they're presenting to you. You need to kind of take time to find out how they got to this point, even when you're trying to figure out why someone's overweight or certain get something from certain conditions, it all boils down to getting to know the patient and taking them on a case by case basis. The problem is, where is the time?

00:44:43.960 --> 00:44:49.670

Waseeat Kareem-Alliu

Is there anything else that you would like to mention or talk about in regards to moral development?

00:44:50.720 --> 00:44:56.140

EP02

Yeah, probably that more time needs to be spent on it. More of it needs to be practical. In fact, if there's anything I remember from doing a uni is it was just lectures. There were a few case studies and a few they called again... they were in a smaller classes.

00:45:15.400 --> 00:45:16.370

Waseeat Kareem-Alliu

The workshops.

00:45:15.520 --> 00:45:33.890

EP02

There's workshops. Stuff. Or seminars. They were like it. It doesn't. It doesn't work. I think they need to get from what I recall, maybe you could just be me being the sort of student I was. But maybe just get the students to create scenarios themselves. And so, because remember, every student is different, so they will create something that's very different and they could learn from each other, cause the beauty of uni is you have so many different backgrounds and to get them all together, to think of different ethical dilemmas. And you have such a difference of opinion. I think it would have been better if it was a debate. When you want to talk morality and ethics, the best way to learn is to debate it. Could that way you get opinions, you get to argue and you get to hammer home and you get to define principles. And I think that's another thing we didn't really do much of when those classes is, allow us to come to a conclusion as to what principles we think and then say, OK, well, these are the four core principles though, how do yours match up? I think it would have made gone a long way to help us to understand and you know, hammer those home.

00:46:30.560 --> 00:46:35.400

Waseeat Kareem-Alliu

Thank you. Anything else that you'd like to mention?

00:46:31.850 --> 00:46:32.570

EP02

Yeah.

What? No, that's it. I think I've. I've. I've spoken enough. I think that's my 5000 words for this evening. So. Yeah.

00:46:42.910 --> 00:47:00.840

Waseeat Kareem-Alliu

Thank you so much. So I'm going to send you a a consent form about use of quotes to tick whether or not you're happy to for me to use any quotes. Like I said, I'm going to check the transcript and then share it with you to make sure that you're happy that I've.

I'm. I'm expressed everything. As you said it, that's all. So thank you. I'll stop recording.

00:47:04.720 --> 00:47:05.230

EP02

Umm.

Mm-hmm.

EP03

0:0:0.0 --> 0:0:1.450

Waseeat Kareem-Alliu

Putting in the transcription.

And just to confirm again that you're happy to take part in the interview.

0:0:6.850 --> 0:0:7.170

EP03

Yes.

0:0:7.680 --> 0:0:37.590

Waseeat Kareem-Alliu

Excellent. So I as I, as I've said the this, this interview is the expatiate on the patterns observed when you qualified just qualified as a pharmacist and perhaps how things have changed since then, now as an established practitioner. It's just to get your thoughts on the differences and also the your perception of moral education in higher education and how that may have may have or may not have influenced your practice and as a qualified pharmacist. So please feel free to answer the questions freely and so the first question will be can you tell me about your career so far as a pharmacist please?

0:0:52.830 --> 0:0:55.160

EP03

OK, so ummm, after graduating from Hertfordshire, I moved to uh North Devon from my bridge here and I've been there ever since. But in various roles. So I did the pre-req year and then I got a junior pharmacist role, sort of rotational, but I worked a lot in technical services. And then I moved on to an oncology hematology role. For a couple of years did a bit of home care,

did an EPMA system implementation. And then the last five years or so, I've been the lead surgical pharmacist surgery and anticoagulation. And during that time I've completed my postgraduate diploma prescribing course, Mary Seacole program and I'm currently doing an MSc in Health Informatics and in the last six months or so, I've been working as a manager implementing a new VHR.

0:1:57.350 --> 0:2:8.940

Waseeat Kareem-Alliu

Lovely. Excellent. That was going to be my next question. So what if there be any qualifications since you've qualified? So you're setting at the moment. Would you describe it as a hospital setting or?

Not same.

0:2:10.200 --> 0:2:18.990

EP03

Yeah. So it's, it's a bit curious because I'm on secondment, so since my primary role is in the hospital. But at the moment I'm in a ..for the next sort of 3-4 months I'm in a non clinical role, yeah.

0:2:26.600 --> 0:2:29.580

Waseeat Kareem-Alliu

Thank you. So I guess any of the questions.

0:2:44.250 --> 0:2:44.510

EP03

Yeah.

0:2:29.980 --> 0:2:55.410

Waseeat Kareem-Alliu

Umm, can refer to your secondment at the moment. But please feel free to touch on when you were in the clinical patient facing role and please feel free to just maybe to elaborate. I guess the difference in the settings.

Lovely, and do you have any non pharmacy related qualifications. So you've mentioned that you're doing an MSc. I guess it is the sort of pharmacy related but any?

0:2:57.270 --> 0:3:9.430

EP03

No, nothing, nothing outside of pharmacy. Yeah, that that MSc is quite broad in terms of informatics, but yeah, I started undertaking it primarily for a pharmacy focus.

0:3:11.190 --> 0:3:14.160

Waseeat Kareem-Alliu

OK. And do you have any non academic qualifications?

0:3:15.630 --> 0:3:19.200

EP03

Ohh, I guess a very long time ago I did some music exams. If thats the sort of thing you're after. And yeah, I think that's about it.

0:3:26.250 --> 0:3:31.810

Waseeat Kareem-Alliu

Lovely. Thank you. So what would you say that you enjoy most about your role as a pharmacist?

0:3:33.740 --> 0:3:38.730

EP03

I think to be honest, I think that's changed a lot over the years. I think when I'm in a purely clinical role, it's nicer, making those individual changes, making having a chat to people sorting, sorting them out, optimizing their meds, getting them, getting them sorted, especially seeing the patient progress from that sort of acute illness as they present to the hospital to a couple of days later, being well enough to go home and that's quite nice, especially if you've had some sort of impact in that part of the journey.

And then in my current role, it's. It's picking up those systemic things and doing that clinical pharmacist role, but on a sort of systems level and it's quite nice to see see your improvements happen in, in a graph of like how long something takes or how well you're taking up a new policy or something like that. So it's quite nice to see your progress in terms of quality improvement.

0:4:31.450 --> 0:4:31.840

Waseeat Kareem-Alliu

Excellent. And what would you say you least enjoy about your role as a pharmacist?

0:4:37.150 --> 0:4:38.390

EP03

Or Umm. On-call would be one of them. I think I think the expectation that we are.... I think still perceived as the last part of the process in terms of prescribing and supply. And and that starts getting better to some extent, but it's still the the idea. And that pervades the the pharmacy is just trying to slow things down rather than to make things work well.

0:5:8.720 --> 0:5:19.40

Waseeat Kareem-Alliu

OK. And is your what your experience so far? Is it difference or what you expected as an undergraduate student?

0:5:19.800 --> 0:5:34.950

EP03

Yeah, very much so. There's been, there's been a number of times where I've been like, sat in the hospital pharmacy or especially in my current secondment doing things. I've sat there and be like I never thought that this would be a job that I'd ever have to do. Or like a an activity that you'd never think you'd undertake. Yeah. There's been quite a few of those movements, especially in sort of some of the managerial aspects of the job. Umm yeah. You never think you're gonna have some, some, some, some conversations or, yeah, there's been some very strange, strange aspects of it.

0:5:59.600 --> 0:6:6.910

Waseeat Kareem-Alliu

Lovely. Are there any specific examples? I guess you mentioned managerial and being one of the themes that's a bit different. Any.

0:6:9.30 --> 0:6:12.400

EP03

Yeah. So we recently had a load of graduates. Brought onto the program that I'm working on, and so I'm suddenly the line manager of 6 graduates in computer science. And I'm trying to teach them pharmacy things and show them how a pharmacy works. And that's all been quite an odd experience that I never thought would come out of doing pharmacy degree.

And then uh, this is probably quite niche to me personally, but there's been a lot of like spreadsheet work that I didn't expect. I didn't expect, especially the way my career is developed that I'd have to do so much data analysis and things like that. Which has been, yeah, a bit of a learning curve.

0:7:1.50 --> 0:7:10.60

Waseeat Kareem-Alliu

OK. And I guess one do you can you describe anything that you think has changed or developed in the profession since you qualified as a pharmacist?

0:7:12.270 --> 0:7:12.810

EP03

Yeah. Ohh quite a lot I think. And one of the one of the big things for us was summary care record access. So when I when I started as a pharmacist to get drug history, we quite often have to phone up the GP surgeries and get things faxed across and some of that care is a bit more seamless. Now we can access summary care. That's a big thing. And I guess the other, the other big change is that when I graduated prescribing seemed like a thing that only very senior pharmacists any very advanced pharmacists got involved with. And now I'm fortunate enough to be in a department where the expectation is that you do prescribing and then, you know, coming in the next couple of years is prescribing ready from undergraduate? Which I think is a a huge change for the profession and one that I don't think. I don't think we're necessarily ready for as a group, but. And that's more of a personal opinion on on the politics.

0:8:18.940 --> 0:8:20.670

Waseeat Kareem-Alliu

Do you want to elaborate on that at all?

0:8:21.380 --> 0:8:45.990

EP03

And yeah, so when I when I did my prescribing course, I turned it on to the end of my diploma and the expectation was that you couldn't do prescribing unless you've been qualified for two years or had been, I think, practicing for two years by the time you finished your prescribing qualification. So you could do it slightly earlier, but you couldn't, you couldn't do it until you were two years qualified. And thinking back to when I wrote my first prescription. I don't think. I probably wouldn't have had the emotional or emotional surety or pharmacy experience to be able to have done that the day I graduated. And certainly I wouldn't have had the organizational support network. Or have had experience of sort of that life experience of dealing with the shades of grey in terms of what you're asked to do in a pharmacy sometimes and then, yeah, I feel like you need a couple of you need some time to learn how to do your job before you start doing prescribing as well.

