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Research Article

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Final year pharmacy students' perceptions of prescribing and the support they need in their foundation training year: A questionnaire study

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Abstract:

Background: In January 2021, the General Pharmaceutical Council (GPhC) changed their Standards for the Initial Education and Training of UK pharmacists to allow newly qualified pharmacists (NQPs) to practise as pharmacist independent prescribers (PIPs) upon registration. The MPharm degree now incorporates prescribing into the teaching curriculum, and the first cohort of pharmacy students to have qualified as PIPs under the new GPhC Standards was in July 2026.

Aim: To explore final year pharmacy students' perceptions of prescribing and identify the support required as they train to become prescribers.

Method: Ethical approval was obtained from King's College London (KCL) research ethics committee. A questionnaire was created using Qualtrics that incorporated confidence scales, Likert statements and free-text questions. This was distributed via email to final year pharmacy students (n = 122) between October to November 2024. Quantitative data were analysed using descriptive statistics, and free-text data were analysed using thematic analysis.

Results: The questionnaire had a 46.7% (*n*=57) response rate. Majority (94.4%, *n* = 54) of students felt prescribing would enhance their professional identity. However, 61.8% (*n* = *35*) agreed that prescribing made them feel anxious. Themes derived from free text responses when asked about concerns with PIP included: 'responsibility and pressure', 'fear of mistake and harm', and 'lack of confidence in ability to prescribe'. The most preferred method of monitoring progress required during the foundation training year (FTY) were: 'observations with prescribing supervisors' *(n*= 27*)* and 'patient case discussions' *(n* = 26*).* Confidence data showed

that students felt the most confident about skills that had been developed from early in the MPharm programme.

Conclusion: This study has highlighted that pharmacy students felt the programme taught them relevant skills to be safe and effective prescribers. Concerns were expressed about prescribing, particularly due to insufficient exposure to diagnostic skills. The students felt that enhanced clinical practice exposure in the undergraduate degree and relevant prescribing support and mentorship during their FTY and beyond would be beneficial. Findings from this study will be useful for other pharmacy educators and FTY providers.

Key Words:

Pharmacy independent prescribing, prescribing skills, diagnostic skills, pharmacy education, foundation training year, professional identity, confidence in prescribing.

Background:

With an ever increasing ageing populace **[1]**, and higher risks of chronic diseases **[2]**, there is a growing demand for healthcare services and access to medicines **[3]**. Due to shortage in the medical workforce **[4]** the authority for other healthcare professionals, such as pharmacists and nurses, to prescribe medicines has been introduced in several countries such as USA, UK, Canada and Australia **[5-7]**. Since 2006, non-medical prescribers (NMPs) have been a key feature of the UK healthcare system. Non-medical prescribing gives legal prescribing rights to pharmacists, nurses and other allied healthcare professionals who have completed an accredited educational programme **[7,8]**. Since 2006, UK pharmacists have been able to gain independent prescribing rights by completing an accredited postgraduate qualification **[9]**. On completion, UK

pharmacist independent prescribers (PIPs) can legally prescribe all medicines in any clinical area, without the need to consult a medical prescriber, including unlicensed medicines; exceptions being cocaine, diamorphine, and dipipanone for the treatment of addiction **[10]**. However, in principle, pharmacists must only prescribe within their own scope of practice and clinical competence. The scope of practice would be determined by the pharmacist's education and training, clinical experience, competence and access to appropriate supervision and governance arrangements **[11]**. The PIP would be responsible and accountable for the assessment of patients, whether diagnosed or undiagnosed for a condition, and for clinical decisions about their management including prescribing **[12,13]**.

In January 2021, the General Pharmaceutical Council (GPhC) in Great Britain, introduced new Standards for the Initial Education and Training of Pharmacists **[14]**, the main purpose of which was for pharmacy programmes to prepare students to be prescriber-ready. After completing their degree, students undertake a foundation training year (FTY) during which they must complete 90 hours of supervised prescribing practice time under the supervision of a designated prescribing practitioner (DPP). DPPs must be registered and practising as prescribers and their main role is to provide support and assess the prescribing competence of pharmacy trainees. Successful sign off from the DPP and passing of the GPhC registration exam allows the pharmacy trainee to practice as a PIP **[15]**. Given these recent changes to the education and training of pharmacists, it is important to understand current student perceptions on prescribing and what support they feel they would need to develop their prescribing skills as they move into their FTY and beyond.

Exploration in this area of research has been sparse within the UK, with a distinct lack of understanding of the impact of recent changes to the GPhC Standards for the Initial Education and Training on the confidence of pharmacy students as future prescribers. Whilst there have been studies on views and perceptions of pharmacy students **[16,17,18]** and pharmacists **[19,20]** as well as other stakeholders and healthcare professionals **[19,21,22]** on prescribing since the introduction of NMPs in 2006, little has been published on the exploration of UK pharmacy student perceptions regarding how effectively they feel they are being prepared to become PIPs, post-implementation of changes to the pharmacy curriculum.

Aim:

To explore final year pharmacy students' perceptions of, and confidence in, prescribing, and identify the learning and support they may require on the MPharm programme as well as during their FTY before being registered as a PIPs.

Objectives of the study:

1) To assess final year pharmacy students' perceptions and confidence in prescribing given the changes in the GPhC 2021 Standards for the Initial Education and Training of pharmacists.
2) To identify areas of support for students in relation to prescribing at undergraduate and Foundation Training levels.

Method

The reporting of this study followed the Strengthening the Reporting of Observational studies in Epidemiology (STROBE) guidelines **[23]**. The STROBE checklist is available as a supplementary file.

