

A qualitative assessment of an education programme for advanced pharmacy practice

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Abstract

Objectives: To understand graduates' perceptions about an advanced education programme for pharmacist practitioners (MSc. in Advanced Pharmacy Practice).

Methods: A purposive sample was chosen and participants were contacted by email. The inclusion criteria were pharmacists of any background who had graduated from the Programme. A semi-structured interview was conducted and a matrix coding approach was used for data analysis.

Results: Most of the participants were working in clinical environments before enrolling in the Programme. Data revealed similar levels of impact from graduates with different years of practice and specialisations.

Conclusion: This study concluded the Programme has a positive impact on career progression and was recognised by candidates for the opportunities and flexibility to different sectors, job roles and experiences. Similarly, graduates indicated they were able to apply their competency development for greater benefit in the workplace. Therefore, the programme appears to be fulfilling its objective to progress advanced practice.

Keywords: *Advanced Practice Framework, APF, MSc in Advanced Pharmacy Practice, Competency Development, Advanced Practice*

Introduction

The concept of professional development exists to ensure pharmacy can meet patients' future health needs and make the necessary changes in practice, to build on patient-pharmacist trust and ultimately improve patient care. It also guarantees the profession is recognised by other healthcare professionals and allows to better review developmental needs (Rivers, 2013a). Moreover, professional recognition is viewed as providing support, acknowledgement and confidence for professional development (Rivers, 2013b).

Historically, there were no structured career stages for the pharmaceutical workforce; there were no clear links with National Health Service priorities, structured workforce training or any assured competency progression framework. Hence, the necessity of adopting a competency-based system in order to ensure a credible means of assessing and accrediting practitioner competence arose (Davies *et al.*, 2002).

Built on previous work (Davies *et al.*, 2002; Obiols Albinana *et al.*, 2005), a competency development framework aimed at assessing pharmacists' practice advancement was initially developed in 2004 (Royal Pharmaceutical Society [RPS], 2013a), following a government white paper (Department of Health, 2005) - the 'Advanced to Consultant Level Framework' (ACLF)

(Competency Development & Evaluation Group, 2009). This framework was later refined and updated to the Advanced Practice Framework (APF), by the RPS, (RPS, 2013b). The APF aimed to create a competency-based structure for assessing a pharmacist's current level of practice and future professional developmental needs (RPS, 2013b), as well as being used as a basis for a nation-wide professional recognition system. This framework has been subsequently adapted for use in Australia in 2015 (Jackson *et al.*, 2015) with ongoing work in other countries.

In 2014, an International Pharmaceutical Federation (FIP) report highlighted a trend of implementation of advanced level attributes across 66 sampled countries (Bruno & Bates, 2014) linked with emerging complex roles of pharmacists, the development of more patient facing roles, and the growth of clinical pharmacy (Galbraith, Bruno & Bates, 2015). The same report presented a study which found that 50 percent of these countries reported no additional regulatory or educational requirements to maintain registration once it was achieved. Moreover, most of the countries used a credit system and a third of them referred a portfolio type system (Bruno & Bates, 2014).

University College London (UCL) offers an innovative programme, the MSc. in Advanced Pharmacy Practice

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(MScAPP) (Innes & Bates, 2015), which was developed to support pharmacists towards being advanced practitioners. This is accomplished through development of their pharmacy practice in the six clusters of the APF: Expert Professional Practice; Collaborative Working Relationships; Leadership; Management; Education, Training & Development; and Research & Evaluation (RPS, 2013a). The MScAPP programme (Programme) aims to underpin advanced practice, inspire continuing professional development (CPD) and to subsequently support workplace development.

Study Aim

This study aimed to explore the general perceptions of UCL's MScAPP graduates about the APF usefulness and, more specifically, how the Programme supports developmental progress towards an advanced practice level, and to describe the added benefits of such a targeted programme of learning development.

Methods

Data Collection

As the project's purpose was merely to collect perceptions from the graduates of the Programme, as an educational evaluation, no formal ethics approval was required. Nonetheless, the interview objectives and procedures were clarified and assurance was given on participants' anonymity and data confidentiality.

A purposive sample was chosen (Smith, 2010), as it was considered the most appropriate for assuring study reliability. Potential participants received an invitation letter by email for an interview session. The inclusion criteria were pharmacists of any background who graduated from the Programme and that responded to the invitation email.