0:9:30.820 --> 0:9:32.420

Waseeat Kareem-Alliu

So you mentioned the Shades of Grey. How would you describe that?

0:9:38.340 --> 0:9:51.440

EP03

And that's that's a very broad question. I guess one of the one of the interesting concepts, Umm for me when I started working in the hospital is that we're not actually registered, we're not actually a registered pharmacy. And so everything we do is essentially under the exact legislation I can't remember the name of, but it's essentially you can supply a medicine to a

patient as long as you're acting in the business of the hospital as a pharmacist. And so that was a bit of a weird one to get your head around because you're suddenly weren't bound by prescription requirements. Or emergency supply never made sense because we couldn't do it because we weren't a pharmacy and there were a couple of things like that which like you don't. They seem so clear cut at university and then you go out into the real world and they don't apply. And emergency supply being a big one because now essentially you don't have to do it anyway with the EPS tokens and electronic prescribing and you can obtain the prescription anytime you want. But certainly there's been times where we've given out medicines without probably inappropriate prescription because it was the right thing to do for the patient. And I'm not saying we didn't have any authorization to do so, but it probably wasn't strictly legal.

0:11:5.50 --> 0:11:12.420

Waseeat Kareem-Alliu

And how did you go about, I guess navigating how to make those decisions? What factors came into play?

0:11:17.770 --> 0:11:23.140

EP03

It's nice when you've got that support network and certainly the first few times I was on call. We didn't have the WhatsApp group because it wasn't. It wasn't such a thing ten years ago. So you know there would be a couple of times where you are. You are there in the pharmacy at three in the morning and someone asks you something and you've got no idea what you're doing. But certainly the first few times I was asked to do something that I wasn't sure if it was right. Yeah, you sort of have to go and ask, ask who's around and sort of get a get a feeling of where that lies in this sort of organizational moral compass, but. I feel like over time I've got a bit more confident in just

Making the decision and doing what I believe is right for the patient.

0:12:6.100 --> 0:12:6.760

Waseeat Kareem-Alliu

Thank you.

0:12:6.900 --> 0:12:9.870

EP03

And then trying to figure out, figure out the paperwork afterwards.

0:12:12.480 --> 0:12:15.610

Waseeat Kareem-Alliu

Lovely. So I'm just making some notes. So lovely, are there any other major themes that you can think of that have changed in the world of pharmacy since you've?

0:12:31.870 --> 0:12:57.820

EP03

I think pharmacy education has changed both for pharmacy technicians and for pharmacists and pharmacy technicians, especially now they're doing an apprenticeship instead of a B.Tech, and NVQ. I think that's been a fair, fairly big change to how their level of knowledge when they come out of the course, but also how you can interact with them as a pharmacist based on that level of knowledge.

Umm. And then certainly the difference between my pre Reg which was all on paper based on the 76 standards and the ones coming through now. And I've been a previous tutor in the last couple of years and the the difference between what I got and what they are coming out of university with and what

they're expected to to show at the end of their preread year is fairly significant I think.

0:13:29.870 --> 0:13:30.410

Waseeat Kareem-Alliu

And have you experienced any significant changes like in your personal and professional life that you would like to share? So maybe like starting family moving abroad since you qualified?

0:13:46.300 --> 0:13:46.750

EP03

Umm.

No, I don't know. I I never expected to to move to Devon in the 1st place. So I sort of ended up here by accident.

And and then I was. I was sort of shocked every time I stayed. And now I'm here and I've got a house and a wife and, you know, we're doing, we're doing well, so I guess.

0:14:7.980 --> 0:14:9.30

Waseeat Kareem-Alliu

Worked out well.

0:14:8.580 --> 0:14:9.730

EP03

I guess, yeah.

0:14:10.810 --> 0:14:11.260

Waseeat Kareem-Alliu

Lovely.

0:14:11.150 --> 0:14:13.0

EP03

I guess that's it on that front, yeah.

0:14:13.350 --> 0:14:14.530

Waseeat Kareem-Alliu

Excellent. Thank you.

So now we're going to delve a little bit deeper into some questions about moral decision making, moral development. So I'll define some key terminology just so that you just to explain the difference. So when we think about ethics, ethics can be described as a systematic study of moral choices in relation to the language associated with them. So these are closely aligned to the four ethical principles, beneficence nonmaleficence, autonomy and justice?

Umm. And then we have morality, which we describe as the ideology and behind good or bad or right or wrong in relation to personal standards or societal, I guess needs or thoughts. Umm. And then we refer to moral development as the growth or the maturation of the process which a person takes in making the decisions between what they do, umm good or bad, right or wrong? And I guess more reasoning is the process that we go through when we want to make a decision on a perhaps an ethical or moral dilemma.

And so I've referred to some of these during the questions I'm asking next. So do you recall anything about moral development or ethical dilemmas from your undergraduate studies?

0:15:43.780 --> 0:15:54.750

EP03

Yeah, I think, I think I recall like a few specific things, but a bit in general and what sort of what sort of things do you want me to talk about there?

0:15:54.320 --> 0:15:56.470

Waseeat Kareem-Alliu

I'm anything so, I just whatever you recall.

0:15:57.780 --> 0:16:2.510

EP03

OK, I remember that a lot of case studies where it was, you know, the classic like the pharmacist won't supply the contraception, et cetera. What would you do? Or this person asked for an emergency supply, but they can't get it somewhere else. And there's always a bit of an ethical twist in there. Umm. And I always remember them feeling fairly, fairly fake. And then I guess the other the other thing that I've vividly remember from undergraduate was that it was time that I don't know if he's still around. Professor Gallagher, was he? He had a GPhC tribunal and something you see the same amphetamines and he was the head of ethics at the time. And yeah, so that was I definitely remember that.

0:17:11.820 --> 0:17:12.770

Waseeat Kareem-Alliu

I think.

That.

0:17:14.870 --> 0:17:15.270

EP03

Ethics.

0:17:15.860 --> 0:17:16.520

Waseeat Kareem-Alliu

Sorry.

Henry, I'm going to ask you to just I'll ask you to start again from we lost connection basically for just about a couple of about 30 seconds. So the last thing that I got was when you mentioned you remember Doctor Gallagher being the head of ethics at the university, I'm going to turn off my camera. Hopefully that will stop the connection being so poor. And then once it stabilizes, I will turn it back on.

Connection issue

0:18:44.280 --> 0:18:46.430

EP03

I am. Oh, there we go. That seems better, doesn't it?

0:18:46.570 --> 0:18:47.600

Waseeat Kareem-Alliu

Yes it is. Excellent. I'm going to turn my camera back on. Hopefully it stays stable if it starts to be a bit weird again, I'll turn it off and turn it back on and hopefully it should behave. Lovely. So we got, I got to, we were talking about Doctor Gallagher being the head of ethics.

0:19:7.560 --> 0:19:11.920

EP03

Yeah. And then suddenly not. And then the only other thing I remember is. Umm, I was in a workshop and I caused a fair amount of controversy by pointing out the difference between sort of religion and culture. Which it didn't go down very well amongst some of my peers. When we were talking about, I think someone was someone was saying should you? Should you refuse someone treatment based on your religion? And I said no because your religions personal choice and you can't force that personal choice on someone else, and then that they got a bit heated. And then that was that was the end of that ethics workshop, interestingly enough. Umm.

0:19:56.560 --> 0:19:57.10

Waseeat Kareem-Alliu

Lovely.

0:19:57.540 --> 0:19:57.990

EP03

Yeah.

0:19:58.290 --> 0:20:2.720

Waseeat Kareem-Alliu

Thank you. So I'll probably touch back on that again shortly. Uh, do you? So you've we talked about the workshops and some of the case studies that you recall. Do you recall any mechanism of moral development? Do you recall any more development activities that you've taken part in since you qualified?

0:20:21.410 --> 0:20:21.970

EP03

Umm. I don't think I think probably the Mary Seacole course, which is part of the NHS Leadership Academy, I feel like there's some aspects of that which could be seen as a role development activity. They're very much concerned with making sure that you have a line of sight to the patient and you're doing the best you can for the patient rather than for your service. But I don't think I've specifically done anything else.

0:20:58.0 --> 0:21:9.290

Waseeat Kareem-Alliu

Lovely and in relation to the above, did any of what you recall from university, did it help you with enhanced moral decision making during your pre-req year?

0:21:11.940 --> 0:21:12.840

EP03

I don't think so.

0:21:14.60 --> 0:21:16.770

Waseeat Kareem-Alliu

And did it have an influence on you after you qualified?

0:21:19.500 --> 0:21:21.180

EP03

No, I think once you're qualified and you're working, you probably take more of a steer in term of what's morally acceptable from your peers in the organization rather than, you know what you're told in a lecture. I think the lecture is probably valuable in terms of getting you started on the right

principles, but until your till you're in a weird situation. Then it's hard to hard to apply it.

0:21:51.630 --> 0:21:52.870

Waseeat Kareem-Alliu

Yeah, very great. And can you describe, uh, one or two instances where you've had a moral dilemma and practice, or perhaps where you've had to implement all you struggled to implement professional judgment? So if you could give one or two examples and I'll ask some further questions in relation to your example.