Questionnaire Development

Data were collected by means of an online self-completed questionnaire built on Qualtrics. The questionnaire consisted of multiple sections, with mostly closed-ended questions using a five-point Likert scale (Strongly Agree, Agree, Neither Agree nor Disagree, Disagree, and Strongly Disagree). The first set of Likert scale questions related to perceptions of the MPharm degree programme (*n* = 3 questions), skills development (*n* = 2 questions), and perceptions on prescribing (*n* = 4 questions). This was followed by a set of confidence questions measured using a five-point scale (1 being not confident at all to 5 being completely confident; *n* = 10 questions). These covered skill sets related to being able to prescribe safely and effectively.

The next set of questions were open questions (*n* = 4 questions) exploring preparation for prescribing during the pharmacy programme, concerns about being a prescriber and what support or training was needed. The final set of questions asked about demographic information (age, gender and ethnicity).

The questionnaire was validated using cognitive interviewing, which has been used in a wide range of healthcare studies to improve questionnaire design **[24]**. Two final year pharmacy students provided written consent to be individually recorded on Microsoft

Teams by the researcher (VP; student researcher) whilst completing the questionnaire using the thinking aloud method. After completing the questionnaire, they were then asked a series of questions about the design, clarity and understanding of the questionnaire. Verbal consent was given for all responses to be audio recorded and the transcripts were analysed to explore any misunderstandings, ambiguities or problems in response options. Any amendments made to the questionnaire were then reviewed by the research team, SB (Lecturer in Clinical Pharmaceutics Education), and AH (Clinical Academic Pharmacist). The full questionnaire and the interview guide are provided as supplementary files.

Questionnaire distribution

Final year students (4th year students at King's College London) were invited to participate in the study via email (sent by AH), WhatsApp (a closed, private channel for fourth year MPharm students; sent by VP) and QR codes during teaching sessions from October to November 2024. These provided a link to the participant information sheet and questionnaire. Reminders were sent to students during this period via the KCL learning platform, KEATS. Consent was indicated by students completing the questionnaire, no individual identifiers were collected at any point in the study. Only the researchers had access to the collected data on Qualtrics.

Quantitative Data analysis

Upon receipt of the completed questionnaires, all responses were coded and entered onto SPSS (IBM Statistical Package for the Social Sciences Statistics for Windows, Version 29.0.1. Armonk, NY) for statistical analysis. Analysis of the data

was largely in the form of descriptive statistics ie, number, frequency, or percentage as appropriate. Microsoft Excel® (version 2504 Build 16.0.18730.20220) 64-bit) was used for graphical representation of the data. Missing responses were excluded from the denominator for each item, so percentages are based on the number of respondents answering that question.

Analysis of open-ended questions was undertaken using thematic analysis in accordance with the methodology used by Braun and Clarke **[25]**, which provided a structured approach to uncovering themes. Briefly, all the responses were read several times and coded before generating themes. Agreement of codes and finalisation of themes were undertaken by VP and AH. In some cases, responses to these questions were converted into numerical data and descriptively presented.

Results

1. Demographics of study participants

The response rate for completion of the questionnaire was 46.7% (*n* = 57). Fifty-four of the 57 participants completed the demographic section of the questionnaire (Table 1). Most of the students were in the 21 to 25 age range (91.2%, *n* = 52), classed themselves as having an Asian background (54.4%, *n* = *31*), and described their gender as female (86%, *n* = 49).

Table 1: Demographic characteristics of study participants (n = 54)



Age		
18-20	1	1.8
21-25	52	91.2
26-30	1	1.8
31+	0	0
Data not provided	3	5.3
Gender		
Male	5	8.8
Female	49	86.0
Non- binary	0	0
Other	0	0
Prefer not to say	0	0
Data not provided	3	5.3
Ethnicity		
White (English, Welsh, Scottish, Northern Irish, Irish, Gypsy, Irish traveller, Roma or Any other White background)	1	1.8
Black/African/Caribbean/Black British (or any other Black, Black British or Caribbean background)	12	21.1
Asian or British Asian (Indian, Pakistani, Bangladeshi, Chinese or Any other Asian background)	31	54.4
Mixed/ Multiple ethnic groups (White and Black Caribbean, White and Black African, White and Asian or Any other Mixed or multiple ethnic backgrounds)	2	3.5
Other ethnic group (Arab, Persian etc.)	6	10.6
Prefer not to say	2	3.5
Data not provided	3	5.3

2. Perceptions of pharmacy teaching in preparation for pharmacy independent prescribing

2.1 Do the students feel they have been prepared adequately as independent prescribers?

Three statements in the questionnaire probed the students' perceptions and views about how effectively they felt they were being prepared to be future PIPs (Figure 1). The majority of students (84.2%, *n* = 48) agreed that the pharmacy programme

taught them to prescribe ethically, safely and effectively, and 73.7% (*n* = 42) and agreed that they felt adequately prepared to take responsibility for prescribing decisions when working within a team. When asked if the pharmacy degree adequately prepared them to become prescribing pharmacists, 59.6% (*n* = 34) agreed it did.