In regard to validity of data, the interview schedule, although semi-structured in order to standardise the interview agenda, used open, non-leading questions to allow participants to fully express their opinions on a specific topic. The interview schedule focused on gathering data on demographic variables, general motivation and perceptions about the programme, as well as learning experience and impact on professional development and workplace. The development of this tool followed a deductive approach and was guided by the 6 clusters comprising the APF. Whenever the interviewee was confused about the questions, some prompts were already designed, as well as some probes when the answers were vague. The probes used were always non-leading, for example, "Can you provide examples?" or "What did you mean by that?"

Individual interviews were conducted during March and April 2016 and were either in-person or using virtual video conferencing software. The same interviewer conducted all interviews. Each interview was conducted in a similar fashion, using a systematic way of data

collection, analysis and interpretation, reducing the sources of error and bias. Interviews lasted between 35 to 50 minutes and were recorded with participant consent. Recordings were deleted following transcription.

Data Analysis

Interviews were later manually transcribed, using the Transcribe® online software. The transcriptions were imported into the software QSR NVivo 11®, which was used as a system to organise and retrieve data.

A matrix coding approach (Miles & Huberman, 1994) was used for data analysis. Data regarding the opinions on the Programme were submitted to a heuristic process of coding and organised according to the obtained primary codes (Motivation/expectations, Learning experience and Workplace). Quotable examples for the secondary codes were found independently from the order in which the questions were placed, assuring a free search into the participants' responses. The weighting column relates both the strength given by respondents and how often the node description was pointed out by the participants.

To understand further the patterns in the data, a matrix coding approach was used (Miles & Huberman, 1994). Of the demographic data collated in the questionnaire, two were used as independent variables: years of practice since MScAPP graduation (Table II) and professional roles before enrolling on the Programme (Table III). These variables were chosen because of their relevance to understand if the programme had a positive impact on short-term career progression and if the programme is adaptable to pharmacists with different specialisations or service delivery roles. The chosen dependent variables concerned current role, RPS Faculty engagement and general workplace representations.

Concerning the perceptions on the APF, data were submitted to an iterative process of thematic grouping and displayed according to different obtained ideas.

Results

Representations on the MSc in Advanced Pharmacy Practice

From a total of 15 participants, 14 were female, with a mean age of 40 (range 31-59) years old. The average years of practice before enrolling on the programme was 18 (range 8-35). Concerning the specialisations of participants, 14 were working in a clinical role and one in academic setting.

As a structured interview schedule was used, all nodes (*i.e.*, codes) obtained appeared following a specific question. Study participants displayed their perceptions about the Programme and the APF. This paper presents the proposed primary and secondary codes, as well as the respective quotable examples (Table I) for the graduates' perceptions of the Programme. To illustrate secondary codes, some transcribed participant's quotations are provided (Q1).

Table I: Nodes (code) table with quotable examples and respective weighting

<i>Primary nodes</i>	<i>Secondary nodes</i>	<i>Quotable examples</i>	<i>Weighting</i>
Node A - Motivation/Expectations		Obtain a post-graduation qualification	*
		Do something careerwise	**
		Be part of an innovative programme	*
		Obtain new skills	***
		Pursue personal development	*
Node B - Learning experience	Node B.1 - Value	Opportunities	**
		Networking with colleagues/speakers	***
		Acquired skills/changes in practice	***
		Flexibility to different sectors	**
		High quality teaching	*
	Node B.2 - Challenges	Managing time	***
		Finding a research question	**
		Writing the assignments	**
		Putting the portfolio together	*
		Travelling to London	*
Node C - Workplace	Node C.1 - Impact	Receiving support from the workplace	*
		Taking new roles	***
		Being an example to the juniors	*
		Inspiring/Supporting colleagues	*
		Benefiting the trust	***
	Node C.2 - Opportunities	Working better in teams	*
		Professional practice enhancement	**
		Taking new roles	***
		Developing research projects	***
		Running sessions on how to develop a portfolio	*
		Applying for RPS faculty membership	**

RPS = Royal Pharmaceutical Society.

Note: The weighting column relates both the strength given by respondents and how often the node description was pointed out by the participants.

Node A – Motivation/Expectations

All participants presented reasons for enrolling on the Programme. Professional-related answers pointed the enrolment on the MScPP as a way to achieve a post-graduation qualification, to do something career wise, such as pulling the portfolio together or putting all working experience together. Q1 “...the motivation was to consolidate all activities that I have done through time, because I had such a mixture of activities and was to consolidate it and gain one accreditation, a single accreditation” [Participant 1].