0:22:14.720 --> 0:22:15.710

EP03

To a fairly.... it's not. It's not very exciting, but we had a we had a chap who am I, so I work in a anticoagulation clinic and we deal with people who are on warfarin that the GPS can't manage for various reasons and it's usually because they've got an extended target or they're a bit wobbly with compliance. And we had one chap who was uh, barely uncompliant, but in a Inconsistent ways, so there would be some weeks where he was compliant in some weeks where he wouldn't be. And it turns out that for part of his non-compliance, other than his drug abuse, was that he did couldn't afford the prescription charge. So instead of being charged 3 * 4 his warfarin prescriptions we took to just sneaking in some outpatient prescriptions from our clinic through the pharmacy and not charging him for them just so they could get the right treatment. And which is, I would not contractually obliged to charge, but it's it's not strictly within the rules that we can break it, but I guess that was the right thing for him and he ended up getting the right treatment, if sometimes still a bit passively. So suppose that's a fairly good one of us doing something for the right reasons.

0:23:48.130 --> 0:23:52.900

Waseeat Kareem-Alliu

So I guess what elements were important to you at the time when you made that decision?

0:23:55.590 --> 0:24:17.840

EP03

I think I didn't want us to be the barrier to him receiving or I didn't want the prescription charge to be the barrier to him receiving good treatment and he had a fairly poor therapeutic relationship with other clinicians. So for us, if we could be seen as the good guys and have his back and help him be as compliant as possible. Then we were one less stressor in an otherwise chaotic life. Umm. And so to be able to sort of take some of that away from him was a nice thing, but ultimately it was just about making sure that he had access to the medicines he needed.

0:24:35.570 --> 0:24:40.780

Waseeat Kareem-Alliu

OK. And how were you able to ascertain that this was the best decision to make at the time?

0:24:45.810 --> 0:24:55.400

EP03

That's a tricky one is that I feel like we didn't. We didn't particularly have any other options because it was I guess our other option was referring back to the GP. Or make him pay for it. And there was no way that we were going to make someone who couldn't pay for their treatment pay for their treatment. And I think in the grand scheme of things, you know, we could have referred him to Citizens Advice and got him some money support and done all of that

but, and for our purposes, just getting him the treatment he needed, it's is, umm, I'm not sure the simplest solution is the right word, but it just seemed the most pragmatic the best for him if he was coming to us for a blood test anyway, why not just, solve the problem when you find it rather than leaving it for someone else.

0:25:38.980 --> 0:25:44.100

Waseeat Kareem-Alliu

And what was the effects? What effect did the outcome have on you or the others involved? If any?

0:25:45.310 --> 0:25:45.850

EP03

I'm.

Well, it worked for a time. He's still fairly, fairly compliant. And you know peaks and troughs in terms of that sort of thing, but it was nice that us showing a bit of willingness to get him the right stuff proved that it wasn't just him being a difficult patient and the there was some challenge in his life that we could help with. So yeah, it was nice to see that we had made a bit of a difference there.

0:26:15.990 --> 0:26:20.160

Waseeat Kareem-Alliu

And under different circumstances, would you have done anything differently?

0:26:23.120 --> 0:26:26.780

EP03

I think I think we clocked it earlier, we might have tried to help the GP

rebuild their therapeutic relationship before things broke down as far as they did. Or tried to work with his local pharmacists to sort something out for him. But in the grand scheme of things. Sometimes patients prefer us because we're separate to their the other services. So we're not the ones frequently telling them off for things like that. So yeah, I'm not sure I would have done a huge amount different.

0:26:56.960 --> 0:27:2.430

Waseeat Kareem-Alliu

And do you think very your thought process or your decisions would have been different earlier in your career That's a newly qualified pharmacist.

0:27:6.810 --> 0:27:8.500

EP03

Yes. Yeah. And I once got, so I probably would have would have tried to charge him as a as a junior pharmacist, cause that's what the rules were.

Once I was on call as as a pre-req. I was on call with one of the senior pharmacists who told me off for charging a I think it was a 32 year old lady who just had a stroke and I we charged them whatever the prescription charge was for sort of 12 aspirin tablets and I didn't necessarily get a telling off. It was like, did you really just charge someone on a Sunday afternoon for some aspirin? And I was like, oh. And yeah, and I guess I probably wouldn't have thought about it as much as a in earlier in my career.

0:27:54.120 --> 0:27:54.690

Waseeat Kareem-Alliu

OK. And is there any particular moral dilemma or type of moral dilemma that you think you have encountered once or more than once? Sorry, over time.

0:28:6.700 --> 0:28:7.360

EP03

Umm. I don't think so. Now it's very tricky to think of when things have been moral dynamics, but I I don't think we tend to encounter a huge number of them in real life. And so yeah, I don't think I've encountered the same one more than twice.

0:28:31.750 --> 0:28:38.410

Waseeat Kareem-Alliu

OK, Umm and you, would you say the way that you've dealt with moral dilemmas have changed over time?

0:28:40.330 --> 0:28:41.840

EP03

I think so, yeah.

0:28:43.710 --> 0:28:45.20

Waseeat Kareem-Alliu

What type of changes?

0:28:46.70 --> 0:28:46.670

EP03

Uh.

0:28:45.760 --> 0:28:47.310

Waseeat Kareem-Alliu

But we'll have things changed.

0:28:48.40 --> 0:28:56.390

EP03

I think I'm a bit more understanding these days. Things were a little less black and white and I think that comes through having seen a lot more of human life comes through the doors in the hospital.

0:29:1.530 --> 0:29:1.980

Waseeat Kareem-Alliu

Right. And do you recall any changes that to the way that you make professional decisions since you qualified?

So thinking of maybe like the time you spend pondering versus maybe the different factors that you take into account when weighing up the decision that you make.

0:29:27.390 --> 0:29:28.300

EP03

Yeah. One of the one of the big turning points in decision making for me was prescribing. And because before the prescribing course, it was very much on the walls, you were advising junior doctors to do things. And then they do them and then. It would be their responsibility at the end of the day. Whereas the prescribing course turns you into the decision maker and at the end of the day, once you've signed the prescription, then it's on you. And so I think. I think that whole process of going from the advisor to the decision maker, in one aspect of the clinical sphere that affects everything else you do. And so I feel like I'm probably a bit more considering of the human in front of me versus the Protocol or the guideline these days, and certainly I'm a bit more willing to go and do something and non standard if it's the right thing for the patient versus just going with whatever's first line.

0:30:39.350 --> 0:30:44.30

Waseeat Kareem-Alliu

OK, Umm and the time we spend pondering on these decisions, has that changed?

0:30:47.550 --> 0:30:49.160

EP03

I think so. I think. Yeah. As a junior pharmacist, I think you tend to weigh quite heavily on a lot of decisions which end up being fairly, meaningless. And then you skip over the ones which probably should have a bit more weight to them, so I think. I think I probably spend more time thinking about more complex things these days. And probably less time thinking about the basic decisions which. I think might have been the other way around as a junior pharmacist.

0:31:23.670 --> 0:31:28.770

Waseeat Kareem-Alliu

OK. And do you frequently face moral moral judgment issues in practice?

0:31:32.190 --> 0:31:40.670

EP03

I don't think so. I think I think if you broke everything down and sort of analyzed it deeply, then maybe yes, but there's is not a huge number of times where I'm faced with something where. There's a clear sort of legality and I'm worried about the right and wrong versus the can I or can't I?

0:31:56.230 --> 0:32:8.700

Waseeat Kareem-Alliu

OK, Umm and has this changed over time? Did you do you think maybe you

were faced with more moral decisions? I guess. Moral dilemmas when you first qualified in comparison to now or has it always been the same?

0:32:13.540 --> 0:32:19.100

EP03

Is, I think if anything I'm probably faced with more now that my work is more at a systems level rather than an individual level. Susanna pharmacist you often you often speak to, you know, the one patient in the bed in front of you, and then you go and do that for the whole ward, whereas. I guess if I make a decision these days, I'm affecting the whole service so. And yeah, I guess there's probably more consideration that needs to be put into eye treating all the patients fairly now versus then simply by virtue of job role.

0:32:52.190 --> 0:33:1.400

Waseeat Kareem-Alliu

OK. And is there anything is there Umm established practitioner that you would say would help you or support you in moral decision making?

0:33:4.180 --> 0:33:4.660

EP03

Uh, I think having a having a cohort of peers that are receptive to the conversations about that sort of thing. Because that's there's a couple of peers that if you ask them a question, you'll get a yes or no answer, not a, not a shades of grey. And that's not helpful, especially if you're trying to figure out what the right answer is.

0:33:34.820 --> 0:33:42.510

Waseeat Kareem-Alliu

Umm. And So what extent do you feel that there is a need for support

programs or mechanisms for pharmacists and moral decision making?

0:33:44.530 --> 0:33:48.700

EP03

I think now prescribing's becoming more of an early career qualification than there is more need to do some moral support for pharmacists. Yeah.

0:34:0.730 --> 0:34:10.30

Waseeat Kareem-Alliu

And when you are dealing with things or dealing with moral decisions and practice, what would you say your strongest influences are?

0:34:16.510 --> 0:34:18.660

EP03

Do you mean sort of internal or external?

0:34:19.400 --> 0:34:22.930

Waseeat Kareem-Alliu

Uh it can be both. Actually both internal and external.

0:34:23.590 --> 0:34:24.20

EP03

OK.

We've got a.

A fairly a fairly good nutrition team that I feel like has taught me a lot about how to how to do right by the patient versus make things work for the policy

etcetera and I feel like. And sometimes I will have a conversation with those people outside of their specialist scope about the right course of action. And so I feel like the staff you work with are an influence on what you do. Umm. And then the question was about other than other than experience, right?

0:35:5.730 --> 0:35:6.940

Waseeat Kareem-Alliu

Yeah. So.