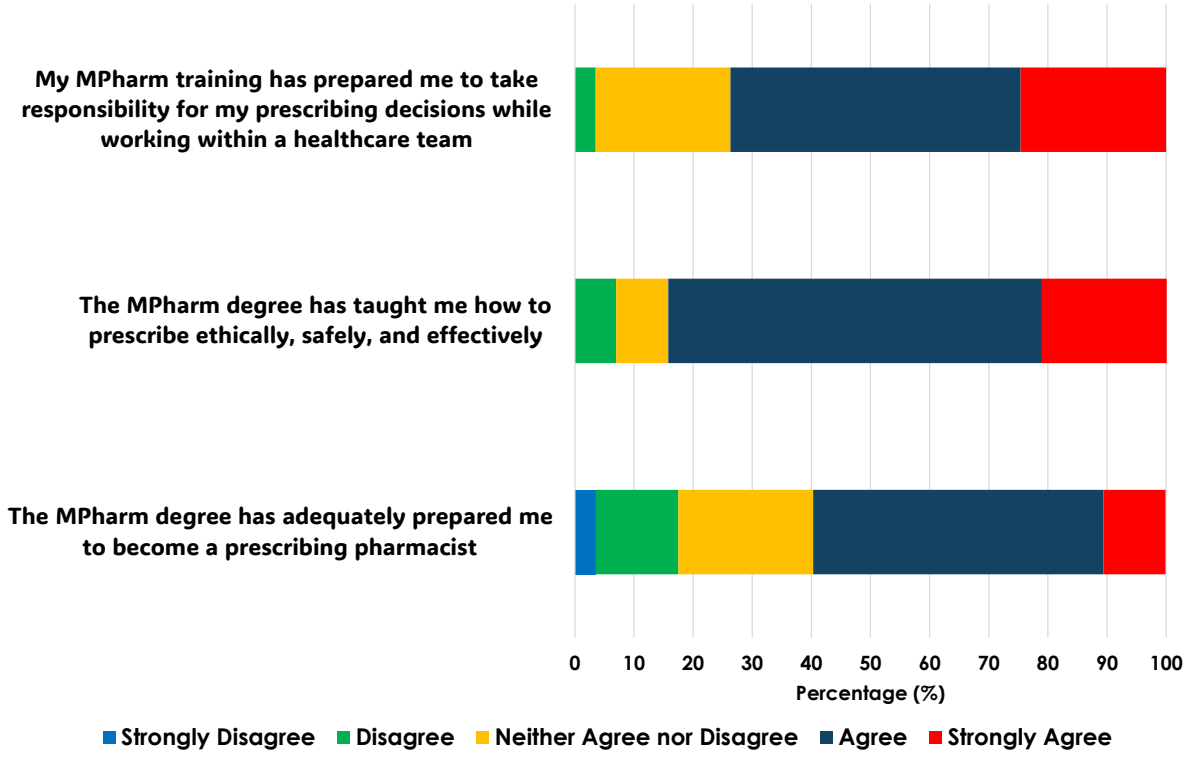


Figure 1: Student perceptions of the pharmacy degree teaching in relation to prescribing (n = 57).

2.2 Development of skills

When asked about views regarding whether the pharmacy programme had adequately developed suitable skills, encompassing communication, inter-professional and clinical decision-making skills to prepare them for the role of PIPs (Figure 2), 80.7% (*n* = 46) of students agreed that the pharmacy degree improved their clinical decision-making skills in prescribing and 84.3% (*n* = 48) agreed it enhanced their communication skills.

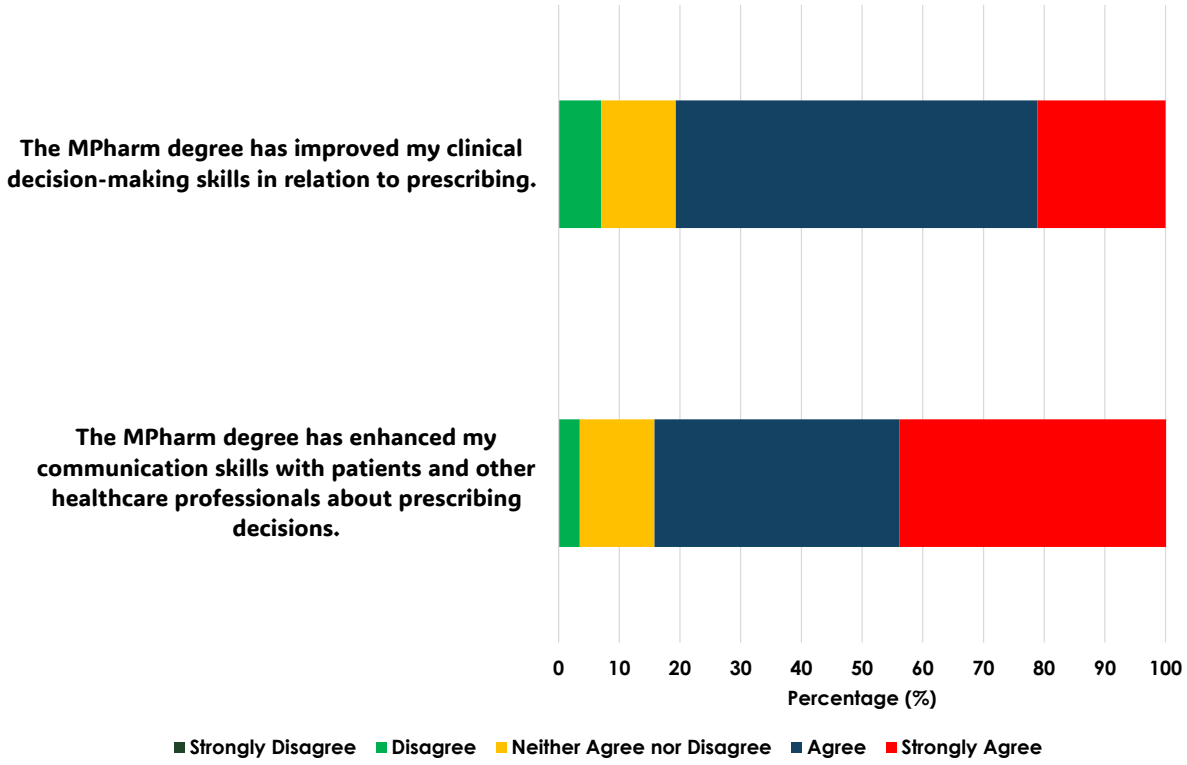


Figure 2: Student perceptions of how well the pharmacy degree has contributed to skills development in relation to prescribing (n=57).