Participants also pointed that the MScPP was an innovative and important programme or that they intended to obtain some personal development out of it. Q2 “I wanted to re-motivate myself, [...] I wanted to get energised again” [Participant 2].

Node B - Learning environment

To assess the learning environment of the Programme, graduates were asked how they valued the Programme and what challenges they faced while undergoing it.

Node B.1 - Value

Concerning positive opinions on the value of the MScPP, participants mostly pointed out the acquired skills from the MScPP, which ultimately they felt that had an impact on their practice; Q3 “...it fitted well with the skills that I had or that I needed to develop to continue doing my job in an effective way” [Participant 3]; and being able to network with colleagues and speakers with exchange of ideas and help Q4 “...just speaking with different people, you network with different people who have done research, it's been like a really good experience” [Participant 4].

Also, the professional opportunities arisen from the MScPP and its flexibility to different sectors were mentioned by some graduates as contributing factors to the value of the Programme. Q5 “...it was really nice because it was quite flexible, so it fitted in with lots of different people, different job roles and different experiences” [Participant 4].

Some graduates expressed opinions on the quality of the MScPP, namely the quality of the teaching, its well-organised structure and prominence of the teachers and speakers and pointed them as main reasons for enrolling

on the Programme; Q6 “*..it was really high quality teaching*” [Participant 5].

Node B.2 – Challenges

The most quoted challenge was time. However, the majority of the participants preferred the idea of a smaller programme, rather than a two- or three-year Master's programme with longer gaps in between modules and assignments; Q7 “*I think is very time-consuming*” [Participant 6].

Secondly, participants considered difficult to find a satisfying research question they could work on, which is one of the Programme objectives (Innes & Bates, 2015). This challenge arose because most of the graduates hadn't been working in research or had never done it before; Q8 “*It took me a long time to decide on my research question, I have done a lot of reading and I have changed my mind so many times*” [Participant 7]. Also, writing long assignments was another pointed challenge for the majority. Despite being involved in appraisals and audits, graduates were not used to writing long pieces of work anymore; Q9 “*I think that actually the study skills aspect [was the most challenging], doing very big pieces of work, writing long research documents, although we are writing evaluating papers within our practice*” [Participant 8].

Finally, the support received from the workplace appears to have some weight, as the MScPP has a self-directed, work-based learning design. A number of participants referred to a ‘recommendation’ to enrol on the Programme, or who were aware of practitioners who had previously enrolled, offering advice on the Programme; Q10 “*My boss was very pleased that a member of the department was looking more outwardly and he thought I was a good role model for others, especially the juniors...If they are only seeing older pharmacists who are stagnated, they are no role models*” [Participant 2].

Node C - Workplace

Questions related to the workplace collated perceptions on the impact the programme had at the practitioners' workplace, as well as the subsequent professional opportunities for the graduates.

Node C.1 - Impact

Most of the participants considered the opportunity of taking new service roles as an important factor. All graduates provided examples that fit, in general terms, with added benefit to their workplace, with the majority of the participants expressing concrete ideas on this topic. Being an example and inspiration to the junior colleagues, supporting peers, working better in teams and developing their practice were some of the gathered examples; Q11 “*I do think it helps to develop the work further, because it gives you that kind of structure and makes you think about things that you wouldn't necessarily think about*” [Participant 9]; Q12 “*..but then also I started setting up developmental sessions for all the pharmacists within my trust*” [Participant 7].

Moreover, when referring to professional development and changes in practice, they pointed out that by having better training, provided by the Programme, they felt they were “*better pharmacists*”, made better clinical decisions, and were able to contribute towards a better staff workforce; Q13 “*By having better training, you get better clinical decisions*” [Participant 10]. Finally, some used the Programme assignments to develop projects within the hospital, bringing innovation into their teams and workplace; Q14 “*And also some of the project work I did was of benefit to the [my workplace]*” Participant 2.

One participant postulated that the Programme could bring different impact levels depending on the previous work experience of the student. This idea suggests, with consideration given to different work experiences, that the perceived impact for younger roles comparing to senior roles might be different.

Node C.2 - Opportunities

In terms of opportunities, participants pointed to a diversity of new professional opportunities after having concluded the MScPP. Graduates referred to taking on new roles and career promotions, some went on to further additional formal education (for example, Ph.D. programmes), or working with or for national professional leadership bodies, becoming a clinical lead pharmacist, for example.

Despite the multiplicity of the provided examples, participants directly referred to the link between engaging with the Programme and the change in roles; Q15 “*So basically everything I have done since then, I don't think I would have the opportunity to do without having the MSc*” [Participant 3].