0:35:9.200 --> 0:35:22.190

EP03

Yeah, I feel like the leadership course that I went on definitely influenced how I how I think about the ultimate decisions that I make that might be a bit more abstract and how they might influence people. Umm. And I've read I've read a a book around management and leadership which I think helped with some moral decision making, but I don't think I've got any other external or internal influences around that.

0:35:38.780 --> 0:35:42.750

Waseeat Kareem-Alliu

And do you think that this differs from other pharmacists or healthcare professionals?

0:35:46.750 --> 0:35:47.110

EP03

Yeah, I think to some extent, pharmacists are slightly shielded from most moral decision making and the doctors and nurses will bear the brunt of it. Simply because of they're a bit more on the frontline of deciding the

treatment plans. And so, yeah, I think nurses probably have a better support network in term people in the same speciality doing the same types of jobs, meeting the same sorts of patients. Whereas when you get to a senior pharmacist level, there's less people around that have had similar experience to help guide you to make decisions.

0:36:31.630 --> 0:36:38.720

Waseeat Kareem-Alliu

OK. And finally, do you think that COVID has affected the way that you deal with dilemmas?

0:36:44.80 --> 0:36:59.200

EP03

I don't think so. Potentially you we're a bit more lenient with some things because of distance travelled, especially we were in a rural location, but I don't, I don't think in general where we've changed very much.

0:37:0.820 --> 0:37:11.160

Waseeat Kareem-Alliu

So you personally, do you think look like the pandemic or I guess what you've seen over the last two years in practice is so you wouldn't say that has changed?

0:37:13.520 --> 0:37:20.910

EP03

Umm yeah, it's a tricky one because I've worked on some of the COVID wards and that was a that was a pretty scary time. And but I wouldn't say that that's affected how I think about the decisions that I make. And no, no more than any other significant clinical or patient experience would.

0:37:37.870 --> 0:37:45.360

Waseeat Kareem-Alliu

Great. Thank you. And is there anything else that you would like to mention in relation to more developments at all that we haven't touched on during the interview.

0:37:50.60 --> 0:37:54.690

EP03

I don't think so. No, I think. Yeah, no, I think I'm happy with that. Yeah.

0:37:55.370 --> 0:38:2.720

Waseeat Kareem-Alliu

Alright, thank you. Thank you very much. I will stop recording and tell you the next steps.

EP04

00:00:00.000 --> 00:00:07.170

Waseeat Kareem-Alliu

Lovely. So thank you very much for making the time just to check once again that you're happy to go ahead and take part in this interview.

00:00:07.530 --> 00:00:08.290

EP04

Yes, I am.

00:00:09.080 --> 00:00:37.800

Waseeat Kareem-Alliu

Excellent. Thank you very much. So I'll go through asking some questions relating to your experiences, professional and personal and have the influences that they've had on your moral decision making and anywhere you have any questions, feel free, please feel free to ask. So my first question, could you please tell me about your career so far as a pharmacist, so settings you've been in?

00:00:36.240 --> 00:00:36.770

EP04

Yeah. Yes, sure. Career. Qualified pharmacy, qualified. Did the usual route of doing a pre registration. Mainly community based that the pre-reg with Boots. Then initial foundation years with Boots as well. Did some relief work where we work almost like locums around Boots stores in South London. Then there's a bit of teaching actually did a bit of teaching whilst I was with Boots. I did a bit of teaching a vocation. I was sort of college for people who wanted to do some pharm tech roles. So with the, the Pharm Tech NVQ thing then. With Boots some managerial roles there, did some care homes

management, travel clinic management. Then at some point in 2016. Umm, wanted to go for more clinical modern managerial route, so I did the independent prescribing course. Got on the course for University of Hertfordshire itself. Finished that 2018 qualified because the independent prescribing set and since then been really in the GP surgery setting. And there I have taken on some managerial roles as well. I'm also working as a multi professional league because there's a few additional roles that have been added into general practice. Just change from the so traditional, just a standalone GP, doing everything, maybe with some practice nurses supporting. Having NHS Primary Care change in where there's roles such as uh, physiotherapist, pharmacists, paramedics or working mental health work, is all working together, almost like a mini clinic in PCN's. Yeah, PCN's are just a collaborative working partnership between different general practice teams as well. Yeah. So now I'm in the general practice scene. Yeah.

00:03:09.900 --> 00:03:23.010

Waseeat Kareem-Alliu

Lovely. Thank you. And so you just to clarify, you started off in community and then you went into, you're now in GP practice.

00:03:11.000 --> 00:03:11.180

EP04

Right. Umm. Yes.

00:03:24.290 --> 00:03:36.520

Waseeat Kareem-Alliu

Lovely. I and do you have any further qualifications? So you mentioned for pharmacy you have the prescribing and do you have any further

qualifications related?

00:03:32.910 --> 00:03:33.440

EP04

Umm. Yes. When you, yeah. In general practice you, you'll have to now do a postgraduate is a postgraduate course but with CPPE or Center for postgraduate pharmacy education. So I've got that qualification which we we're going to PC PEP now. It's called primary care education pathway, Ohh, primary care education pathway where where it just it is really just an introduction gives you even if you've been in general practice they expect you now to have that even if you've been there for a few years. So there's there's these competencies that you have to pass and everything else.

00:04:16.230 --> 00:04:16.670

Waseeat Kareem-Alliu

OK.

00:04:16.640 --> 00:04:21.110

EP04

You can get the exemptions if you've been in general practice and you can show that you've got you've got these. The qualities or training. So I've got that qualification as an 18 month course. I've done that as well. And just the sort of leadership of, you know, several leadership programs. So those things that that I've done, leadership programs with the. Boots with lots of qualification. Step Up group program sort of thing. Then I've done some leadership programs. I'm actually on one now as well my PCN and travel vaccination was certificates and stuff like that, yeah.

00:04:57.070 --> 00:05:01.430

Waseeat Kareem-Alliu

OK. Do you have any non pharmacy or non academic qualifications?

00:05:02.010 --> 00:05:04.830

EP04

Yeah. No. So, no.

00:05:03.560 --> 00:05:05.450

Waseeat Kareem-Alliu

OK, OK. And so you're a prescriber as well.

00:05:09.680 --> 00:05:10.190

EP04

Yes.

00:05:10.650 --> 00:05:14.350

Waseeat Kareem-Alliu

OK, So what would you say you enjoy most about your role as a pharmacist?

00:05:15.760 --> 00:05:19.920

EP04

And now I'll, I'll definitely say enjoyable role as in. Almost a generalist in in the general practice set, and I know the hospital sections, they do have some, some generalist roles, but less likely, those roles are more likely and more specific disease areas like a cardiologist, pharmacist, or a HF pharmacist or respiratory pharmacist, but in the general practice setting it gives you a very role if if cause normally are we doing the long term disease

disease management, so whether patient with respiratory condition, asthma, COPD comes in for a review or someone with a cardiac issue. You have the heart failure, atrial fibrillation what happens in diabetes the whatever the case or those endocrine issues you're able to deal with those now and with more experience more confidently you're definitely happier when. When someone is coming to see you with a increase in heart rate, you performed an ECG. You've been able to diagnose an AF and work with the patient and get them to understand the pathophysiology of the condition and how they manage it. So that's very, very, very rewarding. So I think the clinical aspects of seeing patients and being able to deal with these conditions and actually minor ailments, even someone coming with a cough, yeah, excluding major issues, but you're able to have someone with a cough or someone with acne for a long time and you're working with them. Tinkering and playing around with these things and so and so there's patients satisfaction or and so there's a cure or anything like that. And obviously, everything within your scope that you've learned as well go.

00:07:07.780 --> 00:07:13.120

Waseeat Kareem-Alliu

Great. Thank you. And do you have, what would you say you enjoy the least?

00:07:15.480 --> 00:07:18.370

EP04

Umm, I would say maybe the... It comes to parts and parts of the job and I think now that I've been general practice, I've seen but a lot more, probably in community was the administrative work is always a bit of a burden because you just feel like you want to use your time for something more important, but the is quite important anyway. And so some of the little admin jobs like repeat prescription request that you have to sign off and sometimes

supporting the GPS is doing a whole bulk of prescription signing at the end of the day. And they sometimes demanding and taxing, and sometimes you it feels more administrative. We do have medicine management that we do as well, where we do audits and stuff. I actually don't mind that. But within those audits, sometimes I just feel like my time could be used more efficiently at other things, so if as to set up an audit sometimes I may have to run the searches and do all those things, but I think going forward, we've noticed that pharm are well placed place to do some of those little things. And so we've now actually employed a pharm tech we have one already anyway by the work if everyone was to give them, give her the administrative little tasks, it all builds up. So we've employed another person and I think that will take a lot away from that. So the little administrative tasks that are quite annoying, but I know they're relevant anyway though.

00:08:48.800 --> 00:08:55.870

Waseeat Kareem-Alliu

Yeah, I'm. So would you say that your experience as a pharmacist so far has been different to what you expected?

00:08:57.900 --> 00:09:13.150

EP04

Yeah. Well, when we roll that back, actually I think after completing MPharm and because I actually never actually worked in a pharmacy until I did, maybe the work placements which was wasn't that extensive, isn't it? Just do a week and a in a pharmacy community pharmacy and do a week in a hospital that sort of thing. But when we finished with doing Prereq, actually that was my first real experience of pharmacists. How they work day to day, month in, month out and I was surprised thinking about that way is this. Is this it? So I was is a bit more of a disappointment cause you you're just thinking, wait. You've had extensive training and medicines, a bit of a you do

even business management. I remember what we did in Herts. Yeah. So that's why I kind of took on the management and leadership roles in Boots because it made it more dynamic. It became very repetitive when it became just the one was the check in process as much as they quote sometimes a clinical check or an accuracy check. An accuracy check would be undertaken by an ACT who's had six months training, sometimes three to six months training. So if you tick that box that someone could do that in three to six months and the clinical check, out of, I don't know, 10,000 prescription you may find, I don't know, maybe 15 or maybe 20 prescription with issues and never too huge an issue. Yes, sometimes you may find a huge problem where there's a major interaction.