2.3 Preferred methods of teaching

As a free-text question, students were asked, *'Reflecting on your pharmacy degree, what has prepared you the most for PIP?'*. The two most common areas that students mentioned as preparing them most for prescribing were simulated clinical practice (SCP) classes (n = 27) and simulation sessions (n = 26), both collectively providing opportunities for undertaking role play, clinical decision making and physical assessments (figure 3). SCP and simulation classes use techniques aimed at mimicking real-world clinical situations, including consultation skills, clinical reasoning and decision making, physical assessments and teamwork dynamics.

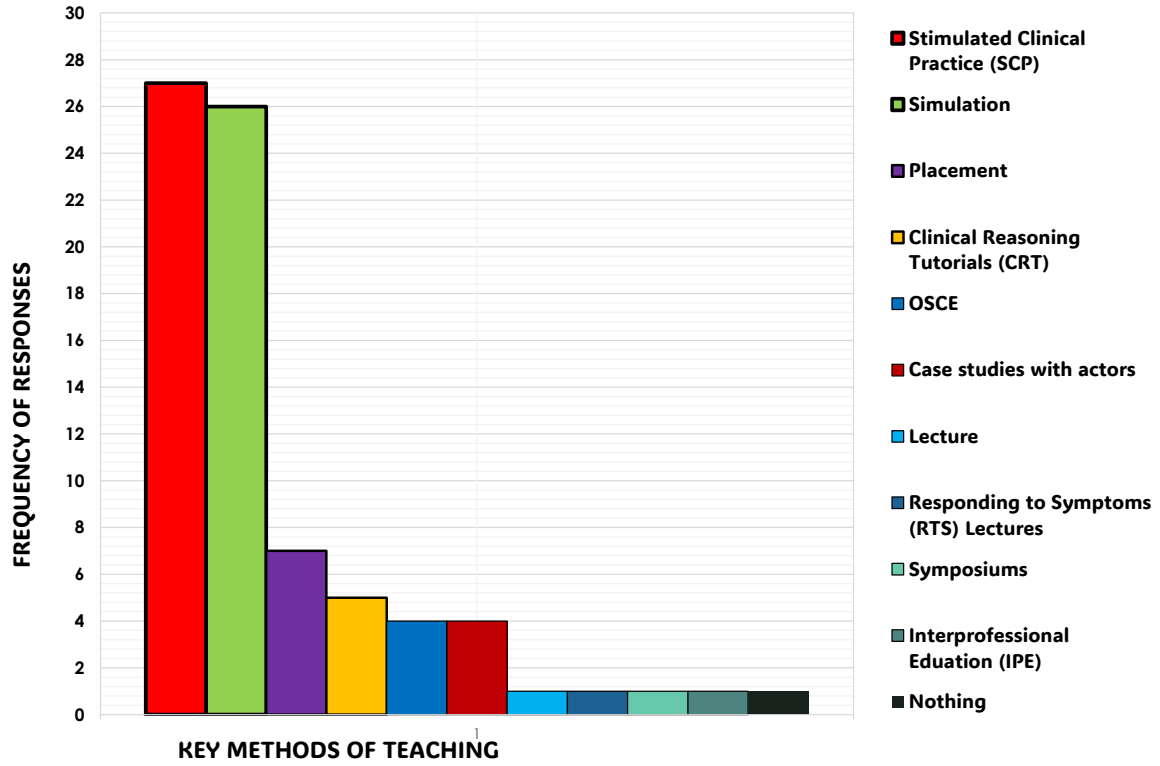


Figure 3: The frequency of responses regarding students' perceptions of the key methods of MPharm teaching that prepared them for independent prescribing.

2.4 Perceptions and views of future improvement in teaching

Students were asked, *'What improvements would you like to see in future MPharm teaching in relation to prescribing?'*.

Themes that emerged from the analysis of the free text responses are shown in Table 2. There was a general feeling from the students that they wanted more prescribing practice whilst on the programme with a focus on diagnostics and physical examinations, more shadowing opportunities with prescribers whilst on placement and clearer guidance around what scope of practice is.

Table 2: Themes and representative quotes from students highlighting the improvements that could be made to the pharmacy degree programme in relation to prescribing

Themes	Representative quotes
More prescribing practice and simulation	*"Increased amounts of prescribing simulations integrated"*
	"More training in relation to prescribing"
Earlier integration of prescribing in the curriculum	*"Include independent prescribing earlier in the course"*
	"Further implementation throughout all the years instead on being focused on 3rd and 4th"
Focus on diagnosis, physical examination and practical application	*"Greater emphasis on diagnosis and what physical examinations need to be done/referred to be able to accurately prescribe medicines"*
	"More emphasis on blood test interpretations"
Structured Placements and Observational Learning	*"Shadowing prescribers and observing real-life prescribing practices"*
	"Have more placements across GP, community and hospital settings"
Case-Based Learning and Scenarios	*"More case-based learning opportunities like care plans and OSCE style classes"*
	"More patient cases to practice prescribing"
More interaction with prescribers and other prescribing students	*"More clinicians to share their experiences when we are doing our case studies"*
	"Prescribing sessions with other prescriber students"
Clearer guidance on the role and scope of prescribing	*"More information on what our 'scope of practice' actually is"*
	"Better knowledge in what exactly is the scope of competence and limits of knowledge as newly qualified prescribers"

3. Future practice as pharmacy independent prescribers

3.1 Perceptions and views of practising as independent prescribers

Perceptions and views were explored of the students' attitudes towards future independent prescribing practice. The majority of students felt that prescribing would

enhance their professional identity as a pharmacist (94.8%, *n* = 54) and 75.5% (*n* = 43) were excited to become prescribing pharmacists (figure 4). No student disagreed with the statement '*I feel excited to become a pharmacist prescriber*', although there were 14 students who selected 'neither agree nor disagree' indicating a neutrality or uncertainty in attitude towards the prospect of PIP.

