

Research title

Exploring Challenges in Pharmacist Prescribing Practices in Dublin: A Comprehensive Investigation into Community Pharmacist's Perspectives and Public Perceptions

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MSC in pharmaceutical Business and Technology (QQI)



GRIFFITH COLLEGE DUBLIN

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CANDIDATE DECLARATION

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I affirm that the work I am presenting for assessment as part of the course leading to the award of the MSc in Pharmaceutical Business & Technology is my own, based on my own learning and/or research, and that I have acknowledged the use of all information and sources during its creation. I also affirm that I haven't copied, plagiarized, or otherwise used someone else's work, including that of other students.

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TABLE OF CONTENTS

CANDIDATE DECLARATION	ii
ACKNOWLEDGEMENTS AND DEDICATIONS	iii
TABLE OF CONTENTS	iv
LIST OF TABLES.....	vii
LIST OF FIGURES	viii
LIST OF ABBREVIATION.....	viii
ABSTRACT	ix
CHAPTER 1	1
1 INTRODUCTION.....	1
1.1 OVERVIEW	1
1.2 Research Question	2
1.3 Research Purpose.....	2
1.4 Research Scope.....	3
1.5 Research Objectives	4
1.6 Structure of The Study.....	5
1.2 Possible Ethical Implications	6
CHAPTER 2	7
2.LITERATURE REVIEW	7
2.0 Introduction.....	7
2.1 General Practitioners GP’s Perception about Pharmacists in General Practice.....	7
2.2 Competence and Training of Pharmacist Prescribers	8
2.3 Impact of Pharmacist Prescribing on Patient Outcomes and Health Care Systems	10
2.4 Best Practices and Models of Pharmacist Prescribing	12
2.5 Nurse Prescribing: Lessons for Pharmacists	13
2.6 Future Research and Opportunities.....	14
2.7 Addressing the Challenges in Dublin: Proposed Research	15
2.8 Integration of (qualitative-quantitative values) QQVs in Mixed-Methods Research.....	17
2.9 Public Perceptions and QQVs	17
Methodological Considerations in QQQV Analysis	18
Addressing Feasibility and Challenges	18
Advancing Research Objectives.....	18
Conclusion	19
Conceptual Framework	21
.....	21
.....	21

.....	21
.....	21
.....	21
Chapter 3 Research Methodology	22
Introduction.....	22
3.1 Overview of Research Methodology.....	22
3.2 Research Philosophy	23
3.3 Research Design and Approach	24
3.3.1 Quantitative Analysis:	24
Philosophical Grounding: Interpretivism.....	24
Data Collection Method: Questionnaire via Google Survey Form	24
Questionnaire Structure	25
Demographics (4 questions)	25
Knowledge (3 questions)	25
Attitude (3 questions)	25
Practices (3 questions).....	25
Perceptions of Impact (2 questions).....	26
General Feedback (2 questions)	26
Sample Size and Population	26
3.3.2 Qualitative Analysis:	26
Participants:	26
Inclusion / Exclusion Criteria	27
3.4 Research Strategy	27
Ethical Considerations And GDPR.....	28
Chapter 4 Results and Findings.....	29
4.1 Analysis of First Objective.....	29
4.1.1 Assessing the Knowledge, Attitudes, and Practices of Community Pharmacists	29
Knowledge of Community Pharmacists.....	30
Attitudes of Pharmacists.....	30
Practices of Pharmacists.....	31
4.2 Analysis of Second Objective	34
4.2.0 Demographics	34
4.2.1 Public Awareness	36
4.2.2 Attitude and Practice of Dublin Residents	39
4.2.3 Public Acceptance	44
4.2.3.2 Perception Of Impact.....	46
4.6 Analysis of Third Objective.....	51
4.7 Qualitative Data Analysis - India.....	53
4.8 Qualitative Data Analysis - Ireland	53
4.9 Discussion	53

4.9.1 Strengths and Limitations	53
4.9.2 Implications for Policy and Practice	54
4.9.3 Future Research Directions	54
4.10 Conclusion.....	54
Chapter 5: Conclusions & Recommendations	55
5.1 Conclusions.....	55
1. Positive Public Perception:	55
2. Pharmacist Willingness and Preparedness:	55
3. Training and Competency Concerns:	55
4. Regulatory Frameworks:	55
5. Implementation Challenges:	56
5.2 Limitations of the Study	56
5.3 Recommendations	57
5.4 Future Research Directions	58
5.5 Conclusion	58
Reference and Bibliography	61
Appendix	62

LIST OF TABLES

Table 1 Financial Outcome	15
Table 2 Table 2: The overview of the research method	23

LIST OF FIGURES

Figure 1 search strategy	11
Figure 2 Themes.....	12
Figure 3 Conceptual framework.....	21
Figure 4 Research Onion	23
Figure 5 Age	34
Figure 6 Gender.....	35
Figure 7 Resource	36
Figure 8 Knowledge.....	37
Figure 9 Knowledge about Dublin	38
Figure 10 Comfortability	39
Figure 11 Opinion on GP consultation and PP	40
Figure 12 Previous Experience	41
Figure 13 Previous experience.....	42
Figure 14 Future Consultations.....	43
Figure 15 Opinion on Data Extrapolation.....	50

LIST OF ABBREVIATION

World Health Organization (WHO)
Quantitative and Qualitative Variables (QQVs)
Mixed Method Research (MMR)
Knowledge, Attitude, and Practice (KAP)
Prescribing Pharmacists (PP)

ABSTRACT

One of the main challenges facing the Irish health sector is the delay in accessing healthcare services, which is partly caused by the insufficient number of physicians in the country. This situation leads to long waiting times for consultations and sometimes forces people to travel abroad to seek medical help. A possible solution to this problem is to introduce prescribing pharmacists, as in the UK, who can prescribe medicines for certain conditions without the need for a doctor's referral. This study aims to explore the feasibility and implications of implementing pharmacist prescribing in Ireland from a policy perspective. It will use qualitative methods to interview community pharmacists in Dublin about their knowledge, attitude and practice regarding prescribing, and quantitative methods to survey the public about their perceptions and preferences on pharmacist prescribing.

The main research question "How can the implementation of pharmacist prescribing in Dublin address the challenges in healthcare service accessibility and alleviate the burden on existing infrastructure, and what are the key considerations from the perspectives of community pharmacists and the public regarding knowledge, attitudes, and practices associated with pharmacist prescribing?". The study is grounded in Interpretivism, making it an appropriate research paradigm for this investigation as it facilitates the exploration of the subjective perspectives of community pharmacists. Through the use of semi-structured interviews featuring open-ended questions, the study provides pharmacists with the opportunity to share their personal experiences, opinions, and interpretations. This approach transcends simple numerical data, enabling an in-depth examination of their knowledge, attitudes, and behaviors regarding Prescribing Pharmacists (PP). Additionally, employing closed-ended questionnaires for surveys aligns with interpretivism, as it acknowledges the subjective nature of individual experiences. While closed-ended questions offer structure, the responses still capture the diverse views and perceptions of the public concerning the introduction of Prescribing Pharmacists in Dublin, Ireland. Interpretivism supports a deeper comprehension of public perception, recognizing that these perceptions are socially constructed and influenced by personal experiences.

Overall, the expected outcome is to establish a robust foundation for evidence-based policy decisions in the Irish healthcare system, fostering a deeper understanding of the dynamics involved in introducing pharmacist prescribing and contributing to enhanced healthcare service accessibility. Upon the comprehensive completion of research and a nuanced understanding of the challenges, the study will be sufficiently equipped to propose recommendations for policy changes and provide advice regarding the implementation of prescribing pharmacists. It aimed to address gaps in existing studies conducted by various researchers in this context, contributing to a more informed and effective approach to pharmacist prescribing, and ultimately enhancing the overall healthcare service delivery in Dublin.

CHAPTER 1

1 INTRODUCTION

Exploring Challenges in Pharmacist Prescribing Practices in Dublin: A Comprehensive Investigation into Community Pharmacist's Perspectives and Public Perceptions

1.1 OVERVIEW

The study explores the difficulties and challenges in the implementation of prescribing practices for community pharmacists in Dublin by conducting interviews among community pharmacists and surveys among Dublin residents. In this modern era, one of the challenges that the Republic of Ireland faces in its healthcare system is the long waiting time for consultation, especially for the common man. This may result in some people seeking medical attention in other countries, where they can access faster and cheaper services. The main cause of this delay is the shortage of physicians in Ireland, which affects the availability and quality of care. This is a serious problem that needs to be addressed urgently, as it affects the health and well-being of the Irish population.

As a clinical pharmacist intern from India, I observed the significant impact and potential of reducing prescription errors through a pharmacist-led prescribing feedback intervention. This intervention notably decreased the rate of prescribing errors and assisted junior doctors in improving their prescribing skills. The potential of this intervention to enhance prescribing outcomes and patient safety suggests it could be widely adopted. Additionally, the demand for pharmacist prescribing (PP) is growing rapidly in Ireland, driven by factors such as the increasing complexity of patient care, the need to improve patient access to healthcare, and the goal of reducing healthcare costs.

Furthermore, the Expert Taskforce on the Expansion of the Role of Pharmacists in Ireland was established by Health Minister Stephen Donnelly TD on July 23, 2023. The Taskforce's purpose is to identify and recommend ways to enhance the services and practices that pharmacists and pharmacies can offer to the health system and the public. It comprises 13 members with diverse backgrounds, including pharmacists, doctors, regulators, academics, and authorities. The Taskforce has been meeting regularly since August 29, 2023, and released its first set of recommendations in November 2023. (Department Of Health, 2023).

In this study, the feasibility of prescribing pharmacists will be analyzed because there is already a well-established system of prescribing pharmacists in the UK. Why it never happened in Ireland is the primary concern in this study. A study on General Practice Pharmacist (GPP) intervention in Ireland demonstrated that it optimized prescribing in primary care. The intervention involved pharmacists reviewing patients' medications, identifying prescribing issues such as contraindications, polypharmacy, and duplications (unnecessary or inappropriate drugs), and communicating their recommendations to the prescribers. The study showcased the capability of pharmacists to improve prescribing quality by reducing polypharmacy and deprescribing medications (Cardwell *et al.*, 2020). The potential contribution to theory: This research will enhance the understanding of the challenges and barriers in implementing pharmacist prescribing practices. It will provide empirical evidence on community pharmacists' perspectives and public perceptions, contributing to the theoretical framework of healthcare delivery models.

The significance to professional practice: The findings will inform policy-making and practice in healthcare, particularly in enhancing the role of pharmacists. It will provide insights into the potential benefits and challenges of pharmacist prescribing, guiding the development of effective strategies for its implementation.

Hence, the study is significant in conducting surveys and interviews among Dublin residents and community pharmacists to extrapolate results aimed at addressing the challenges of implementing pharmacist prescribing. It has the potential to provide valuable recommendations to policymakers and stakeholders.

1.2 Research Question

- What are the perceived challenges in implementing pharmacist prescribing practices in Dublin from the perspectives of community pharmacists and the public?

1.3 Research Purpose

The primary objective of this study is to conduct an extensive exploration of the obstacles and hindrances encountered by pharmacists when integrating prescribing practices in Dublin. Special emphasis will be placed on gathering and analyzing the perspectives and viewpoints of both community pharmacists and the general public.

The Irish healthcare system confronts significant challenges, including prolonged waiting times for consultations due to a shortage of physicians, prompting individuals to seek medical services abroad. In response, this study proposes the adoption of prescribing pharmacists, modeled after

the UK, as a potential remedy. The central aim is to scrutinize the implementation challenges of pharmacist prescribing in Ireland from a policy standpoint. This will be achieved through qualitative interviews with community pharmacists and quantitative surveys of Dublin residents, with findings extrapolated to the broader national context.

By elucidating these challenges, the study aims to inform policymakers on potential strategies for enhancing healthcare delivery through pharmacist prescribing practices, ultimately contributing to the improvement of Ireland's healthcare landscape.

1.4 Research Scope

The scope of this research is centered on exploring the challenges in pharmacist prescribing practices in Dublin, Ireland. It aims to provide a comprehensive investigation into the perspectives of community pharmacists and the public's perceptions. The research will focus on the city of Dublin, providing a geographically specific context that may offer unique insights into local healthcare practices and public sentiment.

The research will assess the knowledge, attitudes, and practices of community pharmacists in Dublin regarding prescribing practices. This will be achieved through interviews, providing qualitative data that can offer in-depth insights into the experiences and perspectives of pharmacists. The scope of these interviews will cover a range of topics related to prescribing practices, including the challenges faced by pharmacists, their attitudes towards these challenges, and their current practices.

In addition to pharmacist interviews, the research will also analyze public perception through surveys. These surveys will aim to address the challenges of implementing prescribing pharmacists in Dublin, providing quantitative data that can be analyzed to identify trends and commonalities in public opinion. The scope of these surveys will cover a broad cross-section of the public to ensure a diverse range of perspectives is captured.

Finally, the research will analyze the data obtained from both the surveys and interviews and provide recommendations for policymakers. This aspect of the research scope is particularly important, as it aims to translate the research findings into practical, actionable recommendations that can help to address the identified challenges and improve healthcare delivery in Dublin.

In terms of the research questions, the study seeks to understand the perceived challenges in implementing pharmacist prescribing practices in Dublin from the perspectives of both community pharmacists and the public. It also aims to identify ways in which these challenges can be addressed to improve healthcare delivery. These research questions provide a clear focus for the study and help to further define its scope.

Overall, the scope of this research is comprehensive, covering multiple aspects of pharmacist prescribing practices in Dublin and involving a variety of research methods to gather and analyze data. It is focused on not only identifying challenges but also providing practical solutions, making it highly relevant to policymakers, healthcare professionals, and the public.

1.5 Research Objectives

- Assess the knowledge, attitudes, and practices of Community pharmacists in Dublin regarding Prescribing Practices through interviews.
- Analyze public perception through surveys to address the challenges of implementing Prescribing Pharmacists in Dublin, Ireland.
- Analyze the data obtained from surveys and interviews and provide recommendations for policy makers.

A possible way to conduct the research is to focus on the Dublin area, where the dissertation duration and practicality are feasible. The main data collection methods would be surveys and in-depth interviews. Surveys would be distributed to Dublin residents to measure their opinions and perceptions on prescribing practices by community pharmacists. In-depth interviews would be conducted with community pharmacists to explore their knowledge, attitude and practice on prescribing practices. This would provide both quantitative and qualitative data for the research analysis.

The study, which aims to investigate the difficulties and barriers that pharmacists face when prescribing medicines in Dublin, is closely related to the previous research that was conducted to evaluate the capabilities of Irish pharmacists in enhancing the public's satisfaction and reducing the healthcare expenses. The prior research highlights the importance of having pharmacists collaborate with General Practitioners (GPs) to improve the quality and efficiency of prescribing medicines in the primary care setting in Ireland. The results indicate that this collaboration is mostly achievable and has positive impacts on both the clinical outcomes and the cost savings (Cardwell *et al.*, 2020).

In relation to the research objective of this study, which is to examine the possibility and the consequences of introducing pharmacist prescribing in Ireland, the findings from previous studies offer useful information. They reinforce the idea that incorporating pharmacists into the primary care environment can be an effective strategy, possibly resolving difficulties in accessing healthcare services and reducing the pressure on the current system.

The study's research approach, which involves using both qualitative methods to conduct interviews with community pharmacists and quantitative methods to administer surveys to the public, is consistent with the mention of ongoing qualitative evaluation in Cardwell et al.'s research. In addition, the patient-focused aspect of the study is in line with the emphasis on patient recruitment before the integration of pharmacists into the primary care setting, which enables earlier and better communication and follow-up between pharmacists and patients after the medication review. Both studies acknowledge the potential benefits of having pharmacists participate in primary care to help achieve global healthcare goals, such as the WHO's Medication Without Harm challenge, which aims to reduce serious, avoidable medication-related harm by 50% in 5 years (Cardwell *et al.*, 2020).

In conclusion, the findings of Cardwell et al.'s research demonstrate the viability of incorporating pharmacists into the primary care setting, offering useful information and guidance on the research methods that are compatible with the aims and structure of the study. This enhances the overall background and significance of the research, as it shows how the study builds on the existing evidence and contributes to the field of knowledge.

1.6 Structure of The Study

The relevant literature pertaining to the study context is reviewed and taken into account for the research design. The study adopts a mixed-methods approach that involves both surveys and interviews as data collection techniques. The interviews will be conducted with community pharmacists from Dublin, while the surveys will be administered to Dublin residents. The interviews are mainly focused on the knowledge, attitude, and practice of the community pharmacist. The study employs both primary and secondary research methods to ensure the smooth and flawless execution of the research process. The main focus of the study is to comprehend the difficulties and barriers in implementing pharmacist prescribing in Ireland. The study location is narrowed down to a small sample of Dublin residents and community pharmacists in order to cope with the limited time frame, ensure the flawless conduction, and suit the dissertation period, but extrapolation of achieved results can provide results for the

Republic of Ireland.