But sometimes they are just more administrative the quantity was too much. It didn't follow the legal framework when it comes to a controlled drug or something. But it just became repetitive, almost on accuracy checking robot. And so, yeah, so that was a disappointment in itself at the start.

00:11:03.860 --> 00:11:04.370

Waseeat Kareem-Alliu

Yeah.

00:11:04.540 --> 00:11:09.830

EP04

We're going through going through the motions and experience and everything else. I think it did help. Because you're able to look at some other things because it builds some skills that you don't know your you're getting even working in like a big, big Multinational like Boots, you meet people you work with, senior managers, you work with all sorts of levels of education of staff and from over the counter start to middle management, upper management and some clinical staff. Everything. Yeah. So yeah, I can understand.

Initially I would say yes was about. Now for the roles that I'm doing that has very much fulfilling is the use of those skills that we I think we learnt.

00:11:55.890 --> 00:12:06.180

Waseeat Kareem-Alliu

OK, thank you. Would you say anything or can you describe anything that has changed or developed in the profession since you've qualified as a pharmacist?

00:12:08.510 --> 00:12:11.170

EP04

Umm yeah, I think. People may say medicines use reviews. I think that started anyway around the time. So yeah, that started before my time anyways. So when I qualified I was medicines use review but in Community and especially in a place like a multi national big chain use that as a purely a commercial rather than a clinical role. How many MUR's are there to be made, to be done in a year? What's the maximum reimbursements we can get from the NHS? Sort of thing and we can always a tick box exercise. You go into a room with a patient and doing an MUR. You're really thinking, you may go through what side effects if you got it. Might say they got this you refer to the GP. But you don't, you're not really dealing with any clinical issues. It became almost like a OK, you take it, you don't take it, make sure you take it after food. OK, make sure you take it. Side effect. OK. See the GP about this. OK, tick, tick, tick box is done 20 wherever 8 pounds in the in the basket and that seemed that way.

When we joined, I think that's when a new medicine service was quite new and again it became a commercial ploy by whether big, big chains, medium chains, even small chains. They were using it the same way. It's £20.00 for a New Meds and you call them blah, blah blah. Are they taking? They're not

taking why you not taking it, make sure you take it, tick box, you've got the money in the bag, those type of things if side effects. Ooh, this sounds a bit speak to your GP, there's no real structure and learning process.

00:13:58.450 --> 00:14:00.320

Waseeat Kareem-Alliu

How did that sit with you personally?

00:14:01.300 --> 00:14:12.740

EP04

Oh personally wasn't. Yeah, it wasn't fulfilling any. Again. It felt like a commercial. OK, make the money. But then from being let's say a relief pharmacist it was a way of them measuring my matrix so that I get bonus so it became an incentive for me to make these things and get the numbers and rather than anything clinical. And then when I got into management as a store manager and I managed two pharmacies again for me at that time it was a way to further my career. So I asked them if you have you done this make sure you get it done and so that it became purely commercial.

00:14:45.420 --> 00:14:46.580

Waseeat Kareem-Alliu

And I guess in.

00:14:45.960 --> 00:14:49.920

EP04

No I think clinical fulfillment to it. Maybe now, I think now they've started the and I do locum in Community once in a while. Like today I did the morning shift to 2:30. That's why I'm sleeping. I'm tired but I'm there's this new community pharmacist consultation service. I think it's a bit more clinical

more better and then they can't really have a target cause its a referral from NHS 111 and I think that NHS have seen these things, or maybe they probably because they've done loads of surveys about MURs and that's why it was pulled back because I think most pharmacists have said it's useless, basically. And so they've seen these and now they've pulled it back. Medication reviews are done in more depth in and the and with the clinical pharmacist in general practice and they can make more of a difference. It's just as though their doctors were doing the medication review and even actually I think we do it better in the so they they've seen this. I am for the CPC as they're calling it now.

00:15:55.700 --> 00:15:56.270

Waseeat Kareem-Alliu

Yes.

00:15:55.830 --> 00:16:21.250

EP04

I think it's better cause you get the referral for NHS 111 and if it's something you can try, even if it's a minor ailment give a bit of, I don't know, hay fever tablet give a bit of this. You can do this and you you sort of generate your own prescription or wherever and you give you give the the patient the medication. If you can't you refer depending on the area sometimes there's actually NHS 111 be referred things that I could actually require care in hospital or walk in centre or anything. So you speak to the patient explain that.

I know that they've been referred by a pharmacist so they expect a treatment, but actually for what you're saying, it needs to be an urgent matter. So go to an A&E and you're urgent. So you've got the that sort of autonomy to do these things. And with further training, I think that's a good service going forward.

00:16:48.810 --> 00:16:49.260

Waseeat Kareem-Alliu

OK. You say further training, would that be for pharmacists?

00:16:53.800 --> 00:16:57.170

EP04

Yes, definitely. Further training for pharmacists. Umm, obviously me being in general practice. I've had three a bit over three years of a lot of clinical work and clinical training. I've done some minor ailments and minor ailments in general practice and the basic over the counter minor ailments because it depends on how, so almost like a, there's almost like a low grade, Minor ailments, middle grade or they called low acuity, minor moments, middle and high. So as much as the minor ailments, such as the basic cough in the pharmacy, maybe a viral cough, and you can deal with that quite easily. In general practice, if someone came with a cough. Which seems like a minor ailments. It could actually be a heart failure issue. So you deal with them, that we're excluding those big issues. But if those big issues, are have come, are you able to deal with it? That's how, that's how it is in general practice or exclusion of the big issues. So if someone came with the a cough and seeing how long it lasts, the onsets, the other symptoms that happening on it, it is this sounding like is it is it just a cough or is it heart issue? It was a heart issue. Are you making sure that you're you're booking them in for the blood test to help you diagnose those? Or discussing with the GP's on because you're quite new to. And the more you do it, the more you know about, you're quite new to it and the more training you get there, but then you'll be able to definitely help with heart failure of they've done a few of those and you'll be able to help with as a cough that seemed like a cough by it could be asthma or anything like that. And so, yeah, so it seems minor, but not too minor. And with the with the the CPCS one again they

may be able to refer coughs, but if it comes to a cough that's over three weeks and the person is saying they're getting swelling and their breathing, then they will just refer that to urgent care now or maybe to a GP surgery. But I don't know whether it may not be possible to do a lot of these things in the pharmacy, so he may be the right thing to do is to refer to general practice anyway.

00:19:10.040 --> 00:19:10.410

Waseeat Kareem-Alliu

OK. And are there any other like themes that you've noticed changing in the world of pharmacy since you've quantified?

00:19:22.040 --> 00:19:22.440

EP04

Umm, Umm, apart from the locum rates going really high, I don't. Those themes? Yes, I think the local, I think that's an important thing because that helps people's decision and career making anyway and getting into pharmacy as well. So I think and pay please apart. I think people need to be reimbursed, depending on their skills and I think and I can see that reimbursement from the NHS well to the Community pharmacy contractors still are crying that they're not really well reimbursed for their dispensing. And I think they're right in that, yeah, the reimbursement isn't great from the government. But for the other roles, I'll say in general practice or the clinical pharmacist roles, yeah the pay, the pay is definitely a lot better than a lot of people envisaged 2, 3, 4, 5 years ago and even in in Community pharmacy, I have seen rates go up as locums and if you see the C&D reviews on pay or C&D survey on pay, you can see a gradual increase. Maybe the pandemic was to play some part. COVID played a part. But I think the exodus of pharmacist from community pharmacy into general practices played a bit of a part as well. As well as even I think I've heard that hospital

roles are beginning to also increase and yeah, I think that's good for pharmacy.

00:21:11.650 --> 00:21:12.120

Waseeat Kareem-Alliu

OK. Have you experienced any significant changes in your personal or professional life or challenges, that you would like to share with me?

00:21:25.650 --> 00:21:28.710

EP04

Umm. Professional life. Yeah. Professional life as a few issues, maybe I'll say. Uh, with working in Big Pharma and morally? Things that I've spoken about already. Now I'm just touching back on with morally things that we did to ensure that the companies that we worked for or sometimes is the stress that comes from upper management or head office is back down. And how it affects a pharmacist or practitioners and it still does anyway. I know they've taken their foot off the pedal because now they need pharmacists and they and they've left them in drones and they they're always getting local and so they're rates are higher and they're making they're all pharmacists "you guys have autonomy to do blah blah blah". But it wasn't that way before it was proper... to use the right term anal in those settings. Umm so yeah, I can see even for some of my colleagues and myself, I can deal with stress quite well. So I was never too, it was never too much of an issue for me. And yeah, maybe I have maybe some stressful situations with some area managers when I was a store manager and I think I dealt with them OK and sometimes we didn't see eye to eye and I made it clear to them. But I didn't see eye to eye with them but were quite professional. And I've seen some of the newly qualifieds undergo quite immense stress being off work because their targets are not be met quite stressed about. And the workload that's given to them, in community pharmacies and that's and that's not what they

expect. So just imagine you've learned. You aren't really told about workload processes and working with senior managers who sometimes are nonclinical and or non pharmacists themselves.

00:23:26.460 --> 00:23:26.830

Waseeat Kareem-Alliu

Yeah.

00:23:26.600 --> 00:23:30.100

EP04

And so it's it takes quite a toll on then.