Despite the positive attitudes, 61.8% (*n* = 35) of students agreed that the responsibility of prescribing made them feel anxious. Students were also asked if they were concerned that prescribing would take too much time away from other responsibilities as a pharmacist. Only 22.9% (*n* = 13) of the students agreed with this statement, with 38.6% (*n* = 22) neither agreeing nor disagreeing.

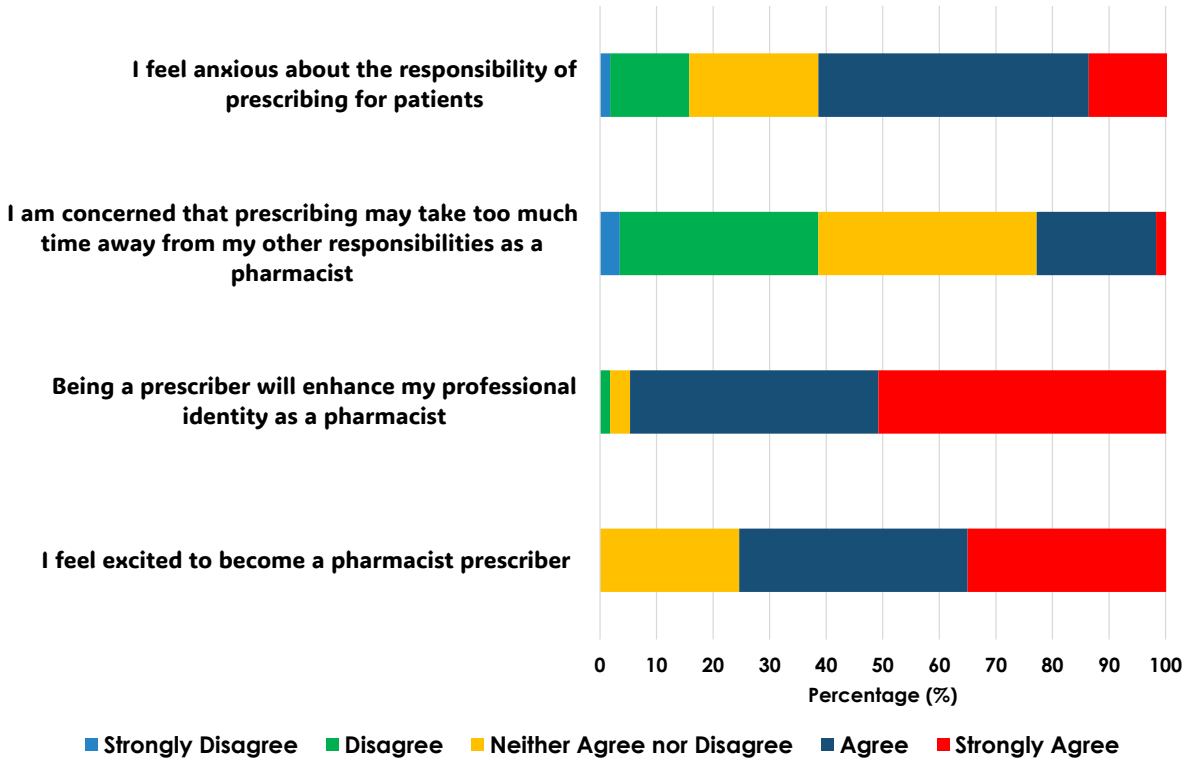


Figure 4 Student perceptions on becoming pharmacist independent prescribers (n = 57)

3.2 Concerns about becoming independent prescribers

Students were asked about any concerns they had regarding becoming a PIP. Themes and the respective quotes are shown in Table 3. Students felt that becoming a prescriber was a big responsibility and they were worried about making mistakes that could harm patients, partly because of feeling unprepared and lacking confidence in their abilities. They were also worried about being fully independent in their decision-making and not having someone to check their work or being asked to prescribe outside of their scope of practice (competency).

Table 3: Themes and representative quotes highlighting concerns about becoming a PIP.

Themes	Representative quotes
Responsibility and pressure	*"I'm worried because I feel like it is a big responsibility"*
	"Making decisions in high-pressure situations"
Fear of mistake and harm	*"Making mistakes and harming patients"*
	"Prescribing something inappropriate that could cause the patient harm"
Lack of support	*"Who will help me and correct me if I'm wrong?"*
	"No one to double-check your decision"
Lack of confidence in ability to prescribe	*"I don't think I will have the confidence in myself as we have not built a strong foundation at university"*
	"Not confident yet to prescribe"
Lack of training and knowledge	*"We haven't covered everything to do with prescribing so I'm not sure how it will look like in practice as we have only done very briefly about conditions"*
	"The lack of diagnosing skill"
Unclear scope of practice	*"I feel as though there are uncertainties in the scope as independent prescribers and their limits"*
	"The concern I have is understanding what we can prescribe at the time of completing the training year"
Pressure of being a prescriber outside of scope	*"Prescribing in situations which are out of your scope but still you're expected to prescribe"*
	"Being expected to prescribe things not within my competence or medications I am not confident about"

3.3 *Preferences on how progress should be monitored during foundation training year*

Students were asked, '*What kind of methods would you find most helpful in tracking your progress as a prescriber during your FTY?*" (Figure 5). This part of the questionnaire involved allowing the students to select more than one option if needed. Observations with prescribing supervisors received the highest number of responses (n = 53), followed by Patient Case Discussions (n = 44). The 'Other' option had one response, but no preferred method was specified by the student.