Another opportunity that the graduates frequently expressed was being able to develop their research projects at their workplaces, which was always presented as exciting and rewarding. Participants also mentioned that the Programme was useful for professional recognition (credentialing) processes (in this case, credentialed membership of the RPS Faculty) as it helped them to gather evidence and build up their portfolios; Q16 “*..but I actually really enjoyed doing my research and that's something I wouldn't have known that I like without doing the MSc so that was really nice and I've sort taken that on [...]. So I've got a grant approved, which is [...] definitely something that wouldn't have happened if I haven't done the MSc*” [Participant 4].

Matrix coding of the data.

The majority of the participants in a senior role (with more than four years of practice since graduation) noted having changed roles after Programme graduation (Table II). A minority of the younger role group (with less than four years of practice since graduation) stated having changed roles afterwards. However, the majority of the younger graduates who said they were still on the same role, were already ‘lead pharmacist’ or ‘specialist pharmacist’ prior to enrolment.

Table II: Years of practice since programme graduation

Years since graduation	Role			CPD		Workplace	
	Changed job	Involved in research	Doing a PhD	RPS faculty	Impact on practice	Impact on the trust	
< 4 (n=8)	2	3	1	4	3	2	
≥ 4 (n=7)	4	3	1	3	3	4	

CPD = Continuing Professional Development; RPS = Royal Pharmaceutical Society

Table III: Years of practice since programme graduation

Role before the MScPP	Role			CPD		Workplace	
	Changed job	Involved in research	Doing a PhD	RPS faculty	Impact on practice	Impact on the trust	
Clinical (n=14)	2	3	1	4	3	2	
Academic (n=)	4	3	1	3	3	4	

CPD = Continuing Professional Development; MScPP = MSc in Advanced Pharmacy Practice; RPS = Royal Pharmaceutical Society

Concerning the research and evaluation competency cluster, an equitable numbers of participants confirmed being currently or formerly involved in developing and conducting a research project by themselves. An equal number of participants in both groups stated to be presently involved in supervising others' research.

Taking a look at the workplace, the majority of the senior role graduates directly expressed that enrolling on the Programme had a positive impact, eventually benefiting the workplace. In a similar fashion, the majority of the senior role group graduates believed that the Programme had an impact on their practice, which helped develop the work further.

Finally, groups can be organised according to different specialties/roles before enrolling on the Programme (Table III). Regardless of their role before the Programme, all participants thought that by having concluded the Programme they were able to find a "better job" and be motivated to conduct their own research (Table III).

Advanced Practice Framework

Apart from representations of the Programme, the interview schedule focused as well on gathering the ideas and perceptions around the APF. Participants were asked how useful the APF was for extended learning and if they referred a lot to it while progressing through the course. Obtained answers were consistently positive, but justifications varied. Due to large volumes of obtained data, only general ideas are displayed.

Almost all participants admitted that they had never used frameworks before and, for that reason, the APF was useful, or explained in a useful way the purpose of the Programme; Q17 "...but then I was given out these clusters again but with a range of practical examples just to get you thinking about the type of examples" [Participant 3]. However, one graduate had

been in contact with the ACLF before, so working with the APF was not considered a challenge; Q18 "But I don't think it was particularly useful because I've already used the ACLF before" [Participant 9].

Moreover, participants felt like the use of the Framework helped undoubtedly identify developmental gaps, acting like a benchmark; Q19 "it was the first time I could actually see what I needed to do and identify gaps in my development and see what I could do to progress" [Participant 7]. Additionally, the use of the APF was considered to facilitate the portfolios' production; Q20 "...because obviously we were building up our portfolio based on it" [Participant 8]. Finally, one participant clearly stated that they had used the APF to support other practitioners assessing whether they were ready to move from one salary band to another.

Generally, graduates felt like the competency cluster of 'Research & Evaluation' firstly, and 'Leadership' secondly were the most challenging clusters at the beginning of the Programme and subsequently throughout.

Unanimously, respondents indicated that they had significantly advanced their knowledge by undergoing this Programme, whether by acquiring new skills or enhancing skills they already possessed. Finally, graduates stated that they were still being guided by the Framework clusters (after graduation), and they remained relevant to continued career development.