00:23:30.840 --> 00:23:35.300

Waseeat Kareem-Alliu

And did you experience any pressures like that as a needed qualified pharmacist?

00:23:30.950 --> 00:23:31.180

EP04

Yes, I did. I did but I can fight my corner, so I did. I did experience quite a few of those, maybe with probably think about 3 managers. My pre-reg tutor was a pharmacist manager and he was quite commercially driven and everything else, but he actually had a good balance, definitely had a good balance, maybe sometimes a bit too commercial, but I had a good relationship with him, so we could we could balance the back and see how other junior forms or prereg pharmacist could have taken it, but I took a head on and I was quite cool with them. And so that's sometimes why some of the roles that I got in Boots was cause of him because sometimes he'd like give him a go, he's quite good, that sort of thing. But I can see definitely

cause I've seen even with some of the prereq students that I worked with was doing my relief duties how that affected them about workload and when they're newly qualified and they just throw them in the deep end. They have issues with dispensers, disrespect and all of that stuff and I think. And I know I think I know and Boots breeded that they made it quite all the dispensers, yes, they put it on the wall that the pharmacist is in charge of the pharmacy but you look at around and there's no real person in charge. Well, yeah, it should be the pharmacist but the newly qualified. It's probably qualified a few months, there's a dispenser who's performance is not banded chatting and blah blah and the work and the pressure is on. When there's patients on, there's a there's a manager breathing down their necks saying that they need NMS , there's the patients waiting for their repeat prescriptions and they're left there on your own and with dispensers that are not sometimes up to task, they're not well trained and sometimes. Yeah, disrespect for all that stuff will play a huge part in their mental yeah life as well, yeah.

00:25:45.880 --> 00:26:16.230

Waseeat Kareem-Alliu

OK. Thank you for this next part, we're going to talk about some concepts of moral decision making and moral development. I'm just going to give you a few key definitions to help contextualize some of the questions. So when we think about ethics, it's described as a systematic study of moral choices in relation to the language or values associated with them. And these you can relate to the four ethical principles justice, autonomy, beneficence and nonmaleficence?

00:26:19.750 --> 00:26:20.720

EP04

Mm-hmm.

00:26:20.360 --> 00:26:28.290

Waseeat Kareem-Alliu

When we think about morality, it's described as the ideology behind good or bad or right or wrong in relation to personal behavioural standards and influences from society and culture. And then when we think about moral development and this is the growth of moral decision making, and it thinks about moral reasoning and with the aim to increase the capacity through which individuals can make mature moral decisions. So with this in mind, do you recall anything about moral development or ethical dilemmas from your undergraduate studies?

00:26:51.330 --> 00:26:51.610

EP04

Umm Umm. There aren't many from undergraduate study, we did exactly what you said we we had these definitions splattered and we had to remember them for probably law and ethics. And but in reality, it was just quite theoretical. And so we didn't, we hadn't really experienced it. Because how many work placements are you going to have? I don't know maybe once a year, twice a year. And you're not really going to see much. And even if you went into a hospital or pharmacy, you're not going to be able to really grasp until you're on the ground. So in undergraduate study I felt like it was very, very theoretical. But I think what they've said is, and I know they've got plans for it is for the undergraduate study to encompass a lot more hands on training so that people can be prescribers blah blah blah. So hopefully they'll be able to experience that, those dilemmas.

00:28:09.060 --> 00:28:14.610

Waseeat Kareem-Alliu

OK. And do you have any thoughts, so you mentioned prescribing, do you

have any thoughts in relation to that?

00:28:12.500 --> 00:28:12.740

EP04

Umm.

00:28:15.850 --> 00:28:16.590

EP04

Yeah. So. Yeah. So, Even with the prescribing and on the course, when we touched on, you've done the prescribing course? Have you done the prescribing course? I'm just asking.

00:28:29.610 --> 00:28:30.400

Waseeat Kareem-Alliu

Yeah, I have.

00:28:30.640 --> 00:28:41.560

EP04

Yeah. The we speak. Did we talk a lot? I think we there was a bit of talk about ethical dilemmas, whether to prescribe for a patient who, you know, a family member, those type of things.

00:28:41.870 --> 00:28:42.460

Waseeat Kareem-Alliu

Yes.

00:28:42.450 --> 00:28:55.890

EP04

Umm, so I think those things play a part when it comes to the ethics of things I used to prescribe for someone who, you know. Are you going to make a sound judgment? Are you to prescribe for yourself, I think the GPhC frowns upon that, those type of things. So I think those moral ethical dilemmas play a part when you are practitioner and or you're you're doing things that would require you to actually sit back and say, OK, well, I'm doing is it is it or maybe when working with the team as well.

And what ethical dilemmas that, that, that happened and in Community pharmacy or in general practice itself, I don't know about hospital, haven't done much work there. So I think it comes with working and prescribing plays a huge part. You got a friend traveling, they want you to prescribe this for them, are you to prescribe? But if you are to prescribe, yes, I think it could be fine if the relationship is not too close, but and if you prescribed and are you documenting and are you making sure that they're using resources? Are you making a clear decision and it's non-judgmental? And if they were to see another practitioner, would they take those same those same decisions? Ermm, so those thing I think play a part when it comes to the roles you would undertake. Yeah, maybe. Yeah. Maybe at some point in the undergraduate study, after all the theories bashed into us if we are able to use them then then you can make those decisions and speak to colleagues, friends. All the practitioners to help you manoeuvre and meander around those situations.

00:30:37.350 --> 00:30:37.690

Waseeat Kareem-Alliu

OK. And do you recall any other mechanism of moral development activities since you qualified?

00:30:45.240 --> 00:31:15.730

EP04

Yeah. Yeah, yeah, yeah. So, uh, moral development activities. Definitely. With some of the leadership training that I did in Boots, we did some moral development, I think even in the pre-reg course as well. And the Boots in house ones, there were some moral development sort of activities by using theory based and those psychological models and everything. I can't remember the specific ones, but we've done a lot of that and put them into practice gradually overtime and you probably it becomes almost second nature. Sometimes when you use them. I don't remember any specific ones though.

00:31:26.160 --> 00:31:34.290

Waseeat Kareem-Alliu

And do you, would you say that this helps with your moral decision making in your pre-reg year or after you qualified?

00:31:34.650 --> 00:31:41.210

EP04

Yes, yes, I'll say. Yeah, they do. They do help. It makes you really think about cause some of these models are well thought of. And yeah, they're well thought of, When you look at them and they they're describing them to you, then O"K. OK, let's make sense". But sometimes, sometimes you don't use them, and you may forget them, but sometimes you may make a conscious decision to use them. "OK. They said when this happens, take yourself out of the situation. Consider the persons feelings. What is priority to someone may not be priority to someone." But those type of things. And so you start working on those things. And definitely you can see a difference in how you grow as a person. Professional and sometimes uh Personally actually as well.

00:32:24.440 --> 00:32:25.000

Waseeat Kareem-Alliu

OK. Could you describe one or two instances where you have experienced a moral dilemma in practice?

00:32:37.110 --> 00:32:38.300

EP04

Umm.

00:32:39.250 --> 00:32:40.930

Waseeat Kareem-Alliu

Or one example is fine.

00:32:39.970 --> 00:32:42.450

EP04

Yeah, yeah, sure, sure, sure.

Uh, moral dilemma for myself, maybe. Yeah, it's probably an error happening, I'll say. In community of probably experience a lot more moral dilemmas when it comes to General Practice, we'll go for an error that occurred in the community pharmacy.

A locum pharmacist who doesn't live really in the country anymore. I think he lives somewhere in Africa, but comes here, works for three to six months and goes back and he gave almost like a four times dose of methadone. I was my regular pharmacy. I was the resident pharmacist there, so my day off I came back in and he just left a note to say yeah instead of the, so something like this is meant to have 24ml of methadone concentrate. So

that's the stronger. So having 24ml, it's like having 240ml, so almost half a bottle. But this patient has been taken, let's say 24ml every day for the past for 20 years or something's well in his 50s and he's been on methadone since he was like 25 or something. And so he's quite opiate naive maybe, and but this pharmacist. Although well experienced, I'm sure because he was an older gentleman. He gave this bed patient, that prescription in itself was quite, wasn't that clear, quite an ambiguous prescription to have, but if you're regularly working there like myself, always work and the one to previous me. Because when there was a change that the pharmacy prior explain that all this prescription you need to do this when I got it and I continued that way and so I think in, if I'm being true to myself now. I think. And sometimes it wasn't prepared. That was the issue and so the pharmacist on the day has to read it, make sense of it and work with that prescription. And yeah, being true to myself now I think that that should have been always a clear written instruction of what to do for that prescription. But again, I was newly qualified 2-3 years down the line. And I've always done it for the patient. This pharmacist came and didn't really understand the willing to get. It was a methodone concentrate, which is not common. You probably in the whole South London probably was one of three or four people apparently who are the method on concentrate, which is a smaller bottle but very potent 10 times more potent than the methadone. And so instead of giving the patient 24ml. Over three days, he read it and gave him 72ml, all in a go. So then he taken almost like a bottle and a half of the normal method on like 72ml, in one go. But the issue was that he found, so if you didn't find the error or if he didn't notice it, it's different. And I think everyone makes mistakes, and even if I think there was a major issue or major problem with it. It's is that he'd recognized the error, and if he'd followed the processes, that's fine. But he recognized the error. That was 72ml and he just left me a note to say "I've given the patient the 72ml and but he's taken. So the thing is he gets 72ml as three bottles of 24ml if I'm not mistaken, yeah, something like that. And he takes 24ml takes and takes 2