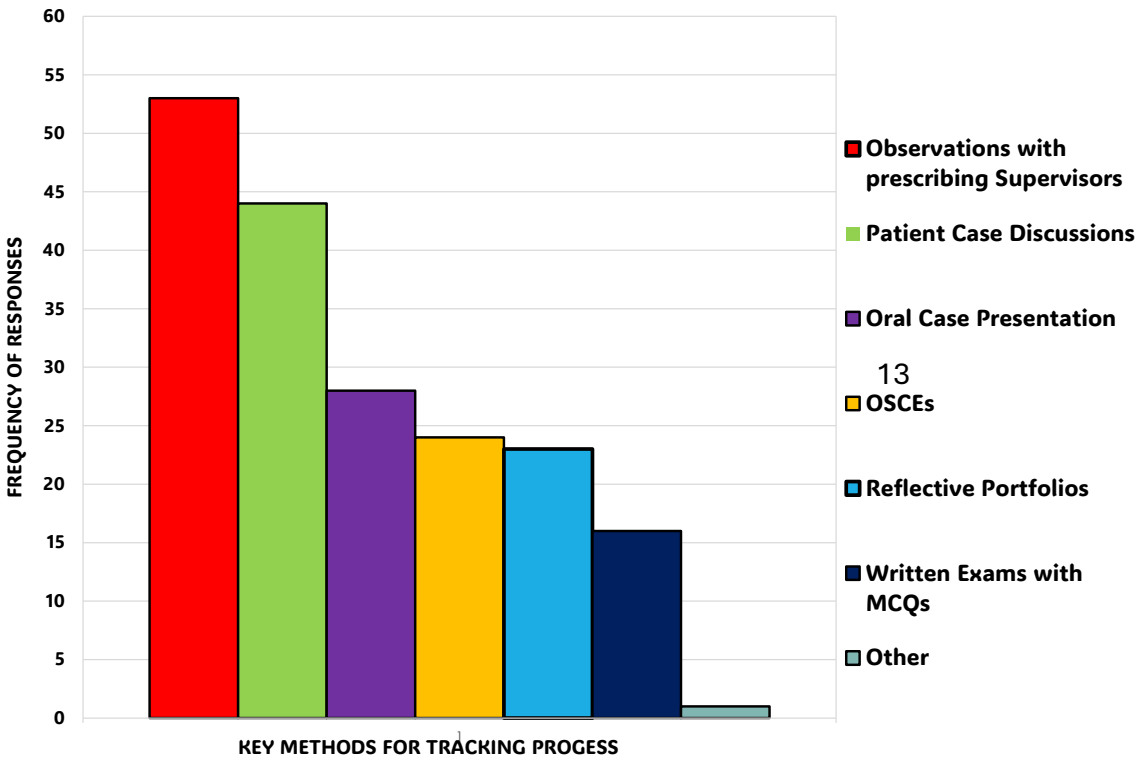


Figure 5: Frequency of responses regarding key methods that students find helpful to track progress

4. Do the students feel confident about being independent prescribers?

Using confidence scales, students indicated the least confidence in 'performing physical examinations to determine the most appropriate course of action for the patient' (mean = 2.98, SD = ±0.96) and 'developing an effective monitoring plan for patients after prescribing a medication' (mean = 3.6, SD = ±0.83) (Figure 6). Students felt most confident in 'taking and documenting a medical history (including medication histories, allergies and intolerances' (mean = 4.51, SD = ±0.70) and 'identifying and addressing patients' adherence issues' (mean = 4.18, SD = ±0.70).