1.2 Possible Ethical Implications

During research, it's crucial for researchers to maintain participant confidentiality, particularly in interviews with community pharmacists or surveys among residents. Researchers must avoid posing personal questions that may cause discomfort. Participants may withdraw from the study on short notice, and this decision must be respected, ensuring their privacy is upheld. Objectivity is key; researchers should exhibit no bias during data collection, even when faced with unexpected responses from the public or pharmacists. It's also important to protect vulnerable populations by excluding them from the study. Finally, when submitting data, researchers must omit personal details of participants to adhere to GDPR policies.

CHAPTER 2

2.LITERATURE REVIEW

2.0 Introduction

The research exploring the multifaceted challenges faced by community pharmacists in Dublin regarding prescribing practices reveals a complex interplay between professional discretion and public expectations. The Republic of Ireland is currently facing challenges in primary care, primarily due to a shortage of physicians. Ireland is currently experiencing a significant challenge in its healthcare system, as highlighted by Dr Matthew Sadlier, the Chairman of the Consultant Committee at the Irish Medical Organization. During a recent interview on RTÉ's Drivetime, Dr Sadlier emphasized the severity of the situation by stating, "We are facing an international, global medical workforce shortage"(RTE, 2023). This issue has been addressed in other countries through innovative prescribing practices. For instance, the UK, America, and Canada have implemented alternative methods, such as empowering community pharmacists with prescribing rights. A focused study in Dublin could shed light on the reasons behind Ireland's hesitation to adopt similar practices, thereby providing valuable insights for policymakers. The proposed study is encouraged by the secondary research, which provides ample evidence. The conceptual framework depicted and outlined a study aimed at understanding the challenges faced by pharmacist prescribing practices in Dublin. It seeks to explore the subjective perspectives of community pharmacists and public perceptions regarding Prescribing Pharmacists (PP). The study's objectives include assessing the Knowledge, Attitude, and Practice (KAP) of community pharmacists and analyzing public perception through surveys. The research question delves into the relationship between community pharmacists' understanding, beliefs, behaviors towards PP, public views, and the environmental, social, and cultural elements that contribute to the difficulties in establishing PP in the local healthcare setting. The framework involves thematic analysis of literature, interviews with pharmacists, and surveys among Dublin residents to derive findings.

2.1 General Practitioners GP's Perception about Pharmacists in General Practice

GPs' perceptions of pharmacists working in general practices: a qualitative study" by (Hurley *et al.*, 2023). The article takes a close look at how relationships are changing between doctors (GPs) and pharmacists in medical practices, focusing on their views, challenges, and what helps them work together well. It shows that while many doctors welcome pharmacists into their

teams, seeing their expertise in managing medications as a key benefit for patient safety and care, there are still significant hurdles to overcome.

These challenges include figuring out each other's roles clearly, overcoming communication issues, dealing with uneven workloads, sorting out funding, and addressing pharmacists' concerns about their professional identity within these settings. These issues point to deeper systemic problems that need solutions like clearer role definitions, better communication, proper training, fair pay, and more recognition for pharmacists.

The article points out that successful teamwork in healthcare relies on strong leadership, trust, and open feedback. Leadership is essential for guiding and motivating teams towards shared goals and creating a collaborative work environment. Trust and feedback are also crucial for building strong, adaptable teams capable of handling the complexities of healthcare today.

It also discusses the broader implications of bringing pharmacists into general practices. While highlighting the benefits, the article urges ongoing research and clear guidelines to make the most of this integration. It emphasizes the need for ongoing learning, evaluation, and raising awareness among doctors, pharmacists, and patients about the critical role pharmacists play in improving how medications are prescribed and managed.

The article calls for more research into how people perceive pharmacist prescribing, especially in Dublin, Ireland. This is seen as vital for improving understanding and trust between pharmacists and the communities they serve. It sets the groundwork for a detailed study into pharmacists' knowledge, attitudes, and practices concerning prescribing in Dublin, as well as how the public views these issues, aiming to identify both the challenges and opportunities in pharmacist prescribing.

In short, the article examines the complex relationship between GPs and pharmacists in medical practices, stressing the need for a balanced approach that tackles the challenges while also making the most of the opportunities to improve healthcare and patient outcomes.

2.2 Competence and Training of Pharmacist Prescribers

This section looks at how prescribing is done in Ireland, comparing the process of nurse prescribing to shed light on how pharmacists can also take on a similar role. It talks about how

nurses have successfully started prescribing after overcoming certain legal and educational challenges, suggesting pharmacists could do the same by adapting these models to fit their unique skills, particularly their deep knowledge of medications. This is important because pharmacists have a lot to offer in managing complicated medicine schedules, improving patient care and satisfaction.

But, it's not all straightforward. The piece points out that more research is needed to figure out how pharmacists, nurses, and other healthcare workers can work together more effectively, offering care that's truly in line with what patients need and want. It emphasizes the need for a team approach that breaks down old barriers, aiming to look after patients in a more rounded way.

The early efforts to introduce nurse and midwife prescribing, starting with a pilot program at the Royal College of Surgeons in Ireland in 2003, are used as an example of the challenges and successes in adding new roles into healthcare. The program faced legal and clinical issues at first, showing how hard it can be to bring in new practices safely and effectively. Yet, by 2007, these roles were officially recognized, showing that with persistence and careful planning, such hurdles can be overcome.

Reflecting on the experiences of nurse prescribers in Ireland, the section suggests that pharmacists are now at a key moment where they can push for their own rights to prescribe. It argues that looking closely at the journey of nurse prescribers—considering the legal, educational, and economic factors—can give pharmacists a clear guide on how to successfully integrate into prescribing roles. This involves not just getting the right to prescribe but fitting into the broader healthcare system in a meaningful way.

The results dives into several key areas for pharmacists to focus on, including navigating legal issues, developing specific educational programs, engaging with other healthcare professionals, and understanding the financial impacts of pharmacist prescribing. This approach is not just about overcoming challenges; it also highlights how pharmacist prescribing could make healthcare more efficient, cost-effective, and high-quality.

Overall, this analysis makes a strong case for expanding pharmacists' roles in healthcare. It calls for a thoughtful and informed strategy that draws on past lessons, uses pharmacists' strengths,

and addresses any shortcomings in providing care that focuses on the patient. It stresses the importance of everyone in healthcare, along with policymakers and educators, working together to broaden what pharmacists can do in a way that meets the changing needs of patients and the healthcare system.(Creedon and O'Connell, 2009).

2.3 Impact of Pharmacist Prescribing on Patient Outcomes and Health Care Systems

The research conducted by Yazid N. Al Hamarneh et al. casts a critical eye on the evolving role of community pharmacists in Alberta and Northern Ireland, probing the hypothesis that perceptions and self-reported roles of pharmacists diverge significantly across these regions. By employing a succinct and professional narrative, the study meticulously delineates its objective, yet it does not escape critique, particularly regarding its limitations which could potentially skew the robustness and applicability of its findings. The acknowledgment of a small participant pool hints at the precariousness of generalizing results, while reliance on self-reported data raises concerns about the accuracy and objectivity of the insights garnered. Additionally, the exclusion of perspectives from other healthcare professionals and the public could be seen as a missed opportunity to enrich the study's depth and breadth, further compounded by a lack of investigation into the cultural and systemic factors that might color the perception of pharmacists' roles.(Hamarneh *et al.*, 2012).

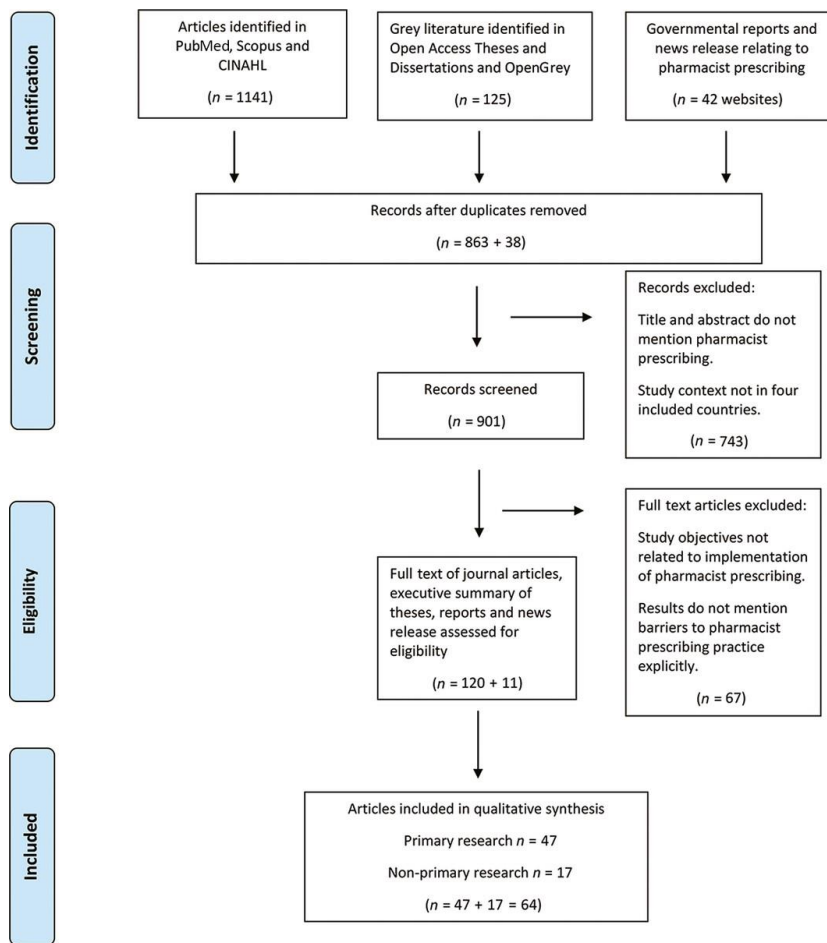


Figure 1 search strategy

The derived themes from Zhou et al.'s study, encompassing the gamut from diagnostic training deficits and infrastructural inadequacies to governance and awareness issues, lay the groundwork for a nuanced research design in this proposed investigation. These themes are not mere observations but are instrumental in shaping the construction of questionnaires and interview guides, ensuring that the inquiry is both grounded in previous findings and attuned to exploring uncharted dimensions of pharmacist prescribing practices.

This approach underscores a methodical and reflective stance towards research design, acknowledging the intricacies and challenges inherent in pharmacist prescribing. It emphasizes the importance of a holistic and inclusive research methodology that not only identifies gaps in existing knowledge but also seeks to address these through comprehensive, empirically grounded investigations. The emphasis on leveraging thematic insights to inform study design reflects a commitment to advancing understanding in this field, aiming to generate actionable, evidence-based recommendations that can inform policy, practice, and further scholarly inquiry. (Zhou *et al.*, 2019)

Rank	Themes	F of ORA	F of N-ORA	Total F
1	Inadequate training regarding diagnostic knowledge and skills	16	10	26
2	Inadequate support from authorities, employers, other medical professionals, and the public	21	2	23
3	Insufficient infrastructure support and technology resourcing	15	5	20
4	Insufficient funding/reimbursement for PP	11	4	15
5	Lack of relevant governance procedures to support PP	8	5	13
6	Poor awareness of PP among stakeholders	9	2	11
7	Difficulties making decisions about prescribing	10	0	10
8	Concerns about potential conflicts between multiple roles of the pharmacist	7	3	10
9	Perceived professional encroachment of medical dominance	6	0	6

F, frequency; N-ORA, non-original research articles; ORA, original research articles.

Figure 2 Themes

Themes originated from the Zhou *et al* study.

- Lack of sufficient diagnostic training and skills
- Insufficient support from authorities and peers
- Limited infrastructure and technology resources
- Inadequate funding or reimbursement for PP
- Absence of appropriate governance for PP support
- Low awareness of PP among involved parties
- Challenges in making prescription decisions
- Issues arising from the pharmacist's multiple roles
- Encroachment concerns due to medical dominance

Based on this article, the themes that are provided are taken into account for the research design, and they are used to create questionnaire and interview points that will be applied in the study.

2.4 Best Practices and Models of Pharmacist Prescribing

The existing research on pharmacist prescribing highlights a notable gap: it outlines three main models of prescribing - supplementary, independent, and collaborative - in various countries but lacks a thorough comparison of their advantages and disadvantages. This gap doesn't just

represent a missing piece in academic discussions; it also means missing out on a chance to find and share the best ways to meet the complex needs of different groups, including patients, pharmacists, healthcare workers, and regulatory organizations.

Not fully exploring these prescribing models in the literature is a significant oversight, especially when it's crucial to meet the varied expectations and requirements of these groups. Without a deep understanding of these models, it's hard to create a prescribing approach that responds well to the changing healthcare environment. This absence highlights the need for detailed research to find insights that can close this gap, aiming to make pharmacist prescribing effective, sustainable, and aligned with everyone's priorities and concerns.

Ireland, with its specific healthcare challenges and system features, provides an excellent opportunity for such research. The study focuses on identifying the challenges of starting pharmacist prescribing in Dublin, looking at the perspectives of both community pharmacists and the public. This central question guides a thorough investigation that goes beyond just listing obstacles to understanding the complex factors and relationships that influence these views.

The research goals are to closely examine the knowledge, attitudes, and practices of Dublin's community pharmacists regarding prescribing, and to understand the public's view on this issue. This approach aims to offer a detailed look at the environment for pharmacist prescribing, highlighting how pharmacist-led efforts can impact patient care.

In conclusion, this analysis stresses the need for focused and detailed research to address the knowledge gaps. By looking at the connections between policy, practice, and perception, the study aims to create a guide for smoothly incorporating pharmacist prescribing into the wider healthcare system, thus improving the quality, accessibility, and customization of patient care. (Zhou *et al.*, 2019)

2.5 Nurse Prescribing: Lessons for Pharmacists

The research by Creedon and O'Connell on nurse prescribing in Ireland offers valuable insights for pharmacists aiming to expand their roles into prescribing. This study highlights the need to adjust the legal structures, educational programs, and teamwork approaches used in nursing for the pharmacy field. However, adapting these elements is complex. It requires a careful look at

the legal hurdles pharmacist prescribers might face and calls for changes to the laws to support this broader role in healthcare.

Creating an educational program specifically for pharmacists is crucial. Instead of a one-size-fits-all approach common in healthcare training, there's a need for courses that delve into the specifics of pharmacology, patient care, and ethics, which are key to a pharmacist's role in managing patient health. This calls for a training program that's thorough and closely aligned with the real-world practice of prescribing by pharmacists.

Talking and working with various groups—like patients, other healthcare workers, regulators, and policy makers—is essential for successfully adding pharmacist prescribers to the healthcare team. These conversations must deal with a mix of expectations, professional roles, and ways to work together. The goal is to create a supportive setting while also addressing any concerns or resistance to this significant change.

The financial aspects of bringing pharmacist prescribers into the system are also important. This includes the costs for training and starting the program, as well as how it affects the overall costs of healthcare delivery, patient access to services, and the efficiency of the healthcare system. A detailed look at these financial issues is needed to show the benefits pharmacist prescribers can offer to the healthcare world.

Creedon and O'Connell's work points the way for pharmacists, showing a route that comes with its challenges but also the potential to redefine their role. This in-depth review stresses the need for a tailored approach in applying the lessons from nurse prescribing to pharmacists. It calls for a unified effort to tackle not just the immediate practical needs regarding laws, education, and teamwork but also to think about the wider impact on the healthcare system. Essentially, it suggests a careful, inclusive, and strategic method for incorporating pharmacist prescribing, aiming to meet the changing needs of patients and the healthcare system as a whole. (Creedon and O'Connell, 2009).

2.6 Future Research and Opportunities

Further research is required to explore specific models for integrating pharmacists into prescribing roles, to evaluate the impact of pharmacist prescribing on patient outcomes and healthcare system efficiency, and to perform cost-benefit analyses of various models and

practices. Additionally, the collaboration between nurses and pharmacists presents an opportunity to utilize the complementary expertise of both professions in medication management and clinical skills.

Overall, drawing from the experience of nurse prescribing, pharmacists can advocate for their own prescribing authority, promote collaboration with other health professionals, and contribute to a more holistic and patient-centered approach to care.(Creedon and O’Connell, 2009)

2.7 Addressing the Challenges in Dublin: Proposed Research

To bridge the gaps found in existing research, the proposed study titled "Exploring the Implementation of Pharmacist Prescribing in Dublin" sets out to examine pharmacists' knowledge, attitudes, and practices concerning prescribing, alongside public opinions on this service. This study aims for a thorough exploration of these areas by employing both qualitative and quantitative research methods. Wrapping up, this review highlights the multifaceted challenges and opportunities presented by pharmacist prescribing. The global conversation suggests a need for research tailored to specific contexts, with Ireland positioned as a crucial area for such studies. The proposed Dublin-based research could pave the way for developing evidence-based approaches, informed policymaking, and the smooth introduction of pharmacist prescribing within the evolving healthcare landscape. The segment touching upon pharmacists' role in enhancing prescribing practices in Irish primary care closely relates to the Dublin study's focus on pharmacist prescribing challenges.

Table 5 Cost savings (over a 12-month period) from prescribing interventions		
Cost category	Cost saving	Cost incurred
Cost savings for amended drugs*	€6374	
Cost savings for stopped drugs	€43 681	
Cost savings from interventions lacking full information	€7162	
Total cost savings for drug intervention	€57 217	
Cost of tests ordered		€549
Overall savings from intervention	€56 669	

*Cost of amended drugs was €31 394 before intervention and €25 019 after intervention.