bottles of the other 24ml home. Because he comes on Mondays and like Thursday, so Monday to Wednesday. But he gave 72ml to drink in a go. Then, when he notices that actually, he had to say he just said ohh, "you know what you're meant to take 2 home isn't it. Yeah, but I've given you all of them. So you drank it all. So I can't give you legally. I can't give you anymore. So that's it. But he hadn't taken into consideration that wait, that's three times the dose that he should have taken and I don't know what went through his mind at that time, whether it was all maybe he feels fine and he's fine, so let's leave it. But when I saw it on the Tuesday, I just, it just rang alarm bells away. He's given 24ml and he's just giving me a note. He hasn't escalated. He hasn't made the patient go to hospital. He hasn't done anything. So then I raised it with sort of patient safety things, seemed brutal that time. I can't remember. Maybe the clinical governance lead and it became a very huge case cause c he'd given three times the dose to the patient I spoke to the prescribed office when I spoke to them. And you have to speak to prescribe blah blah spoke to prescribe prescriber say we need to find emergent leader next day he had to go into hospital make sure ECG's are on and everything he was fine because he's been taking method on for years and he's probably one of the few people who wouldn't have died because of that or had any issue and he was fine and but then the issue went up the ranks and the pharmacist unfortunately, I have issues come raised up and have the GPhC, I think it was still on the register anyway because nothing happened but to learn from his mistakes but that's that was quite should I raise it up? He seems like a good guy. He's worked here before. Is the right thing. Is to raise it up, but the patient seems fine, so you could have those. So moral dilemmas where? Patient is fine but it's still an error. Needs to be reported if their colleagues, or if it was a close colleague would have done, it would have given him more of a call is because the person I didn't know as a locum, but I kind of know that he's worked in our store before. So you have those type of things that way. If it's someone who you regularly see or who you know and that happens in general practices,

all the doctors probably have better are covering up things and the more I see them but yeah we have that issue in I think all healthcare settings you have that issue.

00:38:44.860 --> 00:38:45.150

Waseeat Kareem-Alliu

Yeah.

00:38:59.880 --> 00:39:17.900

EP04

And main thing is making sure that you sort of report it ,learn from it and they don't make as much fuss as they do in community pharmacy in general practice when an errors made. I've made a few errors already and I'm only three years in but the GP has made errors that destroy people's kidneys and everything else. I've noticed that. And so yeah, there's that there's definitely the error thing, but maybe because of blame culture and community pharmacy, especially the big pharmacies people reporting it properly and those type of things run through your head now in a yeah, in on reflection, I think anyway as well.

00:39:43.040 --> 00:39:47.650

Waseeat Kareem-Alliu

You mentioned that you experience more moral dilemma than GP practice.

00:39:48.190 --> 00:39:48.800

EP04

Yeah.

00:39:49.640 --> 00:39:51.440

Waseeat Kareem-Alliu

Could you elaborate on that please?

00:39:51.150 --> 00:40:22.960

EP04

Yeah. Just like how I've said about the examples there cause now you're working closely with a lot of healthcare professionals, isn't it? You may notice that this person really doing the right thing, but they're in training and you may have a word with them, but you notice that they're doing it again. Are you going to raise it with the senior managers? Are you going to raise it with the GP partner cause they're a GP themselves. If your pharmacist colleague, are you going to.. I manage a pharmacy technicians so I can raise it with them and have that

stern conversation. But if it's people who have been doing this for 10 years, but I've noticed that they are you just, you know, you get that that sort of, Umm, should I just leave it? He's been doing it for 10 years. It's probably not the right thing to do, but is it? If I raise it and it comes back, you will be like "Why is he just come here and he's trying to like, you know" that sort of thing. So you have that issue of probably barriers to issues when it comes like that.

00:40:52.300 --> 00:40:52.520

Waseeat Kareem-Alliu

Yeah.

00:40:56.380 --> 00:41:16.650

EP04

Obviously if it's a serious situation and you feel patient safety is really

compromised, you may you may want to raise that or you should raise that, but some of them you may even though it's still a safety issue, but it's a safety issue that's in your eyes. You can make that judgment whether it's serious enough to report it.

00:41:17.330 --> 00:41:17.770

Waseeat Kareem-Alliu

Yeah.

00:41:18.120 --> 00:41:18.500

EP04

Umm.

00:41:20.140 --> 00:41:26.170

Waseeat Kareem-Alliu

At the end with regards to the scenario that you mentioned and that happened with the methadone.

00:41:26.660 --> 00:41:26.960

EP04

Umm.

00:41:28.930 --> 00:41:36.520

Waseeat Kareem-Alliu

Would you? What did you take in to consideration when deciding whether to report it or not? You mentioned like..

00:41:35.650 --> 00:41:36.010

EP04

Yeah.

00:41:37.180 --> 00:41:37.830

Waseeat Kareem-Alliu

Yes, you go ahead.

00:41:38.020 --> 00:41:42.800

EP04

Yeah. Now you were saying. Let me see what I'm going towards, where you're going towards.

00:41:43.650 --> 00:41:49.360

Waseeat Kareem-Alliu

I you mentioned with the familiarity you had with the pharmacist to the patient safety.

00:41:49.600 --> 00:42:13.170

EP04

Yeah. So, yeah, I think the patient safety was the main thing because I just thought three times a dose of methadone at that time I wasn't clinically inept to know that OK, we'll do this and do that and do that. And it's a high dose opiate might do this. My mind wasn't there all I just know is an overdose and it's three times the amount. So I know there should be something going on and but the patient was fine the next day. I called him. He was fine. jolly. When I called him. So I need a possibly nothings happened but I don't know whether down the line something will happen. So I just thought OK. The good thing to do is just to ensure that he's safe and report it. And when I reported it via, should I say the actions of the prescriber after made me

know that I was it was the good thing to do because I'm making the prescriber where prescriber said OK, I'm going to call you back. Then obviously he wrote a report and he actually changed the way he writes that methadone prescription was a thorough clinical governance CD error. And he had the clinical governance people on his head as well. So he changed the way he writes that prescription or prescription is written more clearly now and now so it's helped in in the future for his practice, that patient and probably helped a few other patients as well. And but main thing is also that the actions the prescriber took off making sure that he urgently went to a hospital to make sure that maybe a naloxone should be. So I think if the error even was reported the day before the actions would have been also the same thing but if then he could have easily been saved if that there was going to be an issue. You understand because the thing is that he made the patient do wasn't what I was expecting at that time.

00:43:41.760 --> 00:43:42.320

Waseeat Kareem-Alliu

Yes.

00:43:41.880 --> 00:43:49.350

EP04

I don't know. Yeah, you say. OK, are you fine data that there's no PP issue though. But yeah, he was quite frightened himself.

00:43:50.770 --> 00:43:56.080

Waseeat Kareem-Alliu

And what your what do you have acted or done something differently in alternate circumstances?

00:43:57.730 --> 00:44:01.310

EP04

Umm, no, I think I'll. Yeah, I'll do the same.

00:44:03.610 --> 00:44:10.140

Waseeat Kareem-Alliu

And is there a certain type of moral dilemma that you have encountered more than once over time?

00:44:18.730 --> 00:44:26.500

EP04

Yeah. So sometimes we bent or broken the rules, maybe more in Community pharmacy because in general, in general practice, when prescribing there's no real rule break and I don't think because if I experience the patient that is not, this is not normally what's done, but I think it'll work and the patient agrees and I feel it's safe, is definitely on licensed or off license, but I can still write to all in the documentation and get the patient to do it. And that's it. And but in community pharmacy, I think maybe at some point we and I know some of my other colleagues were making patients, maybe because it was just a headache or the bureaucratic process of going to ask for a prescription back when the patient is in front of you it's a weekend and there's no, I don't know, amlodipine 10mg is out of stock and they need a 5mg and you just told them you know what, just break in half and take it until the other ones come back since in stock and probably, well, definitely illegal to do that. And morally, I think it's borderline OK when the patient is going to be running around all the and probably still won't get the medication and wouldn't know what to do. And but you've made the professional judgment to do it. And I think if GPhC inspection or anyone asks you and you're able to defend that you actually broke the law by was for the patient and you know, it's safe to do that even though it's unlicensed.

Then you shouldn't. But it's safe to do that. And so that's fine. So I think in Community pharmacy and community pharmacy is probably face this a lot. I know they've now put the SSP in place so that they can change some of these dosage forms like fluoxetine, just give them 20 at 10 and 30s, prescribe they're quite basic things that really is it? Should it go back to the prescriber and if it's very straightforward, like those ones, cause you if you send it back to the prescriber, exactly, that's what they'll do. They'll just represent the 20s net or they'll say break 1/2 because there's no 10 anywhere they can't find anywhere. They will do that. And so yeah, you have those issues always where it's you're bending the rules a bit. Yeah, just for you, just for the patient sometimes just to make your life easier as well, but just for the patients maybe.

00:46:48.290 --> 00:46:59.840

Waseeat Kareem-Alliu

And have the way you have dealt with that dilemma changed over time. So would you have dealt with it differently to when you were first, when you were a newly qualified compared to now as an established practitioner?

00:46:58.100 --> 00:46:58.570

EP04

Ohh. Yeah, definitely, definitely, definitely. I would have sometimes I wouldn't. I wouldn't bend in any way for more fashion in in my initial years, even if the patient is that I was like no go to A&E, I can't do it, blah, blah. And so you make a patient go to a like, go all the way. And that time I don't think that time 111 wasn't that prominent. And so you'd make a patient do all sorts. (break) Yeah. So it was a yeah, definitely the way I dealt with them, with them, I think it wasn't the right thing, but that that comes with experience and everything else and how comfortable you are making sure patients are aware that this is not done this way and some other things that

you do. And come to the experience. Yeah. And I've done things where. Yeah, I've done things where maybe amended things and ask this the surgery for prescriptions later and they gave it to me because I explained the clearly to them and previously without that prescription, I wouldn't even try. But then sometimes the patients in front of you only understand the scenario in its entirety. And you know what, what can and cannot be done and helping the patient safety. Alternately, yeah.