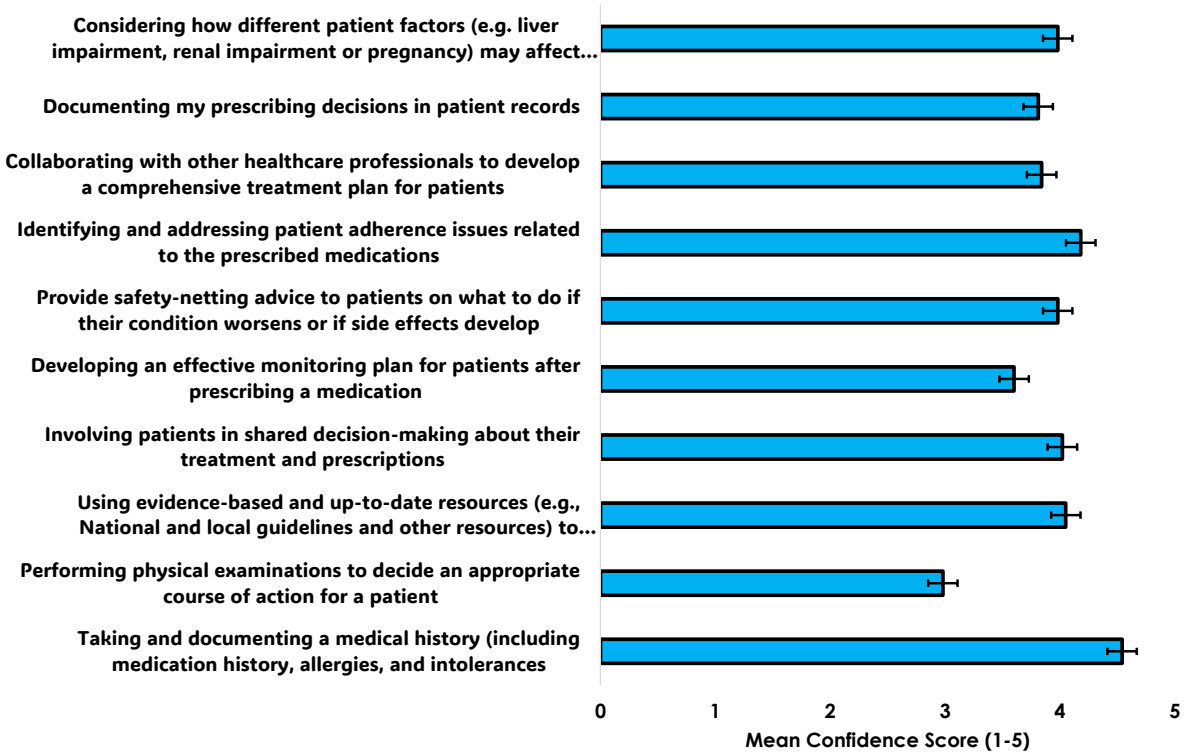


Figure 6: The overall mean confidence score for all students (n=57, ±standard error bars) for each statement, rated from 1 (not very confident) to 5 (very confident).

Discussion

The primary purpose of this study was to gain insight and explore final year pharmacy students' perceptions of, and confidence in, prescribing, and identify the learning and support they may require on the MPharm programme to prepare them for the transition to practice as PIPs. To date, published studies evaluating perceptions and opinions of pharmacy students and pre-registration (now FTY) pharmacists on prescribing has been undertaken prior to the changes in the GPhC Standards for the Initial Education and Training of Pharmacists that has led to all pharmacy students being trained to become prescribers **[16,18,26,27]**.

Perceptions and views of support provided during the pharmacy degree in preparation for prescribing.

A study undertaken by Khan *et al* in 2019 (before the new GPhC Standards were published) evaluated the views and perceptions of MPharm students on pharmacist prescribing **[18]**. It was noted that the undergraduate MPharm programme lacked practical clinical skills development and relied on theoretical knowledge and role play only, to teach these skills. Since the introduction of the new GPhC Standards, the biggest changes introduced in the MPharm programme in the UK have been the incorporation of diagnostic and physical assessment skills, and an increase in experiential learning and clinical placements, giving pharmacy students opportunities to build and practice their 'learned' clinical skills in a 'real-life' environment. In our study, the majority of students agreed that the new pharmacy programme taught them to prescribe ethically and safely, gave them good communication skills to effectively deal with patients and other healthcare professionals about prescribing decisions. They also felt adequately

prepared to take responsibility for their prescribing decisions when working within a multi-disciplinary healthcare team. Being safe prescribers, in terms of knowledge of disease therapeutics, clinical decision-making skills, treatment monitoring, follow-up of prescribing decisions, and having effective communication skills, have been recognised as key to being competent and effective prescribers **[28,29]**. Prescribing skills in the pharmacy programme at King's are taught to students using a variety of pedagogical strategies and techniques, including didactic lectures, SCP classes and simulation workshops, and experiential learning. Korayem *et al*. asserts that simulation-based education complements traditional teaching modalities, and is crucial for developing teamwork, decision-making and communication skills **[30]**. Indeed, students in our study felt the simulation-based sessions prepared them the most for prescribing.

Students' concerns, fears and confidence of independent prescribing

Despite most students agreeing that the MPharm programme had taught them how to prescribe, improve their clinical decision-making skills and take on prescribing responsibility within a team, approximately half of the students felt that the programme did not adequately prepare them to be prescribers. This is an interesting juxtaposition in student perceptions about what they are taught versus whether they feel prepared. There are no studies that can be found in the literature that have evaluated the prescribing-readiness of pharmacy students after changes made by the GPhC in 2021. However, the outcomes from this study can be

compared with other exploratory studies in related healthcare professions. Geoghegan *et al*. explored the views of newly qualified doctors in Ireland on prescribing preparedness **[31]**. When the medical students were asked for suggestions on how to improve prescribing preparedness, one of the emergent themes was more teaching in prescribing. To address these issues, Geoghegan *et al*. recommended strategies such as normalising errors as part of the medical educational learning process, providing adequate training in real-life settings and more encouraging feedback from supervisors (rather than harsh comments) **[31]**. These measures were deemed helpful to alleviate fears and better prepare the medical students for prescribing.

The students in this study did indicate the need for more prescribing practice and earlier integration of prescribing into the curriculum - students preferred if prescribing was integrated into each topic throughout the four teaching years rather than being taught in isolated sessions in the fourth year alone - and more structured placements and observational learning as improvements to the programme to prepare them as prescribers.

Most students in our study felt excited about becoming prescribers and that this would reinforce their professional identity as pharmacists. The reasons for the latter finding were not explored; however, this may suggest that they felt that pharmacist prescribers are less recognised in practice, and that *all* pharmacists being able to prescribe is a positive professional development that would benefit patients.

Despite student excitement about becoming prescribers, findings from our study showed that students expressed concerns about increased responsibility and pressure (especially without supervision from others in the team), fear of making mistakes and causing harm, and having an unclear scope of practice. Charrois *et al*, reported that Canadian and Australian pharmacy students also expressed concerns around increased responsibility of patient care, fear of making decisions regarding a patient's care, particularly when diagnosing, and the ambiguity of the prescriber role in practice **[16].** Solutions proposed to alleviate these concerns for students during their time in education was to have more PIP role models as teacher practitioners with advanced clinical and prescribing skills and promoting patient-centred care thereby removing focus away from the traditional pharmacist roles of being 'product-centred'. A further recommendation was to increase inter-professional education to promote teamwork and interdisciplinary connections between students from different healthcare professions. The aforementioned pedagogical methods have already been incorporated into the King's MPharm program with the objective of increasing pharmacy students' competency and confidence in prescribing.