Table 1 Financial Outcome

The table effectively demonstrates the financial benefits of prescribing interventions over a 12-month period, highlighting substantial savings in various categories of drug prescription

management, with minimal costs incurred for necessary tests. The cost savings for amended drugs amounted to €63,374, achieved by amending prescriptions, with the cost of amended drugs being €31,394 before the intervention and €25,019 after the intervention. The cost savings for stopped drugs totaled €43,681, resulting from stopping certain drug prescriptions entirely. Additionally, cost savings from interventions lacking full information were €7,162. The total cost savings for drug intervention summed up to €57,217, which includes the savings from amended drugs, stopped drugs, and interventions lacking full information. The costs incurred included the cost of tests ordered, which was €549. The overall savings from the intervention were €56,669, calculated as the total cost savings for drug intervention (€57,217) minus the cost of tests ordered (€549).

The results points out that integrating pharmacists into prescribing practices appears workable and potentially beneficial from clinical and economic perspectives. This observation aligns with the positive outcomes the Dublin study anticipates in pharmacist prescribing implementation. Furthermore, the ongoing qualitative assessment detailed in the document resonates with the qualitative strategies our study intends to deploy, notably interviews with community pharmacists. This similarity underlines a mutual interest in deeply understanding pharmacists' roles, providing a methodological connection.

Additionally, the document outlines future actions following the Medical Research Council (MRC) guidelines, which include conducting a pilot study that may be adjusted based on findings relevant to our study, especially concerning patient recruitment. This approach matches the study's aim for a rigorous research design, showcasing a commitment to solid research methods.

The focus on patient recruitment prior to pharmacist integration, to foster early interaction and enhanced follow-up post-medication review, directly relates to our research. It underscores the need to consider patients' views and experiences in pharmacist prescribing, reinforcing the research's patient-centric approach.

Both studies ultimately seek to contribute to the WHO's Medication Without Harm challenge, aiming to cut down on serious, preventable medication-related harm. This global challenge's mention in the document highlights the significant, broader impact the Dublin study could have, aligning with a larger healthcare mission.

In essence, the referenced segment offers useful insights and methodological pointers that

complement and enrich the study's goals and framework. It serves as a relevant benchmark, illustrating the practicality and potential advantages of pharmacist involvement in primary care prescribing, thus amplifying the research's context and significance (Cardwell *et al.*, 2020).

2.8 Integration of (qualitative-quantitative values) QQVs in Mixed-Methods Research

The integration of quantitative and qualitative variables (QQVs) in mixed-methods research (MMR) continues to provoke debate regarding the roles of these data types in assessing the complexities of public policy (PP) implementation. Existing literature emphasizes that MMR enables the measurement of public perceptions and opinions quantitatively, while also exploring their qualitative experiences. This combination is considered crucial for a thorough evaluation of the challenges related to PP implementation. Researchers can use QQVs to transform qualitative insights from various surveys into numerical scores, facilitating easier analysis and comparison to address PP implementation challenges effectively. (Halevi Hochwald *et al.*, 2023).

2.9 Public Perceptions and QQVs

The exploration of public perceptions in this study holds significant weight, given the potential impact of pharmacist prescribing on the public's healthcare experience. While the literature suggests that Quantitative Quality Variables (QQVs) provide a structured approach to analyzing survey data, bridging the gap between qualitative and quantitative insights, concerns remain regarding the reliability and validity of using numerical values to gauge public expectations and anxieties surrounding pharmacist prescribing. By assigning numerical values to qualitative responses, researchers can attempt to quantify the depth of public sentiments, potentially revealing the intensity and prevalence of expectations and concerns. However, this approach raises important questions about the potential for oversimplification and the loss of nuance inherent in translating qualitative data into numerical representations. This study will carefully consider these complexities when analyzing public survey data, ensuring a balanced approach that incorporates both the richness of qualitative responses and the potential for comparative analysis offered by QQVs. By acknowledging these limitations and utilizing a mixed-methods approach, the study strives to gain a comprehensive understanding of public perceptions, ultimately aiming to inform policy decisions with a nuanced understanding of the public's perspective on pharmacist prescribing in Dublin. (Halevi Hochwald *et al.*, 2023)

Methodological Considerations in QQV Analysis

The use of QQVs in the Dublin context stimulates discussions on methodological considerations. Thematic content analysis, as supported by Halevi Hochwald et al. (2023), brings into question the suitability of Likert-type values and the transparency of the conversion process. Methodological rigor is a central theme in these debates. Thematic content analysis offers a systematic framework for assigning Likert-type values to identified themes, ensuring a rigorous and transparent conversion process.(Halevi Hochwald *et al.*, 2023)

Addressing Feasibility and Challenges

Quantifying public perspectives using qualitative-quantitative values (QQVs) leads to discussions on the feasibility and challenges of public policy (PP) implementation. The literature indicates that comparing QQVs with matched questionnaire scores is essential for identifying consistencies and discrepancies, which can inform targeted interventions and policy recommendations. This approach enables researchers to address the feasibility and challenges of PP implementation in a more detailed and nuanced manner.(Halevi Hochwald *et al.*, 2023)

Advancing Research Objectives

QQVs are positioned as an essential tool for advancing research objectives related to public policy (PP) implementation challenges. These discussions focus on the effectiveness of QQVs in identifying key barriers, assessing pharmacist knowledge and attitudes, analyzing public perceptions, and developing and evaluating strategies to address implementation challenges. QQVs enable the identification of key barriers, assessment of pharmacist knowledge and attitudes, analysis of public perceptions, and the development and evaluation of strategies to overcome implementation challenges.

The conclusion highlights the value of QQVs within the mixed-methods research framework. By systematically converting qualitative insights into numerical scores, QQVs bridge the gap between subjective experiences and quantitative analysis. The research suggests that, as Dublin's healthcare system considers a shift towards pharmacist prescribing, QQVs provide a methodologically rigorous approach to exploring complexities and supporting informed

decision-making.(Halevi Hochwald *et al.*, 2023).

Conclusion

In wrapping up this literature review, it becomes clear that the journey towards integrating pharmacist prescribing in Dublin is both complex and rich with potential. The review traverses a diverse landscape, from the challenges and opportunities in establishing pharmacist prescribing roles to the perceptions of GPs and the public towards such a shift in practice. It underscores the critical need for pharmacist-led prescribing to be framed within a broader healthcare context, one that acknowledges the unique contributions pharmacists can make in enhancing patient care and the overall healthcare delivery system. The discussions around GP perceptions, competency and training of pharmacists, the impact on patient outcomes, and the broader healthcare system reveal a consensus on the value of pharmacists in a prescribing role, albeit tempered by concerns over professional identity, training adequacy, and systemic readiness. Drawing lessons from the nurse prescribing model offers a blueprint for addressing these challenges, emphasizing the need for legal, educational, and collaborative frameworks that are attuned to the pharmacists' context.

Moreover, the review highlights the significant gap in comparative analysis of prescribing models and best practices, indicating a ripe area for future research. Such studies could provide the evidence base needed to inform policy, practice, and education, ensuring that pharmacist prescribing is implemented in a manner that is both effective and sustainable. The proposed research aims to delve deeper into these areas, particularly focusing on the knowledge, attitudes, and practices of community pharmacists in Dublin, as well as public perceptions towards pharmacist prescribing. By employing a mixed-methods approach, this study seeks to bridge the gap between quantitative data and qualitative insights, offering a more nuanced understanding of the challenges and opportunities that lie ahead.

In conclusion, the literature review sets the stage for a comprehensive exploration of pharmacist prescribing in Dublin, highlighting the critical need for a concerted effort among stakeholders to navigate the complexities of implementation. It calls for a strategic approach that leverages the strengths of pharmacists, addresses the challenges head-on, and aligns with the evolving needs of patients and the healthcare system. As Ireland grapples with healthcare workforce shortages and seeks innovative solutions to enhance primary care, pharmacist prescribing emerges as a promising avenue to explore, promising to enrich the tapestry of healthcare

provision with its potential to improve patient outcomes, enhance medication safety, and contribute to a more efficient and accessible healthcare system.

Conceptual Framework

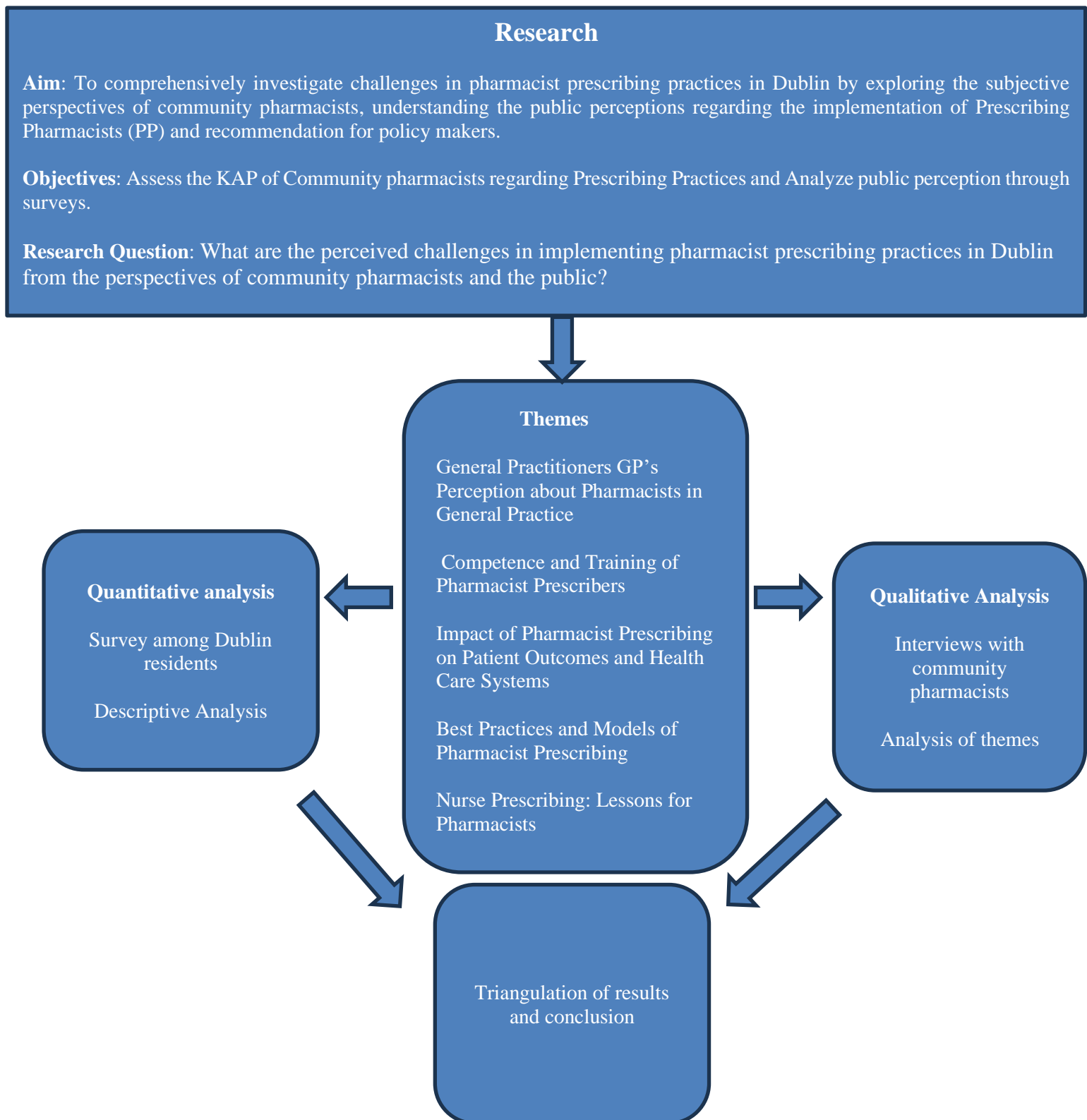


Figure 3 Conceptual framework

Chapter 3 Research Methodology

Introduction

The methodology chapter of this research outlines the systematic approach adopted to investigate the challenges associated with pharmacist prescribing practices in Dublin. This chapter is pivotal as it provides a comprehensive framework for collecting, analyzing, and interpreting data, ensuring that the research questions are addressed in a thorough and detailed manner. The chosen methods are meticulously designed to gather both quantitative and qualitative data, which allows for a holistic and multifaceted understanding of the perspectives of community pharmacists and the public regarding the implementation of pharmacist prescribing. In this chapter, the research philosophy, design, and strategy will be elaborated upon, detailing the specific techniques and procedures employed for data collection and analysis. The rationale behind the selection of these methods will be thoroughly discussed, emphasizing their suitability and relevance for achieving the research objectives. This chapter will also cover important ethical considerations, highlighting the steps taken to ensure the ethical integrity of the research process, and the measures implemented to guarantee the validity and reliability of the study findings.

By adopting a mixed-methods approach, this research aims to provide a robust, comprehensive, and nuanced analysis of the topic. The integration of diverse data sources is intended to enrich the research, allowing for the drawing of meaningful conclusions and the formulation of evidence-based recommendations. This methodological rigor ensures that the findings are not only credible and reliable but also relevant and applicable to real-world contexts, thereby contributing valuable insights to the discourse on pharmacist prescribing practices in Dublin.

3.1 Overview of Research Methodology

No	Primary Data	Part A	Part B
1	Approach	Quantitative Analysis	Qualitative Analysis
2	Design/Philosophy	Interpretivism	Interpretivism
3	Source/Strategy	Questionnaire- Google Survey form	Zoom and In-Person interviews
4	Structure	Demographics: 4 questions Knowledge: 3 questions Attitude: 3 questions Practices: 3 questions Perceptions of Impact: 2 questions General Feedback: 2 questions	Up to 25 minutes interviews

5	Participants	100 Dublin Residents	11 Community pharmacists
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Table 2 Table 2: The overview of the research method

Table 2: The overview of the research method

3.2 Research Philosophy

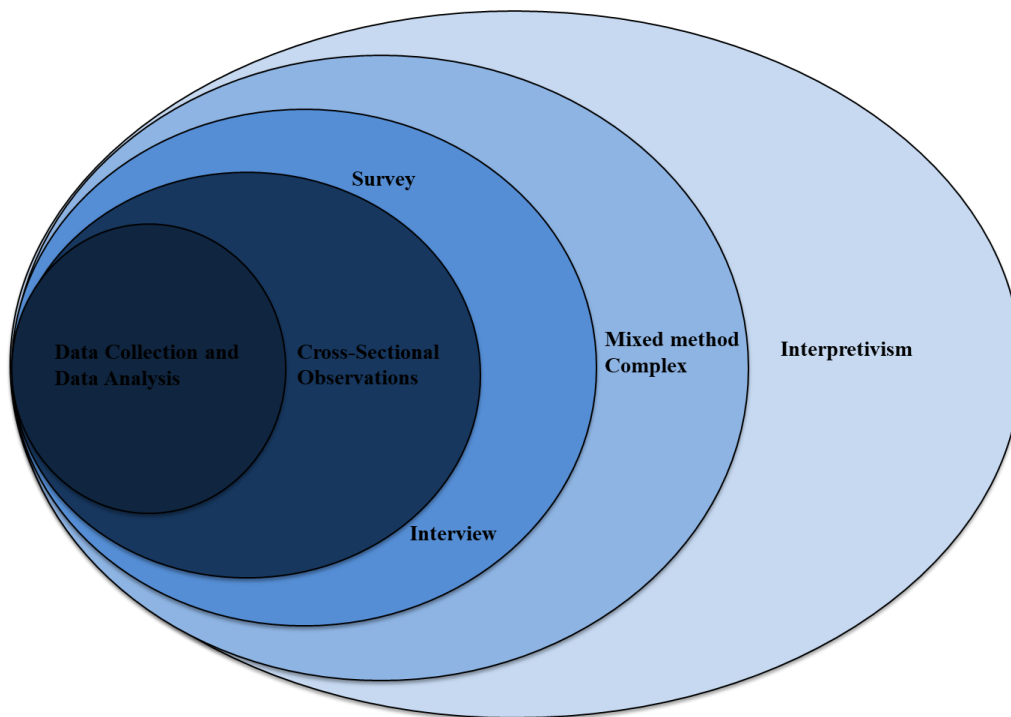


Figure 4 Research Onion

This research project is underpinned by an interpretivist philosophy, which holds that reality is subjective and multifaceted. As such, this philosophy supports the view that understanding the complex world of human experience requires interpretative inquiry, allowing for the context in which people live and work to be considered. The interpretivist approach is essential for this study's purpose, which is to comprehensively understand the roles of community pharmacists in Dublin and the perceptions of Dublin residents towards pharmacists' services.

By adopting interpretivism, the study acknowledges that the realities of community pharmacists and residents are constructed through their social interactions and are thus best understood through their narratives and descriptions. The approach allows the researcher to gain insights into individuals' subjective meanings and the social context of their decisions, actions, and

interactions. In aligning with a cross-sectional descriptive study, this approach facilitates the collection of data at a single point in time to analyze and describe the current status of the phenomena in question. The study is designed to provide a snapshot that depicts the complexities of the experiences and perceptions within the specified timeframe of the research.