00:49:14.600 --> 00:49:21.070

Waseeat Kareem-Alliu

And do you recall any changes to the way that you make professional decisions over time?

00:49:23.380 --> 00:49:37.450

EP04

Yeah, definitely. With experience, you'd be able to make decisions that you it took you probably an hour to make in probably 5 minutes now or maybe 30 minutes. Yeah, let's say 30 minutes or. Think that you can feel the stress levels in your head going up but now you are able to make it. Really quite quickly. Almost like that whole. I think they showed us that whole autopilot type being a driver, getting your license the first time as a provisional license. Then again, no more driver's license. Being newly qualified driver. Then you become well, not get to complacency, but what was it? Competent? Something. There's a there's a table that goes round. I can't remember, but yeah, you know that one? Yeah. So I think that that definitely you can see that. So it wasn't all theory but.

00:50:08.510 --> 00:50:09.080

Waseeat Kareem-Alliu

Yeah.

00:50:15.140 --> 00:50:17.110

EP04

Yeah, they happens. Definitely, yeah.

00:50:17.830 --> 00:50:23.430

Waseeat Kareem-Alliu

And is there a change in factors that you take into account now when making your decisions?

00:50:25.310 --> 00:50:55.080

EP04

Yeah, I think I prioritize the factors. So I put patient first. Normally now I think initially I sometimes I just put law above everything or I'll put, I don't know the powers that be above the manager says we shouldn't do this and that's it. And but now I know you're the professional, you're the practitioner you make this decision and if you're called into question are you be able to defend the alternately have you able to defend the patient safety priority? You're OK. And making sure that you're not going to do anything to maverick or to rogue, but yeah. So that so faces safety at the top, maybe law everything else, all or law and morality and everything on the second, larger than going down that sort of trajectory, yeah.

00:51:13.090 --> 00:51:18.840

Waseeat Kareem-Alliu

And how frequently do you face moral judgment issues and practice? Has this changed over time?

00:51:19.950 --> 00:51:23.820

EP04

Yeah. As I said you face them a lot more in general practice because you, that's with the community pharmacy, its very transactional that the issues and yeah, we are doing more services, and it's still very transactional and it's in its way of working and patient. Patient education is changing and I think they understand that it's a bit more just about than just taking a prescription but you deal with a lot more dilemmas and issues are moral issues and even with the given prescriptions for maybe an antibiotic or antihistamines when the the CCG saying we shouldn't prescribe it, while you may have to prescribe because this person you said you should go and buy and they're saying that they don't have money, they're social deprivations. And so you, you get through all these sort of things as well and you may encounter things with us, uh safeguarding issues or yeah. So it's definitely a lot more now, but able to handle it. Still there are things that you may ask for help though. Definitely it's not like all the things you can do with a lot of things. You still ask for help and it's ongoing.

00:52:39.790 --> 00:52:42.730

Waseeat Kareem-Alliu

OK. And I guess would you say? You said you face more over time. Would you say you face more overtime in your specific setting now?

00:52:48.530 --> 00:52:48.870

EP04

Mm-hmm.

00:52:54.780 --> 00:52:56.010

Waseeat Kareem-Alliu

Or is it stayed the same?

00:52:57.210 --> 00:53:04.760

EP04

In my specific sets and I still face more and it's as I said, it's ongoing. The bigger the scope, the bigger the dilemmas.

00:53:05.220 --> 00:53:05.710

Waseeat Kareem-Alliu

OK.

00:53:05.470 --> 00:53:34.450

EP04

In part you may be speaking to someone who's - you're just diagnosed. I don't know. I'm diabetes and. And you're thinking of and maybe they're not even diagnosed per say, or they're just about diagnosed. And the person is a driver and he's saying, Oh my God, if you put that I'm diabetic or blah, blah, blah. I may lose my license because I have to.... And you're trying to explain to them that it's important that blah, blah, blah. And you may sometimes. Say, let's work on this strategy. Initially, before we put a diagnosis, so confirmed diagnosis because sometimes you can make a diagnosis on one HbA1C, but sometimes you may doubt him. Do a second one so you can have that where you're thinking. OK, at least that you can make a diagnosis on a second HbA1C. So if you've reinforced reinforced it and you put that as a driver working initially and so make that make the diagnosis later and try not to give them medication that will cause them any hypos.

00:53:41.330 --> 00:53:41.680

Waseeat Kareem-Alliu

OK.

00:54:07.240 --> 00:54:09.350

EP04

Then again, you've helped them keep their job, their income and you've helped the patient and sometimes it really has helped the patient. But initially I'm sure as a pharmacist, if I qualify and they said no, I'm like no, you're that we'll do that. But now you're a bit more delicate and you and you can understand how these practitioners are have worked over the years. And it's not, it's not. It's not simple as it seems. Yeah, in in that sense cause. Yeah, you meet these things where you're thinking. OK, wait. Ohh. It's not diagnosed. It's just about how the impact of their actually how affect them. But is there a way we can help them out? Is there a way they can work on their food intake is their way and maybe do a another test in three months and or sometimes they've just done it on a health check they've not really so they could have easily been diabetic for, I don't know, about year without knowing and still driving and they've just popped into a health check place and done it. So yeah, so that's one of those. Yeah.

00:55:05.280 --> 00:55:05.640

Waseeat Kareem-Alliu

Yeah. And is there anything that would support you now as an established practitioner with moral decision making?

00:55:22.090 --> 00:55:35.530

EP04

Yeah, yeah, I'm support. It's just, yeah. So CPD courses, I think, yeah, we just, I I just try to do most of those things to CPD courses talking with other practitioners. And the main support is sometimes speaking to colleagues and especially they experienced colleagues or the more experienced

colleagues who have been dealing with this sometimes for years. Some of these nurse practitioner have been doing this for 15 years. We've got a great Advanced Nurse Practitioner in our practice. She's left though, said they don't pay enough but.... and yeah, and some of the senior GPs work, some great ones I work with now as well. Some of them are still even closed off about pharmacists working in general practice. Some of them love us, some of them don't so we we still going through that and that motion I think, yeah. We'll get there in the end.

00:56:14.860 --> 00:56:21.350

Waseeat Kareem-Alliu

And to what extent do you feel that there's a need for support programs for pharmacists in moral decision making?

00:56:23.630 --> 00:56:34.190

EP04

I think yeah, there's a need. There's definitely a need. Peer group supports programs I think will be great where especially if you want one pharmacist to another. If they the there was sort of that so support network, I don't know whether they can do it within. Higher education per say, but definitely with little pockets of areas. I'm just to discuss things like this and sometimes because sometimes you go into an area you have no idea who, and then you're talking to other professionals who don't understand you as well as a pharmacist would of so. Because I know exactly what I've said about community pharmacy, how stringent we were and the CD book hasn't been signed this and that, and that's how our training isn't coming to a place where there's a bit more flexing involved and how you'd yeah, you don't go those things. So yeah, there's a need and I think. And little pockets of support groups within pharmacist will be a great, great addition to. I don't know who do, whether the higher education institutions or whatever, but

yeah, definitely.

00:57:35.480 --> 00:57:41.970

Waseeat Kareem-Alliu

Thank you. And what are the strongest influences on the way you deal with more decision making and practice?

00:57:44.250 --> 00:57:44.620

EP04

Umm. Umm, strongly strongest influences. What really influences? Again, it's experience. Experience and talking to people. Put a peer-peer support definitely. Sometimes theoretical, we think about things and discussions you've had over something in like a in a case study you've had on a training day or something, those type of things help make you think about those things and help. Sometimes it's totally different, but sometimes the same principles.

00:58:22.050 --> 00:58:26.800

Waseeat Kareem-Alliu

OK. And do you think this is different from other pharmacists or healthcare professionals?

00:58:28.120 --> 00:58:29.070

EP04

No, I think it's quite similar, quite similar. Maybe when it comes to. Umm patient facing healthcare professional first contact ones, It's quite similar.

00:58:42.270 --> 00:58:42.680

Waseeat Kareem-Alliu

And finally, the impacts of COVID, how has this affected the way that you deal with dilemmas?

00:58:54.460 --> 00:58:55.180

EP04

Umm.

00:58:55.480 --> 00:59:04.310

Waseeat Kareem-Alliu

Would you say over the last two years the changes and everything that we've experienced, has that changed the way that you deal with moral dilemmas?

00:59:01.720 --> 00:59:02.050

EP04

Umm. Tomorrow dealing with, I don't think much. Only thing is I may just do it over the phone instead of face to face.

00:59:16.330 --> 00:59:24.620

Waseeat Kareem-Alliu

OK, so is has the the way that you see the world or your perception changed or has it has it affected the time you spend thinking about things?

00:59:26.140 --> 00:59:27.050

EP04

Uh, yes. Yes, maybe a bit a bit more. Yeah, maybe yes. All been a bit more. We've all been a bit more different, is it? We've all changed a bit.

00:59:45.050 --> 00:59:53.800

Waseeat Kareem-Alliu

OK. Thank you. And is there anything else that you'd like to mention in relation to moral development that we haven't touched on in our conversation?

00:59:54.540 --> 00:59:57.210

EP04

And no, I think you pulled it all out of me.

00:59:59.300 --> 01:00:02.670

Waseeat Kareem-Alliu

Lovely. Thank you so much. I'm gonna stop recording now.