Discussion

The majority of the participants in a senior role (with more than four years of practice since graduation) stated having changed roles after graduation, comparing to a minority in the younger role group. The fact that participants were already at such an advanced level point in their careers may explain why the majority of the

younger graduates did not refer to a change of role or moving from salary band after undergoing the Programme. However, the effectiveness of professional development can be assessed both on the short- and long-term changes. When evaluating the long-term changes, it is necessary that sufficient time has passed (Kutner, Sherman, Tibbetts, & Condelli, 1997). Therefore, job-related benefits for the younger graduates can in theory arise at a later phase. As scope of practice is defined as a time sensitive and dynamic aspect of practice (Galbraith *et al.*, 2015), it would be interesting to conduct a future study trying to understand if different challenges have arisen for the graduates, especially for the younger ones, and how they managed with these in the context of Programme-acquired knowledge.

Concerning research and evaluation skills, and competencies, no differences were found between the 'experience age' groups. These findings suggest that the enrolment on the Programme had direct impact on participants' involvement in research and suggests that research and evaluation competencies remains a weak point for the practitioner population in the profession. Similarly, two participants stated they had generated an opportunity for enrolling on doctoral research training (Ph.D.) programme after graduation, suggesting that the Programme enhances further motivation to continue to higher studies.

Although almost all participants applied for the credentialed-entry membership of the RPS Faculty (n=11), half of respondents indicated that the Programme had led to a direct link, by providing the necessary tools and knowledge to engage with the Faculty framework. However, applying for the RPS Faculty recognition also appears to be related with CPD, which is one of the main goals of the MScPP (Innes & Bates, 2015).

General outcomes considered the suitability of the MScPP to introduce practitioners to a focussed engagement with the APF. The APF was viewed as useful for extended learning planning and was considered indispensable for the identification of developmental 'gaps'. It was clear the APF acted by supporting the practitioners in acquiring new skills or purposefully enhancing prior skills and competencies. As pharmacists' confidence in clinical decisions and professional responsibility is largely influenced by a clear role definition, amongst other factors (Frankel, 2013), this support is crucial. Finally, the APF can serve as a valuable tool for assuring the quality and safety of the professional services provided to the general population, enhancing the accountability of the profession (Jackson *et al.*, 2015).

The 'Research & Evaluation' cluster was considered the most challenging at the beginning of the Programme, along with 'Leadership'. This may be due to the limited experience or involvement of the graduates with these competencies before enrolling on the Programme, or previously being unable to engage in a meaningful way with these advanced competencies prior to the Programme. In conclusion, participants recommended referring to the Framework when developing self-motivated planning for advanced stages of practice or progressing to an advanced level.

General

Overall, expressions were offered both around the high points and challenges of the MScAPP. Concerning benefits, the quality of the MScAPP offered by UCL was frequently pointed to as the main reason for valuing the Programme. Additionally, participants praised the flexibility of the APF to different pharmaceutical sectors. Also, a few graduates mentioned offering guidance and support to colleagues undergoing the Programme. This should be encouraged as younger practitioners need aspirational role models (Bates *et al.*, 2009).

Regarding challenges, the most quoted were time and finding a suitable research question for their final thesis. As the MScAPP is a 12-month part-time taught postgraduate programme, graduates have to manage undergoing this programme with their normal work routine and personal lives.

Undoubtedly, participants were favourable to the added benefits of this programme. This suggests that local replication of the programme across other geographies to allow greater accessibility to more pharmacists in the United Kingdom (UK) would be desirable.

Study limitations

The main share of this study sample had previously worked in a clinical setting, comparing to other roles. Thus, a comparative analysis of perceptions on the MScAPP by specialisation was not possible to draw out fully. Further studies aiming to describing the effect of the Programme on different specialties should focus on maximising the richness of data collection by gathering a greater sample of professionals other than those in exclusively clinical roles.

Another limitation is that this study used an explanatory design, being informed by the APF (deductive approach). This excluded a more exploratory design on possible factors impacting professional development in these graduates, other than the APF. A future study could try to unveil additional factors impacting CPD on the MScAPP graduates.

Conclusion

The clearly perceived benefits of graduates from the MScAPP offered by UCL reveal the usefulness of such a programme for CPD of clinical pharmacists. This Programme was especially recognised for the professional opportunities for its graduates and its flexibility to different sectors, different job roles and different experiences. In a similar fashion, graduates felt they were able to apply this development to greater benefit of the workplace.

The use of the APF was considered valuable as the Framework undoubtedly helped in identifying developmental gaps, thus contributing to improve or strengthen advanced level competencies of the participants.

With the added benefits identified, local replication of the Programme across other geographies in the UK seems desirable and the international application of using an adapted APF or similar in other countries would be a desirable aim.

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