The research methodology integrates both quantitative and qualitative data collection methods, capturing a broad spectrum of information that ranges from numerical data gathered through questionnaires to rich, descriptive data from interviews. This mixed-methods approach not only aligns with the interpretivist philosophy but also enhances the depth and breadth of understanding the study seeks to achieve.

In conclusion, the interpretivist philosophy informs the methodological choices made in this research, promoting a nuanced exploration of the pharmacists' and residents' perspectives within the healthcare system. It emphasizes the significance of subjective experience and the importance of understanding the context in which social phenomena occur, making it particularly suitable for a cross-sectional descriptive study that aims to provide a detailed and comprehensive view of the roles and perceptions at a specific point in time.

3.3 Research Design and Approach

In this research project, a mixed-methods approach is employed, incorporating both quantitative and qualitative analyses to provide a comprehensive exploration of the role of community pharmacists in Dublin County and the perceptions of Dublin residents regarding pharmacists' services.

3.3.1 Quantitative Analysis:

Philosophical Grounding: Interpretivism

The data collection is grounded in the Interpretivism philosophy, focusing on understanding the subjective experiences and perceptions of individuals. Although quantitative in nature, the study acknowledges the importance of capturing the nuances in participants' responses.

Data Collection Method: Questionnaire via Google Survey Form

A structured questionnaire will be utilized and distributed through Google Survey forms. This approach facilitates broad reach and convenience for respondents, ensuring high response rates and streamlined data collection. The Google form will be distributed through social media

platforms such as WhatsApp groups, WhatsApp status, and Instagram stories. Additionally, the form will be shared in person in busy places such as Dublin city centre sidewalks, parks, and community centres by the researcher wearing identification cards, such as a student ID card. The researcher will show the QR code of the Google form to willing participants who are residents of Dublin.

Questionnaire Structure

The questionnaire is divided into several sections, each targeting specific aspects related to pharmacist prescribing practices. The sections are as follows:

Demographics (4 questions)

These questions will collect basic demographic information such as age, gender, education level, and occupation. This data will help in understanding the background of the respondents and any demographic influences on their perceptions.

Knowledge (3 questions)

These questions aim to assess the respondents' knowledge about pharmacist prescribing practices. Understanding the level of knowledge will provide insight into how well-informed the public is regarding this healthcare practice.

Attitude (3 questions)

This section will gauge the attitudes of respondents towards pharmacist prescribing practices. It will explore their general sentiments and any biases they may hold.

Practices (3 questions)

Questions in this section will delve into the respondents' personal experiences and behaviors related to pharmacist prescribing. This includes how often they interact with pharmacists and any past experiences with pharmacist-prescribed medications.

Perceptions of Impact (2 questions)

These questions will capture the respondents' perceptions of the impact of pharmacist prescribing practices on healthcare outcomes. This includes perceived benefits or drawbacks.

General Feedback (2 questions)

Finally, this section will gather overall feedback from respondents, providing them with an opportunity to share any additional thoughts or suggestions regarding pharmacist prescribing practices.

Sample Size and Population

The study will target 100 residents of Dublin. This sample size is deemed sufficient to provide meaningful quantitative insights while being manageable for analysis.

By following this structure, the study aims to provide a comprehensive quantitative analysis of the perceptions and behaviors related to pharmacist prescribing practices among Dublin residents, all within the framework of the Interpretivism philosophy.

3.3.2 Qualitative Analysis:

Parallel to the quantitative effort, qualitative data will be gathered through an Interpretivist approach, enabling a deeper understanding of the phenomena from the perspective of the participants. In-depth interviews will be conducted using Zoom or in-person sessions. Each interview is planned to last up to 25 minutes, focusing on community pharmacists' experiences and Dublin residents' viewpoints on pharmacist services. The interviewer will approach pharmacists in person or via email to ascertain their willingness to participate and to discuss a brief overview of the interview plan.

Participants:

Sampling for this study will involve up to 11 community pharmacists, constituting approximately 5% of the total community pharmacies, a figure based on the saturation principle and practicality within the research timeframe (PSI, 2024). For the residents' survey, the sample size is established at 100 (CSO, 2024). This sample size calculation follows established statistical methodology for finite populations.

Inclusion / Exclusion Criteria

The study design includes community pharmacists or pharmacists with community pharmacy experience in Dublin who have agreed to participate, ensuring a professional perspective on the research topic. Additionally, an anonymous survey will be conducted among Dublin residents who have lived in the city for at least the past six months, providing a diverse range of insights. However, to protect those who may be at risk, children and other vulnerable populations will not be included in the study.

3.4 Research Strategy

To determine an appropriate study population size for both community pharmacies and Dublin residents within short study duration, let's consider a few key factors for both segments.

Community Pharmacies

Given there are 216 community pharmacies in Dublin County, interviewing a representative sample within the short timeframe is essential. A commonly used method for determining sample size in qualitative research, where the population is not very large, is to aim for saturation - the point at which no new information is being discovered.

In light of my research schedule and constraints, selecting about 5% of community pharmacies for interviews is an approachable goal, translating to a comprehensive yet manageable scope. Consequently, the aim is to engage with approximately 11 pharmacies out of a total of 216, offering a feasible pathway to achieve depth and breadth in understanding within the constraints of my dissertation timeframe. This refined approach underscores a practical balance between the desire for extensive coverage and the realities of time-bound research, ensuring the interviewing process, alongside subsequent data analysis, remains within manageable bounds (PSI, 2024).

For the aspect of surveying Dublin residents, the methodological shift towards selecting 100 individuals as the study population represents a departure from the statistical formula traditionally applied for larger populations. This strategy acknowledges the logistical

challenges inherent in reaching out to a broader segment of Dublin's adult population of 1,137,360. By opting for a targeted sample of 100 residents, the study embraces an interpretive framework that prioritizes achievable goals within the dissertation's timeline. This approach facilitates a focused design, distribution, and analysis phase of the survey, enabling the research to remain aligned with practical limitations while still striving for meaningful insights. This tailored strategy underscores a nuanced understanding of research methodologies, adapting standard practices to fit the specificities of the study's context and constraints.(CSO, 2024).

Justifications for Study Population Targeting

1. Time Constraints: The short duration of dissertation limits the number of interviews and surveys that can be effectively conducted and analysed. This necessitates a focus on a sample size that is both representative and manageable within this timeframe.

2. Data Saturation: For qualitative interviews with pharmacies, the target range is determined with the goal of reaching data saturation within the available time, ensuring diverse and comprehensive insights into the pharmacists' perspectives without overextending resources.

3. Statistical Significance: For the survey of Dublin residents, the sample size is chosen to achieve statistical significance and representativeness while being practical for distribution and analysis within the study period.

4.Resource Optimization: Balancing the need for representative data with the practical limitations of time, resources, and participant availability guides the choice of these target populations.

5. Scope of Study: The selected sample sizes ensure the study remains focused and in-depth, allowing for detailed analysis and actionable insights within the specific context of Dublin.

These justifications ensure that the study is both rigorous and feasible, aligning with the research objectives while respecting logistical and temporal limitations.

Ethical Considerations And GDPR

The research study has identified several ethical issues and proposed solutions to address them.

Informed Consent and Participant Willingness: Obtaining voluntary and informed consent can be challenging due to power imbalances or misunderstandings, particularly with adult participants. To address this, a detailed consent form will explain the study's aim, methods, and

potential risks and benefits, allowing participants to ask questions before consenting. Ensuring participant willingness is crucial for the research's validity. Honest communication, emphasizing their contribution to healthcare policies, and guaranteeing confidentiality will be employed to increase participant willingness.

Exclusion Criteria and GDPR Compliance: Excluding vulnerable populations raises concerns about fairness and inclusivity. The study will provide clear reasons for exclusions, focusing on adult Dublin residents and community pharmacists, while separate studies can address ethical issues for vulnerable populations. Compliance with GDPR is essential to protect privacy and data. The research will adhere to GDPR rules, including secure data storage and a consent letter outlining data protection measures.

Privacy, Confidentiality, and Emotional Impact: Protecting participant privacy is vital, especially with sensitive healthcare information. Measures such as anonymization, secure storage, and restricted access to identifiable information will ensure confidentiality. Additionally, managing potential emotional impacts is important, as participants may share emotionally charged experiences. The research team will act as supportive listeners throughout the study to responsibly handle emotional responses.

Chapter 4 Results and Findings

4.1 Analysis of First Objective

The main aim of this study is to conduct an in-depth evaluation of the knowledge, attitudes, and practices (KAP) of community pharmacists in Dublin with respect to prescribing practices. This segment will thoroughly analyze the qualitative data collected from detailed interviews with pharmacists. The analysis will be presented in a highly organized manner, examining each component of KAP in great detail to offer a comprehensive understanding of the current situation and identify potential areas for improvement. Notably, out of the 11 pharmacists invited to participate in the study, only 5 agreed to take part. This limited participation highlights the necessity for future studies to engage a larger cohort for more generalized insights..

4.1.1 Assessing the Knowledge, Attitudes, and Practices of Community Pharmacists

Knowledge of Community Pharmacists

The knowledge of community pharmacists in Dublin regarding prescribing practices was assessed through semi-structured interviews. Pharmacists were questioned about their understanding of prescribing regulations, the training they had received, and their perceived competency in prescribing medications. From the interviews, it emerged that most pharmacists had a foundational knowledge of prescribing regulations but lacked in-depth training specific to prescribing practices.

- For instance, a common sentiment reflected was:

“While I understand the basic regulations, I feel we need more specific training tailored to prescribing, especially for more complex medications.” (Pharmacist 1)

- Another pharmacist reinforced this by highlighting the need for continuous education:

"Education should be done maybe on a monthly basis or like, I don't know, maybe like a weekly basis so that they will gain enough knowledge to prescribe antibiotics to patients." (Pharmacist 3)

- Additionally, some pharmacists pointed out the disparity in training and the need for practical, experience-based learning:

“There is a significant gap in our current training programs. While theoretical knowledge is imparted, there is a lack of hands-on experience in actual prescribing practices.” (Pharmacist 4)

This indicates a gap in continuous professional development, highlighting the need for targeted training programs to enhance pharmacists' competencies in prescribing.

Attitudes of Pharmacists

The attitudes of pharmacists towards prescribing were generally positive, with many expressing a willingness to undertake additional responsibilities if proper training and support were provided.

A notable quote illustrates this point:

- “I am very happy if such an initiative comes into practice in the future because prescribing kind of restricts a lot of people from access to medication. This will help them and enable them to get a prompt access to medication.” (Pharmacist 1)
- Other pharmacists echoed this sentiment, noting the potential for improving patient care:

“Prescribing rights for pharmacists would significantly reduce the burden on GPs and make healthcare more accessible to the community.” (Pharmacist 2)

- Some pharmacists also mentioned the readiness of the profession to take on this expanded role:

“I believe we are ready to take on prescribing responsibilities, provided we receive the necessary training and support. It’s a natural progression for our role in healthcare.”

(Pharmacist 5)

This positive attitude reflects an openness to evolving their roles, suggesting that pharmacists see the potential benefits of prescribing in improving patient access to medications and overall healthcare outcomes.

Practices of Pharmacists

Currently, the prescribing practices among community pharmacists are limited due to regulatory restrictions. However, the pharmacists interviewed showed a proactive approach in providing medication-related advice and over-the-counter solutions.

- Pharmacist 1 stated:

“We can only suggest in our current capacity. So, I definitely say that we need training for that. We need more continuous professional development.” (Pharmacist 1)

Another pharmacist highlighted the proactive steps they are taking within existing constraints:

- “Even though we are not allowed to prescribe, we often guide patients on medication management and monitor their treatments to ensure safety and efficacy.”
(Pharmacist 3)

Some pharmacists expressed frustration over the current limitations but showed readiness to embrace expanded roles:

- “Our current role is restricted, but with the right training and regulatory support, we could significantly enhance patient care by prescribing for minor ailments.” (Pharmacist 4)

This proactive stance indicates a readiness to expand their role, provided they receive adequate training and regulatory support.

Training and Education

A recurrent theme was the need for comprehensive training programs to equip pharmacists with the necessary skills for prescribing. Many pharmacists expressed a desire for more specialized education that goes beyond the basic training they received.

- Pharmacist 4 emphasized the importance of experience along with training:

“Giving prescribing rights to a pharmacist brings about lots of changes. It would be ideal to give prescribing rights to pharmacists who have enough experience, not for everybody.” (Pharmacist 4)

- Pharmacist 3 suggested that ongoing education should be more frequent:

“Education should be done maybe on a monthly basis or like, I don't know, maybe like a weekly basis so that they will gain enough knowledge to prescribe antibiotics to patients.” (Pharmacist 3)

Regulatory Support

Pharmacists highlighted the need for clear regulatory frameworks to support their prescribing practices. This includes not only legal permissions but also the development of standard operating procedures and guidelines.

- Pharmacist 5 pointed out the necessity of regulatory changes:

“There would need to be changes in legislation to give pharmacists the power to prescribe. It's in the pipeline, and I think it will eventually happen.” (Pharmacist 5)

- Pharmacist 4 added the importance of policy and legislative support:

“There should be additional systems or technologies implemented to keep a patient medication record, ensuring proper diagnosis and treatment tracking.” (Pharmacist 4)

Interprofessional Collaboration

The interviews underscored the importance of collaboration between pharmacists and other healthcare professionals. Pharmacists noted that successful implementation of prescribing

practices would require strong communication channels and teamwork with GPs and other healthcare providers.

➤ Pharmacist 2 highlighted the need for integration within the healthcare system:

“Pharmacists need to get integrated with the healthcare system and develop rapport with doctors and nurses to understand various medical conditions of patients.” (Pharmacist 2)

➤ Pharmacist 4 discussed the technological and diagnostic limitations:

"If pharmacists are given the right to prescribe, there should be changes made in the pharmacy to implement new diagnostic methods and systems, which is a significant task." (Pharmacist 4)

Summary of Interviews

Pharmacist 1:

- **Background:** Pharmacist in Dublin, degree from India, registered in Ireland.
- **Opinion:** Supports prescribing rights for pharmacists with appropriate training. Emphasizes the need for training and a system of checks and balances.
- **Challenges:** Potential resistance from other healthcare professionals, need for legislative and regulatory frameworks, and ensuring proper training and oversight.

Pharmacist 2:

- **Background:** Community pharmacist in Ireland for six months.
- **Opinion:** Believes in the need for training before granting prescribing rights.
- **Challenges:** Regulatory frameworks, interprofessional collaboration, integration with healthcare systems, and technological implementation for record-keeping.

Pharmacist 3:

- **Background:** PharmD from India, working in Dublin since 2023.
- **Opinion:** Supports prescribing rights but emphasizes the need for continuous education and adequate funding. Stressed the importance of managing workload to ensure proper patient care.
- **Challenges:** Workload, need for government funding, and proper training programs. Highlighted the necessity for regular education sessions to gain confidence in prescribing.

Pharmacist 4:

- **Background:** Community pharmacy experience in Dublin, registered recently.
- **Opinion:** Supports prescribing rights for experienced pharmacists to prevent errors and improve patient care. Highlighted the potential for pharmacists to catch and correct mistakes made by doctors.
- **Challenges:** Political and industrial resistance, need for policy development, and

implementation of diagnostic tools in pharmacies. Emphasized the need for experience, suggesting prescribing rights should be given only to those with significant practical experience. Also noted the need for implementing new diagnostic methods and systems in pharmacies.

Pharmacist 5:

- **Background:** Qualified since 2008, Community pharmacy experience and regulatory experience.
- **Opinion:** Believes prescribing rights would benefit the public and the profession.
- **Challenges:** Training and assessment, legislative changes, and effective communication systems.

These insights collectively suggest that while there is support among community pharmacists for prescribing rights, several challenges need to be addressed, including training, regulatory frameworks, interprofessional collaboration, and managing practical issues such as workload, funding, and technological integration.