Students in this study expressed lack of confidence in specific areas related to prescribing, namely physical assessments and creating plans for monitoring. Woit *et al*, in a cross-sectional study, identified factors that impacted the confidence in prescribing of pharmacy and medical students in a Canadian university **[17]**. They found that education and clinical experience improved confidence, and lack of experience in certain therapeutic areas and the feeling that additional information was required to make a prescribing decision, decreased confidence. Zhou *et al*, found that

one of the main barriers faced by prescribing pharmacists in the UK related to perceptions of inadequate training regarding diagnostic knowledge and skills **[32]**. Whilst new pharmacy programmes (including at King's) have introduced more diagnostic and physical examination skills, it is acknowledged that more practice in this area within the course and on placements would be beneficial.

The literature findings discussed above suggest that students' lack of prescribing-confidence is due to feelings that they have limited 'real-life' experience despite acknowledging that they have developed the relevant knowledge and skills. These outcomes align with the findings in our study and therefore based on the collective findings from all studies mentioned, including our own, we suggest that more opportunities need to be provided to apply prescribing knowledge and skills in real-life settings with supportive supervision and structured feedback (more prescribing practice and structured placements including observational learning) to develop confidence alongside prescribing competence.

It should be noted that caution has been applied to the interpretation of student perceptions regarding fears and anxiety about practising as PIPs, given that this cohort were the first to be taught the new prescribing curriculum and have no direct comparison of their perception of future prescribing roles with previous students who did not qualify as PIPs.

Perceptions and views of support and training required during the foundation training year

At the time of this study, plans for the content of the FTY and scope of practice were uncertain for all involved, which would have impacted student responses to the questionnaire. In our study, students thought they would benefit from one-to-one monitoring and patient case discussions as key methods of tracking their progress during their FTY, and that conventional types of clinical assessments such as OSCEs and summative exams were not as favoured. Indeed, other published studies have emphasised the benefits of case-based learning as educational interventions that can improve prescribing competency **[34,35,36]**, and this type of learning is also used in practice for trainee pharmacists. Currently in the FTY, trainees have a designated supervisor who supports them throughout the year, and a DPP who supports them with their 90 hours of prescribing practice. Trainees will be supervised and gain their prescribing competences via their DPP. Cased based discussions are one of the several workplace-based assessments that the trainees will need to undertake to demonstrate their competencies, along with the need to complete an e-portfolio. Studies have highlighted the importance of support provided by educational supervisors to address learning and support needs in the early years of training and practice **[37,38]**. Thus, in the context of our findings that show a lack of confidence in prescribing, DPP supervision should address the concerns reported by the students in this study, something they would have been uncertain about at the time of undertaking the study.

Students in this study also expressed a lack of clarity in their scope of practice (range of services and activities that a qualified professional is trained and competently able to perform) once they completed their FTY. In the context of a trainee prescriber, this would be a 'nominated prescribing area' which gives a setting in which to demonstrate the generic skills of a prescriber **[15]**. This is not to

restrict scope of practice but to provide focus to trainees for development of transferrable prescribing skills **[15]**. Again, working with the DPP should support students in this regard. However, further work will be required to determine how well the trainees feel supported by their DPP, and what additional training the pharmacy course needs to provide.

Study Limitations

Limitations of this study include a 46.7% response rate. Although this is a higher response rate compared to other questionnaire-based studies, increased participation would have allowed for wider views and statistical analysis. In addition, the views only belonged to students from one university, limiting generalisation to pharmacy students across the UK as teaching methods and teaching resources vary across different Schools of Pharmacy. Furthermore, confounding factors that could have affected opinion, such as gender, background, media, and previous experience, was not accounted for or explored. Only two participants took part in the cognitive interviewing, however, this method involved in-depth discussions which provided confidence in the appropriateness of the final questionnaire.

Conclusion

This study has highlighted that most students felt that the pharmacy programme they undertook was able to give them the skills needed to prepare them as prescribers and give them confidence in certain areas, but that they had concerns about their future practise as prescribers, especially their scope of practice.

Particular areas identified as needing further support were diagnostic and physical assessment skills. Whilst these skills have been incorporated within redesigned pharmacy programmes, the students in this study were transitioned from the previous GPhC Education and Training Standards to the new GPhC Standards, which has incorporated prescribing. Thus, it is understandable that there are some concerns and fears about their training and confidence, which will be interesting to follow up on with students who have started from year 1 of the new programme.

For the students in this study, it is important to note that whatever concerns were felt about their training and confidence as they completed their MPharm programme may have been addressed during their FTY. The support provided by the designated supervisor and DPP is thus important in ensuring a confident and skilled prescribing workforce. In future it would be beneficial for pharmacy programme providers to liaise with those in charge of the FTY, the training providers and DPPs. This is an interesting time in the UK and over the next few years it will be important to examine how student perceptions about their training and career as prescribers will change.

Declarations

Ethics approval and consent to participate

A Research Ethics Minimal Risk Self-Registration form was submitted and approved (Ref: MRAAA-23/24-44/6) by King's College London (KCL) Research Ethics Committee. All research methodologies used in this study were carried out in accordance with relevant guidelines and regulations.

Informed consent was obtained from all participants involved in this study.

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None

Data Availability

The full dataset gathered for the study is available from the corresponding author upon reasonable request.

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Authors' Information

AH is the academic lead for the study and contributed to data analysis.

VP undertook data collection and analysis.

NP contributed to the review and editing of the manuscript.

SB prepared the manuscript for publication and is the corresponding author.

Consent for publication

Not applicable

Competing interests

The authors declare they have no competing interests.

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