4.2 Analysis of Second Objective

The second objective of this study is to analyze public perception through surveys to address the challenges of implementing prescribing pharmacists in Dublin, Ireland. This section presents the survey findings, focusing on public awareness, acceptance, and concerns regarding pharmacist prescribing. 5 participant mentioned that they are not Dublin residents so approximately 5.62 % of the changes will be there in given results

4.2.0 Demographics

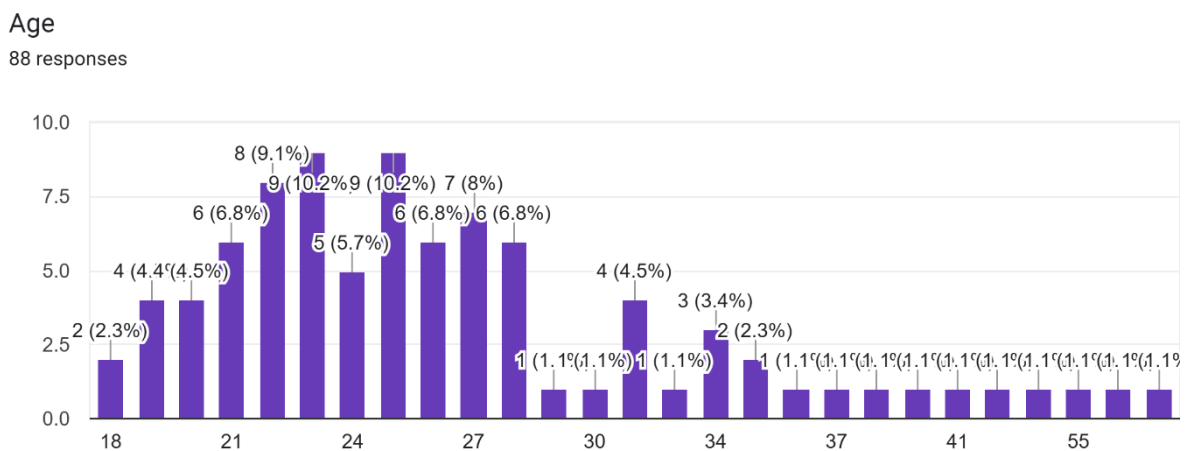


Figure 5 Age

Key Insights:

- **Most Common Ages:** The highest number of respondents are aged 23 and 24 years, each with 9 respondents, making up 10.2% of the total responses for each age.
- **Major Age Group (21-29 years):** The majority of respondents fall within the age range of 21 to 29 years, accounting for 60 respondents (68.2%).
- **Least Common Ages:** Ages 31 to 47 years each have only 1 respondent, making up 1.1% per age group.
- **Older Respondents:** There is a notable drop in the number of respondents in their 30s and beyond, with only sporadic representation across these ages.

Summary:

The age distribution of the survey respondents is heavily skewed towards younger adults, particularly those in their early to late 20s. The most represented age groups are 23 and 24 years old, each constituting 10.2% of the respondents. The age group of 21 to 29 years makes up the majority of the respondents, indicating that the survey primarily reached a younger demographic. There is a significant decline in representation among respondents in their 30s and older, suggesting less participation from older age groups.

Gender

89 responses

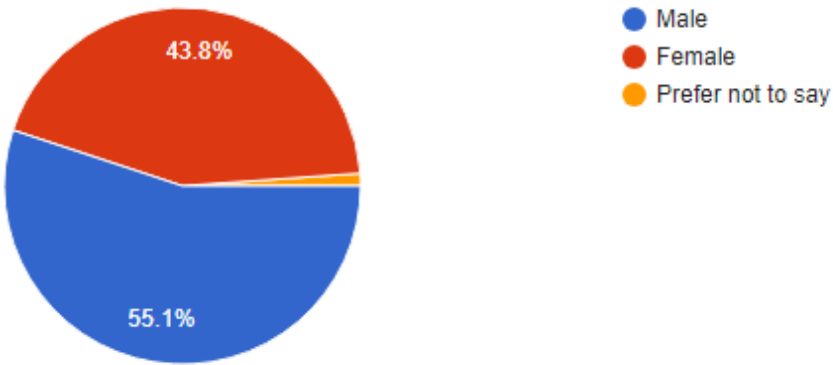


Figure 6 Gender

The pie chart represents the gender distribution of 89 survey respondents. Here is a detailed explanation of the results:

Gender Distribution:

- Male: 55.1% (49 respondents)
- Female: 43.8% (39 respondents)

- Prefer not to say: 1.1% (1 respondent)

Key Insights:

Majority Gender: The majority of respondents are male, accounting for 55.1% of the total responses.

Female Representation: Females make up 43.8% of the respondents.

Prefer Not to Say: A very small percentage (1.1%) of respondents chose not to disclose their gender.

Summary:

The survey results indicate that a slightly higher number of males (55.1%) participated in the survey compared to females (43.8%). Only one respondent (1.1%) preferred not to specify their gender. This suggests that the survey sample has a fairly balanced gender distribution with a slight male predominance.

4.2.1 Public Awareness

From where did you learn about pharmacist prescribing?

87 responses

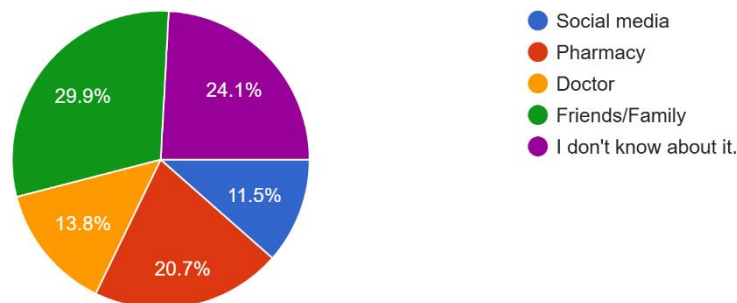


Figure 7 Resource

The pie chart shows the results of a survey conducted among Dublin residents regarding their knowledge about pharmacist prescribing practices. Here is a breakdown of the results based on the sources from where the respondents learned about pharmacist prescribing:

Social Media (11.5%) : A small portion of the respondents, 11.5%, learned about pharmacist prescribing through social media platforms.

Pharmacy (13.8%) : 13.8% of the respondents received information about pharmacist prescribing directly from pharmacies.

Doctor (20.7%) : A significant number, 20.7%, were informed by their doctors about

pharmacist prescribing practices.

Friends/Family (29.9%) : The largest group, 29.9%, gained knowledge about pharmacist prescribing from friends or family members.

I don't know about it (24.1%) : 24.1% of the respondents indicated that they do not have any knowledge about pharmacist prescribing practices.

In summary, the survey indicates that friends and family are the primary source of information for most respondents about pharmacist prescribing, while a significant portion also remains unaware of this practice. The remaining respondents gathered information from doctors, pharmacies, and social media, with doctors being the most notable among these sources.

The survey revealed that a significant portion of the public is aware of the concept of pharmacist prescribing. However, detailed knowledge about the specifics and the potential benefits was limited. For instance, many respondents indicated awareness but lacked understanding of how it would practically benefit them.

Are you aware that pharmacists in some countries can prescribe medications for certain conditions?

89 responses

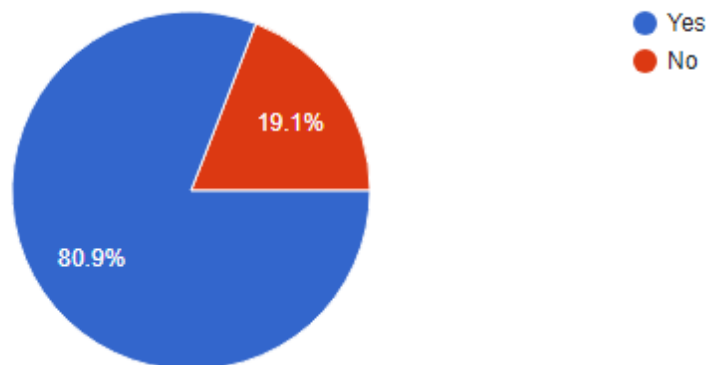


Figure 8 Knowledge

The pie chart illustrates the awareness among 89 respondents regarding the ability of pharmacists in some countries to prescribe medications for certain conditions. Here is a detailed explanation of the results:

Yes (80.9%): A substantial majority, 80.9%, of the respondents are aware that pharmacists in some countries have the authority to prescribe medications for specific conditions.

No (19.1%) : Conversely, 19.1% of the respondents are not aware of this capability of

pharmacists.

In summary, the data indicates that most respondents are informed about the prescribing role of pharmacists in certain countries, while a smaller proportion remains uninformed. This suggests a relatively high level of awareness about the expanded roles of pharmacists in healthcare among the surveyed individuals.

Can pharmacists prescribe medicine in Dublin?

87 responses

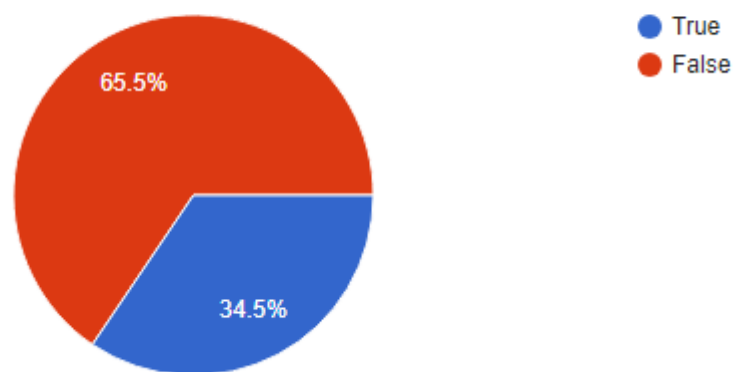


Figure 9 Knowledge about Dublin

The pie chart represents the responses of 87 individuals to the question, "Can pharmacists prescribe medicine in Dublin?" Here is a detailed explanation of the results:

True (34.5%) : 34.5% of the respondents believe that pharmacists in Dublin can prescribe medications.

False (65.5%) : 65.5% of the respondents believe that pharmacists in Dublin cannot prescribe medications.

In summary, the majority of respondents (65.5%) are under the impression that pharmacists in Dublin do not have the authority to prescribe medications, while a smaller portion (34.5%) believe that they do. This indicates a significant level of misunderstanding or lack of awareness about the prescribing rights of pharmacists in Dublin among the surveyed individuals.

4.2.2 Attitude and Practice of Dublin Residents

On a scale from 1 (strongly disagree) to 5 (strongly agree), how comfortable are you with pharmacists prescribing medications?



89 responses

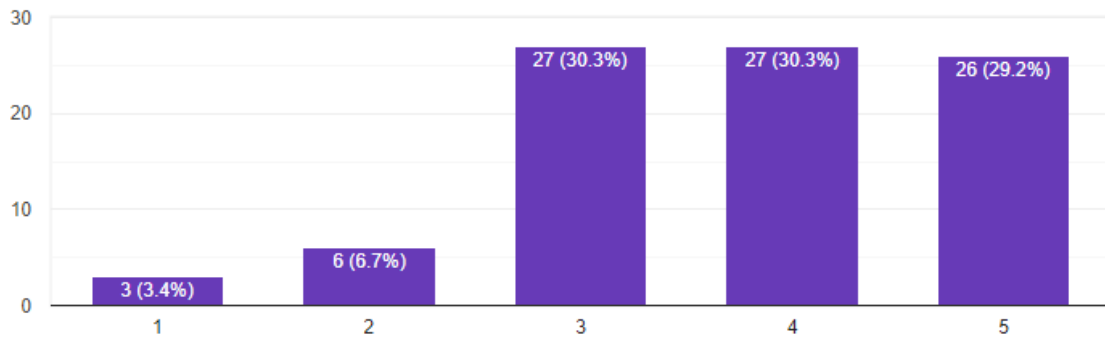


Figure 10 Comfortability

The bar chart illustrates the comfort level of 89 respondents regarding pharmacists prescribing medications, rated on a scale from 1 (strongly disagree) to 5 (strongly agree). Here is a detailed explanation of the results:

1 (Strongly Disagree) : 3 respondents (3.4%) strongly disagree with the idea of pharmacists prescribing medications.

2: 6 respondents (6.7%) somewhat disagree with pharmacists prescribing medications.

3: 27 respondents (30.3%) are neutral, indicating an equal level of comfort and discomfort.

4: 27 respondents (30.3%) agree and feel comfortable with pharmacists prescribing medications.

5 (Strongly Agree): 26 respondents (29.2%) strongly agree and feel very comfortable with pharmacists prescribing medications.

In summary, the majority of respondents are either neutral or comfortable with the idea of pharmacists prescribing medications, with the highest frequencies at ratings 3, 4, and 5. This suggests a generally positive or neutral attitude towards pharmacist prescribing practices among the surveyed individuals. Only a small proportion of respondents expressed discomfort (ratings 1 and 2).

Do you believe pharmacist prescribing can reduce waiting times for medical consultations? Why or why not?

88 responses

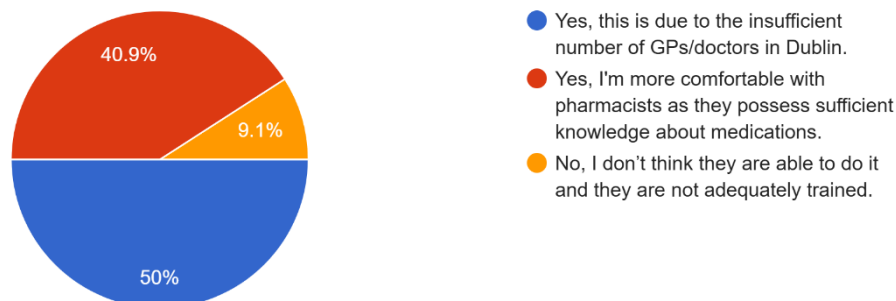


Figure 11 Opinion on GP consultation and PP

The pie chart presents the responses of 88 individuals regarding whether they believe pharmacist prescribing can reduce waiting times for medical consultations, along with their reasons for their beliefs. Here is a detailed explanation of the results:

Yes, this is due to the insufficient number of GPs/doctors in Dublin (50%): Half of the respondents (50%) believe that pharmacist prescribing can reduce waiting times for medical consultations because there are not enough general practitioners (GPs) or doctors in Dublin.

Yes, I'm more comfortable with pharmacists as they possess sufficient knowledge about medications (9.1%): A smaller portion, 9.1%, agree that pharmacist prescribing can help reduce waiting times, and they are comfortable with pharmacists' knowledge about medications.

No, I don't think they are able to do it and they are not adequately trained (40.9%): 40.9% of the respondents do not believe that pharmacist prescribing can reduce waiting times, as they think pharmacists are not adequately trained or capable of performing this role.

In summary, half of the respondents see pharmacist prescribing as a solution to reduce waiting times due to a shortage of doctors. A smaller group also supports this view, citing their comfort with pharmacists' expertise. However, a significant proportion (40.9%) doubts the capability and training of pharmacists to take on this role. This shows a divided opinion on the effectiveness and appropriateness of pharmacist prescribing as a solution to medical consultation wait times in Dublin.

Have you ever consulted a pharmacist for medication advice?

88 responses

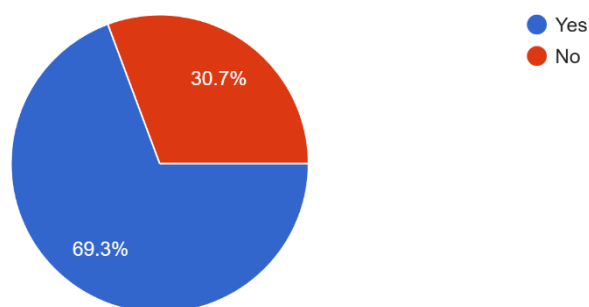


Figure 12 Previous Experience

The pie chart shows the responses of 88 individuals to the question, "Have you ever consulted a pharmacist for medication advice?" Here is a detailed explanation of the results:

Yes (69.3%) : A majority of respondents, 69.3%, have consulted a pharmacist for medication advice at some point.

No (30.7%) : The remaining 30.7% of respondents have never sought medication advice from a pharmacist.

In summary, the chart indicates that a significant majority of the respondents are comfortable seeking medication advice from pharmacists, reflecting trust in the pharmacists' expertise and accessibility. However, nearly one-third of the respondents have not consulted a pharmacist for such advice, which could be due to a variety of reasons such as personal preference, lack of awareness, or a habit of consulting doctors directly.

On a scale from 1 (Below Average) to 5 (Convenient and comfortable), How was your experience with community pharmacists?

83 responses

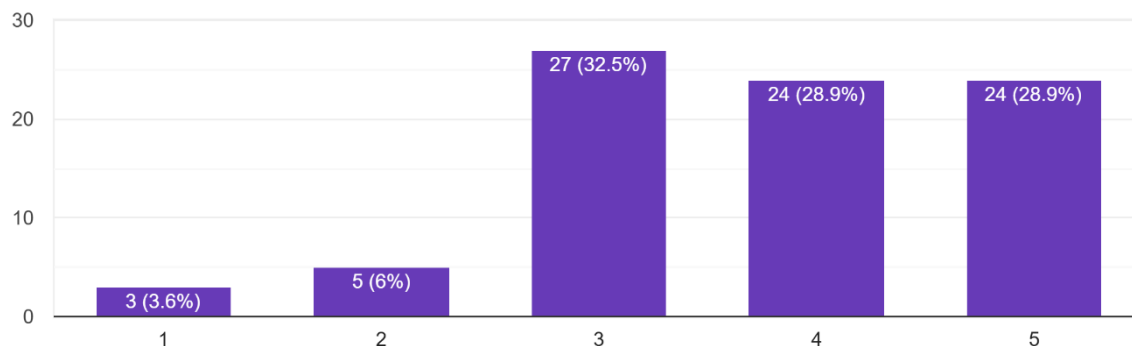


Figure 13 Previous experience

The bar chart shows the responses of 83 individuals to the question, "On a scale from 1 (Below Average) to 5 (Convenient and comfortable), how was your experience with community pharmacists?" Here is a detailed explanation of the results:

- 1 (Below Average) : 3 respondents (3.6%) rated their experience as below average.
2. 5 respondents (6%) rated their experience slightly better than below average.
3. 27 respondents (32.5%) rated their experience as average.
4. 24 respondents (28.9%) rated their experience as above average.
5. (Convenient and comfortable): 24 respondents (28.9%) rated their experience as convenient and comfortable.

In conclusion, the majority of respondents had a positive experience with community pharmacists, with 28.9% giving the highest rating (5) and another 28.9% rating it above average (4). A significant portion (32.5%) had an average experience. Only a small percentage of respondents rated their experience as below average (3.6%) or slightly better than below average (6%). This indicates a generally favourable view of the services provided by community pharmacists among the respondents.

On a scale from 1 (Maybe or No) to 5 (Very likely), How likely are you to consult a pharmacist for a prescription in the future?

88 responses

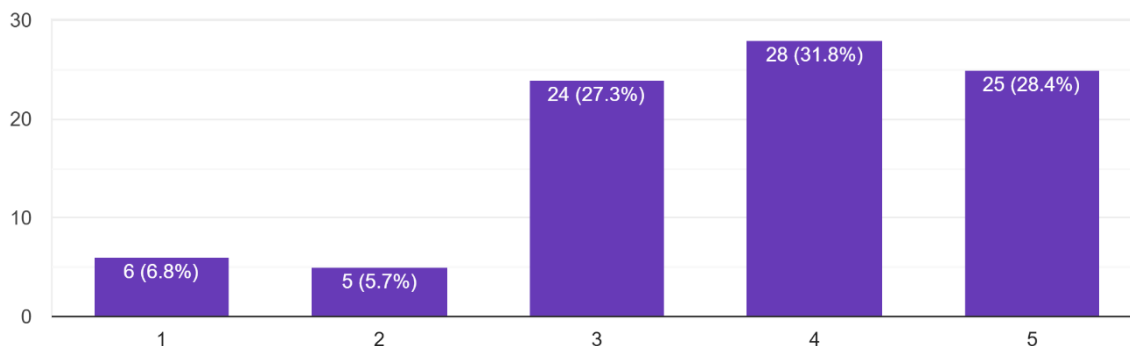


Figure 14 Future Consultations

The bar chart shows the responses of 88 individuals to the question, "On a scale from 1 (Maybe or No) to 5 (Very likely), how likely are you to consult a pharmacist for a prescription in the future?" Here is a detailed explanation of the results:

- 1 (Maybe or No):** 6 respondents (6.8%) indicated that they are unlikely to consult a pharmacist for a prescription in the future.
- 2: 5 respondents (5.7%)** also expressed low likelihood of consulting a pharmacist.
- 3: 24 respondents (27.3%)** are neutral, neither likely nor unlikely to consult a pharmacist for a prescription.
- 4: 28 respondents (31.8%)** indicated they are likely to consult a pharmacist for a prescription.
- 5. (Very likely): 25 respondents (28.4%)** indicated they are very likely to consult a pharmacist for a prescription in the future.

The survey results indicate a predominantly positive reception towards the idea of consulting pharmacists for prescriptions, with a majority of 60.2% of respondents expressing a likelihood or high likelihood of doing so. This is complemented by a neutral stance from 27.3% of participants, suggesting openness to the concept. Only a minority of 12.5% expressed reluctance. These findings reflect a trust in pharmacists' expertise and a willingness to engage with them in the healthcare process, highlighting the potential for pharmacists to play a more significant role in patient care and medication management.

4.2.3 Public Acceptance

4.2.3.1 Common concerns

Based on the 44 responses to the question "Are there any additional concerns regarding pharmacist prescribing practices in Dublin?" :

No Concerns:

Total Responses: 16

Percentage: 36.4%

Details:

- Responses indicating no concerns include "No", "N/A", "Nope", "None that I can think of", "Na", "Not yet", "Nil", "No I think it's good".

Concerns About Training and Competence:

Total Response: 11

Percentage: 25%

Details:

- Training: "This could work if they are being trained in college, their curriculum should be modified according in case they are allowed to prescribe medicine", "Adequate training needs to be given to pharmacist to handle this responsibility and the range of medications to be prescribed should be specified".
- Competence: "Not all pharmacists are competent to diagnose", "Lack of knowledge".

Safety and Regulation:

Total Responses: 5

Percentage: 11.4%

Details:

- Safety: "Have to ensure patient safety".
- Regulation: "Have to ensure patient safety", "Adequate training needs to be given to pharmacist to handle this responsibility and the range of medications to be prescribed should be specified".

Conditional Support:

Total Responses: 6

Percentage: 13.6%

Details:

- "Maybe that although they are aware of medications they might not be fully aware on the disease nature since that's sound more like a doctors job but I would be happy with a pharmacists choice"
- "I think pharmacists could prescribe for basic normal issues, like a sore throat that needs antibiotics. I think doctors are more for diagnosing complicated issues where it would require more complex prescribing".

Uncertainty and Miscellaneous:

Total Responses: 6

Percentage: 13.6%

Details:

Uncertainty: "Don't know whether they do it", "Traditional concepts of Irish people", "-"

Miscellaneous: "Maybe", "Not sure", "I think it's good".

Summary:

- No Concerns: 36.4% (16 out of 44 responses)
- Concerns About Training and Competence: 25% (11 out of 44 responses)
- Safety and Regulation: 11.4% (5 out of 44 responses)
- Conditional Support: 13.6% (6 out of 44 responses)
- Uncertainty and Miscellaneous: 13.6% (6 out of 44 responses)

In conclusion , most of the responses indicate no additional concerns about pharmacist prescribing practices. However, a significant portion (25%) highlights the need for adequate training and ensuring pharmacist competence. Safety and regulatory concerns are also notable,

making up 11.4% of responses. Conditional support is expressed by 13.6% of respondents, who are generally supportive but with reservations about the scope of practice. Uncertainty and miscellaneous comments also account for 13.6% of the responses. These insights suggest that while there is broad acceptance of pharmacist prescribing, there are important considerations around training, competence, safety, and regulation that need to be addressed.

4.2.3.2 Perception Of Impact

Based on the 74 responses to the question "Can pharmacist prescribing improve patient care? (Yes / No / Unsure),"

Positive Responses (Yes):

Total Positive Responses: 51

Percentage: 68.9%

Details:

- **Access and Convenience:** Many respondents believe that pharmacist prescribing can improve patient care by reducing wait times, allowing faster access to medications, and making healthcare more approachable ("Yes, because patients won't need wait for appointment approval...", "Yes. It allows faster access to antibiotics, antifungals, oral contraceptives etc.").
- **Efficiency:** Respondents mentioned that it would help in optimizing the healthcare system by providing direct access to medications and minor treatments, thus reducing the burden on GPs and hospitals ("Yes. By providing direct access to medications and minor treatments, they optimise the health care system.").
- **Knowledge and Training:** Some highlighted the pharmacists' knowledge and training in medications as a reason for improved patient care ("Yes. They have knowledge.", "Yes, they studied it.").

Negative Responses (No):

Total Negative Responses: 3

Percentage: 4.1%

Details:

- **Concerns Over Training:** Respondents expressed doubts about the capability and training of pharmacists to prescribe effectively ("No", "At least for me, I think prescriptions should solely be done by doctors and GPs").

Unsure Responses:

Total Unsure Responses: 20

Percentage: 27%

Details:

- **Lack of Information:** Many respondents were unsure due to a lack of knowledge or information about the pharmacists' capabilities and training ("Unsure, like previously stated, I don't know if they have enough medical training to prescribe medication").
- **Conditional Uncertainty:** Some responses indicated uncertainty but acknowledged potential benefits or concerns depending on implementation and regulation ("Maybe yeah", "Unsure, I don't have any idea about that.").

Summary:

Yes (Positive Impact): 68.9% (51 out of 74 responses)

No (Negative Impact): 4.1% (3 out of 74 responses)

Unsure: 27% (20 out of 74 responses)

The majority of respondents, 68.9%, believe that pharmacist prescribing can enhance patient care, noting advantages like shorter wait times, better access to medications, and greater efficiency in the healthcare system. Only a small percentage, 4.1%, oppose the idea, mainly due to concerns regarding pharmacists' training and competence. Meanwhile, 27% are uncertain, often due to a lack of information or clarity about the scope and execution of pharmacist prescribing. These findings indicate a generally positive perspective on the potential benefits of pharmacist prescribing, while also highlighting specific concerns that need to be addressed to achieve wider acceptance.

4.2.3.3 General Feedback

Based on the 49 responses to the question "What improvements, if any, would you suggest for pharmacist prescribing practices in Dublin?" :

No Improvements Suggested:

Total Responses : 14

Percentage : 28.6%

Common Responses :

- "None"
- "Nil"

- "No comments"
- "N/A"
- "No"

Training and Education:

Total Responses: 12

Percentage: 24.5%

Common Suggestions:

- "Study Some medical stuff to know what to give."
- "A lot of training beforehand. Maybe a restriction on particular drugs."
- "Continuous education and collaboration with healthcare teams."
- "Pharmacists should be given permission to prescribe more medications."
- "Curriculum updation for pharmacist."

Policy and Regulation:

Total Responses: 5

Percentage: 10.2%

Common Suggestions:

- "There must be strict policies."
- "Maybe a restriction on particular drugs. As this could be abused."
- "Knowing they have some sort of certifications might help build credibility."
- "Should implement pharmacist prescribing."

Collaboration and Feedback:

Total Responses: 3

Percentage: 6.1%

Common Responses:

- "I suggest teamwork will improve the pharmacist prescribing practice in Dublin."
- "Get regular feedback."
- "Possibly having an opinion of a doctor if possible."

Increased Scope of Practice:

Total Responses: 4

Percentage: 8.2%

Common Suggestions:

- "Pharmacists should be given permission to prescribe more medications."

- "Allow pharmacists to prescribe some medications in certain cases."
- "Allow them to help repeat prescriptions without contacting GP."

Awareness and Credibility:

Total Responses: 4

Percentage : 8.2%

Common responses :

- "Greater awareness."
- "More forthcoming, more awareness."
- "Knowing they have some sort of certifications might help build credibility."

Consultation and Patient Interaction:

Total Responses: 3

Percentage: 6.1%

Common Responses:

- "Availability of a private consultation room."
- "Private room for consultations."

Specific Conditions and Referrals:

Total Responses: 2

Percentage: 4.1%

Common Responses :

- "Not to overdo the work, let pharmacist should always refer to a doctor if it seems serious."
- "If you regularly collect prescription every month, then one shouldn't need to see the GP."

Miscellaneous Suggestions:

Total Responses : 2

Percentage : 4.1%

Common Suggestions :

- "Quick treatment and recovery from the current symptoms."
- "Would save time."

The majority of responses (28.6%) indicated no suggested improvements, reflecting

satisfaction or a lack of specific ideas for enhancement. Training and education are significant areas for improvement (24.5%), emphasizing the need for better preparation and ongoing education for pharmacists. Policy and regulation suggestions (10.2%) highlight the need for stricter guidelines and the implementation of specific restrictions. There are also calls for increased scope of practice (8.2%), better collaboration and feedback mechanisms (6.1%), enhanced awareness and credibility (8.2%), improved consultation and patient interaction (6.1%), and clear guidelines for specific conditions and referrals (4.1%). Overall, the responses reflect a mix of satisfaction and targeted areas for development to optimize pharmacist prescribing practices in Dublin.

On a scale of 1 to 10, how many other Dublin residents would agree with your comments?
86 responses

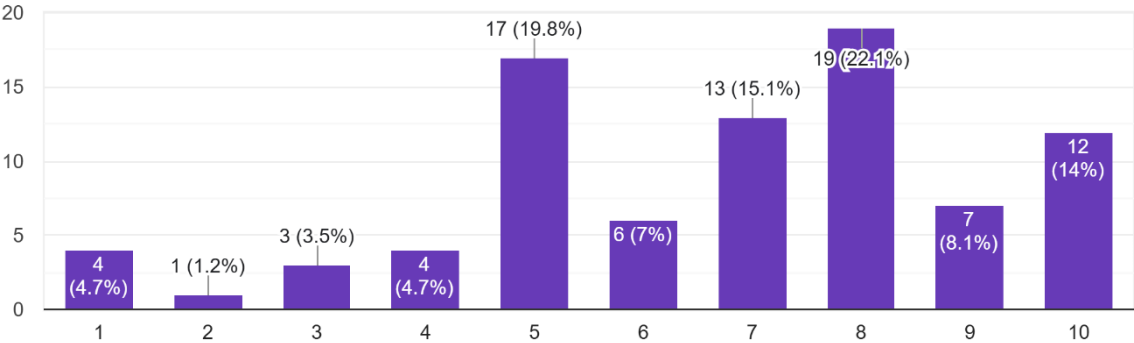


Figure 15 Opinion on Data Extrapolation

The bar chart represents the responses of 86 individuals to the question "On a scale of 1 to 10, how many other Dublin residents would agree with your comments?" Here is a detailed analysis of the results:

Distribution of Responses:

- 1. Scale 1 : 4 respondents (4.7%)
- 2. Scale 2 : 1 respondent (1.2%)
- 3. Scale 3 : 3 respondents (3.5%)
- 4. Scale 4 : 4 respondents (4.7%)
- 5. Scale 5 : 17 respondents (19.8%)
- 6. Scale 6 : 6 respondents (7%)
- 7. Scale 7: 13 respondents (15.1%)
- 8. Scale 8: 19 respondents (22.1%)

- 9. Scale 9: 7 respondents (8.1%)
- 10. Scale 10: 12 respondents (14%)

Key Insights:

Most Common Agreement Level (Scale 8): The highest number of respondents (19 individuals, 22.1%) believe that a significant portion of Dublin residents would agree with their comments, rating the agreement level at 8 out of 10.

Median Agreement Level (Scale 5) : A substantial number of respondents (17 individuals, 19.8%) rated the agreement level at 5, indicating a neutral or moderate level of agreement among other Dublin residents.

High Agreement Levels (Scales 9 and 10): Combined, 19 respondents (22.1%) believe that 90% or more of Dublin residents would agree with their comments, indicating strong confidence in widespread agreement.

Low Agreement Levels (Scales 1 to 4): A smaller segment of respondents (12 individuals, 14.1%) believe that few Dublin residents would agree with their comments, with ratings between 1 and 4.

The majority of respondents believe that a moderate to high number of Dublin residents would agree with their comments about pharmacist prescribing practices. Specifically:

- 42.2% (scales 8, 9, and 10) indicate high confidence in agreement among other residents.
- 42% (scales 5, 6, and 7) reflect moderate confidence in agreement.
- 14.1% (scales 1 to 4) express low confidence in agreement.

This distribution suggests that most respondents feel their views are likely to be shared by a significant portion of the population, with a notable proportion showing high confidence in widespread agreement.

4.6 Analysis of Third Objective

Triangulation of Survey and Interview Data

Triangulation was used to cross-verify the findings from the surveys and interviews, ensuring a comprehensive understanding of the challenges and opportunities in implementing pharmacist

prescribing.

4.6.1 Corroborating Public and Pharmacist Perspectives

Both the survey data and interview responses indicate a positive attitude towards pharmacist prescribing. The public's support for pharmacist prescribing aligns with pharmacists' willingness to take on this role, provided they receive adequate training.

Public Support: The majority of survey respondents (68.9%) believed that pharmacist prescribing could improve patient care, citing benefits such as reduced waiting times, improved access to medications, and increased efficiency in the healthcare system .

Pharmacist Willingness: Interviews indicated that pharmacists were also willing to take on prescribing roles, provided they received adequate training and regulatory support. Many pharmacists felt that prescribing rights would allow them to better utilize their expertise and contribute more significantly to patient care .

4.6.2 Addressing Concerns

The concerns raised by the public about pharmacists' training and competency were echoed by the pharmacists themselves, highlighting the need for robust training programs. This alignment underscores the importance of addressing these concerns to ensure the successful implementation of pharmacist prescribing.

Public Concerns: Approximately 25% of survey respondents highlighted the need for adequate training and ensuring pharmacist competence as significant concerns. Additionally, 40.9% of respondents were skeptical about pharmacists' ability to handle complex medical conditions .

Pharmacist Concerns: Pharmacists echoed these concerns, emphasizing the necessity of comprehensive and continuous training programs. They stressed the importance of experience along with training to ensure competency in prescribing practices .

4.6.3 Importance of Regulatory Frameworks

Both datasets highlighted the necessity of clear regulatory frameworks. The public's trust in pharmacists' prescribing abilities is contingent on the assurance that they are operating within a well-defined regulatory environment.

Public Trust: The public's trust in pharmacist prescribing abilities is contingent on the assurance

that pharmacists operate within well-defined regulatory environments. Only 34.5% of survey respondents correctly believed that pharmacists in Dublin could currently prescribe medications, indicating a need for clear communication about regulatory changes.

Pharmacist Regulation: Pharmacists underscored the need for legal permissions, standard operating procedures, and guidelines to support their prescribing practices. They called for legislative changes and the development of systems to ensure proper diagnosis and treatment tracking.

4.7 Qualitative Data Analysis - India

Although this study primarily focuses on Dublin, insights from the interviews with pharmacists trained in India but practicing in Dublin provide valuable comparative perspectives. These pharmacists emphasized the importance of adapting training programs to local contexts and the potential benefits of leveraging international experiences .

4.8 Qualitative Data Analysis - Ireland

In Ireland, the qualitative data revealed a readiness among pharmacists to expand their roles. However, this readiness is tempered by the need for adequate training and regulatory support. The pharmacists' perspectives underscore the importance of a phased approach to implementing prescribing practices .

4.9 Discussion

The discussion synthesizes the findings from both the qualitative and quantitative data, drawing connections between the identified themes and the broader context of healthcare delivery in Dublin. The findings indicate a general readiness among pharmacists and a positive reception from the public, provided that concerns about training and regulation are adequately addressed .

4.9.1 Strengths and Limitations

The study integrates both qualitative and quantitative methods, which allows for a more nuanced understanding of pharmacist prescribing practices. However, the focus on Dublin might limit the generalizability of the results, as regional variations in prescribing practices and challenges could be significant. Additionally, the low participation rate of pharmacists could introduce bias as it may not represent the views of the wider pharmacist community. The short duration of the study could also affect the depth of data collected, potentially overlooking long-

term trends and impacts. Future research could address these limitations by expanding the geographical scope, increasing participant engagement, and extending the study period to capture a more representative and comprehensive picture of pharmacist prescribing across Ireland .

4.9.2 Implications for Policy and Practice

The findings have significant implications for policy and practice. By addressing the identified challenges through targeted training, regulatory support, and public education, Dublin can set a precedent for the successful implementation of pharmacist prescribing practices in other regions.

4.9.3 Future Research Directions

Future research should expand beyond Dublin to include a broader geographic scope within Ireland. Additionally, longitudinal studies can assess the long-term impacts of pharmacist prescribing on healthcare outcomes and patient satisfaction .

4.10 Conclusion

In conclusion, this study provides a detailed examination of the challenges and opportunities in implementing pharmacist prescribing practices in Dublin. The findings highlight the need for comprehensive training, clear regulatory frameworks, and public education to ensure the successful integration of prescribing pharmacists into the healthcare system. By addressing these needs, policymakers can enhance healthcare accessibility and efficiency, ultimately benefiting the broader population .

Chapter 5: Conclusions & Recommendations

5.1 Conclusions

The results of this study offer an in-depth analysis of both the potential benefits and the challenges associated with implementing pharmacist prescribing practices in Dublin. By integrating data from surveys conducted with Dublin residents and insights gained from interviews with community pharmacists, several important conclusions have been drawn.

1. Positive Public Perception:

A considerable majority of the public, specifically 68.9%, are in favor of pharmacist prescribing, recognizing its potential to enhance patient care. The primary advantages identified by supporters include shorter waiting times for GP appointments, better access to medications, and overall improved efficiency within the healthcare system. These benefits underscore the public's belief in the positive impact that pharmacist prescribing could have on the delivery of healthcare services..

2. Pharmacist Willingness and Preparedness:

Pharmacists are largely open to assuming prescribing responsibilities, contingent upon receiving sufficient training and regulatory backing. They perceive this expanded role as a valuable opportunity to more effectively apply their specialized knowledge and make a more substantial contribution to patient care. With the proper support, pharmacists believe they can play a critical role in enhancing healthcare delivery.

3. Training and Competency Concerns:

Both the public and pharmacists have articulated concerns regarding the necessity for comprehensive training programs to guarantee that pharmacists are adequately competent in prescribing medications. Around 25% of the survey respondents specifically identified training and competency as major issues, and these apprehensions were similarly voiced by the pharmacists interviewed. This consensus highlights the critical need for robust educational frameworks to support the safe and effective implementation of pharmacist prescribing practices.

4. Regulatory Frameworks:

The need for well-defined and strong regulatory frameworks emerged as a consistent concern throughout the study. Public trust in pharmacists' ability to prescribe medications heavily depends on the assurance that these activities occur within clearly established regulatory boundaries. Notably, only 34.5% of survey respondents accurately recognized that pharmacists in Dublin currently have prescribing authority, highlighting a significant gap in communication and the necessity for greater regulatory transparency and clarity. This underscores the importance of enhancing public awareness and understanding through improved regulatory communication efforts.

5. Implementation Challenges:

For the successful implementation of pharmacist prescribing practices, it is essential to address key concerns related to training, competency, and regulatory frameworks. Ensuring that pharmacists are well-prepared and operate within clear regulatory guidelines is crucial. Additionally, public education and awareness campaigns will play a vital role in fostering trust and enhancing understanding of pharmacist prescribing among the general population. These efforts will help to create a supportive environment for the integration of pharmacists into the prescribing process..

5.2 Limitations of the Study

While this study offers valuable insights, it is important to recognize several limitations:

1. Geographic Limitation : The focus on Dublin may restrict the applicability of the findings to other regions within Ireland or internationally. Healthcare systems and public perceptions can vary widely in different areas, which may affect the generalizability of the results.

2. Participation Rate: The relatively low participation rate among pharmacists could introduce a potential bias, as the perspectives of the broader pharmacist community might not be fully captured. This could limit the comprehensiveness of the findings.

3. Study Duration: The short duration of the study may have impacted the depth of data collected, possibly overlooking long-term trends and effects. A longer study period might have provided more detailed insights into the implications of pharmacist prescribing practices.

4. Sample Size: Although the sample size was adequate to draw meaningful conclusions, a

larger sample could have yielded more robust data and helped to further validate the findings. Increasing the sample size in future research would enhance the reliability and generalizability of the results.

5.3 Recommendations

Based on the findings and conclusions drawn from this study, several key recommendations are proposed to enhance the implementation of pharmacist prescribing practices:

1. Comprehensive Training Programs: It is essential to develop and implement thorough and continuous training programs for pharmacists. These programs should ensure that pharmacists are well-prepared to take on prescribing roles. This includes providing initial training as well as ongoing professional development opportunities to keep their skills and knowledge current.

2. Clear Regulatory Frameworks: Establishing robust regulatory frameworks is crucial. These frameworks should provide clear guidelines and standards for pharmacist prescribing, including legal permissions, standard operating procedures, and detailed guidelines for practice. This will help create a structured and secure environment for pharmacists to operate in.

3. Public Education and Awareness: Launching public education campaigns is necessary to increase awareness and understanding of pharmacist prescribing. These campaigns can help build trust and confidence in the abilities of pharmacists by educating the public on the role and competencies of pharmacist prescribers.

4. Pilot Programs: Introducing pilot programs is recommended to assess the feasibility and impact of pharmacist prescribing before wider implementation. These pilot programs can offer valuable data and insights, allowing for adjustments and refinements to the approach based on real-world experiences.

5. Interprofessional Collaboration: Promoting collaboration between pharmacists, doctors, and other healthcare professionals is vital. Such collaboration ensures integrated and coordinated patient care, leveraging the expertise of various healthcare providers for better patient outcomes.

6. Monitoring and Evaluation : Implementing robust monitoring and evaluation mechanisms

is crucial to track the impact of pharmacist prescribing on healthcare outcomes and patient satisfaction. Continuous monitoring can help identify areas for improvement and ensure ongoing quality enhancement in pharmacist prescribing practices.

5.4 Future Research Directions

Future research efforts should strive to broaden the geographic scope of the study to encompass additional regions within Ireland and potentially extend to other countries. This expansion would allow for a more diverse understanding of how pharmacist prescribing practices might be implemented and perceived in different contexts. Longitudinal studies would be particularly valuable as they can evaluate the long-term effects of pharmacist prescribing on healthcare outcomes and patient satisfaction over extended periods. Such studies would provide insights into how these practices evolve and their sustained impact on the healthcare system.

Moreover, future research should also aim to gather the perspectives of a wider range of healthcare professionals, including doctors, nurses, and allied health workers, to gain a more holistic understanding of the interprofessional dynamics involved in pharmacist prescribing. Exploring the financial implications and impact on healthcare costs is another crucial area that would benefit from further investigation. By analysing cost-effectiveness and potential savings, research can provide a comprehensive view of the economic benefits and challenges associated with pharmacist prescribing. This multi-faceted approach to future research will help to develop a more thorough and nuanced understanding of the potential and challenges of implementing pharmacist prescribing practices on a broader scale.

5.5 Conclusion

In summary, this study offers an in-depth analysis of both the challenges and opportunities associated with implementing pharmacist prescribing practices in Dublin. The research findings underscore several critical needs that must be met to successfully integrate pharmacists into prescribing roles within the healthcare system.

Firstly, there is a clear requirement for comprehensive and ongoing training programs to ensure that pharmacists are well-prepared and competent in their expanded roles. This training should encompass both initial education and continuous professional development to keep pharmacists up-to-date with the latest medical knowledge and prescribing practices.

Secondly, the establishment of clear and robust regulatory frameworks is essential. These

frameworks should provide detailed guidelines and standards for pharmacist prescribing, ensuring that pharmacists operate within a structured and safe environment. Such regulations will help to build trust and confidence among the public and other healthcare professionals in the pharmacists' prescribing abilities. Additionally, public education and awareness campaigns are crucial to foster understanding and acceptance of pharmacist prescribing. Educating the public about the role and capabilities of prescribing pharmacists can help to alleviate concerns and misconceptions, thereby enhancing trust in the healthcare system. By addressing these key areas—comprehensive training, clear regulatory frameworks, and public education—policymakers can significantly improve healthcare accessibility and efficiency. This will ultimately benefit the broader population by providing more timely and effective healthcare services.

Overall, The study also reveals that pharmacists are generally ready and willing to take on prescribing responsibilities, and there is a positive perception of this practice among the public. These factors indicate a significant potential for improving healthcare delivery through pharmacist prescribing. However, it is crucial to adequately address the identified challenges to fully realize this potential. By doing so, the healthcare system in Dublin can be strengthened, leading to better health outcomes for the community.

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Appendix

Ethics Application & Declaration Form

DISSERTATION TITLE: Exploring Challenges in Pharmacist Prescribing Practices in Dublin: A Comprehensive Investigation into Community Pharmacist's Perspectives and Public Perceptions

RESEARCHERS NAME: Rahib Pattathil

PROGRAMME OF STUDY: MSc Pharmaceutical Business Technology.

SUPERVISOR'S NAME: Professor Mark G. Campbell

DECLARATION:

The information in this application form is accurate to the best of my knowledge. I undertake to abide by the ethical principles outlined by the Innopharma and Griffith College ethics policy. If this proposal is approved by the Griffith College Ethics Committee, I undertake to comply with any conditions required by the Committee. I confirm that this application is complete with all required documentation and signatures and that these are attached as appendices..

For Student:

STUDENT SIGNATURE: 

DATE: 27-03-2024

The research contained within this research dissertation proposal has been approved.

For Supervisor:

Ethics Committee Approval Required:

Yes

No

SUPERVISOR SIGNATURE: 

DATE: 01-04-2024

For Ethics Committee (if required):

Ethics Committee Approval Given:

Yes

No

ETHICS COMMITTEE MEMBER SIGNATURE:

DATE:

SECTION 1: DESCRIPTION OF RESEARCH STUDY

1.1 PURPOSE OF THE RESEARCH

Topic: The research questions seeks to understand perceived challenges in implementing pharmacist prescribing practices in Dublin and identify strategies to address them effectively. By addressing these questions, the study aims to offer valuable insights for policymakers, healthcare professionals, and the public alike.

Title: Exploring Challenges in Pharmacist Prescribing Practices in Dublin: A Comprehensive Investigation into Community Pharmacist's Perspectives and Public Perceptions

Research Question: What are the perceived challenges in implementing pharmacist prescribing practices in Dublin from the perspectives of community pharmacists and the public?

Hypothesis/Hypotheses : Not applicable.

The topic is linked primarily to two modules:

- Research Methodology
- Operational Excellence

Overall Aim: The research aims to yield actionable data that can inform policy makers, healthcare providers, and the general public on optimizing the role of pharmacists in the primary healthcare setting in Dublin. It is designed to contribute to a better understanding of how community pharmacists can be integrated effectively into healthcare teams to improve the quality and safety of prescribing practices.

Objectives:

- Assess the knowledge, attitudes, and practices of Community pharmacists in Dublin regarding Prescribing Practices through interviews.
- Analyse public perception through surveys to address the challenges of implementing Prescribing Pharmacists in Dublin, Ireland.
- Analyse the data obtained from surveys and interviews and provide recommendations for policy makers.

1.2 RESEARCH METHODOLOGY:

Paradigm/philosophical approach: Interpretivist

Primary research strategy: Mixed method

Type of Data to be collected: Both Qualitative and Quantitative

Methodology/Method: Survey (primarily quantitative), Interview (Qualitative).

Type of data: The study will collect data through surveys of Dublin residents by asking questions relevant to public opinion on current pharmacy practice among community pharmacies, current prescribing practices, prescribing practices of community pharmacist and personal opinion. It will also collect data through Qualitative interviews from community pharmacists with questions relevant to knowledge, attitude and practice on prescribing practices.

Collection/generation method: A 30-minute interview, face-to-face, semi-structured interview using open questioning at the participant's place of work (community pharmacies) or via zoom meetings, and a questionnaire-based survey among residents collecting

Data analysis method: Qualitative data will be analysed as descriptive analysis and Microsoft Excel will be used for quantitative analysis. Then triangulation will also be done to compare, contrast and analyse both data.

Participants:

Given there are 216 community pharmacies in Dublin County, interviewing a representative sample within the short timeframe is essential. The strategic adjustment to interview about 5% of community pharmacies reflects a well-considered approach to research within time and resource constraints. By targeting a smaller, more specific group, the study aims to achieve a depth of understanding that is both comprehensive and feasible. Similarly, the decision to survey 100 Dublin residents, rather than applying a broad statistical formula, indicates an interpretive adaptation of research methods to the practicalities of the study's context. This focused approach allows for a manageable yet insightful exploration of the subject matter, tailored to the unique demands of the dissertation's scope and timeline.

Process:

1. Collect Data:

Gather all the qualitative data from interviews and quantitative data from surveys.

2. Initial Analysis:

Qualitative Data: Use thematic analysis to identify common themes, patterns, and narratives from the interviews with pharmacists.

Quantitative Data: Analyse survey responses using statistical methods to understand the frequency, distribution, and correlations of the responses from residents.

3. Compare and Contrast:

Look for patterns in the qualitative data that are supported or contradicted by the quantitative data. For example, if pharmacists mention a specific barrier to prescribing practices in interviews, see if this barrier is also reflected in the survey responses from the residents.

Conversely, if the survey data suggest high satisfaction among residents with pharmacist-led prescriptions, examine the interview transcripts to find qualitative evidence that supports or provides context to these findings.

4. Integrate Findings:

Synthesize the results from both datasets to form a comprehensive understanding of the knowledge, attitudes, and practices regarding pharmacist prescribing in Dublin.

Where the data corroborate each other, author can present these as robust findings of study.

Where the data differ, explore the reasons behind these discrepancies, which could be due to differences in perspectives, biases, or the way questions were interpreted.

5. Interpretation:

Interpret the integrated findings in the context of research questions and objectives. Discuss how the triangulated data provide a more nuanced and credible insight into prescribing practices from the standpoint of both pharmacists and residents.

6. Reporting:

In research report, document the process of triangulation and how it contributed to the credibility of research findings.

Present any conflicting findings as areas for further investigation or as limitations of the current study.

Triangulation not only adds rigor to research but also provides a multi-dimensional view of the issue under study, which is particularly useful in complex areas like health services research where perceptions and practices can vary widely among different stakeholders.

2.3 PROPOSED QUESTIONS

For the current study focusing on the knowledge, attitude, and practice (KAP) related to prescribing practices among Dublin residents, here are some proposed questions categorized under each KAP area:

Knowledge:

- "Can you list the types of medications that pharmacists are authorized to prescribe in Dublin?"

- "What conditions are pharmacists typically allowed to prescribe medication for, to your knowledge?"
- "How do you stay informed about the scope of practice for pharmacists in Dublin regarding prescribing?"
- "Do you know about prescribing pharmacists around the world?"

Attitude:

- "How do you feel about if pharmacists having the authority to prescribe medication?"
- "In your opinion, does pharmacist prescribing enhance the care provided to patients? Why or why not?"
- "What are your thoughts on the safety and effectiveness of medications prescribed by pharmacists compared to those prescribed by doctors?"

Practice:

- "Have you ever consulted a pharmacist for a prescription, and if so, can you describe the experience?"
- "How often do you choose to use prescribing services of a GP?"
- "Could you share how pharmacists' practices have impacted your healthcare choices?"

For pharmacists, questions could be adjusted to reflect their professional perspective:

Knowledge:

- "What specific training have you received for medication handling, and how do you keep this knowledge up to date?"
- "Are there any particular challenges you face when keeping abreast of the medications if you are authorized to prescribe?"

Attitude:

- "What is your perspective on the role of pharmacists in medication management in Dublin?"
- "How do you believe pharmacist prescribing influences patient outcomes?"

Practice:

- "Can you walk me through the process you follow when prescribing medication?"
- "How has the integration of prescribing into your practice changed your interaction with patients?"

SECTION 2: POSSIBLE ETHICAL ISSUES

2.1 SUBJECT MATTER

Does the research proposal involve:

- Research into specific company activities that would be deemed sensitive or confidential? No
- Research into politically and/or racially/ethnically and/or commercially sensitive areas? No
- Sensitive, personal, professional or corporate issues? No

2.2 RESEARCH PROCEDURES

Does the research proposal involve:

- Research that might damage the reputation of companies or participant? No
- Research that may negatively affect the reputation of Griffith College/Innopharma? No
- Use of personal records without consent? No
Use of company data without consent? No
- The offer of any inducements to participate? No
- Audio or visual recording without consent? No
- Using a language other than English? No

2.3 PARTICIPANTS

Does the research proposal involve:

- People who are not competent and/or fluent in English? No
- Does your research group/sample include any of the following vulnerable groups: (Adult participants; Adults with psychological impairments; Adults with learning difficulties; Adults under the protection/control/influence of others (e.g. in care/prison); Relatives of ill people (e.g. parents of sick children); Hospital or GP participants recruited in medical facility; persons under the age of 18)? No

If you have answered NO to ALL questions, you do not need to complete Section 3. Please go to Section 4.

If you have answered YES to ANY question in Section 3, you must complete Section 3.

SECTION 4: STEPS TAKEN TO AVOID ETHICAL ISSUES

3.1. SUBJECT MATTER

If your ethical issues related to *Subject Matter*, outline your action plan to deal with such sensitive issues.

N/A

3.2. RESEARCH PROCEDURES

If your ethical issues related to *Research Procedures*, outline your action plan to deal with sensitive research procedures.

N/A

3.3. RESEARCH PARTICIPANTS

If your ethical issues related to *Participants*, outline how you will protect vulnerable persons or those that do not have English as their first language.

N/A

SECTION 4: ABOUT YOUR PARTICIPANTS

4.1. PARTICIPANT PROFILE

Outline your participant profile and why you have chosen them for this study (*do not provide names except where it is deemed impossible to conceal identity*).

Random and convenience sampling of Dublin adults is being considered. Vulnerable population and residents of any other county will not be considered for survey.

Dublin community pharmacists are being considered for interviews.

4.2 PARTICIPANT RECRUITMENT

Outline how you plan to gain access to/contact/approach your participant(s).

- Dublin community pharmacists will be contacted through in person
- Dublin residents are contacted through social media platforms, phone calls and emails.

SECTION 5: INFORMATION, CONSENT AND CONFIDENTIALITY

5.1 PARTICIPANT INFORMATION LETTER FOR PARTICIPANTS

Please confirm below that your information letter covers:

- Description of the research topic and method: Yes
- Details of what participation will involve: Yes
- Rights to anonymity: Yes
- Confidentiality: Yes
- Rights to withdraw from the research (at any time): Yes
- The contact details of the researcher (and supervisor if necessary): Yes

5.2 INFORMED CONSENT FORM FOR PARTICIPANTS

Please indicate below if your research requires a signed consent form by selecting the relevant option only (delete the Yes or No sentence as appropriate).

Yes: Written consent will be obtained from both interviewees and survey participants. An example of the consent which will be sought is given in Appendix B:

SECTION 6: STORAGE OF MATERIALS

6.1. DATA STORAGE AND MANAGEMENT, PROTECTION ISSUES

The study will collect data from adult Dublin residents and community pharmacists. KAP data will be collected through interviews from community pharmacists and surveys from Dublin residents. The data collected will be stored in electronic format in personal computers of author and submitted to Griffith college Moodle for validation purposes. The storage will be last long for 2 years after examination for publication of dissertation and it will be mentioned in consent form. I plan to collect qualitative data in the form of audio-visual recordings of interviews with participants, who are all community pharmacists in the Dublin Pharmacy sector. A back-up copy to that held on the PC will be made on Griffith's One Drive. To assist with analysing the data I will have transcripts of the interview conversations prepared in Word which will be stored in the same ways.

SECTION 7: NON-DISCLOSURE AGREEMENT AND STUDENT CONSENT

7.1 Non-Disclosure Agreement (NDA)

Will the final dissertation contain any information pertaining to any source what would warrant the use of a Non-Disclosure Agreement (NDA) e.g. industry-based research? No

7.2 Student consent

If a Non-Disclosure Agreement (NDA) is not required, does the Student consent to allow their completed dissertation to be held/published by Innopharma/Griffith College? Yes

SECTION 8: RECORDING AND RETENTION OF DISSERTATION VIVA

8.1 Viva Recording

The Dissertation viva will be recorded. This recording may be used to facilitate assessment by Innopharma staff, a third reader if necessary and/or if requested by the external examiner for the Programme. The recording will be held in line with current GDPR guidelines and will not be made publicly available.

SECTION 8: DOCUMENT CHECKLIST

- 8.1 Information letter for participant (Appendix A) Yes
- 8.2 Consent form for participant (Appendix B) Yes
- 8.3 Questions (Appendix C) Yes
- 8.4 Other document(s) - please specify (Appendix D) N/A

I confirm that this application is complete and all required documents are included in the appendix.

For Student:



STUDENT SIGNATURE: f

DATE:



EXPLORING CHALLENGES IN PHARMACIST PRESCRIBING PRACTICES IN DUBLIN: A COMPREHENSIVE INVESTIGATION INTO COMMUNITY PHARMACIST'S PERSPECTIVES AND PUBLIC PERCEPTIONS

Participant Information Letter

I would like to invite you to take part in a research study. Before you decide if you agree to take part you need to understand why the research is being done and what it would involve for you. Please take time to read the following information carefully. Ask questions if anything you read is not clear or if you would like more information. Take time to decide whether or not to take part.

WHO I AM AND WHAT THIS STUDY IS ABOUT

My name is Rahib Pattathil I am pursuing my MSc Pharmaceutical Business and Technology at Griffith college Dublin, Ireland. I am conducting this study as part of my research project during my final postgraduate term. I am undertaking this study to evaluate Exploring Challenges in Pharmacist Prescribing Practices in Dublin: A Comprehensive Investigation into Community Pharmacist's Perspectives and Public Perceptions. The study will collect some data through interviews with community pharmacists and will be conducted through the online Zoom platform. A set of questions will be asked during the interview regarding prescribing practices of pharmacist. The interview will be recorded for the further analysis of data.

WHAT WOULD TAKING PART INVOLVE?

The study will be carried out as an interview conducted through the Zoom platform. If you agree to take part in the interview, its timing will be according to your availability. During the interview questions will be asked regarding the impact of prescribing practices in the Irish health sector. It will take circa 30 minutes to complete. The interview will be recorded for further analysis. The recordings will be highly confidential and only accessible to the authorised person.

WHY HAVE YOU BEEN INVITED TO TAKE PART?

I have requested you to take part in this study because you are working in the field of Community pharmacies. You have good knowledge and be well informed about the impact of implementation of the prescribing practices and challenges faced by community pharmacists .

DO YOU HAVE TO TAKE PART?

Your participation in this study is completely voluntary and you have the right to refuse to participate and refuse to answer any question. You can withdraw at any time without any consequence whatsoever. If you need to withdraw from the study at any stage, please contact the researcher phone number +353892623223 / email id : rahib.pattathil@student.griffith.ie

WHAT ARE THE POSSIBLE RISKS AND BENEFITS OF TAKING PART?

There will be no significant risks of harm, risks to confidentiality and psychological risk. The benefit will be that you will contribute to research on this important topic.

WILL TAKING PART BE CONFIDENTIAL?

The confidentiality and anonymity of all participants and any individuals mentioned will be upheld. The name and whereabouts of participants will not be disclosed. The data can only be accessed by the researcher. During the course of conducting the research, non-anonymized information, such as consent forms and audio recordings, will be collected and retained.

HOW WILL INFORMATION YOU PROVIDE BE STORED AND PROTECTED?

Signed consent forms and original audio recordings or transcripts of them will be retained in Griffith college Dublin, Ireland until after my degree has been conferred. A transcript of interviews in which all identifying information has been removed will be retained for a further two years after this. Under freedom of information legalisation, you are entitled to access the information you have provided at any time.

WHAT WILL HAPPEN TO THE RESULTS OF THE STUDY?

Research in this area is limited to the dissertation only. All dissertation research projects and their content will be made accessible in the Griffith College Library. It could be published in e-journals or repositories online, but, the details of participants will be kept anonymous.

WHO SHOULD YOU CONTACT FOR FURTHER INFORMATION?

Researcher details: Rahib Pattathil

Griffith College, Dublin, Ireland

Contact number - +353 892623223

Contact mail – rahib.paatathil@student.griffith.ie

Consent Form

Exploring Challenges in Pharmacist Prescribing Practices in Dublin: A Comprehensive Investigation into Community Pharmacist's Perspectives and Public Perceptions

I voluntarily agree to participate in this research study.

- I understand that even if I agree to participate now, I can withdraw at any time or refuse to answer any question without any consequences of any kind.
- I understand that I can withdraw permission to use data from my interview within two weeks after the interview, in which case the material will be deleted.
- I have had the purpose and nature of the study explained to me in writing and I have had the opportunity to ask questions about the study.
- I understand that participation involves conducting interviews on the Zoom platform.
- I understand that I will not benefit directly from participating in this research
- I understand that all information I provide for this study will be treated confidentially
- I understand that in any report on the results of this research my identity will remain anonymous. This will be done by changing my name and disguising any details of my interview which may reveal my identity or the identity of people I speak about.
- I agree to my interview being audio-recorded.
- I understand that disguised extracts from my interview may be quoted in the dissertation, viva, and in future conference presentations, published papers, ejournals, library.
- If data is coming from within one company or specifically pertaining to the one company the researcher will adhere to all of the codes of conduct and employee confidentiality requirements of the company and there is no expectation to breach these in this research. A signed confidentiality statement between researcher and company can be agreed and signed if deemed necessary.
- I understand that if I inform the researcher that myself or someone else is at risk of harm, they may have to report this to the relevant authorities - they will discuss this with me first but may be required to report with or without my permission
- I understand that a signed consent forms and original audio recordings will be retained in personal computers of researcher and will be submitted to Griffith Moodle for evaluation until final evaluation in May 2024 then 2 years after that for publishing.
- I understand that a transcript of my interview in which all identifying information has been removed will be retained *for 2 years after May 2024*.
- I understand that under freedom of information legalisation I am entitled to access the information I have provided at any time while it is in storage as specified above.

- I understand that I am free to contact any of the people involved in the research to seek further clarification and information.

Researcher details: Rahib Pattathil
Griffith College, Dublin, Ireland
Contact number - +353 892623223
Contact mail – Rahib.pattathil@student.griffith.ie,rahibrsb@gmail.com

Signature of participant

[Full Name – Printed]

Signature of research participant

_____Date

Signature of researcher

I believe the participant is giving informed consent to participate in this study



_____Date

Signature of researcher



APPENDIX C: QUESTIONS

The following is an example of how questions should be presented:

For this research focusing on the knowledge, attitude, and practices (KAP) related to prescribing practices among Dublin residents, and incorporating community pharmacists' perspectives, study might consider structuring questions as follows:

Ethical Considerations:

- A. "I sent you a Participant Information Letter/Email last week. Have you had the chance to review it?"
- B. "Do you fully understand your rights and the details outlined in the Informed Consent Form?"
- C. "Are you willing to sign the consent form to participate in this interview?"

For Community Pharmacists:

1. Could you share your experiences and role regarding prescribing practices in the pharmacy setting, particularly any initiatives taken to improve these practices?"
2. "How do you conceptualize prescribing practices within a community pharmacy, and what do you identify as the key components and challenges in enhancing these practices?"
3. "What specific interventions or changes do you believe could significantly benefit prescribing practices, and what challenges might arise in implementing these improvements?"
4. "Reflecting on your experiences, which prescribing practice areas have shown notable improvement through certain interventions or tools, and how could these be further optimized?"

For Dublin Residents:

1. "Have you ever received a prescription from a pharmacist? Could you share your experience?"
2. "What is your understanding of the role of pharmacists in prescribing medications?"
3. "How do you perceive the safety and effectiveness of medications prescribed by pharmacists?"
4. "Would you be comfortable consulting a pharmacist for prescriptions for minor ailments? Why or why not?"
5. "How often do you seek medical advice or prescriptions from pharmacists compared to other healthcare providers?"
6. "Can you share any positive or negative experiences you've had with pharmacist-prescribed medications?"
7. "Do you believe there are enough information and awareness about the prescribing authorities of pharmacists among the public?"
8. "In your opinion, what could be done to improve the prescribing practices of pharmacists to better serve the community?"

These questions aim to elicit detailed insights into the prescribing practices from the perspectives of both the service providers (pharmacists) and the recipients (residents), addressing the key areas of knowledge, attitude, and practices related to the topic.

APPENDIX D, etc.: OTHER DOCUMENTS

Interview Invite

Dear <recipient>,

I would like to invite you to take part in a research project that I am conducting into “Exploring Challenges and Opportunities in Pharmacist Prescribing Practices in Dublin: A Comprehensive Investigation into Community Pharmacist’s Perspectives and Public Perceptions”

. Please see below for further details on myself, the research and what the interview would entail.

Me: My name is Rahib Pattathil. I am a full-time master's student with Griffith College Dublin studying Pharmaceutical Business and Technology. As part of my degree I am required to conduct primary research on an area related to the Life Sciences.

My research: My research is based on understanding challenges of implementing prescribing practices of community pharmacists.

When: The 20-minute interview can take place any time that suits you between now and the 2nd week of May.

Would you like to be a part of my study?

Once again, I would be extremely grateful if you could take part in this interview for educational purposes. Please let me know if this would be possible and we can arrange a date.

Many thanks and kind regards,

Rahib Pattathil

Questionnaire

Dublin Residents Survey on Pharmacist Prescribing Practices

Welcome

Hello! My name is Rahib Pattathil, and I am currently undertaking a research project as part of my studies in Pharmaceutical Business Management and Technology at Griffith College Dublin and my email id is: rahib.pattathil@student.griffith.ie. The focus of my research is to explore the challenges and opportunities associated with pharmacist prescribing practices in Dublin.

Purpose of the Study

This study aims to gain a deeper understanding of both community pharmacists' perspectives and the public's perceptions regarding the role of pharmacists in prescribing medications. We are interested in exploring awareness levels, attitudes towards pharmacist prescribing, experiences with pharmacist-led prescriptions, and suggestions for improving this practice in Dublin.

Survey Overview

The following survey is designed to collect your views and experiences related to pharmacist prescribing in Dublin. Your participation will contribute valuable insights into how pharmacist prescribing can be optimized to enhance healthcare delivery and patient care within the community.

- **Estimated Completion Time:** The survey will take approximately 5-10 minutes to complete.
- **Confidentiality:** Please rest assured that all responses will be kept strictly anonymous and confidential. No personal information will be collected that can identify you.
- **Voluntary Participation:** Residents of Dublin who have been living there for 6 months or more are eligible to participate in this survey. Participation is entirely voluntary, and you have the right to withdraw at any point without any consequences

Sections Included in the Survey

1. **Demographics:** Questions about your age, gender, and area of residence to understand the diversity of perspectives.
2. **Knowledge:** Your awareness and sources of information regarding pharmacist prescribing practices.
3. **Attitudes:** Your feelings towards pharmacist prescribing, using a Likert scale for quantifiable insights.
4. **Practices:** Your personal experiences, if any, with pharmacist prescriptions.
5. **Perceptions of Impact:** Your views on the effects of pharmacist prescribing on healthcare and patient care.
6. **General Feedback:** Any suggestions you have for improving pharmacist prescribing practices.

- Do you consent to your responses being used for research purposes? Participation is voluntary, and you may withdraw at any time. Your responses will be confidential and used solely for the purpose of this study.?

Demographics

- **Age:**
- **Gender (Male,Female,prefer not to say)**
- **Are you Dublin resident (Yes/No)**
- Area of Dublin you reside in:

Knowledge About Pharmacist Prescribing Practices In Dublin

- From where did you learn about pharmacist prescribing? (Social media,Doctor,Pharmacy,Friends,I don't know)
- Are you aware that pharmacists in some countries can prescribe medications for certain conditions? (Yes/No)
- Can pharmacists prescribe medicine in Dublin? (True/False)

Attitude

- On a scale from 1 (strongly disagree) to 5 (strongly agree), how comfortable are you with pharmacists prescribing medications?
- Do you believe pharmacist prescribing can reduce waiting times for medical consultations? Why or why not? (Yes, this is due to the insufficient number of GPs/doctors in Dublin./ Yes, I'm more comfortable with pharmacists as they possess sufficient knowledge about medications./ No, I don't think they are able to do it and they are not adequately trained.)
- Are there any additional concerns regarding pharmacist prescribing practices in Dublin?

Practices

- Have you ever consulted a pharmacist for medication advice? (YES/NO)
- On a scale from 1 (Below Average) to 5 (Convenient and comfortable), How was your experience with community pharmacists?
- On a scale from 1 (Maybe or No) to 5 (Very likely), How likely are you to consult a pharmacist for a prescription in the future?

Perceptions of Impact

- How do you think pharmacist prescribing affects the healthcare system in Dublin?
- Can pharmacist prescribing improve patient care? (Yes / No / Unsure) Please explain

your answer.

General Feedback

- What improvements, if any, would you suggest for pharmacist prescribing practices in Dublin?
- On a scale of 1 to 10, how many other Dublin residents would agree with your comments?